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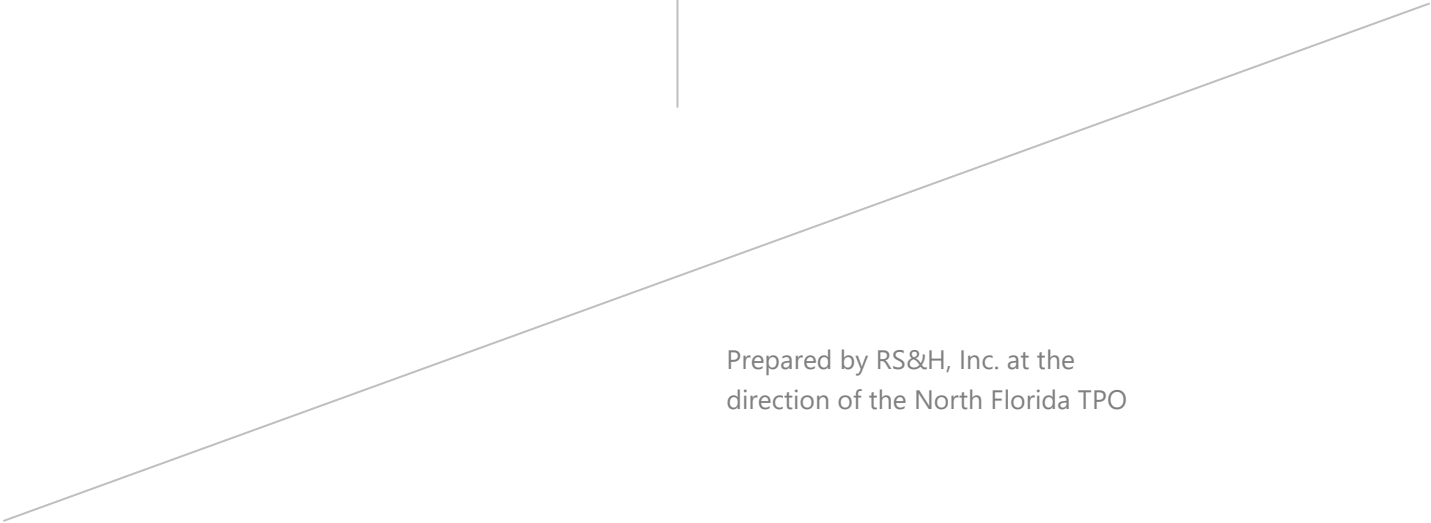
***North Florida  
Alternative Fuels Infrastructure  
Gap Analysis***





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Gap Analysis***

FINAL  
7/6/20



Prepared by RS&H, Inc. at the  
direction of the North Florida TPO

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# 1. SUMMARY

The North Florida Clean Fuels Coalition (“the Coalition”) has conducted an alternative fuel infrastructure gap analysis to determine where investment would support use of clean fuels. The analysis builds on the Coalition’s 2016 application for Federal Highway Administration (FHWA) Alternative Fuel Corridor (AFC) designation under Section 1413 of the FAST Act. The 2016 application identified Interstates 10, 95 and 295; US Highways 17 and 301 and State Roads 105, 200 and A1A as potential AFCs. FHWA designated I-95 and I-295 “Signage Ready” along certain segments for electric vehicles (EV) and compressed natural gas (CNG). The designation indicates that vehicles using these fuels could travel these segments with assurance of adequate fueling infrastructure. Other corridors were designated “Signage Pending,” indicating additional infrastructure is required.

This analysis also builds on the Coalition’s 2018 conceptual signing plan for the region’s designated AFCs, developed in response to FHWA’s published criteria for designating and signing AFCs. The Coalition’s goal is to meet the FHWA’s “Signage Ready” criteria for all identified corridors and provide applicable signing.

In addition to the FHWA program, the analysis supports Senate Bill 7018, enacted into law in June 2020, which directs the Florida Department of Transportation to develop a master plan for EV charging infrastructure along the State Highway System. Among other provisions, it requires the state’s Public Service Commission to consider “strategies to develop ...charging stations [by] building partnerships with local governments, other state and federal entities, electric utilities, the business community, and the public....”

This analysis will also contribute towards a statewide Electric Vehicle Roadmap. The Roadmap is being developed by the Florida Department of Agriculture and Consumer Services’ Office of Energy. One goal of the road map is to identify areas that lack EV charging infrastructure

Geospatial evaluation of corridors and existing station locations incorporates FHWA AFC criteria, including distance from the corridor and distance between stations.

The analysis identified the opportunity to expand “Signage Ready” designations for three corridors:

- I-95 for electric vehicles (EV) along its entire length within the Coalition geography.
- I-95 for compressed natural gas (CNG) along its entire length within the Coalition geography.
- I-95 for liquefied petroleum gas (LPG) or propane along its entire length within the Coalition geography.

The analysis also identified an opportunity to establish one new “Signage Ready” corridor.

- US17 for CNG along its entire length within the Coalition geography.

The analysis identified the need for additional EV, CNG, liquefied natural gas (LNG) and LPG infrastructure to expand FHWA AFC “Signage Ready” designation to all Strategic Intermodal System (SIS) roadways within the Coalition geography. These stations would also connect North Florida corridors to recently designated segments elsewhere in the state.

These include four Level 3 (L3) EV charging stations, two CNG stations, three LNG stations and four propane stations (Table 1). Several of these stations would provide infrastructure for multiple corridors if located at strategic intersections. These capital improvements are the minimum required. Additional infrastructure may be advantageous to the region’s alternative fuel transportation network. The estimated capital investment associated with this minimum infrastructure is \$11.48M.

**TABLE 1: ALTERNATIVE FUEL INFRASTRUCTURE CAPITAL REQUIREMENTS ALONG COALITION CORRIDORS**

Fuel Type	Quantity of New Infrastructure	Corridor(s) Served	Estimated Cost
EV	4	I-10, SR-A1A, SR-105, US-17, US-301 / 200	\$180,000
CNG	2	I-10, SR-A1A, US-301 / SR-200	\$3,600,000
LNG	3	I-10, I-95, I-295, SR-105, US-301 / SR-200	\$7,500,000
LPG	4	I-10, SR-A1A, US-17, US-301 / SR-200	\$200,000
<i>Total</i>	<i>13</i>		<i>\$11,480,000</i>

- The four EV stations are relatively inexpensive, are in high demand locations and / or align with stakeholders’ goals and objectives.
- The two CNG capital improvements are expensive and require a strategically located anchor tenant.
- The LNG stations are very expensive and require market demand.
- The LPG stations are relatively low cost but require a strategically located anchor tenant and additional planning to provide public access.
- No hydrogen stations are considered feasible at this time.

No further action is necessary along I-295 for EV, CNG and LPG since this corridor is already designated “Signage Ready.”

Using Annual Average Daily Truck Trips as a proxy, there is insufficient market demand to justify investment in LNG infrastructure along SR-A1A and US-17. Investment in CNG, LNG and LPG infrastructure along SR-105 is impractical due to its short length and lack of intersecting corridor segments where infrastructure would have strategic value.

## 2. BACKGROUND

### 2.1 NORTH FLORIDA CLEAN FUELS COALITION

Tracing its roots back to 2007, the North Florida Clean Fuels Coalition (the Coalition) is a 501(c)(3) focused on encouraging petroleum reduction for business, government and non-profit agencies in Baker, Clay, Duval, Nassau, Putnam and St. Johns counties. Funded and staffed by the North Florida Transportation Planning Organization (North Florida TPO), the Coalition has grown into a center for alternative fuels, vehicles and infrastructure excellence.

The Coalition serves a six-county area including Baker, Clay, Duval, Nassau, Putnam, and St. Johns (Figure 1). The region's population is just under 1.5 million, with over 90 percent in Duval, St. Johns, and Clay. The major urban center is Jacksonville. Other incorporated urbanized areas include Macclenny in Baker; Orange Park and Green Cove Springs in Clay; Atlantic, Neptune and Jacksonville Beach in Duval; Fernandina Beach in Nassau; Palatka and Crescent City in Putnam and St. Augustine and St. Augustine Beach in St. Johns. Clay, Duval and St. Johns also include large areas of suburban development. While all counties in the region include rural areas, these predominate in Baker, Nassau and Putnam.

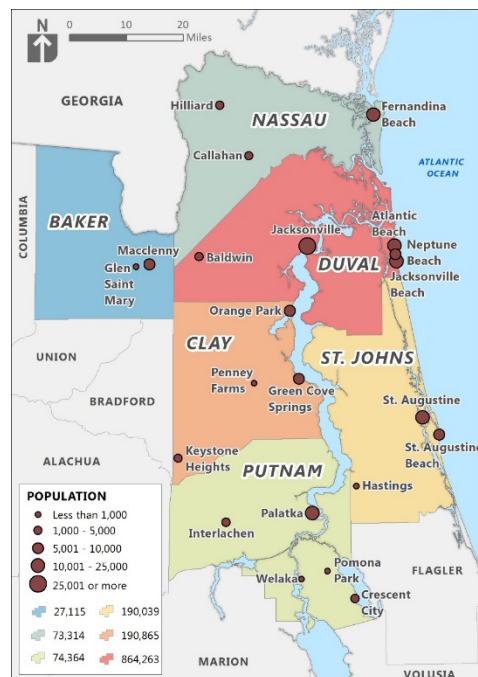


FIGURE 1: COALITION SERVICE REGION COUNTIES AND CITIES

The Coalition region differs from the North Florida TPO region, which serves Clay, Duval, Nassau and St. Johns Counties. However, Baker and Putnam Counties are ex-officio members of the TPO's Board of Directors. These six counties also participate at the Northeast Florida Regional Planning Council, which coordinates area-wide collaboration on issues of regional significance.

## 2.2 ALTERNATIVE FUEL CORRIDORS

Section 1413 of the Fixing America's Surface Transportation (FAST) Act required the U. S. Department of Transportation (USDOT) to identify national plug-in electric charging (EV), hydrogen, propane (LPG), compressed (CNG) and liquefied (LNG) natural gas fueling corridors ([Alternative Fuels Corridors](#)) in strategic locations along major highways to improve mobility of alternative fuel vehicles (AFVs). In response, FHWA is designating a national alternative fueling network along the National Highway System (NHS). In 2016, FHWA solicited nominations from state and local officials to designate Alternative Fuels Corridors. Designation means infrastructure exists along the segments to facilitate refueling of AFVs.

The North Florida TPO responded to USDOT's solicitation (see Appendix) with an application in 2016, characterizing alternative fuel infrastructure along a network of corridors in Baker, Clay, Duval, Nassau, Putnam and St. Johns Counties. As a result, I-95 was designated "signage ready" for EV (from the Georgia Border to St. Augustine) and CNG (from Jacksonville to St. Augustine). For the purposes of this analysis, "Jacksonville to St. Augustine" is assumed to be the Nassau County / Duval County border and the intersection of I-95 and SR-207, the southernmost interchange with a direct route to the City of St. Augustine. The entire length of I-295 was designated for EVs, CNG and LPG (propane autogas).

**TABLE 2: FHWA "SIGNAGE READY" DESIGNATED CORRIDORS IN NORTH FLORIDA**

Corridor	EV	CNG	LNG	LPG	Hydrogen
I-95	Georgia Border to St. Augustine	Jacksonville to St. Augustine	-	-	-
I-295	Entire length	Entire length	-	Entire length	-

I-10, SR-105 and SR-A1A were designated "signage-pending," indicating infrastructure is needed to facilitate refueling of AFVs along the segment. Portions of I-95 were also designated "Signage Pending" for CNG, LNG, LPG and Hydrogen, while I-295 was designated "Signage Pending" for LNG (Table 2).

**TABLE 3: FHWA "SIGNAGE PENDING" DESIGNATED CORRIDORS IN NORTH FLORIDA**

Corridor	EV	CNG	LNG	LPG	Hydrogen
I-10	Jacksonville to Lake City	Jacksonville to Lake City	Jacksonville to Lake City	Jacksonville to Lake City	Jacksonville to Lake City
I-95	-	Georgia Border to Jacksonville	Georgia Border to St. Augustine	Georgia Border to St. Augustine	Georgia Border to St. Augustine
I-295	-	-	Entire Length	-	Entire Length
SR-105	SR-105 @ I-95 to SR-105 @ SR-A1A	SR-105 @ I-95 to SR-105 @ SR-A1A	SR-105 @ I-95 to SR-105 @ SR-A1A	SR-105 @ I-95 to SR-105 @ SR-A1A	SR-105 @ I-95 to SR-105 @ SR-A1A
SR-A1A	Fernandina Beach to Marineland	Fernandina Beach to Marineland	Fernandina Beach to Marineland	Fernandina Beach to Marineland	Fernandina Beach to Marineland

The North Florida TPO application included proposals to designate US Highway 17 and US Highway 301 / State Road 200. However, these corridors received no designation status. These are significant city and city-to-city freight corridors. Alternative fuel infrastructure along these corridors may support fleets of Class 3 to 6 trucks operating on dedicated, hub-and-spoke routes.



Until recently, North Florida featured the only designated corridors in the state. An effort led by the Central Florida Clean Cities Coalition succeeded in designating [other corridors](#) in June 2020. Newly designated corridors are summarized below, with segments continuous with those in North Florida **bolded**.

Corridor	EV	CNG	LNG	LPG	Hydrogen
I-95	Between the southern terminus in Miami and Boca Raton; between Port St. Lucie and Vero Beach; and <b>between Port Orange and St. Augustine</b>	<b>Between Bunnell and St. Augustine</b>	-	Between Fort Lauderdale and Fort Pierce	-
I-10	-	Between Pensacola and Milton	-	Between the FL/AL border and Pensacola	-
I-75	Between Brandon and Wildwood	Between Fort Myers and the <b>FL/GA border</b>	Between Ocala and the <b>FL/GA border</b>	-	-

FHWA also designed [several corridor segments](#) signage pending in June 2020.

Corridor	EV	CNG	LNG	LPG	Hydrogen
I-95	Between Boca Raton and Port St. Lucie; and between Vero Beach and Port Orange	<b>Between Bunnell and the southern terminus in Miami</b>	-	Between the southern terminus in Miami and Fort Lauderdale; and <b>between Fort Pierce and St. Augustine</b>	-
I-10	<b>Between the FL/AL border and Lake City</b>	Between the FL/AL border and Pensacola; and <b>between Milton and Lake City.</b>	<b>Between the FL/AL border and Lake City</b>	<b>Between Pensacola and Lake City</b>	-
I-75	Between the I-75/SR-924 interchange in Miami Lakes and Brandon; and <b>between Wildwood and the FL/GA border</b>	Between Fort Myers and the I-75/SR-924 interchange in Miami Lakes	Between Ocala and the I-75/SR-924 interchange in Miami Lakes	-	-

## 2.3 DESIGNATION CRITERIA

FHWA has established criteria for designating Alternative Fuels Corridors. (Table 2).

**TABLE 4: CURRENT FHWA ALTERNATIVE FUELS CORRIDOR CRITERIA**

Fuel	Criteria
CNG	Public, fast fill, 3,600 pounds per square inch (psi) stations within 5 miles of the corridor, no greater than 150 miles between stations.
EV	Public, DC Fast Charging within 5 miles of the corridor, no greater than 50 miles between stations.
LNG	Public stations within 5 miles of the corridor, no greater than 200 miles between stations.
LPG	Public, primary stations within 5 miles of the corridor, no greater than 150 miles between stations.
Hydrogen	Public stations within 5 miles of the corridor, no greater than 100 miles between stations.

These criteria have changed since the North Florida AFCs were established. In the initial 2016 Request for Nominations, FHWA designated highways with both Level 2 (L2) and DC Fast Charging or Level 3 (L3) infrastructure. Following 2017, the FHWA Request for Nominations specifies that only DC Fast Charging infrastructure is eligible for designation ([FHWA AFC RFN](#)).

L2 electric vehicle charging equipment (EVSE) remains valuable to highway travelers, who, for example, may seek to align decisions regarding EV charging with dining or lodging along a corridor. North Florida has several dozen L2 EVSE. Most of these have been installed because of investment by the North Florida TPO as part of its ChargeWell program. Under current FHWA alternative fuels corridor criteria, these Level 2 stations are not eligible for Directional / Repeated Directional Signing.

This gap analysis only considers current FHWA criteria and excludes L2 EVSE.

## 2.4 LINKS TO OTHER STATEWIDE EFFORTS

Senate Bill 7018 enacted into law in June 2020 directs the Florida Department of Transportation to develop a master plan for EV charging infrastructure along the State Highway System. Among other provisions, it requires the state's Public Service Commission to consider "strategies to develop ...charging stations [by] building partnerships with local governments, other state and federal entities, electric utilities, the business community, and the public...." Through this gap analysis, the North Florida TPO is well positioned to support this effort.

This analysis will also contribute towards a statewide Electric Vehicle Roadmap. The Roadmap is being developed by the Florida Department of Agriculture and Consumer Services' Office of Energy. One goal of the road map is to identify areas that lack EV charging infrastructure, which is the focus of this study in the North Florida region.

### 3. COORIDOR GAP ANALYSIS

#### 3.1 INTERSTATE 10 (I-10)

The I-10 Corridor is the major east-west route within the Coalition boundary connecting it to New Orleans, Houston, Phoenix and Los Angeles. It currently has no “Signage Ready” designation for any alternative fuel in the Coalition geography. It was recently designated “Signage Ready” for CNG and LPG for segments in the western panhandle of the state. It is designated “Signage Pending” for EV, CNG, LNG, LPG and Hydrogen in North Florida and for all fuels except Hydrogen elsewhere in the state. Strategic investment in EV, CNG, LNG and LPG fueling infrastructure is required along this corridor to meet FHWA “Signage Ready” criteria statewide and support alternative fuel fleets. No development of Hydrogen fleets or supporting infrastructure is expected in the region for the foreseeable future.

##### 3.1.1 EV

##### 3.1.1.1 Infrastructure Analysis

This corridor is currently designated “Signage Pending” from Jacksonville to Lake City. There is Level 3 (L3) Electric Vehicle Support Infrastructure (EVSE) or stations in Jacksonville, on the east end of the corridor, and in Lake City, which is just outside the North Florida Clean Fuels Coalition geography. There are also L3 EVSE in Tallahassee.

