

**Lee County MPO Rail Feasibility Study
Contract 2012-001**



Technical Report

Assessment of Existing and Future Freight Issues

July 24, 2013

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1. Report Summary

This report evaluates various issues relative to the freight rail service that the Seminole Gulf Railway (SGLR) currently provides through Lee County into northern Collier County. The condition of the existing rail corridor and current and future freight traffic levels are addressed. The SGLR rail corridor extends approximately 79 miles from a connection with CSX Transportation (CSXT) in Arcadia through Desoto, Charlotte, and Lee Counties to the end of track in northern Collier County. Approximately 37.5 miles of the route are located in Lee and northern Collier County. SGLR leases the corridor from CSXT who still owns the right-of-way.

Members of the project team met with Mr. Bruce Fay, President of the SGLR, on October 12, 2012 to discuss this project and to obtain information relative to SGLR operations and infrastructure. Team members also participated in a hi-rail inspection trip with SGLR staff on November 27, 2012. Some of the information in this report was obtained from the meeting discussion and observations during the hi-rail trip. Discussion is also included of freight issues that have been identified in various other reports that have been done previously.

This freight rail assessment report addresses several key questions regarding existing and future rail freight issues and opportunities as follows:

1.1 Existing Rail Freight Service in Lee County

Due to its location close to the southern tip of the Florida peninsula, Lee County's freight movements are led by origin and destination traffic, though some freight is through-traffic bound for Collier County and Southeast Florida. Current freight traffic on the SGLR in Lee County consists of frozen and refrigerated goods, scrap metal products, propane, lumber and newsprint.

The region's historically strong population growth, combined with a substantial tourism industry stimulate freight movements related to construction materials and consumer goods, while growing technology industries and business services require frequent and reliable parcel deliveries to maintain competitiveness. Although tourism and services now dominate Lee County's economy especially as the traditionally large construction sector declines, Southwest Florida's economic legacy is tied to agriculture and this industry continues to ship large volumes of perishable vegetables and fruits as well as nursery plants to locations throughout the United States. The majority of this traffic is shipped by truck.

At the present time, the SGLR interchanges freight cars with CSXT in Arcadia two or three times per week, depending on freight car volumes. The SGLR also runs a dinner train five evenings per week year round from Fort Myers north to a point in southern Charlotte County.

1.2 Opportunities for Expanded Freight Service

All of the data and forecasts reviewed indicate that while growth in southwest Florida is still anticipated, the forecasted rate of growth has slowed. For rail freight traffic, it appears that nominal or negative growth might be reasonably anticipated. Overall, national freight growth (in tonnage) is anticipated to be 1.5 – 2% per year. The Federal Highway Administration freight analysis framework (FAF 3.3) that tracks highway truck tonnage projects a 1.6% per year increase in Lee County, which is within this national range. Although indicators point towards reduced market share by rail, a nominal positive growth rate would be considered a conservative projection.

Expanded freight rail service will be in response to market-driven demand where the rail provides a cost competitive advantage over other modes of freight transport. Currently, rail freight within the counties that form FDOT District 1 constitutes approximately 12% of all freight tonnage in the district but is projected to decline both in percentage and in absolute tonnage by year 2035, losing market share to highway truck freight.

There are potential opportunities to increase rail freight service that have been identified in other studies. For example, the Investment Element of the 2010 Florida Rail System Plan identified two potential projects. An intermodal transfer facility has been proposed on SGLR-owned property near the intersection of Hanson Street and Veronica Shoemaker Parkway. A rail intermodal/transloading facility has been proposed in the vicinity of Southwest Florida International Airport off Alico Road for transloading and storing petroleum products such as gasoline, diesel fuel, and aviation kerosene type jet fuel (Jet A Fuel) transported by rail; this project would also include the delivery of jet fuel from the rail yard to the airport fuel farm by pipeline.

1.3 Constraints to Expanded Freight Service

SGLR rail freight service in Lee County has both geographic and market-based constraints. Its geographic location on the peninsula makes the County less suited for through freight traffic as opposed to origin and destination traffic. As a largely consumer market, rail freight has a significant disadvantage of lacking a backhaul (outbound rail) opportunity which puts rail at disadvantage to provide competitive pricing to potential rail customers. Truck freight overcomes this disadvantage with the flexibility to seek backhaul freight opportunities outside of the region and even elsewhere in Florida.

Other typical issues that have been identified for freight are that rail is not reliable enough to meet the time sensitive needs of most freight dependent customers. Rail does not provide the door-to-door service that trucks are able to provide, so it typically requires another truck move from the train to the end destination if the long haul is by rail.

The relocation of the CSXT intermodal facility from Taft near Orlando to an integrated logistics center near Winter Haven may also undermine some of the competitive advantages that the SGLR provides. Inbound CSXT containerized freight will be offloaded to trucks at this facility and is a shorter distance to Lee County than previously provided from Orlando.

While there are some locations where the SGLR track is maintained at a level to allow maximum freight train speeds of 25 mph, the majority of the corridor is maintained to allow maximum freight train speeds of 10 mph. This current track condition is adequate for the current low density SGLR freight operations. SGLR is very interested in attracting additional customers who would boost freight traffic volumes. Such increases in train volumes would require future investment in the track and bridge infrastructure which simply cannot be justified at the present time. Improvements needed for freight traffic increases would need to be considered in conjunction with any proposed initiatives to implement a passenger service on the SGLR corridor.

1.4 Conclusions

With rail freight traffic expected to experience only nominal growth, significant improvements to the SGLR infrastructure cannot be justified without public investment. Continuation of low density freight operations will allow the SGLR corridor to be viable for potential use as a passenger corridor.

2. Historic and Current Freight Traffic

The SGLR rail operations are based in Fort Myers. The SGLR rail corridor within the study limits extends from the Charlotte-Lee County line at about Milepost (MP) AX-952.6 to the end of track in northern Collier County at about MP AX-990.1. Figure 2 shows the limits of the SGLR corridor that have been considered for this study. At the present time, the SGLR interchanges freight cars with CSXT in Arcadia two or three times per week, depending on freight car volumes. The SGLR also runs a dinner train five evenings per week year round from Fort Myers north to a point in southern Charlotte County.

Based on the October 12, 2012 discussions with SGLR, SGLR expected to move about 7,000 carloads of freight in 2012 across the entire SGLR corridor. This volume is down from about 14,000-15,000 in the recent past. SGLR formerly handled about 30 carloads per week to North Naples/northern Collier County. Most of this former traffic consisted of lumber and other building materials. This traffic does not exist at the present time, but this traffic could return if and when there is an upturn in building construction in the area.

Current freight traffic consists of frozen and refrigerated goods that are shipped by rail to Florida Freezer in North Fort Myers; these goods are then shipped out by truck for distribution in the local area. Scrap metal products are loaded and unloaded by two separate companies at two rail-served locations in Fort Myers. Propane, lumber and newsprint are also moved by rail on the SGLR in Lee County.