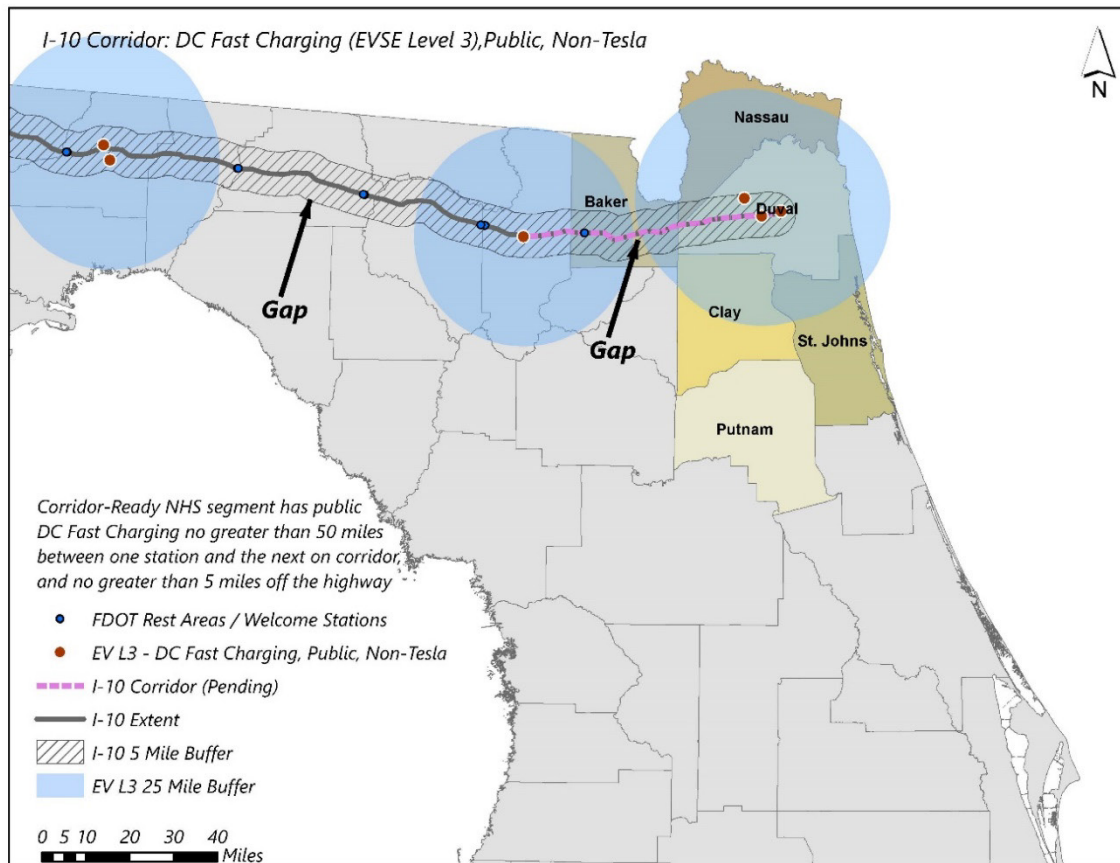


FIGURE 2: EV INFRASTRUCTURE ALONG THE I-10 CORRIDOR WITHIN THE COALITION GEOGRAPHY

A gap exists in Baker County that prevents “Signage Ready” designation within the Coalition geography.

Installing a 50kW L3 EVSE at the US-301 / SR-200 interchange near Baldwin in Duval County would close this gap. This station would also have value for North-South travel along the US-301 / SR-200 corridor (US Highway 301 / State Road 200 (US 301 / SR 200)).

Beyond the Coalition geography, L3 EVSE at Mile Marker 265 FDOT Rest Area near Lee in Madison County would extend “Corridor Ready” designation to beyond Tallahassee.

**3.1.1.2 Cost**

The cost to achieve “Signage Ready” designation along the I-10 corridor within the Coalition geography is estimated at \$45,000, based on the cost of one 50kW L3 EVSE, inclusive of materials and installation.

**3.1.1.3 Feasibility**

L3 EVSE is not capital intensive relative to other kinds of fueling infrastructure. Further, the North Florida TPO has funded development of L2 EVSE throughout the region in the past, forging partnerships with private and public entities to host and maintain the infrastructure. A partnership with the City of Jacksonville, JEA (the municipal utility serving the region), the Town of Baldwin or one of the other public landowners in the vicinity could support development of L3 EVSE along the I-10 corridor near US-301 / SR-200/200 in Baldwin (Figure 2).

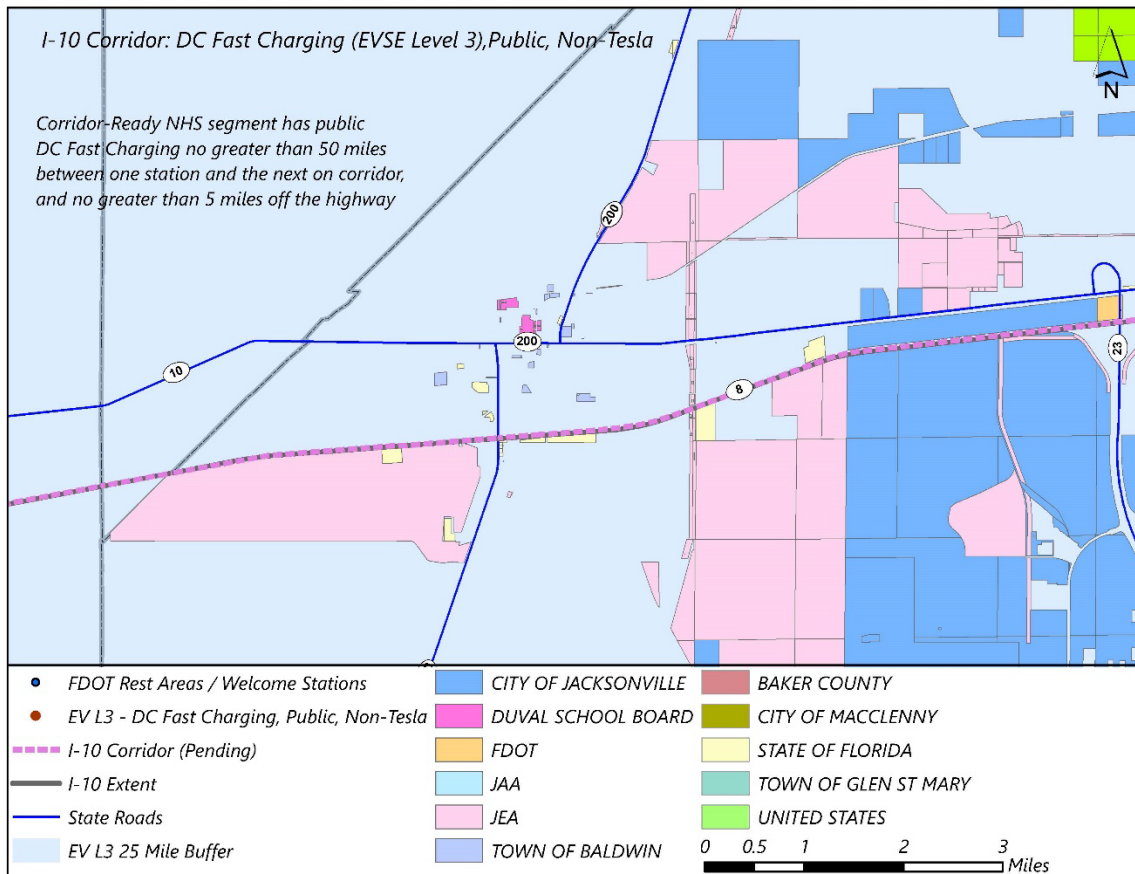
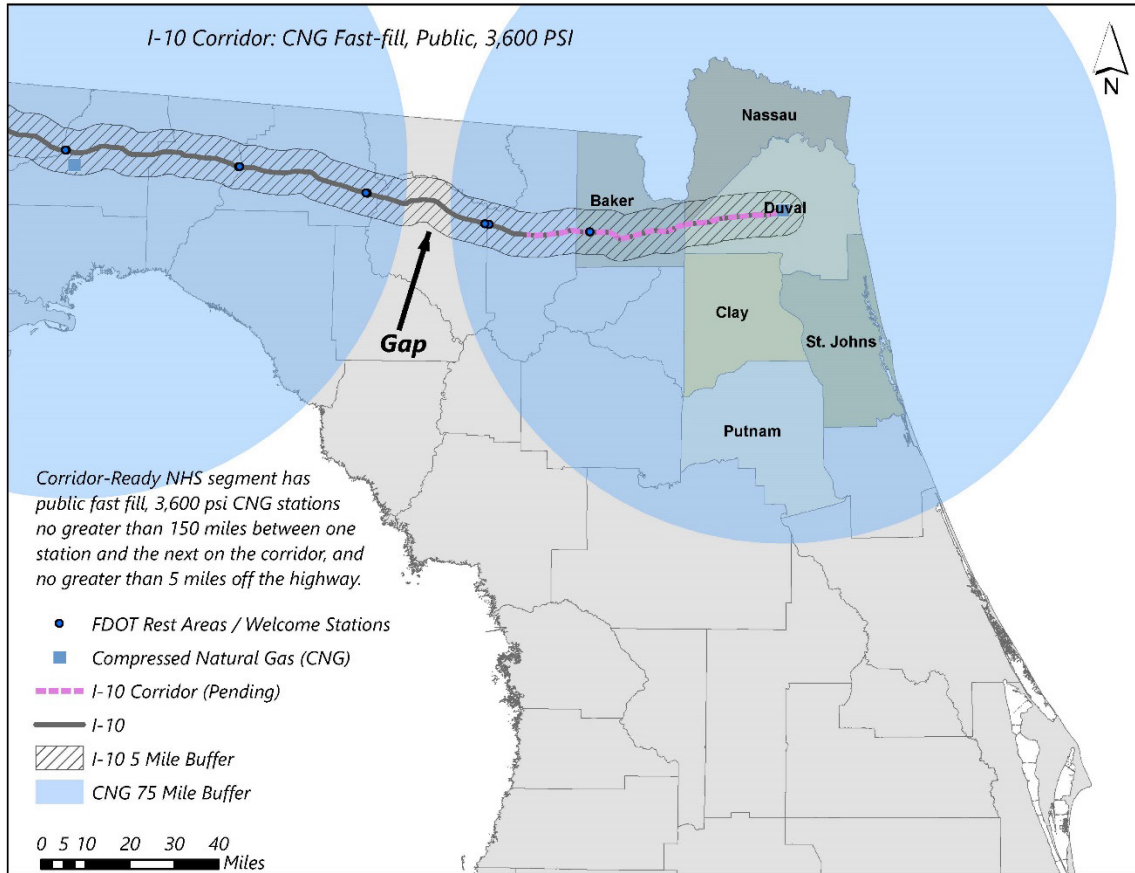


FIGURE 3: PUBLIC PARCELS IN THE VICINITY OF I-10 AND US-301 / SR-200

### 3.1.2 CNG

#### 3.1.2.1 Infrastructure Analysis

This corridor is currently designated “Signage Pending” from Jacksonville to Lake City. There is a public compressed natural gas station near downtown Jacksonville close to the eastern terminus of the corridor. There is also a public CNG station outside of the Coalition geography in Tallahassee.



**FIGURE 4: CNG INFRASTRUCTURE ALONG THE I-10 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

The gap between these two stations prevents the corridor from achieving “Signage Ready” status. A station within the Coalition geography in Baker County or extreme western Duval County would fill this gap. A strategic location could be the US-301 interchange near Baldwin. A strategic location outside of the Coalition geography would be near the I-10 and I-75 interchange near Lake City in Columbia County.

#### 3.1.2.2 Cost

The cost to achieve “Signage Ready” designation along the I-10 corridor within the Coalition geography is estimated at \$1.8M, assuming a fast-fill design.

#### 3.1.2.3 Feasibility

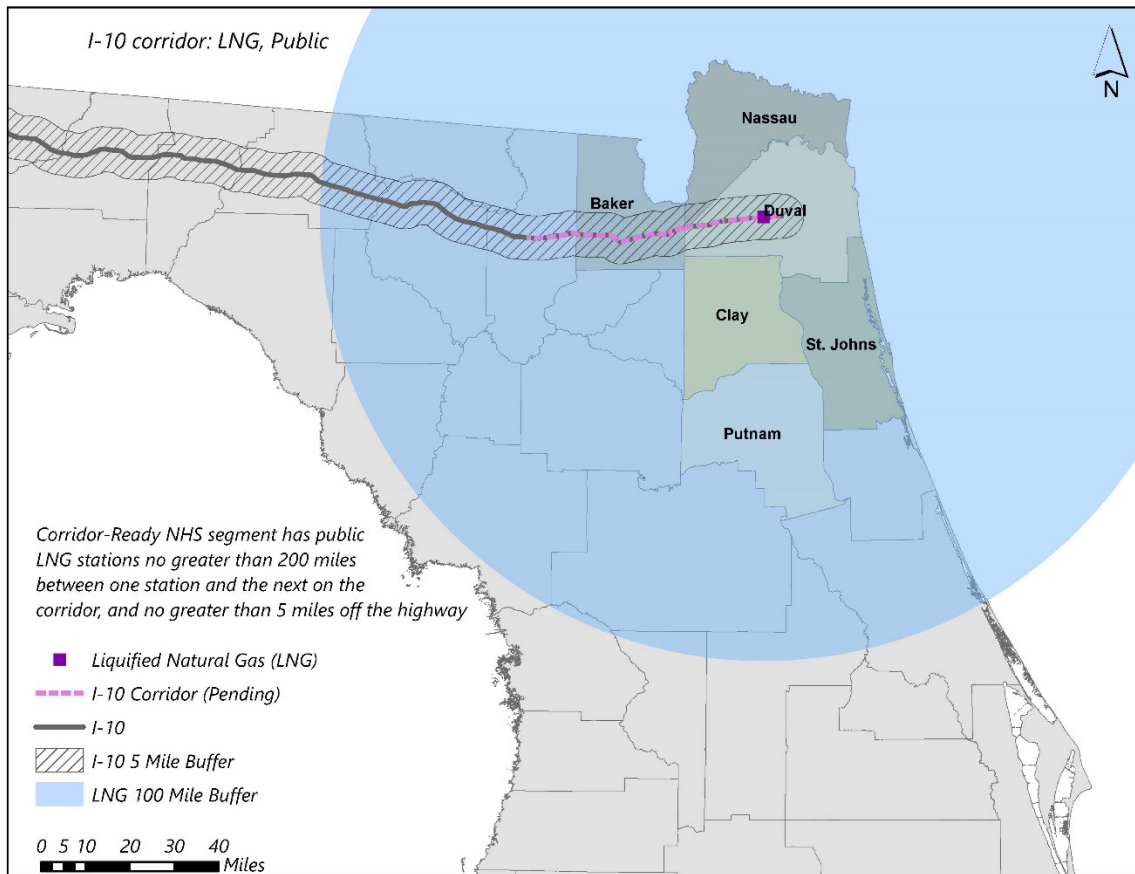
CNG stations are capital intensive. Both traditional or public private partnership delivery methods require an “anchor tenant” or otherwise enough demand to justify investment. Annual Average Daily Truck Trips (AADT) near Baldwin are high along I-10 (more than 11,000) and US-301 (more than 4,000).

The North Florida TPO has applied CMAQ funding to CNG infrastructure projects in the past, including public and private CNG fueling stations at the Jacksonville Transportation Authority’s operations campus near downtown Jacksonville. There are no known public fleets in the vicinity of the identified infrastructure gap (e.g. the town Baldwin) that might benefit from a similar funding strategy. Large public fleets are in the area. The I-10 / I-75 interchange near Lake City is a major transportation interchange that could provide enough CNG demand for a station developer. However, the Coalition is not aware of any such development plans. It has limited influence on transportation planning in this area.

### 3.1.3 LNG

#### 3.1.3.1 Infrastructure Plan

This corridor is designated “Signage Pending” from Jacksonville to Lake City. There is one LNG station west of downtown Jacksonville.



**FIGURE 5: LNG INFRASTRUCTURE ALONG THE I-10 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

Developing an LNG station anywhere east of Tallahassee would meet the criteria for “Signage Ready. A station within the Coalition geography in Baker County or extreme western Duval County would fill this gap. A strategic but impractical location is the US-301 interchange near Baldwin; however, there is an existing LNG station only 13 miles away at I-10 and Lane Avenue. A better strategic location outside of the Coalition geography would be near the I-10 and I-75 interchange near Lake City in Columbia County.

### 3.1.3.2 Cost

The cost to achieve “Signage Ready” designation along the I-10 corridor within the Coalition geography is estimated at \$2.5M.

### 3.1.3.1 Feasibility

LNG stations are very capital intensive. Both traditional or public private partnership delivery methods require an “anchor tenant” or otherwise enough demand to justify investment. Further, there is already an LNG station along I-10 west of Jacksonville. There may not be demand for another LNG station along this corridor within the Coalition geography. The North Florida TPO has yet to provide funding support for LNG infrastructure, although it has participated in LNG projects, including partial funding of an LNG tender car for the Florida East Coast railroad. There are no known public fleets in the vicinity of the identified infrastructure gap (e.g. the Town of Baldwin) that might benefit from a similar funding strategy at this time. Large private fleets are in the area. The I-10 / I-75 interchange near Lake City is a major transportation interchange that could provide enough LNG demand for a station developer. A station further west, near Tallahassee would also have strategic value, given the operating range of LNG vehicles. However, the Coalition is not aware of any such development plans. It has limited influence on transportation planning outside its geography.

### 3.1.4 LPG

#### 3.1.4.1 Infrastructure Plan

This corridor is designated “Signage Pending” from Jacksonville to Lake City. There is one public, fleet-ready LPG station along the corridor west of downtown Jacksonville.

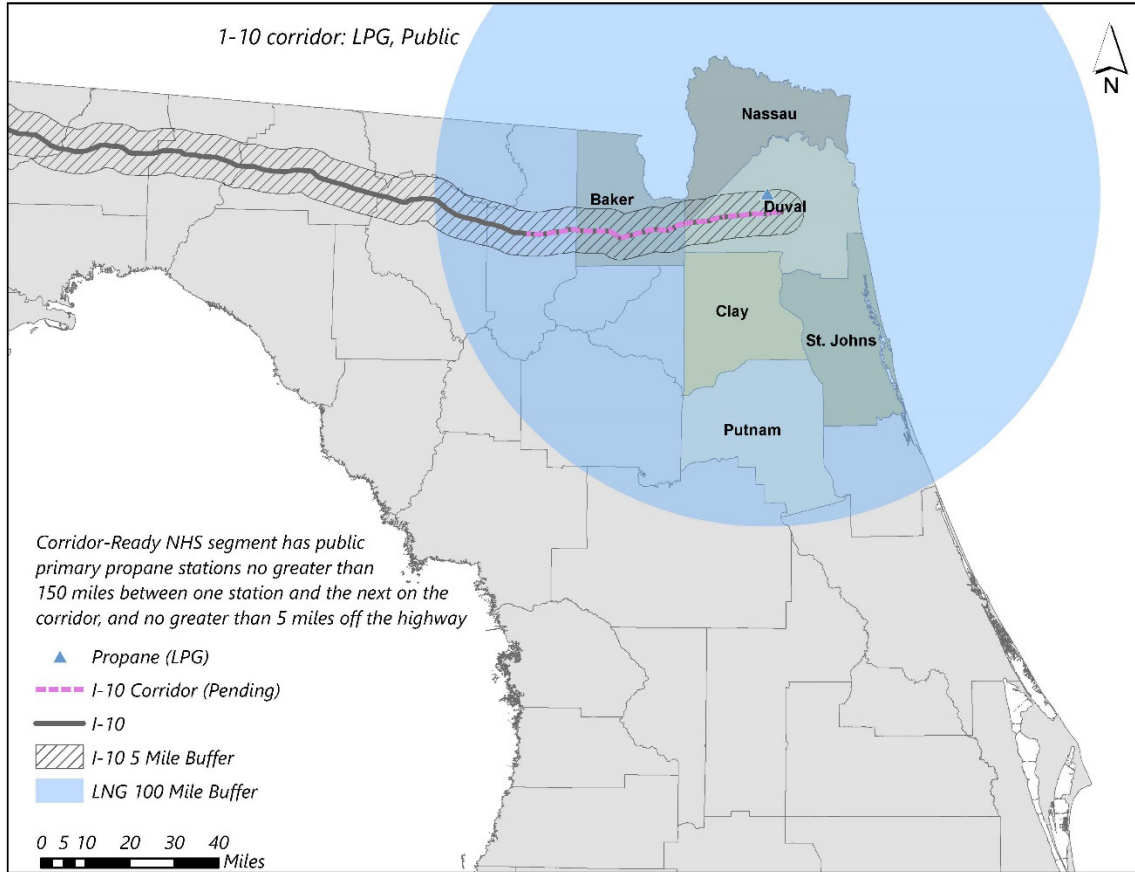


FIGURE 6: LPG INFRASTRUCTURE ALONG THE I-10 CORRIDOR WITHIN THE COALITION GEOGRAPHY

An LPG station in western Duval County or Baker County would qualify the corridor as “Signage Ready” within the Coalition geography. A station at the US-301 / SR-200 interchange near Baldwin would also have value for North-South travel along the US-301 / SR-200 corridor (See US Highway 301 / State Road 200 (US 301 / SR 200) below)

#### 3.1.4.1 Cost

The cost to achieve “Signage Ready” designation along the I-10 corridor within the Coalition geography is estimated at \$50,000, inclusive of materials and installation.

#### 3.1.4.2 Feasibility

LPG fueling infrastructure is not capital intensive relative to other kinds of fueling infrastructure. However, the North Florida TPO has not funded development of LPG infrastructure in the region in the past. Further, while LPG fuel-marketers are willing to provide up-front capital investment for infrastructure supporting relatively small fleets, these stations are often semi-private, accessible only to fleets with a contractual relationship with the LPG marketer. Developing infrastructure near I-10 and US-301 / SR-200 would entail identifying a suitable fleet, partnership with a fuel-marketer and negotiating circumstances under which



public access to the infrastructure might be acceptable to the parties. At present, the Coalition is not aware of any such development plans at this location.

### 3.1.5 Hydrogen

Despite "Pending" designation, no hydrogen infrastructure development is expected in North Florida.

### 3.2 INTERSTATE 95 (I-95)

The I-95 Corridor serves as the major north-south corridor connecting the region to Miami and Washington DC, New York and Boston. It is currently designated “Signage Ready” for EV and CNG for portions of the Coalition geography. It is designated “Signage Pending” for CNG, LNG, LPG and Hydrogen for portions of the Coalition geography. Recently, “Signage Ready” and “Signage Pending” designations were added for other parts of the state. These additions connect to North Florida’s existing EV and CNG “Signage Ready” corridors and its “Signage Pending” LPG corridor.

Based on the current state of infrastructure deployment in the region, this corridor meets FHWA criteria for “Signage Ready” along the entirety of the Coalition geography for EV, CNG and LPG. Strategic investment in LNG fueling infrastructure is required along this corridor to meet FHWA “Signage Ready” criteria and support alternative fuel fleets. No development of hydrogen fleets or supporting infrastructure is expected in the region for the foreseeable future.

#### 3.2.1 EV

##### 3.2.1.1 Infrastructure Plan

This corridor has been designated “Signage Ready” from Georgia Border to St. Augustine.

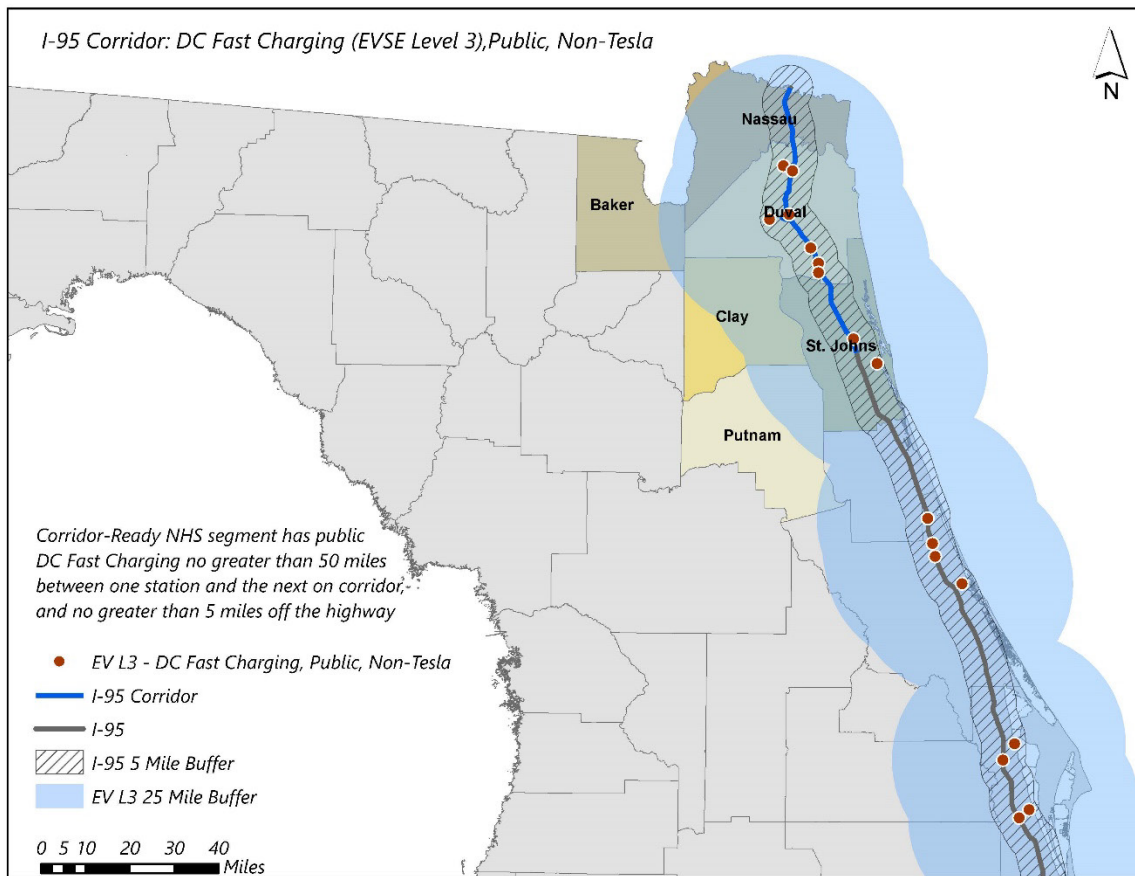


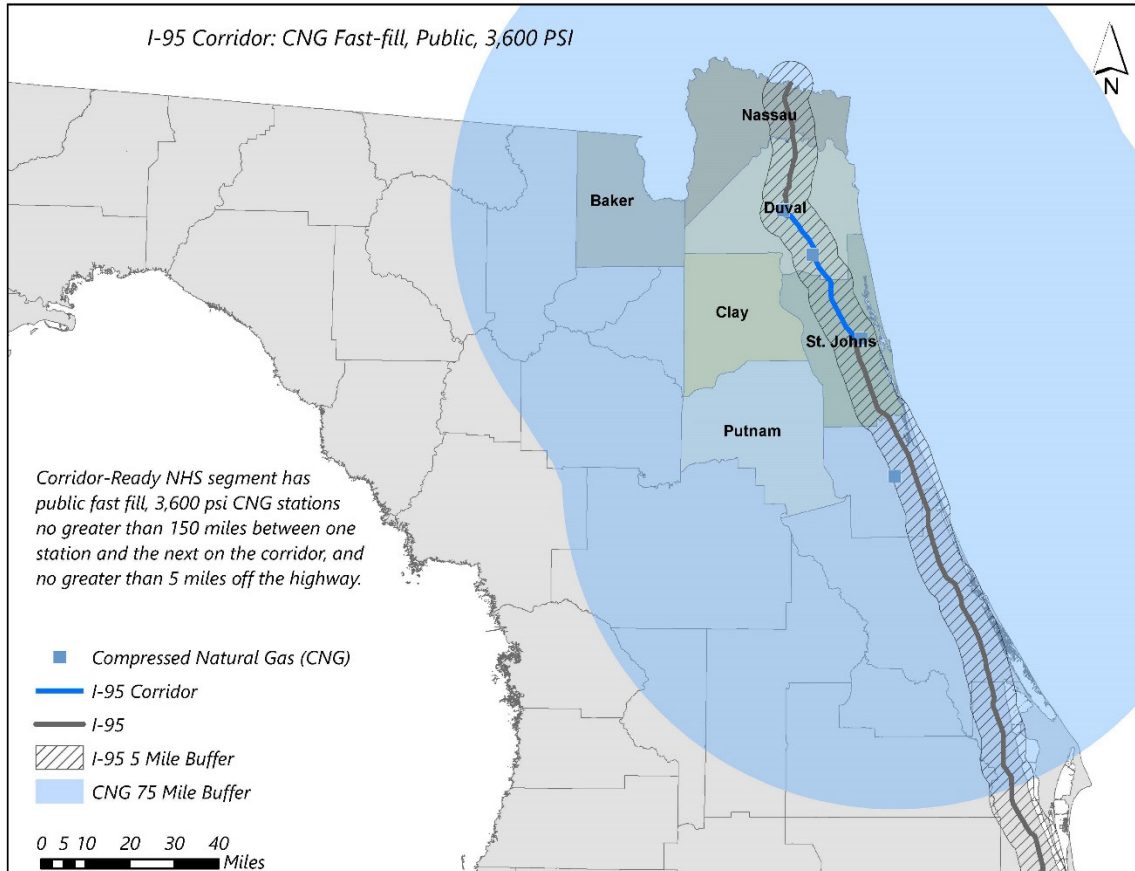
FIGURE 7: EV INFRASTRUCTURE ALONG THE I-95 CORRIDOR WITHIN THE COALITION GEOGRAPHY

Based on existing infrastructure, the corridor should be extended throughout the North Florida Clean Fuels territory (i.e. to the St. Johns County Border). FHWA’s recent addition of a “Signage Ready” corridor between Port Orange and St. Augustine appears to acknowledge this. No additional infrastructure is required to meet “Signage Ready” criteria.

### 3.2.2 CNG

#### 3.2.2.1 Infrastructure Plan

This corridor has been designated “Signage Ready” from Jacksonville to St. Augustine.



**FIGURE 8: CNG INFRASTRUCTURE ALONG THE I-95 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

Based on existing infrastructure, the corridor should be extended throughout the North Florida Clean Fuels territory (i.e. from the Georgia Boarder to the St. Johns County Border).

Infrastructure located in Flagler County would justify extending the corridor to northern Brevard County.

#### 3.2.2.2 Cost

No additional cost is required to extend the “Signage Ready” corridor throughout the North Florida Clean Fuels Coalition geography

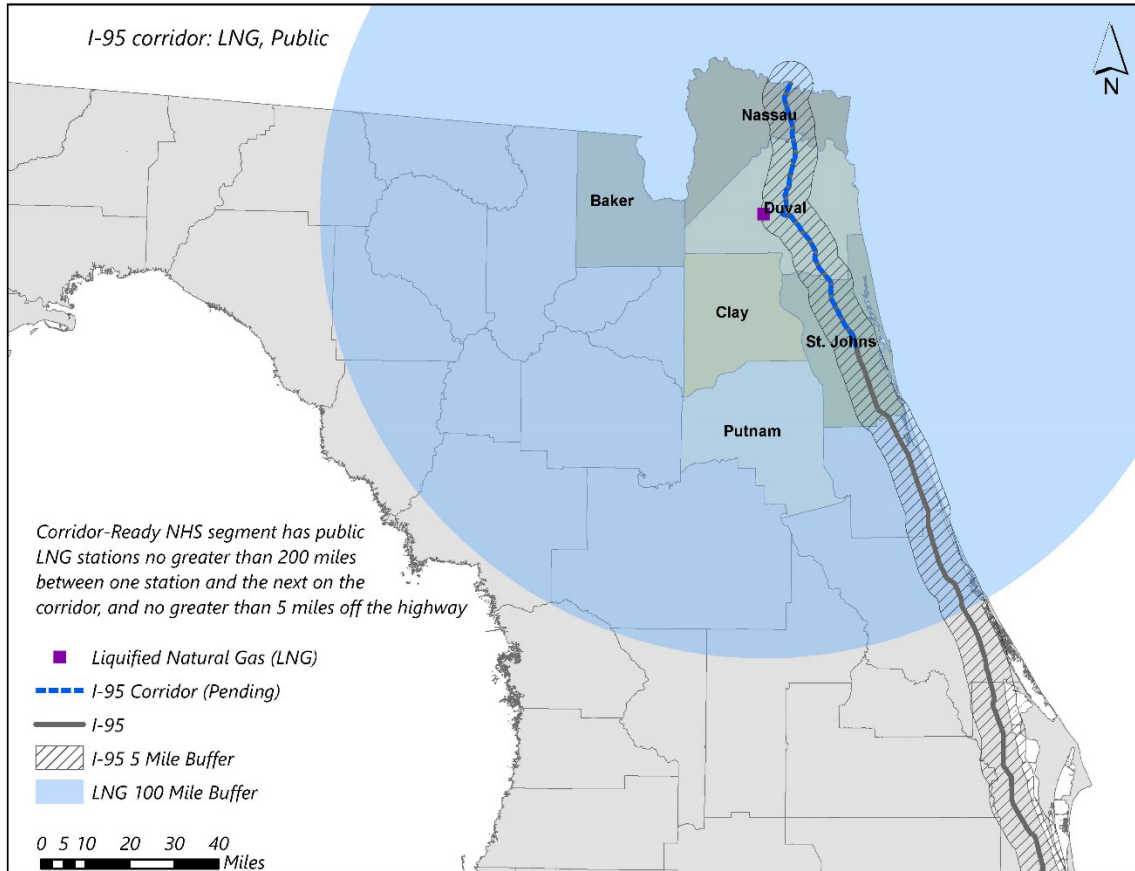
#### 3.2.2.3 Feasibility

No additional infrastructure is required for “Signage Ready” designation.

### 3.2.3 LNG

#### 3.2.3.1 Infrastructure Plan

Due to a single LNG station along Interstate 10, within five miles of Interstate I-95, this corridor is currently designated “Signage Pending” from the Georgia Border to St. Augustine.



**FIGURE 9: LNG INFRASTRUCTURE ALONG THE I-95 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

With only one station, a gap exists along the length of the corridor. However, another station anywhere along the corridor would qualify the entire Coalition geography as “Signage Ready.”

Installing an LNG station near the SR-105 interchange would close this gap. This station would be close to existing liquefaction plants located to the east of the corridor along SR-105. It may be possible to site a station along SR-105 that is within five miles of both the I-95 and I-295 corridor (See [State Road 105 \(SR-105\)](#) below). Another option would be to site a station at I-95 and SR-200 near Yulee, which would also serve the US-301 / SR-200 corridor. Outside the Coalition geography, a station in Volusia County near Daytona Beach or the I-95 / I-4 interchange would be strategically valuable.

#### 3.2.3.2 Cost

The cost to achieve “Signage Ready” designation along the I-10 corridor within the Coalition geography is estimated at \$2.5M. However, as contemplated one station would also serve I-95 and I-295.

### 3.2.3.3 Feasibility

LNG stations are very capital intensive. Both traditional or public private partnership delivery methods require an “anchor tenant” or otherwise enough demand to justify investment. There is already an LNG station along the corridor. The North Florida TPO has yet to provide funding support for LNG infrastructure, although it has participated in LNG projects, including partial funding of an LNG tender car for the Florida East Coast railroad. There are no known public fleets in the vicinity of the identified infrastructure gap that might benefit from a similar funding strategy at this time. The proximity of major liquefaction plants to I-95 and I-295, both important freight corridors, as well as major seaport terminals along SR-105 may provide enough supply and demand for a station developer. However, the Coalition is not aware of any such development plans.

## 3.2.4 LPG

### 3.2.4.1 Infrastructure Plan

This corridor is currently designated “Signage Pending” from the Georgia border to St. Augustine.