During the November 27, 2012 hi-rail trip, multiple side tracks were observed to have active freight cars at various customer locations throughout Lee County. Active scrap metal loading and unloading were observed at the SGLR facility just south of Hanson Street and at the former wye track area near MLK Boulevard and Evans Avenue. A north-south spur track breaks off the SGLR main line near Edison Avenue and runs south parallel to Evans Avenue; this spur track ends just north of Canal Street. Tank cars were observed at a propane gas company on this spur track near Franklin Street. No other industries located along this spur track appear to be active rail customers. A lumber car was observed being unloaded on a side track south of Crystal Drive.

There are numerous industries that are capable of receiving freight rail service in the Kennesaw Industrial Park. This area is roughly bounded by Palm Avenue on the west, Tara Lee Street and Kutak Lane on the north, Veronica Shoemaker Boulevard on the east, and Hunter Street on the south. Many of the industries in this area at one time had active rail service, but many are now vacant and none were observed to have active rail car loading or unloading. An intermodal transfer terminal that has been proposed to be located in this area is discussed in more detail in Section 5 of this report. Another industrial complex south of Hunter Street is capable of receiving rail service but no active rail cars were observed. Both of these areas could be potential locations for new rail served industries.

The industrial parks along Alico Road could also potentially attract new rail customers. The former Baker Mine spur south of Fort Myers that runs along Alico Road at one time served a rock quarry, but new mines have been opened that are much further east of the current end of track. Rock shipment from these newer mines is handled by trucks and it is not anticipated that there will be any rail shipment of this rock by rail in the foreseeable future. A rail-served facility for transloading and storing petroleum products transported by rail in this area has been proposed and is discussed in Section 5 of this report.

Figure 1: SGLR Corridor with Mileposts



Source: RMI Midwest

South of Alico Road, the density of housing along the SGLR corridor would generally hamper future industrial development, although some small vacant parcels potentially could attract new industries. There is also potential for rail business for building materials to return to northern Collier County should there be an upturn in building construction.

At the time that this report was prepared, SGLR was not aware of any other planned new industries or expansions of existing industries that would lead to increases in future freight rail service in Lee County. SGLR identified inbound aggregate, especially granite, as a possible future commodity for track ballast and for asphalt.

3. Future Freight Traffic

The freight forecast analysis for the rail feasibility study is focused on evaluating recent population and freight data and data indicators for future rail freight in Lee County. The primary purpose for the analysis is to estimate the potential for increased freight rail demand for the corridor and determine if rail improvements will be needed to support the potential increase in freight rail traffic.

The forecast analysis considers future total freight flows for the County and estimated volumes of bulk and containerized shipments for the SGLR using existing available data sources combined with rail operator interviews. Many of the existing data sources pre-dated Florida’s economic recession or were found not to reflect the effects of the economic downturn that began in 2007 and therefore multiple sources were consulted to assess future rail freight traffic. In any case, the data reviewed and summarized in this analysis is general in nature, and frequently based on small sample sizes or on larger geographic areas than Lee County. It should be noted that the data used in freight predictions is typically based on past and anticipated performance, and like most forecasts can be influenced, positively or negatively, by unanticipated changes in development within the area. The primary data sources for this assessment are listed in Table 3-1.

Table 3-1: Primary Data Sources

Source	Data
Lee County Freight And Goods Mobility Analysis, August 2009	Physical and geographic assessment of the Lee County freight infrastructure and insight towards future freight demand for the region
Federal Railroad Administration (FRA) Database	Train flows reported for at-grade rail crossings through study area
Bureau of Economic and Business Research (BEBR)	County population forecasts
Federal Highway Administration (FHWA) Freight Analysis	Highway freight volumes and forecasts through 2040
Surface Transportation Board, Public Use Waybill Data, 2011	Sample carload and commodity flows to/from Lee County BEA Economic Area. Evaluate types of commodities by rail for growth opportunities, i.e. building materials.
Florida Trade & Logistics Study Technical Report, April 2011	District level freight forecast by mode and commodity
SGLR Interviews	Current and expected volumes, key industries

3.1 Lee County Freight Overview

The Lee County Freight and Goods Mobility Analysis, August 2009 reports that:

“Lee County is geographically positioned at the center of the Southwest Florida region, linked to Florida’s populous Southeast and West Central regions by I-75, U.S. 41, and SR- 80. Due to its location close to the southern tip of the Florida peninsula, Lee County’s freight movements are led by origin and destination traffic, though some freight is through-traffic bound for Collier County and Southeast Florida.

The region’s historically strong population growth, combined with a substantial tourism industry stimulate freight movements related to construction materials and consumer goods, while growing technology industries and business services require frequent and reliable parcel deliveries to maintain competitiveness. Although tourism and services now dominate Lee County’s economy especially as the traditionally large construction sector declines, Southwest Florida’s economic legacy is tied to agriculture and this industry continues to ship large volumes of perishable vegetables and fruits as well as nursery plants to locations throughout the United States.

Lee County’s Southwest Florida International Airport is Southwest Florida’s main gateway, providing freight and parcel delivery services to and from major domestic markets, a significant benefit to Southwest Florida’s business community. The airport also provides limited international flights to Canada and Europe. Miami International Airport, as the dominant cargo airport, also supports Southwest Florida. While Lee County has recreational ports, the County’s businesses rely on port facilities located outside the County (Ports of Manatee and Tampa to the north, and Port Everglades and Miami to the east) to meet deep-sea shipping needs and then use Southwest Florida’s highway network to reach points within Lee County.

Southwest Florida’s major freight facilities and supporting freight transportation infrastructure were impacted directly by both the local and statewide increases in freight volumes that were associated with a decades-long string of strong population and employment growth.”

This physical and geographical assessment still holds true. The 2009 report also summarized that freight demand in Lee County and Southwest Florida will be closely tied to the population and demographics as the main economic drivers affecting freight demand in this area. Although there are signs of growth and investment returning to the region, the effects of the recession are expected to take many years to overcome before freight traffic rebounds to pre-recession levels of activity.

3.2 Federal Railroad Administration (FRA) Database

A review of the Federal Railroad Administration (FRA) railroad/highway grade crossing database for grade crossings along the SGLR corridor in Lee County reports less than 1 train per day plus the nightly dinner train operation on the SGLR line. This data generally supports the information that SGLR provided as discussed in Section 2.

3.3 Population and Employment

Lee County is largely a consumer market and therefore population change is a key contributor to economic and freight growth. Lee County is the most populous County in Southwest Florida

and a decades-long run of exceptionally rapid population growth has slowed sharply since 2007. Lee County grew nearly six times in population from 105,000 in 1970 to over 638,000 in 2012.

The Florida Bureau of Economic and Business Research (BEBR) Projections of Florida population by county, 2015–2040 were obtained for Lee County. BEBR develops an annual estimate of population and a set of low, medium and high projections in 5-year increments for each county in the state of Florida. The current, as of June 2013, estimated population for Lee County is 638,029. As shown in Table 3-2 below, the projected 2040 population for Lee County ranges from 792,000 to 1,348,500. This represents an overall growth rate of 24% to 111% over the 28 year timeframe.

Table 3-2: Lee County Population Forecast (BEBR, June 2013)

County	Estimate 2012	Projections, June 2013					
		2015	2020	2025	2030	2035	2040
LEE	638,029						
Low		641,900	696,200	738,300	768,300	786,500	792,000
Medium		682,800	773,500	858,500	937,000	1,008,300	1,070,200
High		723,800	850,900	978,700	1,105,600	1,230,200	1,348,500

By 2040, Lee County is expected to add 432,171 people, bringing its population to approximately 1,070,200 people (BEBR Medium Projection). However, given the recent economic climate, an increase of this magnitude is not a certainty. The speed with which Lee County recovers from the 2008-2013 economic downturn is a factor that will influence whether the county’s population growth will meet the current forecast.

3.4 Lee County Population and Land Use Forecasts

The Lee County MPO Florida Standard Urban Transportation Model Structure (FSUTMS) model is based on forecasts of population and employment in geographic Traffic Analysis Zones (TAZs) referencing then-current BEBR projections, census tract data, and adopted land use maps. The most recent model (which was developed in 2008) anticipates the year 2035. The population forecast used in that model for the year 2035 is 1,034,400, which is roughly equivalent to the medium projection for 2035 developed by BEBR in 2008. (As discussed elsewhere, the medium population projections have been adjusted downward annually by BEBR from 2008 through 2012.) Based on this model’s socio-economic data and adopted land use data, the overall Lee County employment growth was anticipated to be about 60% between 2007 and 2035, while industrial employment was anticipated to grow approximately 36% between 2007 and 2035.

The attached maps show the MPO’s projected growth in population for year 2007–2020, Figure 3-1, and year 2007-2035, Figure 3-2. Figures 3-3 and 3-4 show the change in industrial employment by TAZ for Lee County from 2007 to 2020 and from 2007 to 2035, respectively. The map also shows the anticipated 2040 freight tonnage by roadway facility based on the Highway Freight Forecast for Lee County from the FHWA database, as discussed in the next section. As shown on these maps, the 2020 population growth occurs in the Cape Coral area, with some additional growth along I-75 and in the eastern part of the county between SR 80 and SR 82. By 2035 however, the population growth has increased in adjacent zones and is

generally uniform across the county. Industrial employment on the other hand, appears to be much more focused in terms of growth. By 2020 growth in this sector is anticipated largely along the northern border of the County west of I-75; however, recent public acquisitions for the Prairie Pines Preserve and the Charlotte Harbor Flatwoods Preserve will force much of this growth to other locations. Growth in this sector is also anticipated between SR 82 and I-75 with limited growth in Fort Myers and along the SR 78 corridor in Cape Coral. By 2035 additional growth is anticipated within these same general areas.

In comparing industrial employment within 1 mile along the I-75 and the SGLR corridors it can be shown (Table 3-3) that while there is slightly more industrial growth projected to occur along the I-75 corridor, the total industrial employment along the SGLR corridor is still nearly double that of I-75.

Table 3-3 – GIS Buffer Analysis Industrial Employment along I-75 vs. SGLR Corridors

Area	Ind. Emp. 2007	Ind. Emp. 2015	Ind. Emp. 2020	Ind. Emp. 2025	Ind. Emp. 2030	Ind. Emp. 2035
Lee County	45,879	51,511	55,613	58,778	61,170	62,394
1-Mile Interstate Buffer	5,378	7,714	8,800	9,773	10,500	11,034
1- Mile Rail Line Buffer	18,408	20,661	21,709	22,647	23,349	23,864

It must be noted that the MPO’s projections were completed at the height of the population and economic boom in Florida (2007). Recent growth has not met those projections, and it is anticipated that future forecasts would show somewhat lower growth rates. The potential limitations of this data are discussed in greater detail in the Technical Report on “Estimates and Projections of Existing and Future Land Uses in Lee County.” The purpose of this is to illustrate the anticipated growth in terms of land use and industrial employment relative to the existing rail line. As illustrated in Figures 3-1 and 3-2, the growth in population is generally spread out across the County, and more significantly, the least growth in population appears to occur in the area immediately adjacent to the existing rail line for much of the corridor. Industrial employment in Lee County is predominantly outside a 1 mile buffer of the rail corridor. The year 2035 projections estimate roughly 62,000 total industrial employees in Lee County with approximately 24,000 of these employees within 1 mile of the rail corridor.

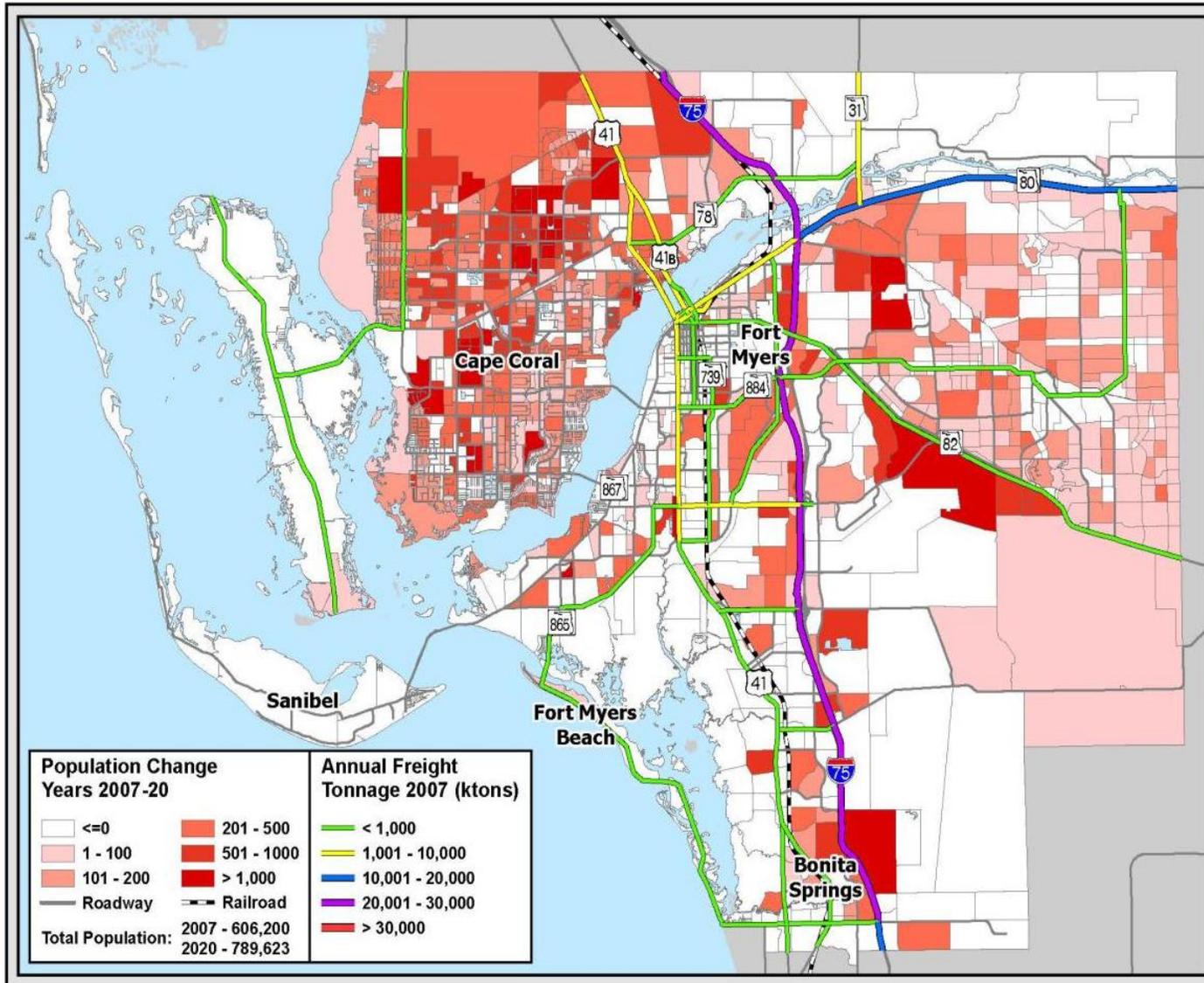
3.5 Surface Transportation Board (STB) Public Use Waybill Data 2011