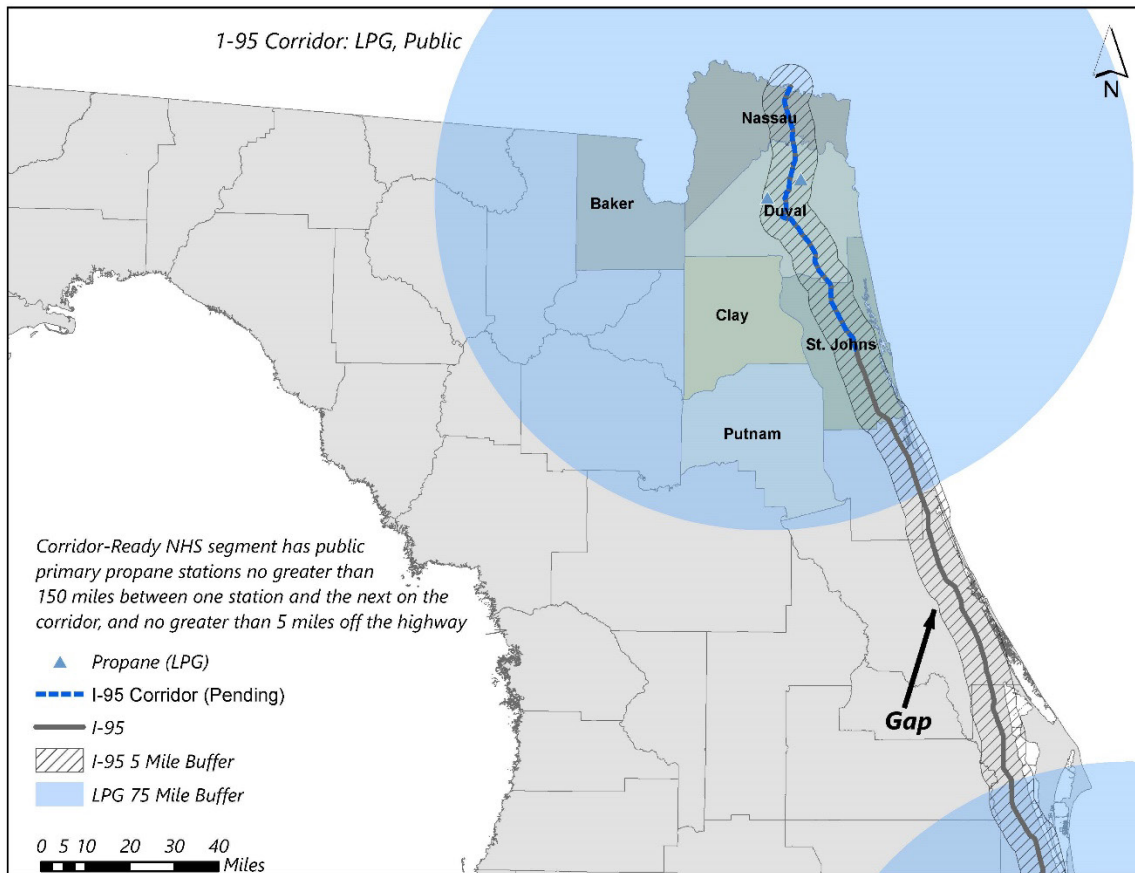


FIGURE 10: LPG INFRASTRUCTURE ALONG THE I-95 CORRIDOR WITHIN THE COALITION GEOGRAPHY

Analysis indicates two LPG stations in Duval County that justify “Signage Ready” designation throughout the Coalition geography.

Locating an LPG station in Volusia County could establish a “Signage Ready” corridor beyond Central Florida.

**3.2.4.2 Cost**

No additional cost is required to extend the “Signage Ready” corridor throughout the North Florida Clean Fuels Coalition geography

**3.2.4.3 Feasibility**

No additional infrastructure is required for “Signage Ready” designation.

**3.2.5 Hydrogen**

Despite “Pending” designation, no hydrogen infrastructure development is expected in North Florida.

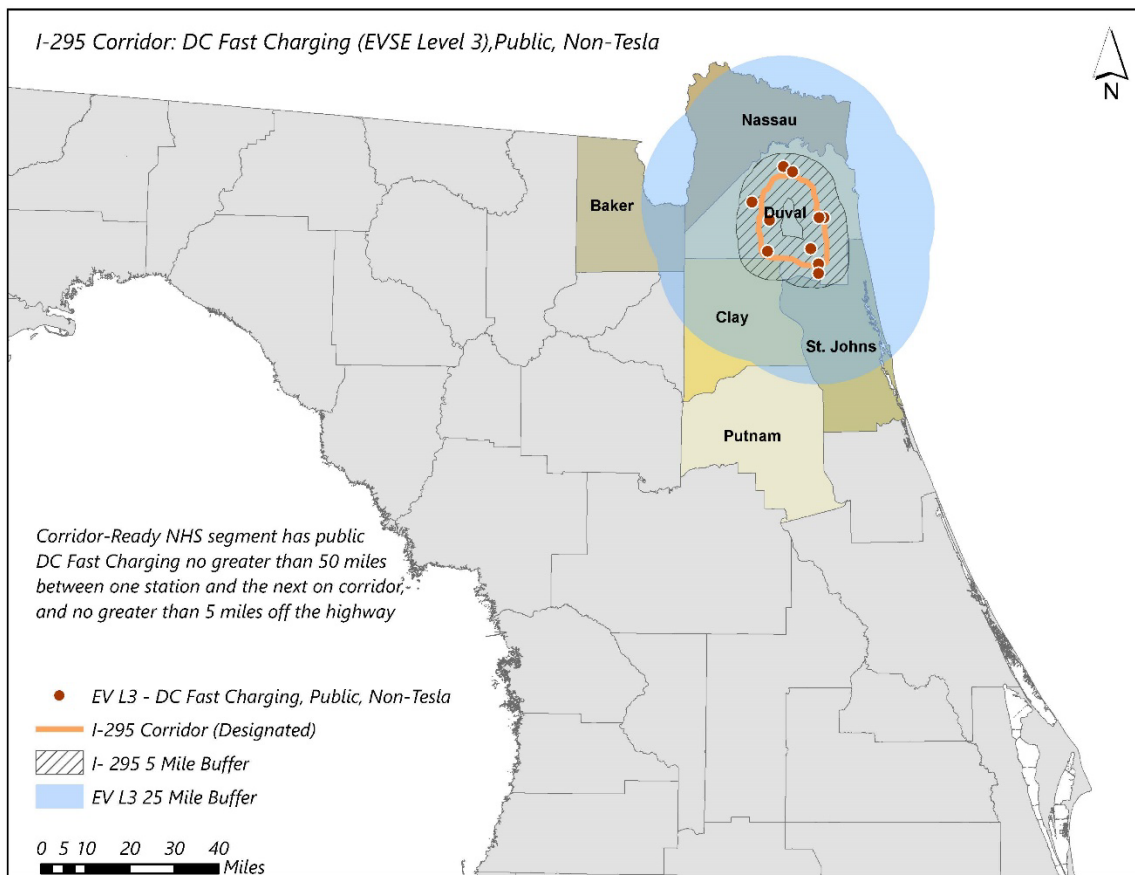
### 3.3 INTERSTATE 295 (I-295)

The I-295 Corridor serves as a bypass to the City of Jacksonville, connecting I-95, I-10 and the other Corridors included in the Network. It is currently designated “Signage Ready” for EV, CNG and LPG. It is designated “Signage Pending” for LNG and hydrogen for portions of the Coalition geography.

Strategic investment in LNG fueling infrastructure is required along this corridor to meet FHWA “Signage Ready” criteria and support alternative fuel fleets. No development of hydrogen fleets or supporting infrastructure is expected in the region for the foreseeable future.

#### 3.3.1 EV

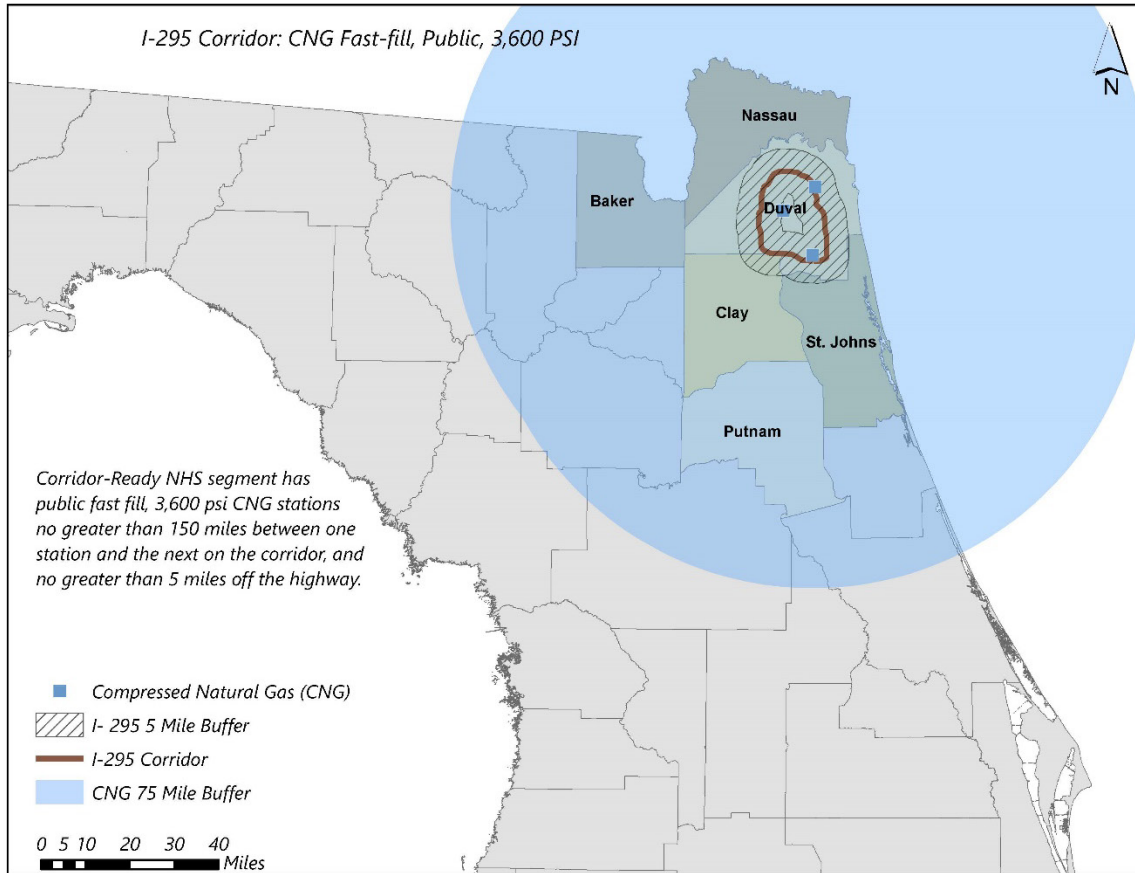
As a result of several L3 EVSE along its circumference, this corridor has been designated “Signage Ready.” No further action is necessary.



**FIGURE 11: EV INFRASTRUCTURE ALONG THE I-295 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

### 3.3.2 CNG

This corridor has been designated "Signage Ready" due to two CNG stations located along the corridor north and south of downtown Jacksonville. No further action is necessary.

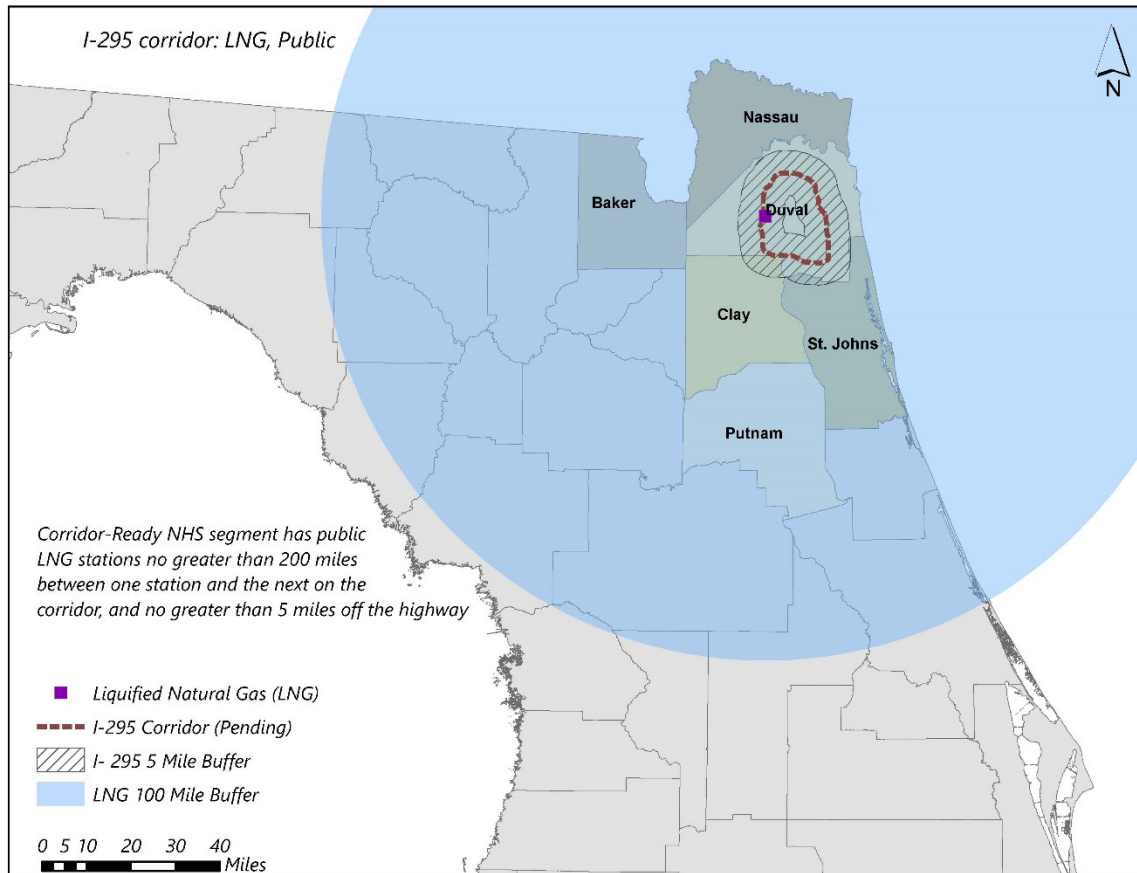


**FIGURE 12: CNG INFRASTRUCTURE ALONG THE I-295 CORRIDOR WITHIN THE COALITION GEOGRAPHY**



### 3.3.3 LNG

This corridor is currently designated “Signage Pending.” There is only one LNG station located in the Coalition geography. It is located within 5 miles of both the I-295 and the I-10 corridors.



**FIGURE 13: LNG INFRASTRUCTURE ALONG THE I-295 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

As note above in the I-95 corridor discussion, installing an LNG station near the SR-105 interchange could close an infrastructure gap along both I-95 and I-295. This station would be close to existing liquefaction plants located to the east of the corridor along SR105.

#### 3.3.3.1 Cost

The cost to achieve “Signage Ready” designation along the I-10 corridor within the Coalition geography is estimated at \$2.5M.

#### 3.3.3.2 Feasibility

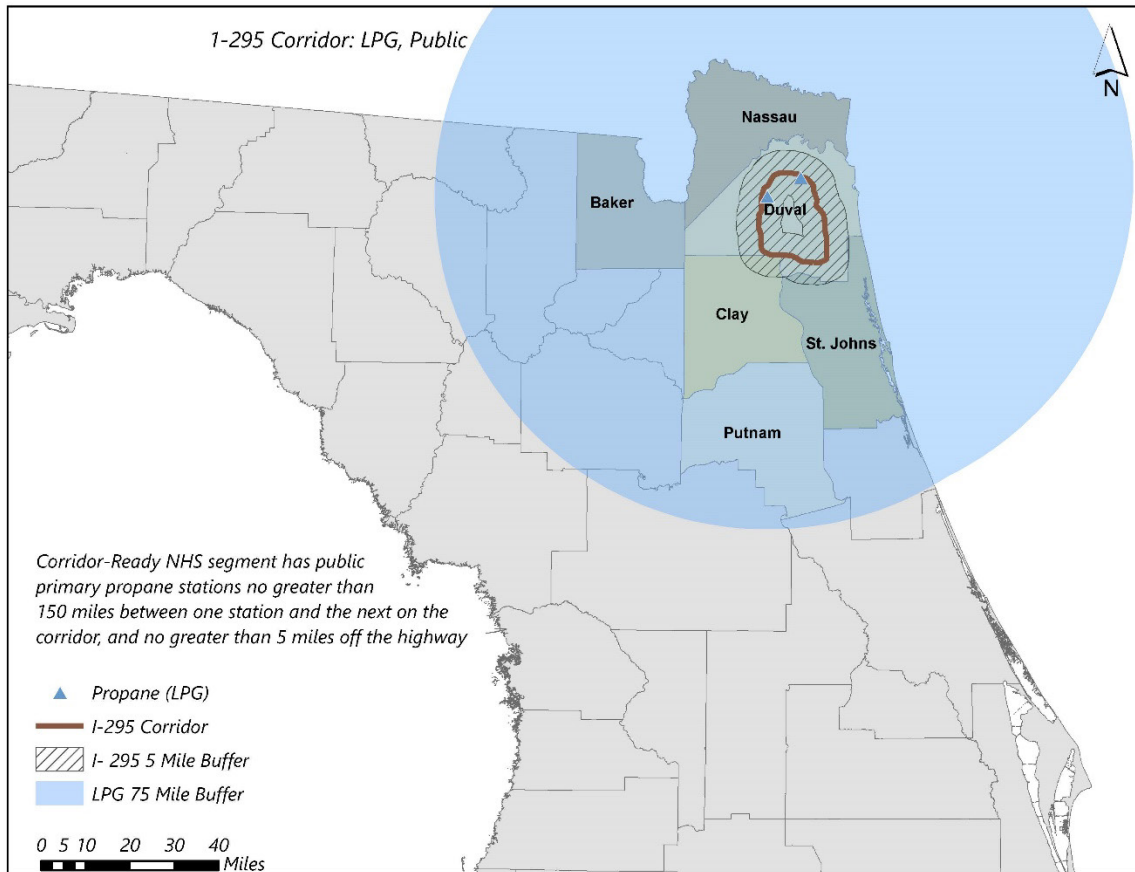
LNG stations are very capital intensive. Both traditional or public / private partnership delivery methods require an “anchor tenant” or otherwise enough demand to justify investment.

The North Florida TPO has yet to provide funding support for LNG infrastructure, although it has participated in LNG projects, including partial funding of an LNG tender car for the Florida East Coast railroad. There are no known public fleets in the vicinity of the identified infrastructure gap that might benefit from a similar funding strategy at this time.

The proximity of major liquefaction plants to I-95 and I-295, both important freight corridors, as well as major seaport terminals along SR105 may provide enough supply and demand for a station developer. However, the Coalition is not aware of any such development plans.

### 3.3.4 LPG

This corridor has been designated "Ready". No Action is necessary.



**FIGURE 14: LPG INFRASTRUCTURE ALONG THE I-295 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

### 3.3.5 Hydrogen

Despite "Pending" designation, no hydrogen infrastructure development is expected in North Florida.