A waybill is the bill of lading issued by rail carriers to their customers. A review of the STB sample data indicates that there is no reporting of any originating or terminating waybill samples to and from the Lee County area. This is evidently because the SGLR freight rail traffic is below a certain carload per year threshold; hence their traffic would not be represented in the data set. Additionally, traffic for the SGLR would be interchanged from CSXT in Arcadia which would likely be the last reporting station. Hence no information has been used from the STB waybill data for this report.

3.6 FHWA Freight Analysis Framework

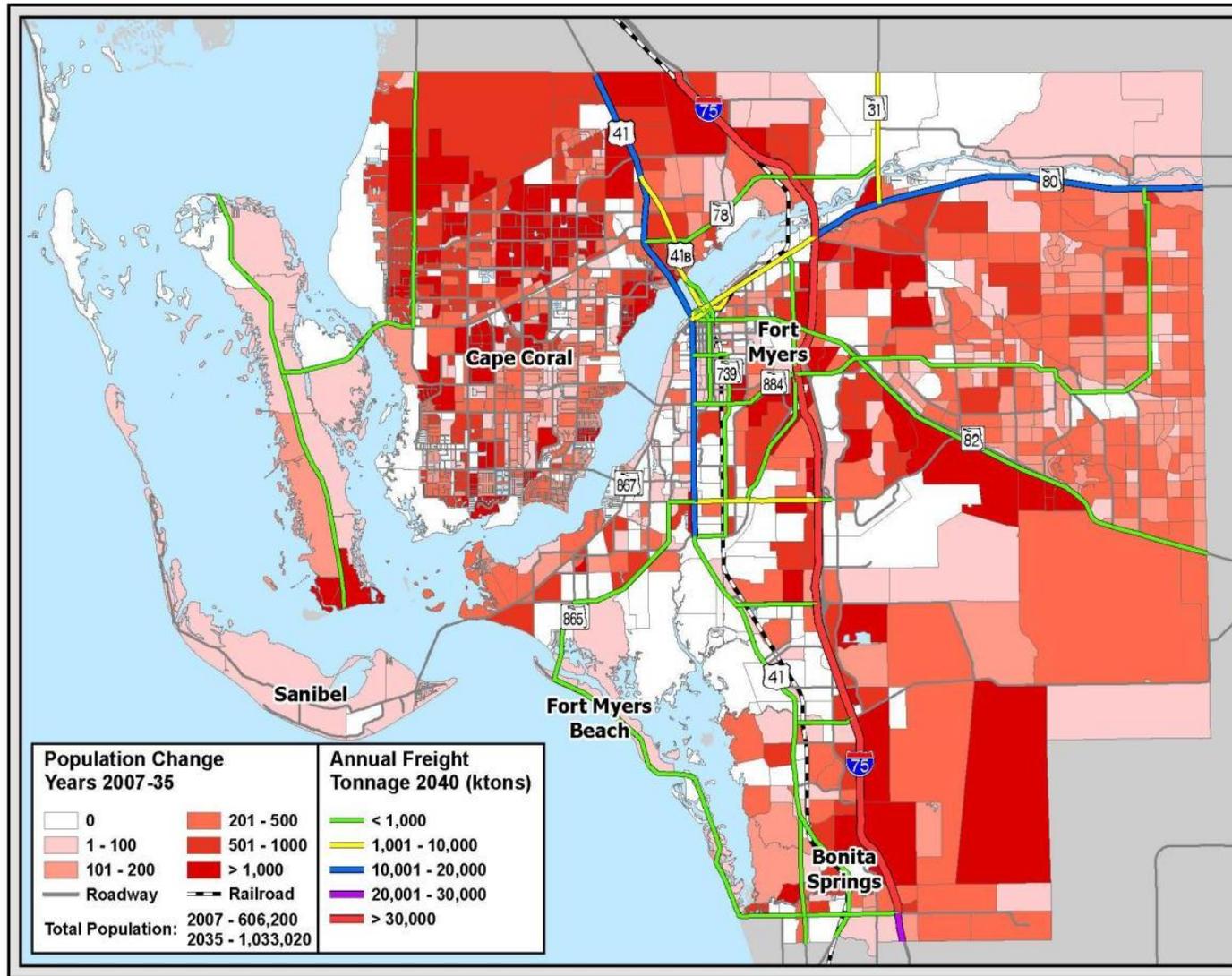
The Federal Highway Administration Freight Analysis Framework (FAF) version 3.3 (FAF3.3) database was used to evaluate the freight flow projections for Lee County. The FAF3.3 is based in 2007, but includes 2010 provisional data, and includes a forecast for 2040 truck freight flows. The freight projections for 2007 and 2040 have been evaluated against the MPO model growth projections of population and employment. Note that the FAF data (2040) and the MPO forecast horizon year (2035) are not consistent, however, the data comparison shown in figures 3-1 through 3-4 are able to illustrate the projected patterns of growth and freight movement over a similar timeframe. Based on these projections and as illustrated on the maps in the following pages, I-75 in Lee County is anticipated to carry the most freight traffic in terms of tonnage, with estimated freight traffic of 20,001,000 to 30,000,000 tons (20,001 to 30,000 ktons) in 2007 and anticipated freight traffic of greater than 30,000,000 tons (30,000 ktons) by 2040. Freight traffic on US 41 in the northern part of the county is also anticipated to increase from 1,001,000 to 10,000,000 tons (1,001 to 10,000 ktons) to 10,001,000 to 20,000,000 tons (10,001 to 20,000 ktons) by 2040. This growth pattern indicates there is an anticipated increase in demand for north / south freight movement in Lee County. As noted previously, these projections are also based on 2007 data, which may not accurately reflect the recent slowing of the economy. Based on the data from FAF3, it is projected that freight tonnage on the highway will increase by 51%, or 1.6% per year. This is consistent with the national average growth projection of 1.5 % to 2.0%. The corridor level existing (2007) and forecasted (2040) freight by weight for Lee County is depicted on Figures 3-1 through 3-4.