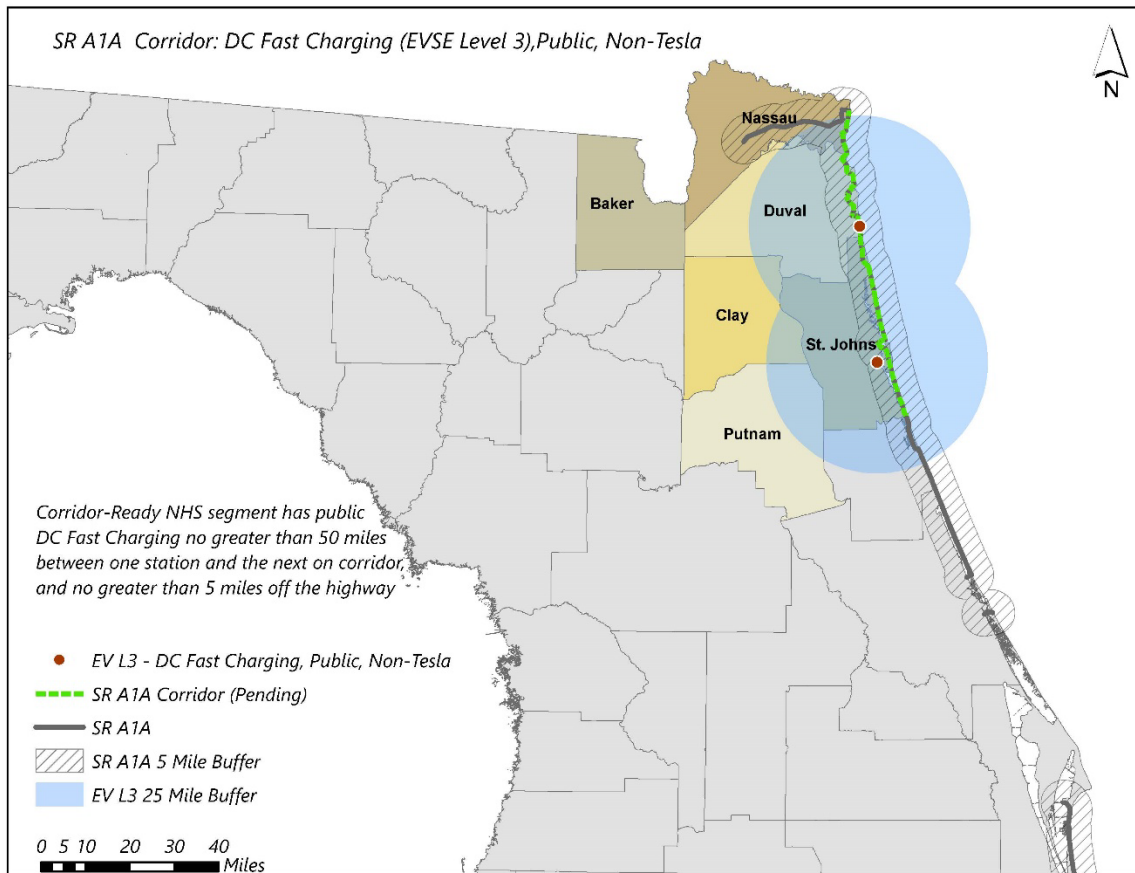
### 3.4 STATE ROAD A1A (SR-A1A)

SR-A1A connects the Port of Fernandina and the City of Fernandina Beach to coastal cities, including Jacksonville Beach and St. Augustine along the length of the state. It currently has no “Signage Ready” designation for any alternative fuel, either in the Coalition geography or in Florida. It is designated “Signage Pending” for EV, CNG, LNG, LPG and hydrogen. Strategic investment in EV, CNG, and LPG fueling infrastructure is required along this corridor to meet FHWA “Signage Ready” criteria within the Coalition geography and support alternative fuel fleets. Given that this corridor is a low-volume freight corridor within the Coalition geography<sup>1</sup>, developing LNG fueling infrastructure is not practical. No development of hydrogen fleets or supporting infrastructure is expected in the region for the foreseeable future.

#### 3.4.1 EV

##### 3.4.1.1 Infrastructure Plan

This corridor has been designated “Signage Ready” from Fernandina to Marineland. There are presently two L3 EVSE along the corridor, one near the Duval County / St. Johns County border, the other in St. Johns County.



**FIGURE 15: EV INFRASTRUCTURE ALONG THE SR-A1A CORRIDOR WITHIN THE COALITION GEOGRAPHY**

<sup>1</sup> Average daily truck traffic along SR-A1A at the Duval County / St. Johns County Border is below 800, compared to over 14,000 along the parallel I-95 corridor.

These two stations meet FHWA for “Signage Ready” from just south of Fernandina Beach to the St. Johns County border. Installing L3 EVSE in Fernandina Beach would meet FHWA criteria along the corridor’s entire length within the Coalition geography.

**3.4.1.2 Cost**

The cost to achieve “Signage Ready” designation along the length of the SR-A1A corridor within the Coalition geography is estimated at \$45,000, based on the cost of one 50kW L3 EVSE, inclusive of materials and installation.

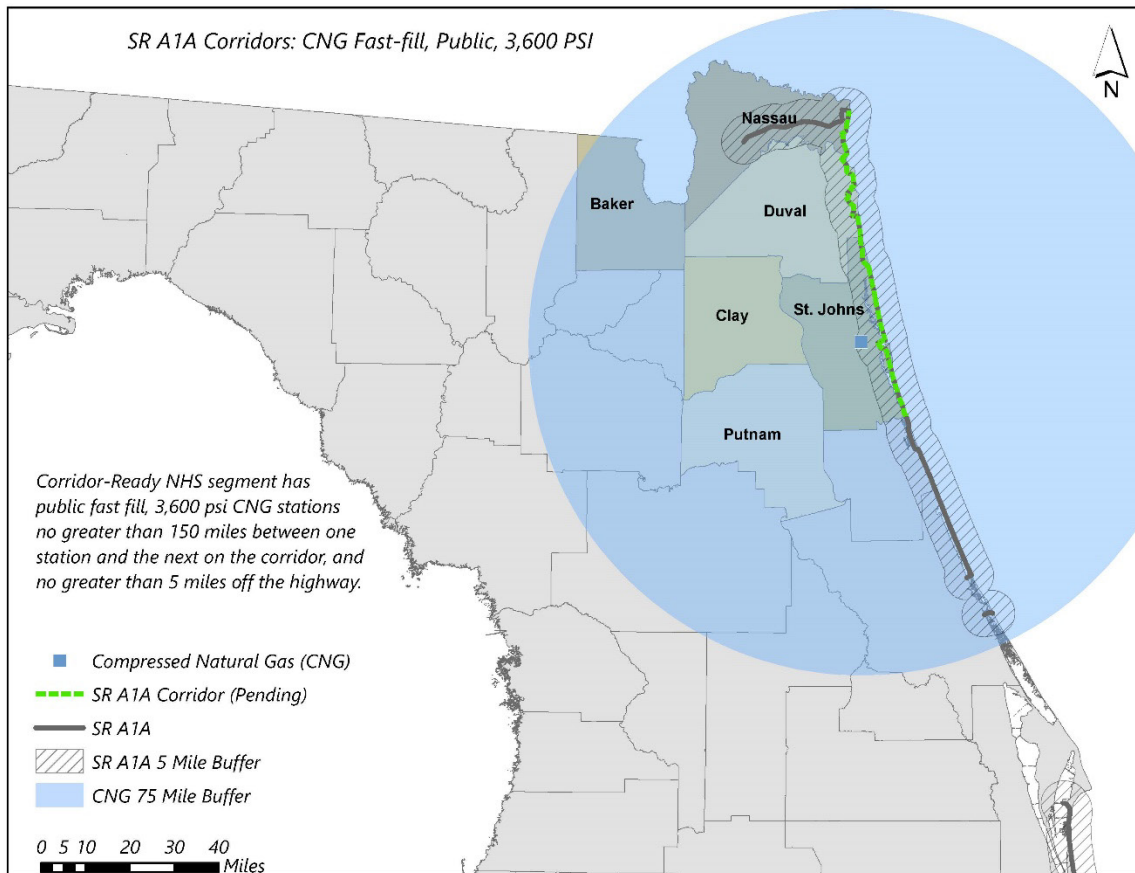
**3.4.1.3 Feasibility**

L3 EVSE is not capital intensive relative to other kinds of fueling infrastructure. Further, the North Florida TPO has funded development of L2 EVSE throughout the region in the past, forging partnerships with private and public entities to host and maintain the infrastructure. In 2019, the North Florida TPO funded L2 EVSE installation at Fernandina Beach in partnership with the City and Florida Public Utilities. A similar partnership could support developing L3 EVSE in the City. Location of L3 EVSE here would also support the US-301 / SR-200 corridor (See US Highway 301 / State Road 200 (US 301 / SR 200) below).

**3.4.2 CNG**

**3.4.2.1 Infrastructure Plan**

Due to a public CNG station operated by St. Johns County, this corridor is designated “Signage Pending.”



**FIGURE 16: CNG INFRASTRUCTURE ALONG THE SR-A1A CORRIDOR WITHIN THE COALITION GEOGRAPHY**

A second station along the corridor is necessary to meet FHWA criteria for “Signage Ready” and support CNG fleets. A strategic location for a station would be on SR-A1A near the I-95 interchange near Yulee. This location was identified as part of a 2018 Clean Fuels Feasibility Study conducted for Nassau County by the North Florida TPO (“Nassau County Clean Fuels Feasibility Study”). This location would also support the US-301 / SR-200 corridor.

#### **3.4.2.2 Cost**

The cost to achieve “Signage Ready” designation along the SR-A1A corridor within the Coalition geography is estimated at \$1.8M, assuming a fast-fill design.

#### **3.4.2.3 Feasibility**

CNG stations are capital intensive. Both traditional or public private partnership delivery methods require an “anchor tenant” or otherwise enough demand to justify investment. While the North Florida TPO has applied CMAQ funding to CNG infrastructure projects in the past, the Nassau County Clean Fuels Feasibility Study concluded that enough public fleet demand did not exist in this area to support developing a CNG station. Private demand would have to be identified to justify development. The Coalition is not presently aware of any such development plans.

### 3.4.3 LNG

#### 3.4.3.1 Infrastructure Plan

This corridor has been designated “Signage Ready” from Fernandina to Marineland. There are presently no LNG fueling stations located along the corridor.

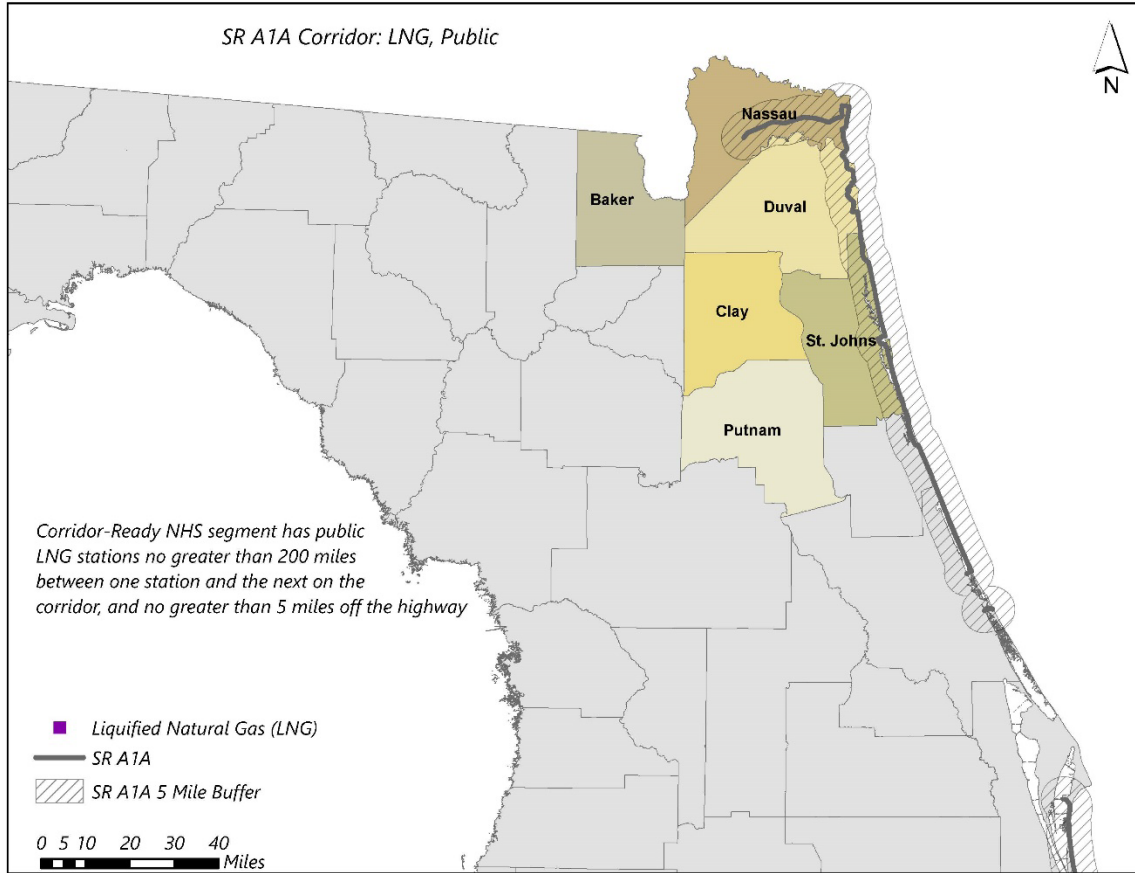


FIGURE 17: LNG INFRASTRUCTURE ALONG THE SR-A1A CORRIDOR WITHIN THE COALITION GEOGRAPHY

Given that this corridor is a low-volume freight corridor within the Coalition geography,<sup>2</sup> developing LNG fueling infrastructure is not practical.

<sup>2</sup> Average daily truck traffic along SR-A1A at the Duval County / St. Johns County border is below 800, compared to over 14,000 along the parallel I-95 corridor.

### 3.4.4 LPG

#### 3.4.4.1 Infrastructure Plan

This corridor has been designated “Signage Ready” from Fernandina to Marineland. There are presently no LPG fueling stations located along the corridor.

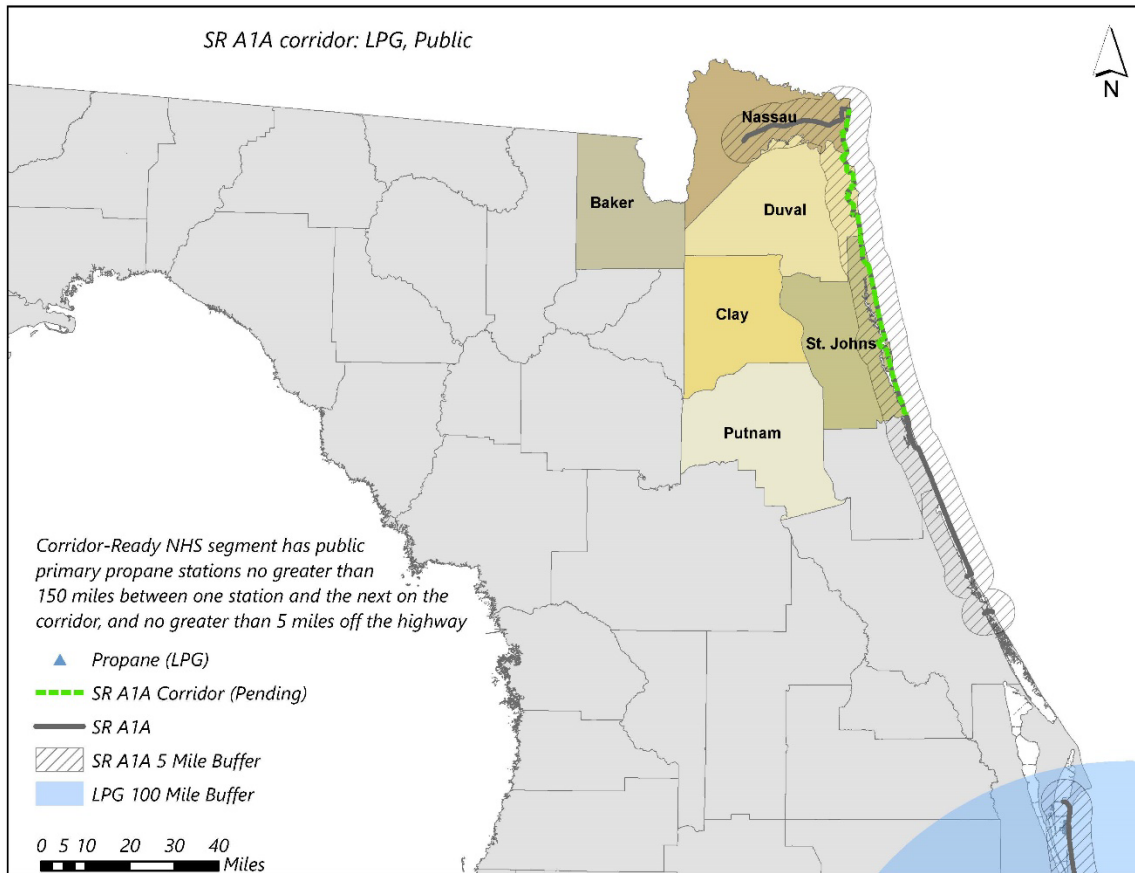


FIGURE 18: LPG INFRASTRUCTURE ALONG THE SR-A1A CORRIDOR WITHIN THE COALITION GEOGRAPHY

Two new LPG stations would be required along this corridor to meet FHWA “Signage Ready” criteria. Two strategic locations are Fernandina Beach and St. Augustine. These communities likely have mid- to light-duty commercial fleets for which LPG would be a cost-effective alternative fuel. A Fernandina Beach LPG station would also support fleets travelling the US-301 / SR-200 corridor.

#### 3.4.4.2 Cost

The cost to achieve “Signage Ready” designation along the SR-A1A corridor within the Coalition geography is estimated at \$100,000 for two stations, inclusive of materials and installation.

#### 3.4.4.3 Feasibility

LPG fueling infrastructure is not capital intensive relative to other kinds of fueling infrastructure. However, the North Florida TPO has not funded developing LPG infrastructure in the region in the past. Further, while LPG fuel-marketers are willing to provide up-front capital investment for infrastructure supporting relatively small fleets, these stations are often semi-private, accessible only to fleets with a contractual relationship with the LPG marketer. Developing infrastructure near Fernandina Beach and St. Augustine

would entail identifying suitable fleets, partnership with a fuel-marketers and negotiating circumstances under which public access to the infrastructure might be acceptable to the parties. Currently, there is at least one LPG powered fleet, Old Town Trolley, in St. Augustine. However, the fueling infrastructure is private. At present, the Coalition is not aware of any public LPG infrastructure development plans in St. Augustine or Fernandina Beach.