Figure 3-1: Population Change (Years 2007-2020)



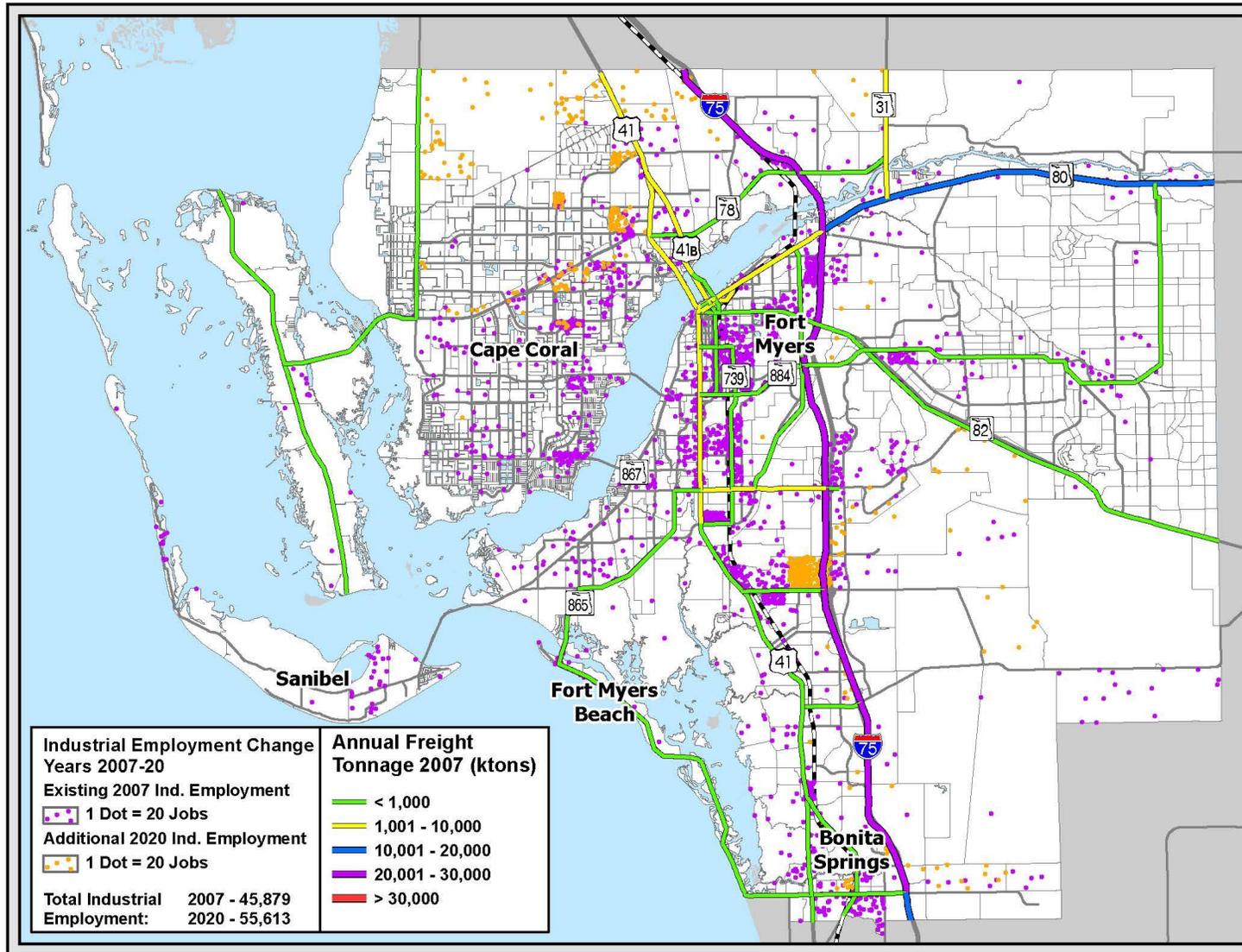
Sources: HDR, Lee County MPO 2007 and 2020 model TAZ data and FHWA FAF 3.3 2007 highway freight data

Figure 3-2: Population Change (Years 2007-2035)



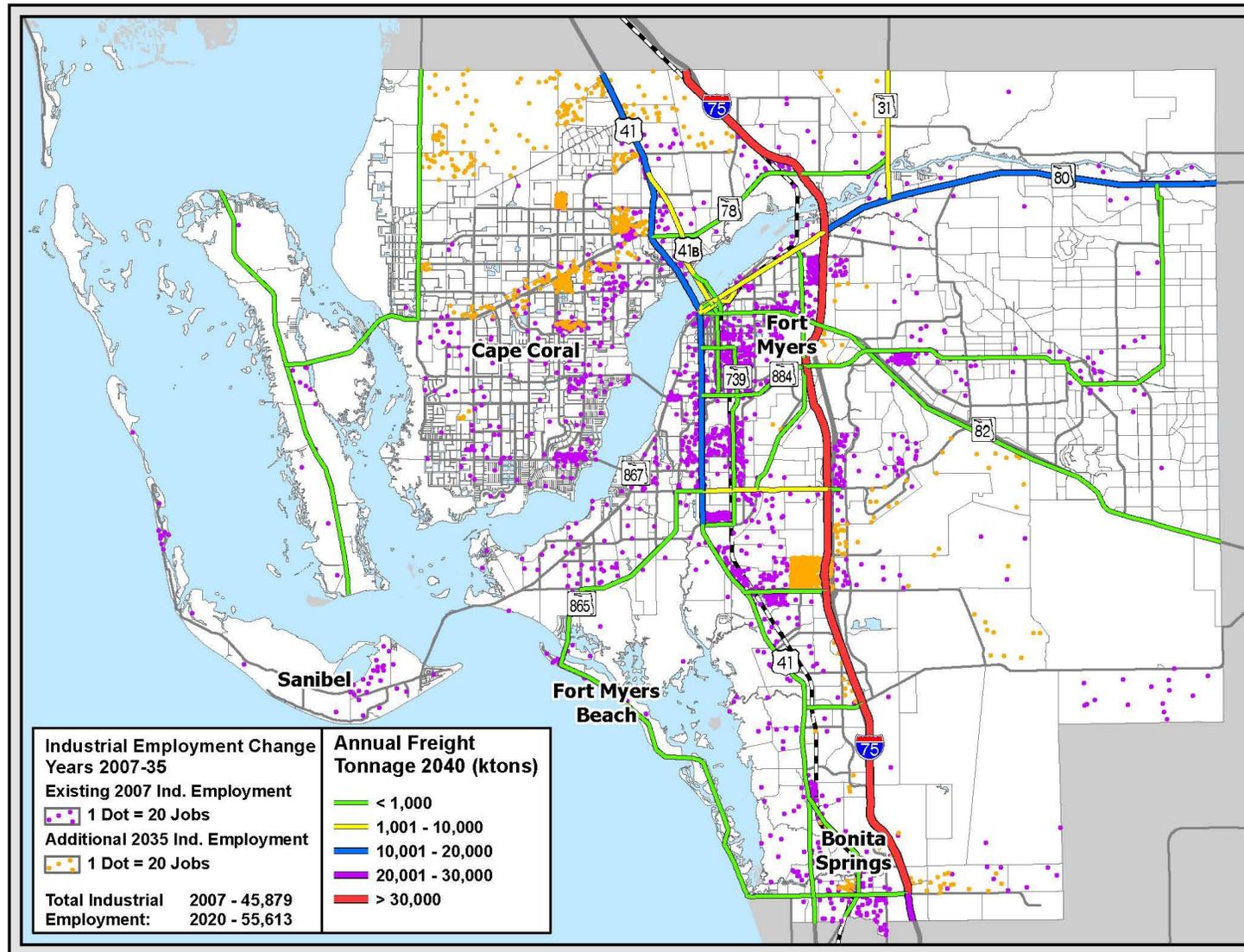
Sources: HDR, Lee County MPO 2007 and 2035 model TAZ data and FHWA FAF 3.3 2040 highway freight data