### 3.4.5 Hydrogen

Despite "Pending" designation, no hydrogen infrastructure development is expected in North Florida.



### 3.5 STATE ROAD 105 (SR-105)

SR-105 from I-95 to SR-A1A near Naval Station Mayport is an NHS STRAHNET Connector serving the Dames Point and Blount Island Marine Terminals. This segment is characterized by liquefied natural-gas (LNG) powered shipping operations that are unique in the world and a model for alternative fuel deployment. Two LNG liquefaction plants and two marine bunkering facilities along this route serve LNG-powered ships. LNG is exported domestically and internationally from these facilities.

The corridor is currently designated “Signage Pending” For EV, CNG, LNG, LPG and hydrogen. Strategic investment in EV and LNG fueling infrastructure is required along this corridor to meet FHWA “Signage Ready” criteria and support alternative fuel fleets. Currently one CNG and one LPG station is along the corridor. Due to its short length and lack of synergistic opportunities at its western and eastern termini, new CNG or LPG stations are not practical. No development of hydrogen fleets or supporting infrastructure is expected in the region for the foreseeable future.

#### 3.5.1 EV

##### 3.5.1.1 Infrastructure Plan

This corridor is currently designed “Signage Pending” due to an EV charging station along I-95 within 5 miles of SR-105.

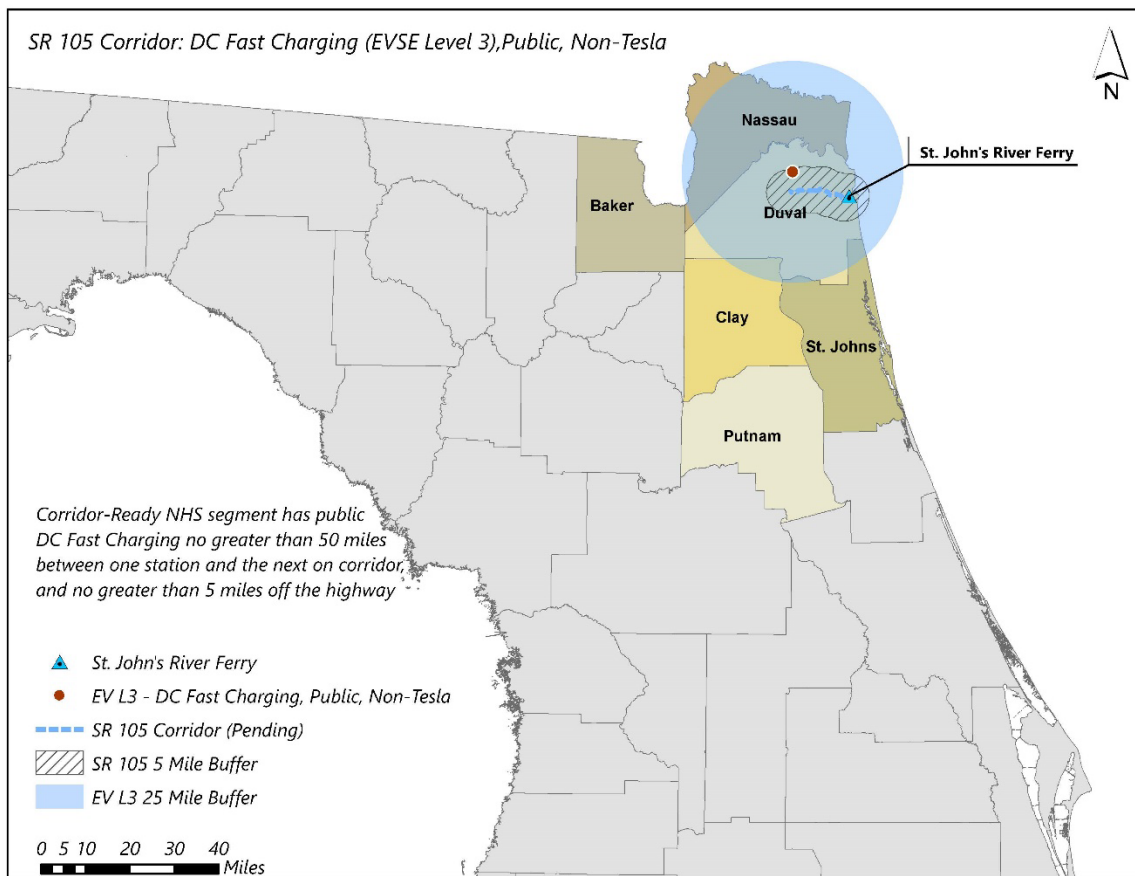


FIGURE 19: EV INFRASTRUCTURE ALONG THE SR-105 CORRIDOR WITHIN THE COALITION GEOGRAPHY

Installing L3 EVSE at the Ft. George Ferry Terminal of the St. Johns River Ferry at the eastern terminus of the corridor would meet FHWA criteria for “Signage Ready.”

**3.5.1.2 Cost**

The cost to achieve “Signage Ready” designation along the SR-105 corridor within the Coalition geography is estimated at \$45,000, based on the cost of one 50kW L3 EVSE, inclusive of materials and installation.

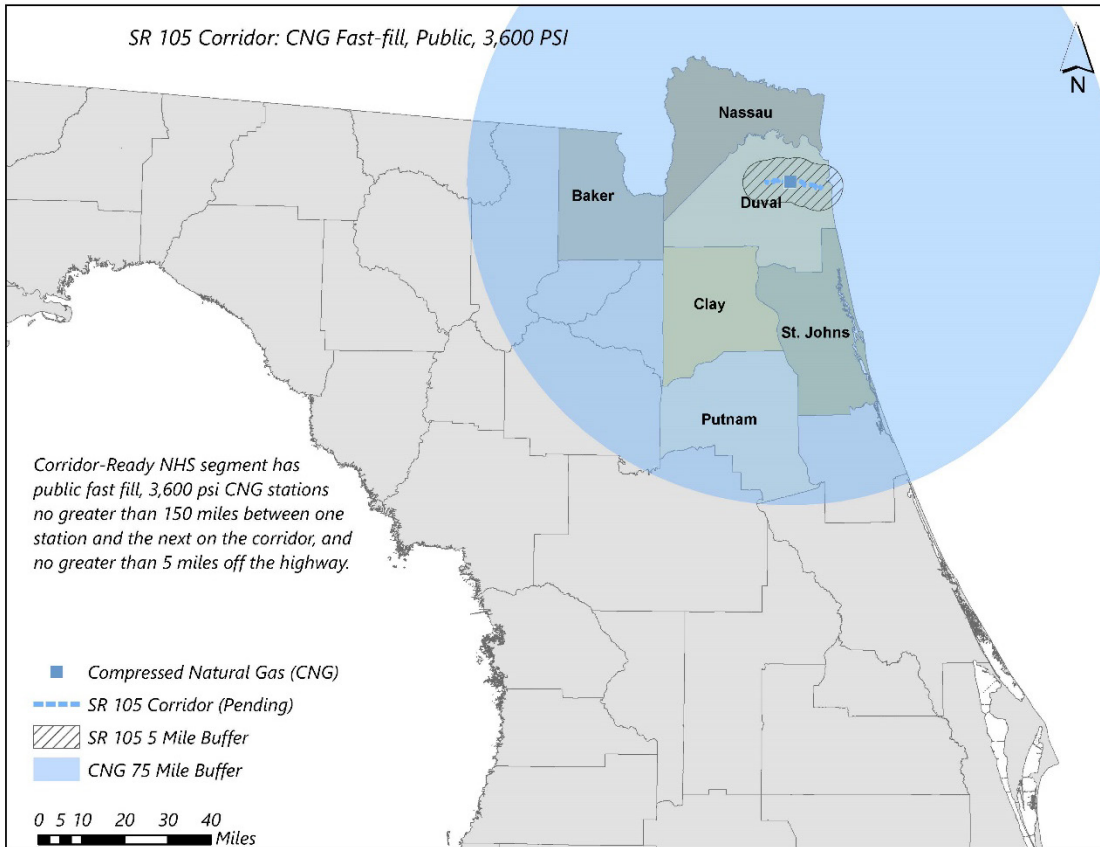
**3.5.1.1 Feasibility**

L3 EVSE is not capital intensive relative to other kinds of fueling infrastructure. Further, the North Florida TPO has funded developing L2 EVSE throughout the region in the past, forging partnerships with private and public entities to host and maintain the infrastructure. A partnership with the JTA, which operates the St. Johns River Ferry, could support developing L3 EVSE at the Ft. George Terminal. However, current ferry ridership and traffic volumes along the corridor,<sup>3</sup> may not justify investment in L3 EVSE.

**3.5.2 CNG**

**3.5.2.1 Infrastructure Plan**

There is currently one public CNG fueling station along SR-105. Accordingly, it is designated as “Signage Ready” by the FHWA.



**FIGURE 20: CNG INFRASTRUCTURE ALONG THE SR-105 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

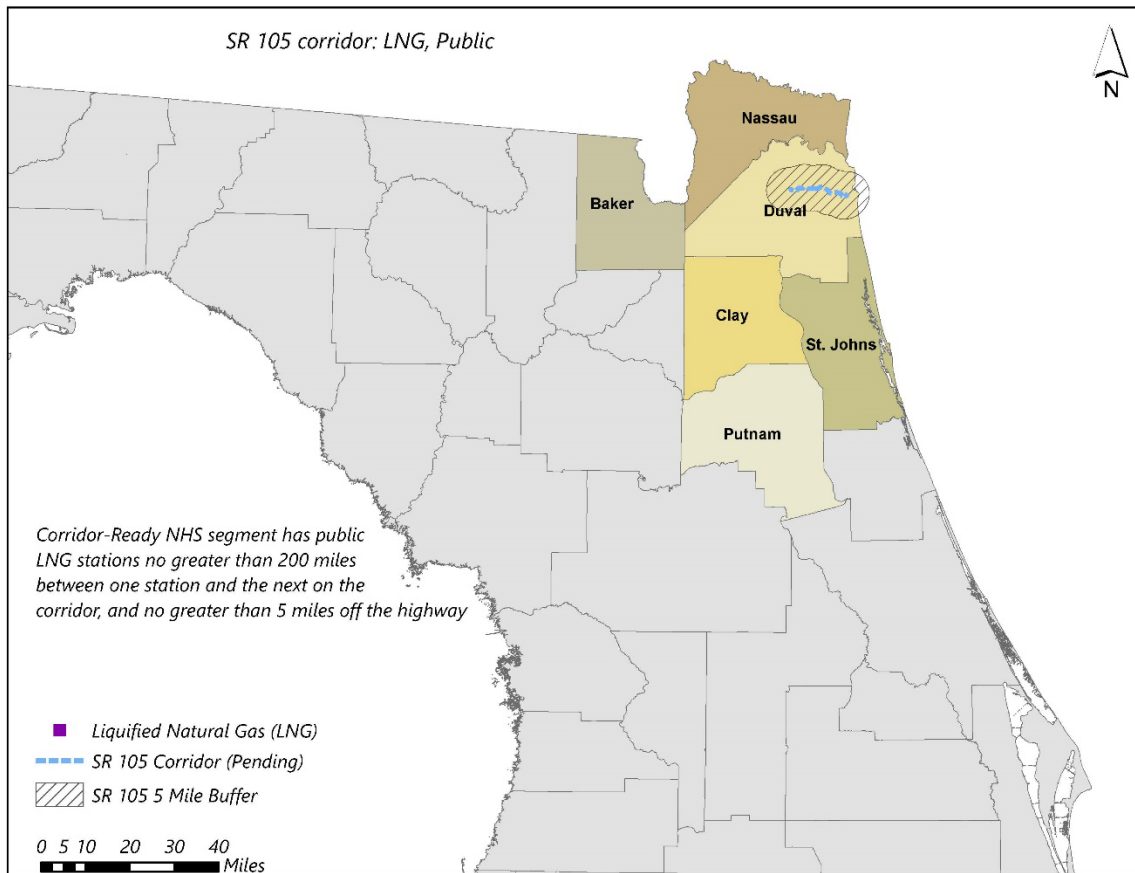
<sup>3</sup> AADT north and south of the St. Johns River Ferry route are between 5,500 and 6,000.

Due to its short length and lack of synergistic opportunities at its western and eastern termini, a second CNG station is not practical.

### 3.5.3 LNG

#### 3.5.3.1 Infrastructure Plan

This corridor is currently designated “Signage Pending.” There are no LNG stations located along the corridor.



**FIGURE 21: LNG INFRASTRUCTURE ALONG THE SR-105 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

As noted above (See Interstate 95 (I-95) and Interstate 295 (I-295)) a strategic location for a new LNG station would be along this corridor within five miles of both I-95 and I-295. However, locating a station here would not meet FHWA “Signage Ready” criteria, since a minimum of two stations are required along the corridor.

#### 3.5.3.2 Cost

The cost to achieve “Signage Ready” designation along the SR-105 corridor within the Coalition geography is estimated at \$2.5M. However, one station would also serve I-95 and I-295.

#### 3.5.3.3 Feasibility

LNG stations are very capital intensive. Both traditional or public private partnership delivery methods require an “anchor tenant” or otherwise enough demand to justify investment.

The North Florida TPO has yet to provide funding support for LNG infrastructure, although it has participated in LNG projects, including partial funding of an LNG tender car for the Florida East Coast railroad. There are no known public fleets in the vicinity of the identified infrastructure gap that might benefit from a similar funding strategy at this time.

The proximity of major liquefaction plants to I-95 and I-295, both important freight corridors, as well as major seaport terminals along SR105 may provide enough supply and demand for a station developer. However, the Coalition is not aware of any such development plans.

### 3.5.4 LPG

#### 3.5.4.1 Infrastructure Plan

There is currently one public LNG fueling station along SR-105. Accordingly, it is designated as “Signage Ready” by the FHWA.

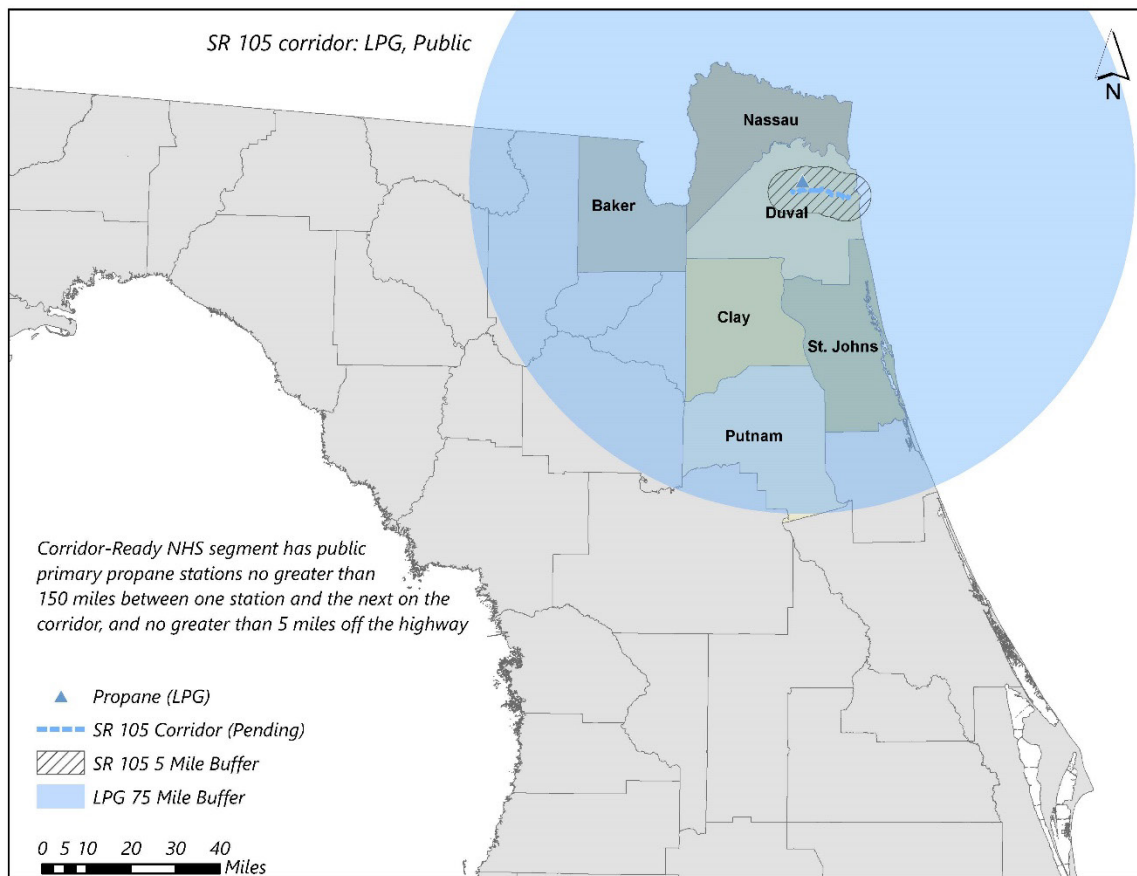


FIGURE 22: LPG INFRASTRUCTURE ALONG THE SR-105 CORRIDOR WITHIN THE COALITION GEOGRAPHY

Due to its short length and lack of synergistic opportunities at its western and eastern termini, a second LNG station is not practical.

### 3.5.5 Hydrogen

Despite “Pending” designation, no hydrogen infrastructure development is expected in North Florida.

### 3.6 US-17

The US 17 corridor is a major north-south connector through the Coalition boundary. The US 17 segment begins in Duval County at the intersection of US 17 and I-10 and runs south through Clay and Putnam counties and ends in the City of Palatka within Putnam County. It is an NHS STRAHNET Connector serving Naval Air Station Jacksonville to the intersection with I-295. Beyond this intersection, the US 17 corridor connects to major metro areas in the region like Orange Park, Green Cove Springs and Palatka. Reynolds Park is a multimodal port, rail and highway hub located along the US 17 corridor in Green Cove Springs.

The corridor currently has no FHWA Alternative Fuel Corridor designation, despite inclusion in the North Florida TPO / Coalition application in 2016. It is presently unknown if FHWA would consider designating this corridor in the future. Nevertheless, the corridor currently meets FHWA "Signage Ready" criteria for CNG. Strategic investment in EV and LPG fueling infrastructure is required to meet these criteria. It is not practical to develop an additional LNG station along this corridor; however, an LNG station in the Orlando area would likely result in it meeting FHWA criteria. No development of hydrogen fleets or supporting infrastructure is expected in the region for the foreseeable future.