Figure 3-3: Industrial Employment Change (Years 2007-20)



Sources: HDR, Lee County MPO 2007 and 2020 model data and FHWA FAF 3.3 2007 highway freight data

Figure 3-4: Industrial Employment Change (Years 2007-35)



Sources: HDR, Lee County MPO 2007 and 2035 model TAZ data and FHWA FAF 3.3 2040 highway freight data

3.7 Florida Trade and Logistics Study, 2011

In 2010, the Florida Chamber Foundation led a “statewide initiative to develop an economic blueprint for the next two decades”. As part of this effort a Florida Trade and Logistics Study (FTLS) was conducted. This study included a statewide review of Florida’s logistics industry and transportation system; population and economic forecasts; trade flow data; and stakeholder input. The technical appendix for the study included forecasts by mode and type of freight for each of Florida’s FDOT Districts. Lee County is located in FDOT District 1, as shown on Figure 3-5 below.

Figure 3-5: FDOT Districts



Source: FDOT

The FTLS included projections of freight traffic in each of FDOT’s 7 districts for years 2035 and 2060. These projections were completed at three levels. The first looked at inbound, outbound and internal traffic but did not take into account through traffic. The second level projected freight traffic by mode, for air, international waterborne, rail and truck freight traffic. The third level projected freight movement by commodity type, breakbulk, bulk and container traffic. The table below summarizes the data for FDOT District 1 at each of the levels in tons, as used in the FTLS.

Table 3-3: FDOT District 1 Freight Flows (Not Through)

Direction	2010 (in	2010 % of Total	2035 (in Tons)	2035 % of Total	% Growth from 2010	2060 (in	2060 % of Total	% Growth from 2035
Inbound	47,896,894	47%	69,000,577	48%	44%	94,739,355	52%	37%
Internal	18,485,638	18%	24,903,298	17%	35%	27,636,584	15%	11%
Outbound	36,190,163	35%	49,265,879	34%	36%	59,229,474	33%	20%
Total	102,572,695	100%	143,169,753	100%	40%	181,605,412	100%	27%

Mode	2010 (in	2010 % of Total	2035 (in Tons)	2035 % of Total	% Growth from 2010	2060 (in	2060 % of Total	% Growth from 2035
Air	21,077	0%	30,584	0%	45%	46,918	0%	53%
Int'l Waterborne	1,174,114	1%	1,985,089	1%	69%	3,036,958	2%	53%
Rail	11,814,753	12%	9,687,230	7%	-18%	9,534,448	5%	-2%
Truck	89,562,751	87%	131,466,850	92%	47%	168,987,088	93%	29%
Total	102,572,695	100%	143,169,753	100%	40%	181,605,412	100.00%	27%

Commodity Type	2010 (in	2010 % of Total	2035 (in Tons)	2035 % of Total	% Growth from 2010	2060 (in	2060 % of Total	% Growth from 2035
Breakbulk	23,731,257	23%	33,055,079	23%	39%	38,049,627	21%	15%
Bulk	55,961,930	55%	63,775,989	45%	14%	65,532,236	36%	3%
Container	22,879,508	22%	46,338,686	32%	103%	78,023,550	43%	68%
Total	102,572,695	100%	143,169,753	100%	40%	181,605,412	100%	27%

As shown in Table 3-3, overall freight movement into, out of, and within District 1 is anticipated to increase 40% between 2010 and 2035. Rail freight movement is projected to decline, both in terms of the percent of total freight in the district traveling by rail, and in terms of total tonnage. As shown in Table 3-3 above, rail freight tonnage is anticipated to decrease 18% between 2010 and 2035, and another 2 % between 2035 and 2060. In the same timeframe, truck freight is anticipated to grow by 47% in 2035, and by another 29% by 2060. The majority of freight in District 1 currently travels by truck, 87%, and by 2060 this is anticipated to increase to 93%. Container freight traffic is projected to have the most growth, growing by 103% by 2035 and by an additional 68% by 2060. Currently 22% of freight in the district is container, but by 2060 it is anticipated to almost double to 43%. The percent of total freight in bulk is expected to decrease from 55% today to 36% by 2060, with a significantly slowing rate of growth. Breakbulk freight is projected to remain a steady 23% to 21% of the total freight traffic.

Based on this data, it would appear that the demand for freight movement by rail is decreasing in District 1. Given that currently there is no through rail line in Lee / Collier Counties (the SGLR ends in northern Collier County), the through freight traffic is not anticipated to greatly impact this trend, and it generally is anticipated that the existing line will see less demand in the future than it does today based on these projections.

3.8 Potential Barriers to Freight Rail Growth

The 2003 Transearch data concluded that rail freight constitutes only 0.2% of all freight movement within and through Lee County. The options to utilize rail for existing or future freight are dependent upon many factors, some of which are external to Lee County, including their dependence upon CSXT to bring freight down to the SGLR.

Based on freight stakeholder interviews conducted across 6 Central Florida counties, other issues facing rail freight utilization include concerns that: rail is not reliable enough to meet the time sensitive needs of most freight-dependent customers; rail does not provide the door-to-door service that trucks are able to provide so it typically requires another truck move from the train to the end destination if the long haul is by rail; and, without a significant backhaul opportunity, it is difficult to get service or competitive pricing from the railroads – this is a statewide problem in most markets.

The likely result is that there will be limited growth in freight movement by rail in Lee County. It is likely that the SGLR will have sufficient capacity to accommodate either more train cars or additional freight operations if they were needed. By comparison, the Florida Central Railroad (FCEN) in the Orlando area has indicated that potential future commuter rail operations on their line from Orlando to Tavares would not necessarily be a problem for them. Currently, the FCEN operates 5 days per week with 2 switching trains per day on a single track, based on data provided for the Florida Rail Highway Crossings Inventory, 2012. They project 12% growth in local traffic (mostly food products and construction materials in and recycled metals out). FCEN has stated that they could consider shifting their freight operations to evenings to make room and accommodate commuter trains.

3.9 Conclusion

All of the data and forecasts reviewed indicate that while growth in southwest Florida is still anticipated, the forecasted rate of growth has slowed. For rail freight traffic, it appears that nominal or negative growth might be reasonably anticipated. Overall, national freight growth (in tonnage) is anticipated to be 1.5 – 2% per year. The FAF 3.3 (highway truck tonnage) projects a 1.6% per year increase in Lee County, which is within this national range. Although indicators point towards reduced market share by rail, a nominal positive growth rate would be considered a conservative projection.

4. Assessment of the Condition of the Existing SGLR Infrastructure

The SGLR rail corridor within the study limits extends from the Charlotte-Lee County line at about Milepost (MP) AX-952.6 to the end of track in northern Collier County at about MP AX-990.1. Figure 2 shows the limits of the SGLR corridor that have been considered for this study. This section will review the existing condition of the SGLR trackage and discuss potential track improvement projects that have already been identified.

4.1 Existing Track and Bridge Conditions

The FRA has established track safety standards that identify nine specific classes of track (Class 1 through 9), as well as a category referred to as Excepted Track. The difference between each track class is based on progressively more demanding standards for track structure, track geometry and inspection intervals. Each track class has a corresponding

maximum allowable speed associated with it: the higher the track class, the higher the allowable speed. Each railroad makes the determination as to which track class they will maintain their track to, based on their operational and maintenance needs. Once these designations are made, the FRA and FDOT hold the railroads accountable for maintaining their track to the standards for each particular track class.

There are some locations where the SGLR track is maintained to FRA Class 2 track safety standards which allow maximum freight train speeds of 25 mph. However, the majority of the corridor in Lee County is maintained to Class 1 standards which allow maximum freight train speeds of 10 mph. SGLR did not provide the limits of which track segments are maintained to Class 1 standards and which are maintained to Class 2 standards. The current track condition is adequate for the current low density SGLR operations. The dinner train operates at a maximum speed of 10 mph between the Colonial Boulevard station at MP 968.2 and MP 946 in southern Charlotte County. South of the SGLR yard and maintenance facility at MP 969, the track is classified as "Excepted Track" which requires inspection prior to use and allows maximum freight train speeds of 10 mph; passenger trains are not permitted to operate on Excepted Track.

For heavy tonnage freight railroads, the industry standard is to use 136# welded rail. Rail size is described and measured by weight; one yard length of "136# rail" weighs 136 pounds. Heavy tonnage rail lines typically include the use of welded rail which means that the ends of each individual length of rail are welded together with no joints. Jointed rail, where each individual length of rail is connected by joint bars on each end, requires more maintenance attention. The use of 136# welded rail provides for longer rail life and decreased maintenance costs.

The use of 115# rail is generally adequate and preferred on lower density freight lines, as well as on some transit lines and passenger railroads. Longer rail life and reduced maintenance costs can be achieved with both welded and jointed 115# rail for these types of applications. For freight rail lines that historically have had low tonnage, the use of 100# jointed rail and smaller is generally adequate for the rather limited operations. New rail with sizes of 100# and smaller are no longer readily available, hence 100# rail and smaller that is still in service is usually older and more susceptible to breaking. Such 100# rail is typically jointed which also requires more maintenance attention.

North of Cranford Avenue at about MP 964.5, the rail is predominantly jointed 100#. From Cranford Avenue south to Hanson Street at about MP 966.5, the rail is welded 110# and 115# that was installed as part of the Evans Avenue highway project. South of Hanson Street, jointed 100# rail is in place to Colonial Boulevard at about MP 968.2. South of Colonial Boulevard, the rail is jointed 85#. These are general limits for the rail sizes, and it should be noted that there are scattered locations where the rail has been changed with different rail sizes.

There are approximately 65 turnouts on the SGLR within the study limits. The majority of the turnouts are 100# rail but 13 turnouts were observed to have 85# rail. One turnout has 115# rail. Figure 4-1 shows typical condition of the existing SGLR track at a location with 100# jointed rail. There are 51 railroad/highway at-grade crossings on the SGLR in Lee County.

Figure 4-1: Typical Condition of SGLR Track at MP 967.0 South of Hanson Street



Photo: HDR

There are a total of 21 bridges within the study limits. The types of bridges include:

- 9 Timber Trestles with Open Deck
- 6 Timber Trestles with Ballasted Deck
- 3 Concrete Trestles with Ballasted Deck
- 1 Steel Deck Plate Girder with Open Deck
- 1 Deck Plate Girder/Through Plate Girder Combination with Open Deck
- 1 Movable Bridge with Open Deck (Caloosahatchee River)

SGLR would not share bridge condition or inspection reports as part of this study. SGLR has advised that all the bridges are capable of supporting rail cars weighing 286,000 pounds which is the national standard car weight. The bridges are generally maintained in fair to good condition, which is an adequate level to support current train operations and comply with FRA requirements. Figure 4-2 shows a typical timber trestle.

Figure 4-2: Typical Timber Trestle at Milepost MP 963.5 North of Michigan Avenue



Photo: HDR

As part of ongoing maintenance, SGLR typically replaces approximately 30,000 wood cross ties per year. SGLR uses their own employees and equipment to do tie replacement work. SGLR does not have any current plans to upgrade the rail within the corridor. This level of routine maintenance is adequate to support current freight traffic levels. The smaller, jointed rail that is prevalent on the SGLR generally limits the amount of tonnage and speeds for freight. Due to the age and size of the existing rail, the rail should be considered for upgrading to 115# at selected locations, especially on curves. Should freight traffic increase dramatically with a desired increase in freight train speeds, a capital maintenance program would be required to replace ties and upgrade rail throughout the corridor. Various timber trestles would also need to have rehabilitation work done, and some may be considered to be replaced with concrete trestles with ballasted decks.