#### 3.6.1 EV

##### 3.6.1.1 Infrastructure Plan

This corridor is not designated by the FHWA. There are three L3 EVSE along this corridor in Duval County. There are several L3 EVSE south of the Coalition geography in Volusia, Seminole and Orange counties.

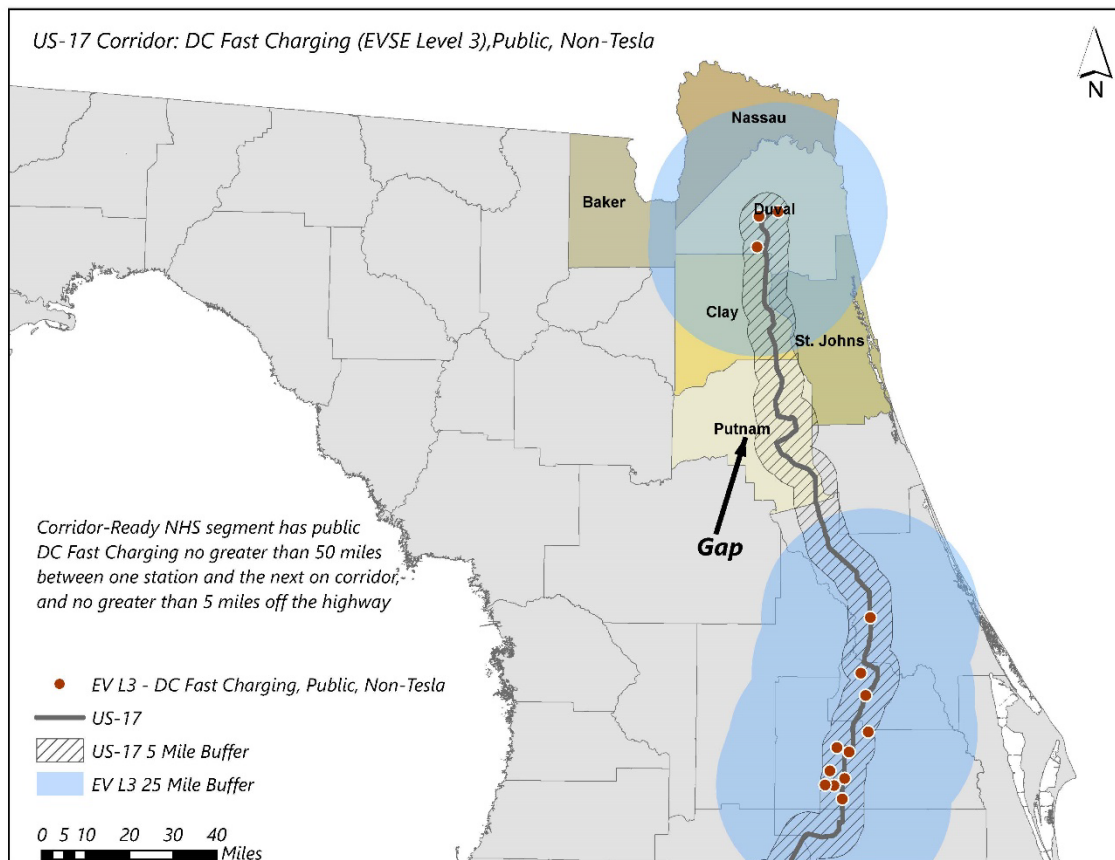


FIGURE 23: EV INFRASTRUCTURE ALONG THE US-17 CORRIDOR WITHIN THE COALITION GEOGRAPHY

A gap exists in Putnam County. Installing L3 EVSE in Palatka, the County seat would fill this gap.

**3.6.1.2 Cost**

The cost to achieve “Signage Ready” designation along the SR-105 corridor within the Coalition geography is estimated at \$45,000, based on the cost of one 50kW L3 EVSE, inclusive of materials and installation.

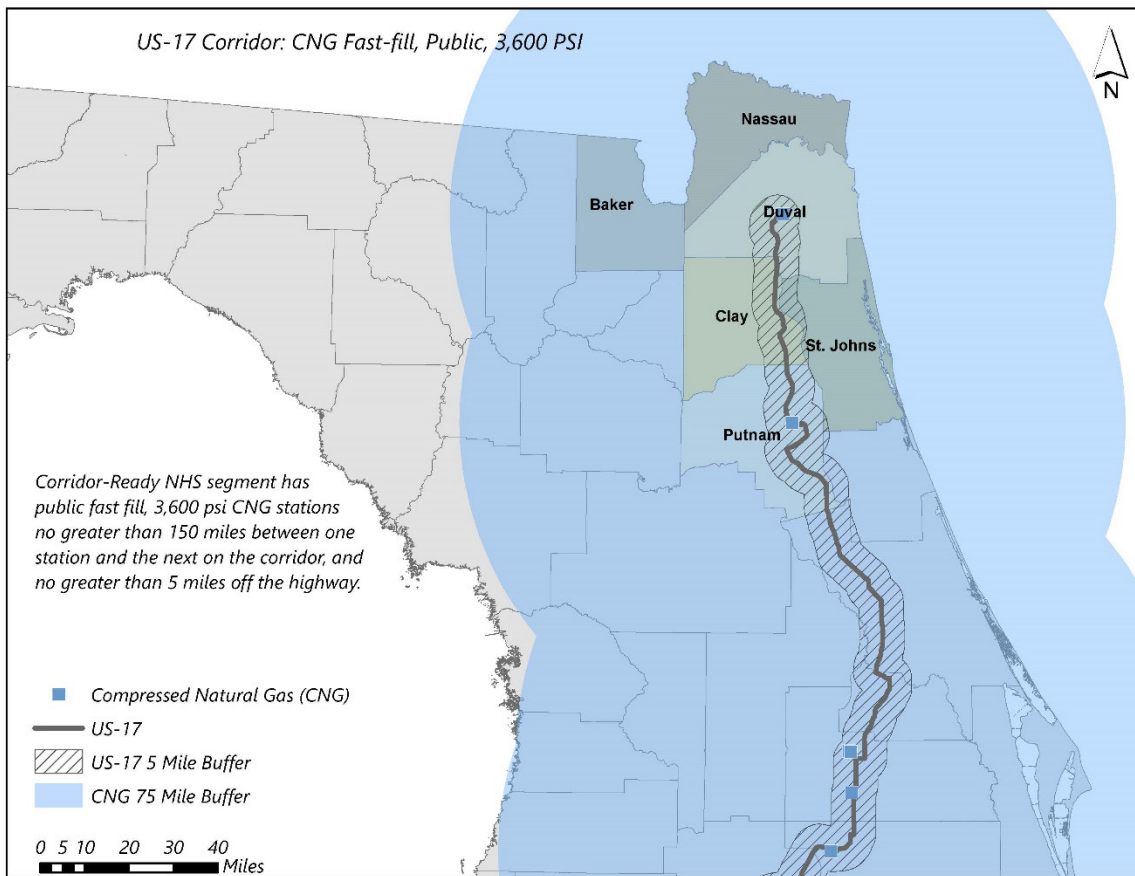
**3.6.1.3 Feasibility**

L3 EVSE is not capital intensive relative to other kinds of fueling infrastructure. Further, the North Florida TPO has funded developing L2 EVSE throughout the region in the past, forging partnerships with private and public entities to host and maintain the infrastructure. A partnership with the City of Palatka or Putnam County could support developing L3 EVSE. However, enough demand for L3 EVSE may not yet exist in the area.

**3.6.2 CNG**

**3.6.2.1 Infrastructure Plan**

This corridor is not designated by the FHWA. However, there are several CNG stations along its length, including two within the Coalition geography.



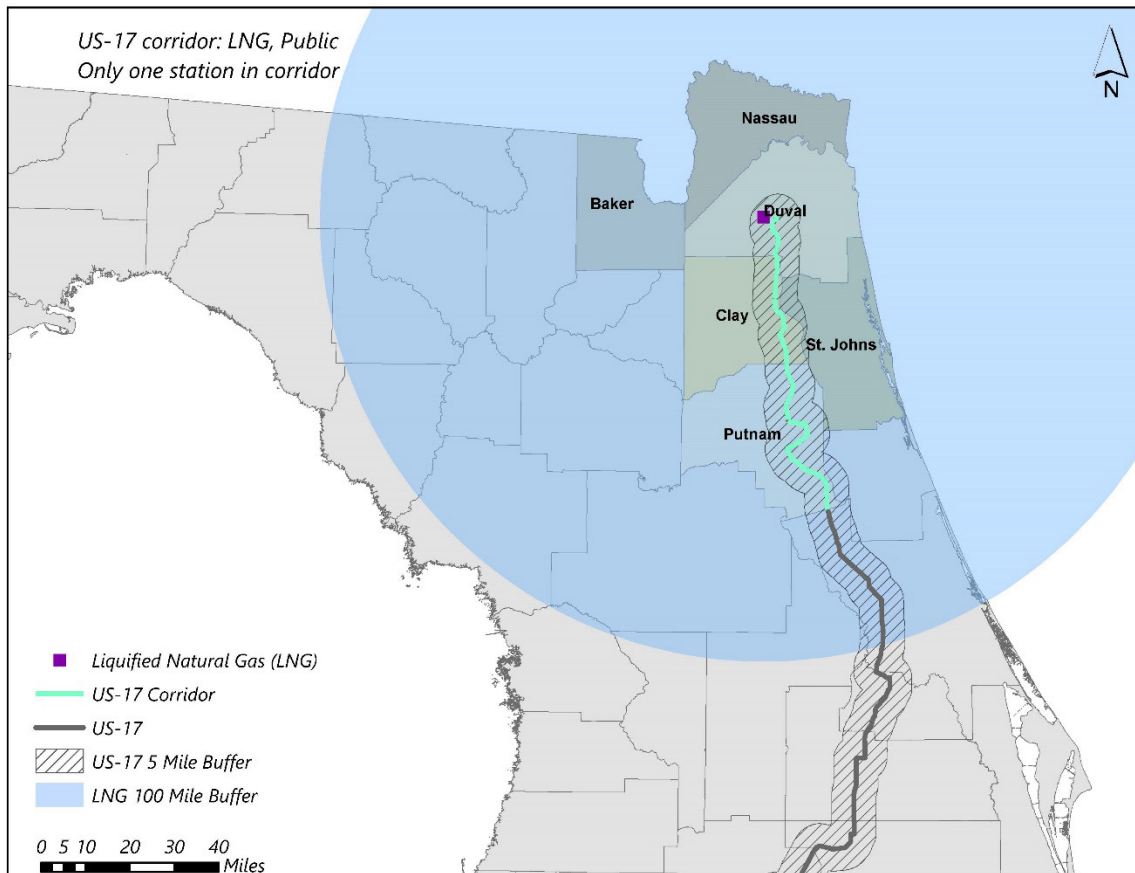
**FIGURE 24: CNG INFRASTRUCTURE ALONG THE US-17 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

This corridor currently meets FHWA criteria for “Signage Ready” throughout its length within the Coalition geography and beyond (Figure 23). No further infrastructure investment is required.

### 3.6.3 LNG

#### 3.6.3.1 Infrastructure Plan

This corridor is not designated by the FHWA. However, there is one LNG station west of downtown Jacksonville.



**FIGURE 25: LNG INFRASTRUCTURE ALONG THE US-17 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

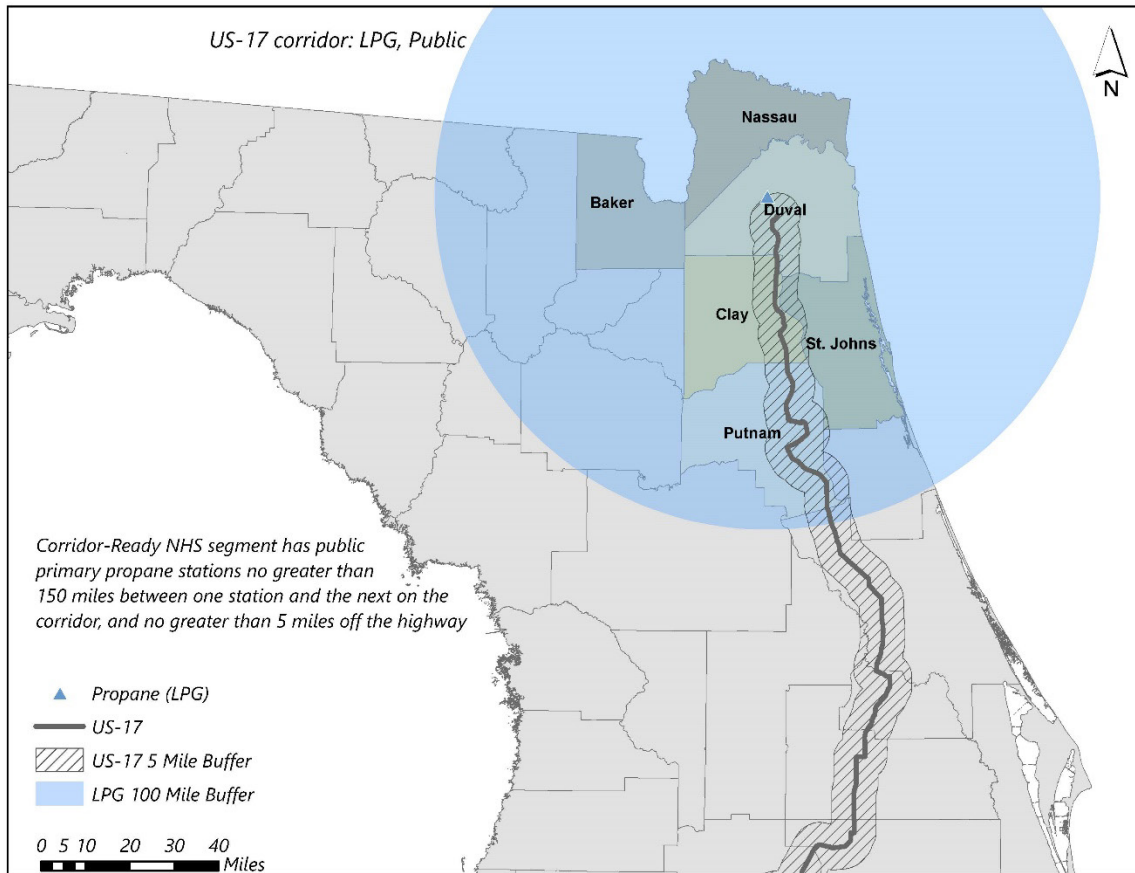
To meet FHWA “Signage Ready” criteria another LNG station is required along US-17. However, daily truck traffic in Clay or Putnam County is likely not enough<sup>4</sup> to attract development within the Coalition boundary. Developing of a station in Orlando would facilitate designating the corridor from there to Jacksonville. Nevertheless, the Coalition is not aware of any development plans within its geography or beyond. It has limited influence on transportation planning in the Orlando area.

<sup>4</sup> Truck Annual Average Daily Vehicle Trips (AADT) is about 1,000 between Green Cove Springs (Clay County) and Palatka (Putnam County). It is close to 7,000 along the parallel section of I-95.

### 3.6.5 LPG

#### 3.6.5.1 Infrastructure Plan

This corridor is not designated by the FHWA. However, there is one LPG station north of downtown Jacksonville.



**FIGURE 26: LPG INFRASTRUCTURE ALONG THE US-17 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

A second LPG station along this corridor would meet FHWA “Signage Ready” criteria. Strategic locations include Orange Park or Green Cove Springs in Clay County or Palatka in Putnam County. Each of these communities likely have mid- to light-duty commercial fleets for which LPG would be a cost-effective alternative fuel.

#### 3.6.5.2 Cost

The cost to achieve “Signage Ready” designation along the SR-A1A corridor within the Coalition geography is estimated at \$50,000, inclusive of materials and installation.

#### 3.6.5.3 Feasibility

LPG fueling infrastructure is not capital intensive relative to other kinds of fueling infrastructure. However, the North Florida TPO has not funded development of LPG infrastructure in the region in the past. Further, while LPG fuel-marketers are willing to provide up-front capital investment for infrastructure supporting relatively small fleets, these stations are often semi-private, accessible only to fleets with a contractual relationship with the LPG marketer. Developing infrastructure near Orange Park, Green Cove Springs or



Palatka would entail identifying suitable fleets, partnering with fuel-marketers and negotiating circumstances under which public access to the infrastructure might be acceptable to the parties. At present, the Coalition is not aware of any public LPG infrastructure development plans in these locations.

### 3.6.6 Hydrogen

Despite "Pending" designation, no hydrogen infrastructure development is expected in North Florida.

### 3.7 US HIGHWAY 301 / STATE ROAD 200 (US 301 / SR 200)

The US 301 / SR 200 corridor begins at the Clay County line. It runs through Duval County to the intersection with US 1. It continues as FL 200 through Nassau County, ending at the intersection with FL A1A in Fernandina Beach. It is a major freight connector within the Corridor boundary and provides links to metro areas in central and southwest Florida including Gainesville and Tampa.

The corridor currently has no FHWA Alternative Fuel Corridor designation, despite inclusion in the North Florida TPO / Coalition application in 2016. It is presently unknown if FHWA would consider designating this corridor in the future. With no alternative fuel infrastructure along its length within the Coalition territory, the corridor does not meet FHWA "Signage Ready" criteria for EV, CNG, LNG, LPG or hydrogen. Strategic investment in CNG, LNG and LPG fueling infrastructure is required to meet these criteria. Previously identified EV investment along the I-10 and SR-A1A corridors would also result in the US 301 / SR 200 corridor meeting FHWA criteria. No development of hydrogen fleets or supporting infrastructure is expected in the region for the foreseeable future.

#### 3.7.1 EV

##### 3.7.1.1 Infrastructure Plan

This corridor is not designated by the FHWA. There are no L3 EVSE along this corridor within the Coalition geography. There are two L3 EVSE south of the Coalition geography in Sumter County and additional L3 EVSE in Hillsborough County.

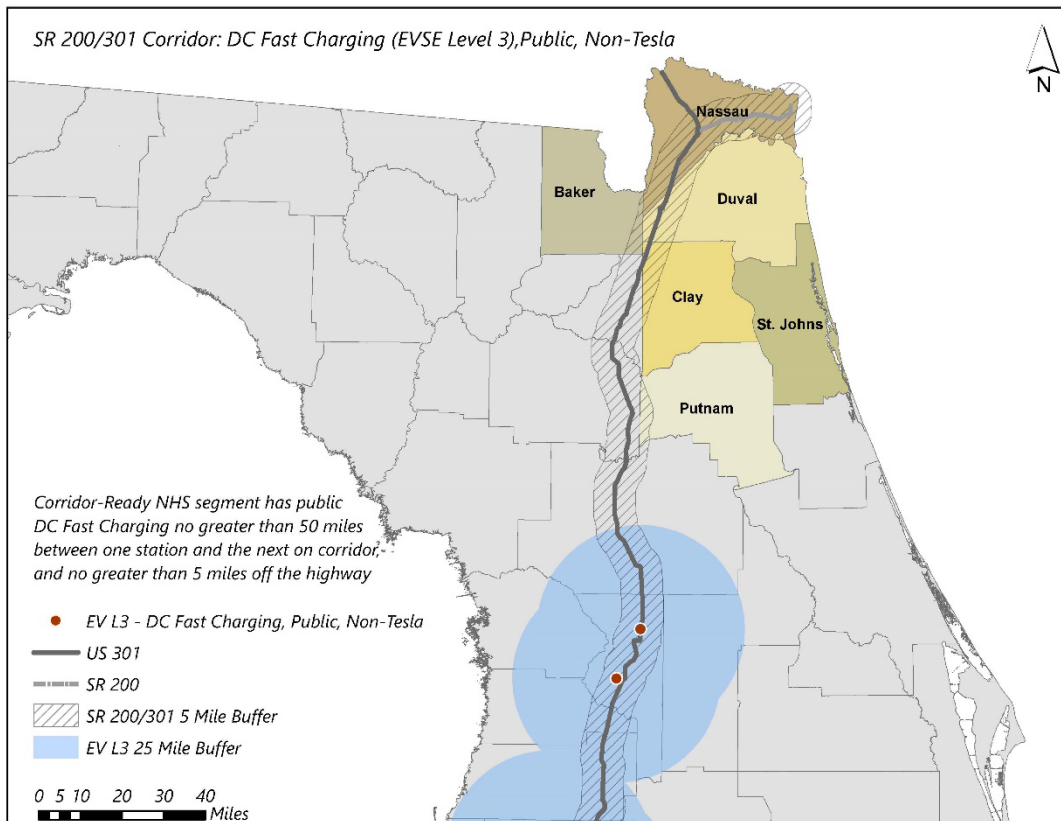


FIGURE 27: EV INFRASTRUCTURE ALONG THE US-301 / SR-200 CORRIDOR WITHIN THE COALITION GEOGRAPHY

At least two L3 EVSE are required to meet “Signage Ready” criteria within the Coalition geography. Additional stations would be needed to meet the criteria along the length of the corridor from Fernandina Beach to Tampa.

New stations at the US-301 and I-10 interchange near Baldwin (See Interstate 10 (I-10)) and US-301 / SR 200 and SR-A1A near Fernandina Beach (See State Road A1A (SR-A1A)) have been discussed above. If these stations are developed, no further infrastructure would be required along this corridor to meet minimum requirements for “Signage Ready” corridors.

#### **3.7.1.2 Cost**

The cost to achieve “Signage Ready” designation along the US-301 / SR-200 corridor within the Coalition geography is estimated at \$90,000, based on the cost of two 50kW L3 EVSE, inclusive of materials and installation. However, one station would also serve I-10 and US-301 / SR-200 and one station would serve SR-A1A and US-301 / SR-200.

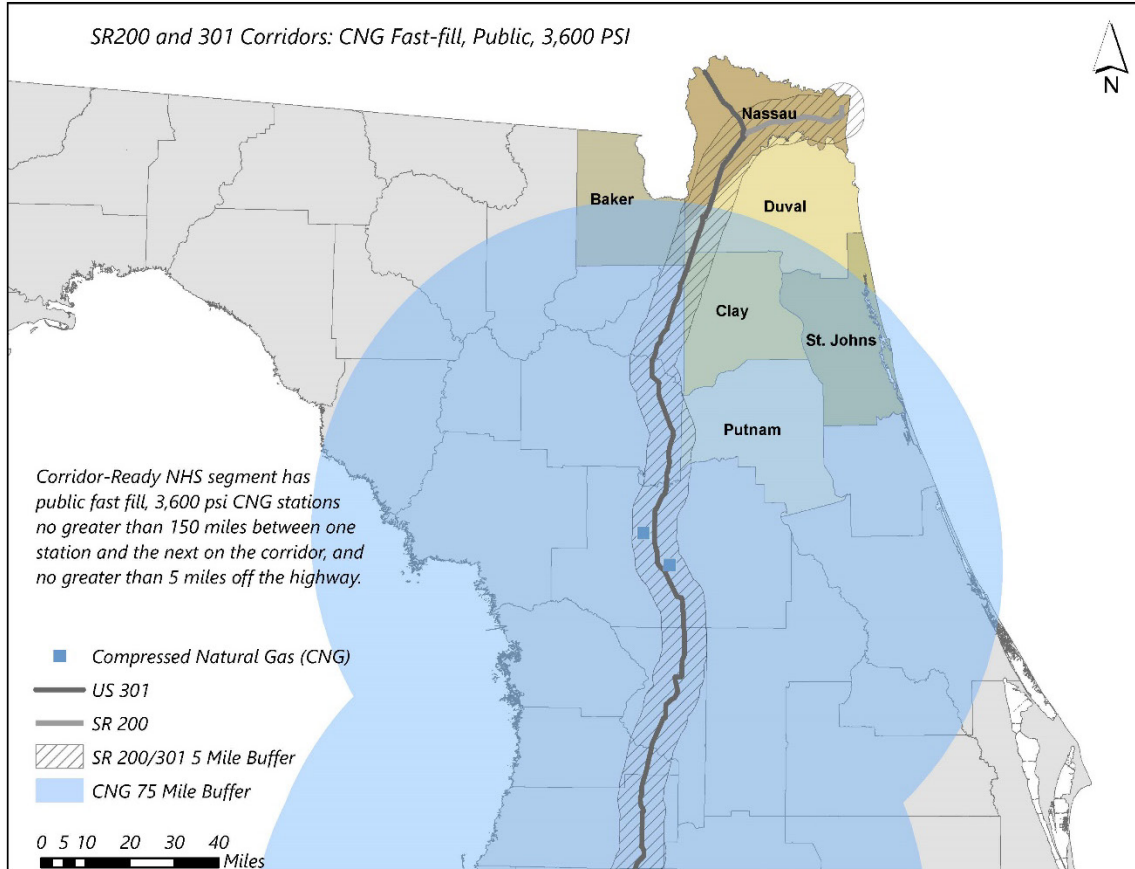
#### **3.7.1.3 Feasibility**

L3 EVSE is not capital intensive relative to other kinds of fueling infrastructure. Further, the North Florida TPO has funded developing L2 EVSE throughout the region in the past, forging partnerships with private and public entities to host and maintain the infrastructure. A partnership with the City of Jacksonville, JEA (the municipal utility serving the region), the Town of Baldwin or one of the other public landowners in the vicinity could support developing L3 EVSE along the I-10 corridor near US-301 / SR-200/200 in Baldwin (Figure 2). In 2019, the North Florida TPO funded L2 EVSE installation at Fernandina Beach in partnership with the City and Florida Public Utilities. A similar partnership could support developing L3 EVSE in the City near the US-301 / SR-200 corridor.

### 3.7.2 CNG

#### 3.7.2.1 Infrastructure Plan

This corridor is not designated by the FHWA. There are no L3 EVSE along this corridor within the Coalition geography. There are two CNG stations south of the Coalition geography in Marion County and additional L3 EVSE in Hillsborough County.



**FIGURE 28: CNG INFRASTRUCTURE ALONG THE US-301 / SR-200 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

Given the Marion County infrastructure, only one new CNG station is required within the Coalition geography to meet “Signage Ready” criteria. A strategic location might include US-301 at I-10 near Baldwin. (See Interstate 10 (I-10)).

#### 3.7.2.2 Cost

The cost to achieve “Signage Ready” designation along the US-301 / SR-200 corridor within the Coalition geography is estimated at \$1.8M, assuming a fast-fill design. However, one station would also serve I-10 and US-301 / SR-200 if located near Baldwin.

#### 3.7.2.1 Feasibility

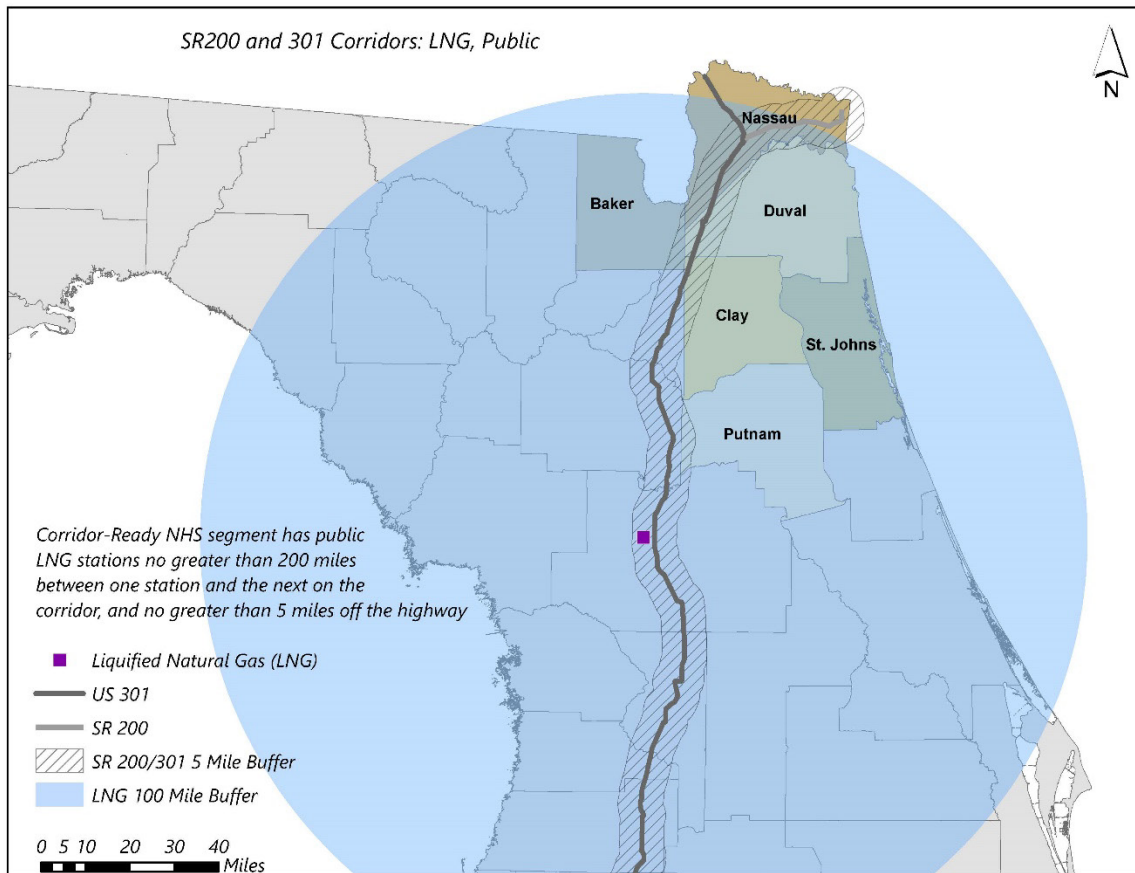
CNG stations are capital intensive. Both traditional or public private partnership delivery methods require an “anchor tenant” or otherwise enough demand to justify investment. Truck AADT in this area are high along I-10 (more than 11,000) and US-301 (more than 4,000).

The North Florida TPO has applied CMAQ funding to CNG infrastructure projects in the past, including public and private CNG fueling stations at the Jacksonville Transportation Authority’s operations campus near downtown Jacksonville. There are no known public fleets in the vicinity of the identified infrastructure gap (e.g. the town Baldwin) that might benefit from a similar funding strategy.

### 3.7.3 LNG

#### 3.7.3.1 Infrastructure Plan

This corridor is not designated by the FHWA. There are no LNG stations along this corridor within the Coalition geography. There is an LNG station south of the Coalition geography in Marion County.



**FIGURE 29: LNG INFRASTRUCTURE ALONG THE US-301 / SR-200 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

Given the Marion County station, additional LNG infrastructure is required in the Coalition territory to meet “Signage Ready” criteria. A strategic location might include US-301 at I-10 near Baldwin. However, there is an existing LNG only 13 miles away at I-10 and Lane Avenue. Another possibility is SR-200 at I-95.

#### 3.7.3.2 Cost

The cost to achieve “Signage Ready” designation along the US-301 / SR-200 corridor within the Coalition geography is estimated at \$2.5M.

**3.7.3.3 Feasibility**

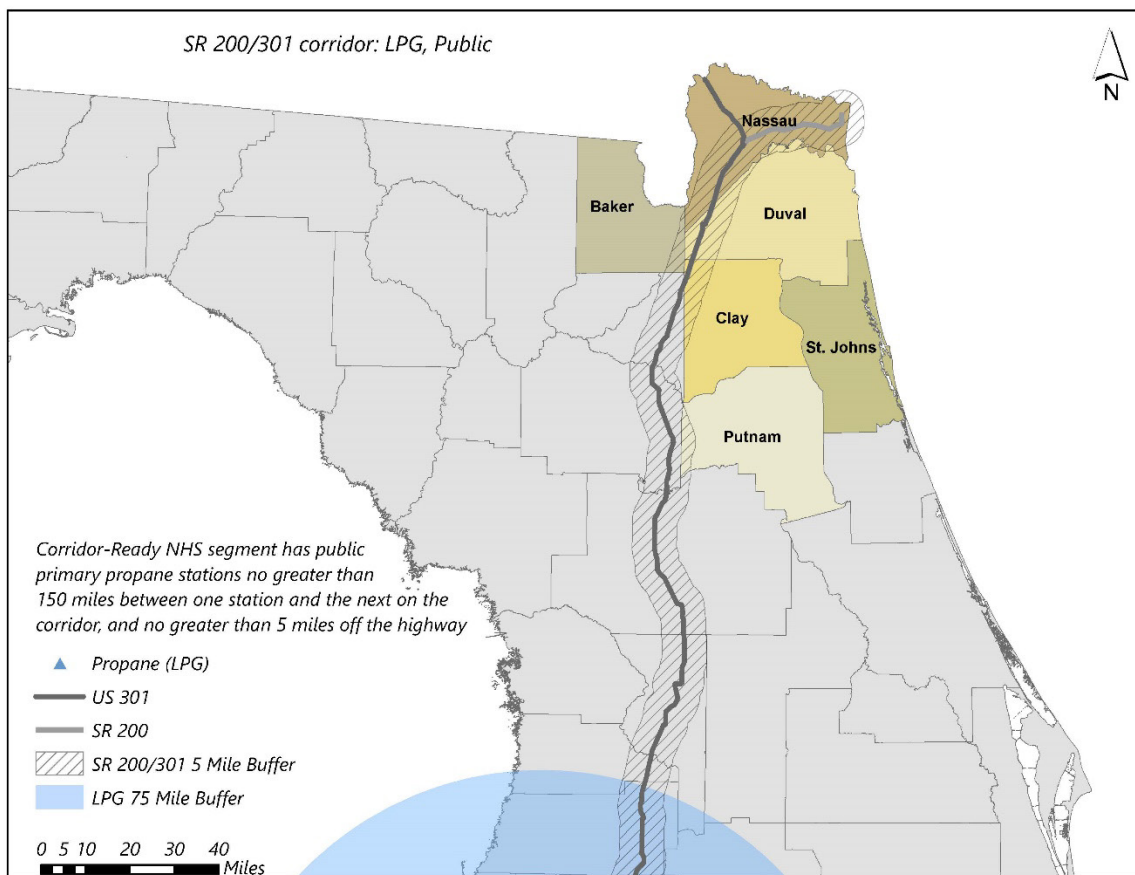
LNG stations are capital intensive. Both traditional or public private partnership delivery methods require an “anchor tenant” or otherwise enough demand to justify investment. Truck AADT near Baldwin are high along I-10 (more than 11,000) and US-301 (more than 4,000). However, as noted above, there is already an LNG station nearby. Truck AADT near I-95 and SR-200 are about 10,000 and 2,000, respectively.

The North Florida TPO has yet to provide funding support for LNG infrastructure, although it has participated in LNG projects, including partial funding of an LNG tender car for the Florida East Coast railroad. There are no known public fleets in the vicinity of the identified infrastructure gap (e.g. the Towns of Baldwin and Yulee) that might benefit from a similar funding strategy at this time. Large private fleets are in the area. However, the Coalition is not aware of any development plans.

**3.7.4 LPG**

**3.7.4.1 Infrastructure Plan**

This corridor is not designated by the FHWA. There are no LPG stations along this corridor within the Coalition geography.



**FIGURE 30: LPG INFRASTRUCTURE ALONG THE US-301 / SR-200 CORRIDOR WITHIN THE COALITION GEOGRAPHY**

At least two LPG stations with the Coalition geography are required to meet “Signage Ready” criteria. Additional stations south of this geography would be required to extend designation to the Tampa area.

One of the stations could be located near Fernandina Beach. This station would also serve the SR-A1A corridor (See State Road A1A (SR-A1A)). Another could be located at SR-300 and I-10 near Baldwin (See I-10).

#### **3.7.4.2 Cost**

The cost to achieve “Signage Ready” designation along the US-301 / SR-200 corridor within the Coalition geography is estimated at \$100,000 for two stations, inclusive of materials and installation. However, these two stations could be located to serve the I-10 and SR-A1A Corridors in addition to US-301 / SR-200.

#### **3.7.4.3 Feasibility**

LPG fueling infrastructure is not capital intensive relative to other kinds of fueling infrastructure. However, the North Florida TPO has not funded developing LPG infrastructure in the region in the past. Further, while LPG fuel-marketers are willing to provide up-front capital investment for infrastructure supporting relatively small fleets, these stations are often semi-private, accessible only to fleets with a contractual relationship with the LPG marketer. Developing infrastructure near I-10 and US-301 / SR-200 and Fernandina Beach would entail identifying a suitable fleet, partnership with a fuel-marketer and negotiating circumstances under which public access to the infrastructure might be acceptable to the parties. At present, the Coalition is not aware of any such development plans at this location.

### **3.7.5 Hydrogen**

Despite “Pending” designation, no hydrogen infrastructure development is expected in North Florida.