It should be noted that the SGLR will continue to maintain and/or upgrade their track and bridges to a level that meets their ongoing freight traffic needs. These freight upgrades should be considered independently from any initiative to implement a passenger service on the SGLR corridor. Typical costs for upgrading rail and ties for a freight-only railroad like the SGLR will vary between approximately \$200,000 and \$500,000 per mile, depending on the level and

percentages of renewal. A detailed inventory of the SGLR was not performed as part of this study; hence more detailed rehabilitation costs cannot be determined at this time.

The cost of upgrades to improve freight rail service that are discussed in this report should not be confused with the extensive capital costs that would be needed for the implementation of a passenger service that would require relocation and/or complete reconstruction of the existing SGLR track. Freight and passenger traffic could both potentially operate on the same track with either temporal separation or in a mixed-traffic setting, depending on the mode selected. Capital costs for various modes have been discussed in a separate report. These costs would be developed in more detail after a specific mode is selected. A detailed inventory of the SGLR track, bridge and crossing warning systems would need to be made to identify what existing infrastructure components would need to be replaced, upgraded, or retained for use for the selected mode. Separate freight vs. passenger infrastructure costs would not be considered; the costs that would be developed to implement a passenger service would also include the costs to provide an enhanced infrastructure for freight service.

4.2 Potential Freight Rail Improvement Projects

In 2009, Lee County submitted a TIGER Grant application for a number of projects involving the SGLR rail infrastructure. Unfortunately this application for funding was not approved. The application requested funding for:

- Installation of 115# rail between Colonial Boulevard and Hanson Street and between Cranford Street and the Lee-Charlotte County line for a length of 14 miles.
- Rehabilitation and structural improvements of the movable railroad bridge over the Caloosahatchee River to include replacement of depreciated pilings and the painting of the main drawbridge span.
- Reconstruction of the track to include rail, crossties, tie plates and ballast between Alico Road and Colonial Boulevard for a length of 8 miles. The 100# rail removed from the section between Colonial Boulevard and Hanson Street would be reused in this section.
- Construction of an intermodal rail/truck transfer terminal on a parcel owned by SGLR southwest of the intersection of Hanson Street and Veronica Shoemaker Boulevard. (This proposed terminal is discussed in more detail in Section 5 of this report.)
- Rail corridor right-of-way acquisition from CSXT from northern Collier County to the Lee/Charlotte County line for a length of about 38 miles.

This TIGER grant would have allowed the SGLR to upgrade the track condition in the segments identified which could result in higher freight train speeds and decreases in track and bridge maintenance and repair costs.

Various public agencies and private entities were asked to provide input to the Florida Department of Transportation during development of the 2010 Florida Rail System Plan (FRSP). At that time, any potential rail projects were to be included in the Plan so that projects could be considered for any future discretionary funding. Lee County MPO acted as the "Agency Reporting Need" for two projects that affect the SGLR infrastructure in Lee County. These two projects are listed in the FDOT Investment Element of the FRSP, but no funding sources have been identified to date for either project.

Project 287 of the FRSP identifies the "Seminole Gulf Infrastructure Improvements-Phase 1" as follows: "The Phase 1 project will renew sections of the SGLR railroad bridge that spans the Caloosahatchee River. The project will replace fully depreciated sections and make structural improvements; replace fully depreciated pilings and other structural members, paint main

drawbridge span. The project will also upgrade SGLR track structure between Colonial Boulevard and Hanson Street and between Cranford Street and Lee County line, a total distance of 14 miles. Improvements to this section include installing new 115-pound continuous welded rail, longlife crossties and related tie plates, track fastening systems and installing new ballast. The project also includes rehabilitating SGLR track structure between Alico Road and Colonial Boulevard, a distance of 8 miles. Improvements to this section includes installing 100-pound rail that will be removed to install 115-pound mentioned previously, installing long-life crossties and related tie plates, associated materials and ballast. Also, in coordination with Charlotte and DeSoto County, expand the improvements to include replacement of Shell Bridge in Charlotte County and installation of 42 more miles of 115-pound rail in these two counties.”

This Phase 1 work is identified with a “mid-term” timeframe of six to 10 years at an estimated cost of \$7.3 million in 2009 dollars. Funding of this Phase 1 project would allow SGLR to implement the minimum improvements to allow them to be prepared for increases in freight traffic, raising freight train speeds, and decreasing SGLR’s ongoing track and bridge maintenance and repair costs. These minimum improvements would be needed to make SGLR more viable to attract new freight rail customers. Figure 4-3 shows the Caloosahatchee River bridge.

Figure 4-3: Caloosahatchee River Bridge



Photo: HDR

Project 291 of the FRSP identifies the "Seminole Gulf Infrastructure Improvements-Phase 2" as follows: "Phase 2 is a project to continue upgrading and expanding the rail infrastructure in Lee County by appropriate investments in track maintenance and capacity upgrades, track and crossing signals and railroad crossings in addition to building additional tracks to connect the railroad to key markets in Manatee, Glades, Hendry, Charlotte, Collier and Lee. Furthermore this project will look into investing in new rail technology such as double-stacking, rail cars, etc., and expanding rail capacity through double tracking, passing sidings etc., which could be needed in response to the proposed Winter Haven Intermodal Logistics Center (ILC). Proposed Phase 1 and 2 improvements will facilitate in the future investment of a permanent Amtrak service connecting Lakeland, Arcadia, Punta Gorda, Fort Myers, Bonita Springs and Naples. It may also result in the investment of intercity rail services connecting Tampa and Bradenton to all the urban centers in SW Florida including Sarasota, Venice, Punta Gorda, Fort Myers, Bonita Springs and Naples as described in the Florida Inter City Passenger Rail Vision Plan."

This Phase 2 work is identified with a "mid-to-long term" timeframe of 11 to 20 years at an estimated cost of \$50 million in 2009 dollars. Additional track capacity improvements are identified in general terms to allow for increased freight operations and to include considerations to help set the stage for future intercity passenger rail. Refined costs and project details would be developed at a later date. The Phase 1 improvements would be a prerequisite to be completed before considering Phase 2. Funding of this Phase 2 project would allow SGLR to be prepared for increases in freight traffic that could develop as a result of the CSXT Winter Haven intermodal logistics center (ILC) that is currently under construction and is expected to be completed in mid 2014. This will be discussed further in the next section of this report.

It should be noted that these Phase 1 and Phase 2 track improvement projects, if implemented on the SGLR, would serve to potentially increase freight train speeds and decrease maintenance costs. These projects would not be intended to allow implementation of any proposed light rail or commuter rail passenger service on the corridor.

4.3 Potential Passenger Rail Improvement Project

The City of Bonita Springs acted as the "Agency Reporting Need" for another project that could affect the SGLR infrastructure in Lee County. Project 307 of the FSRP identifies the "Passenger Railway in Southwest FL" as follows: "Rehabilitate Passenger Rail for 95 miles along the CSX line from Old 41 on the Collier-Lee Co. border to Ona, Hardee Co. connecting with CSX line, currently used for freight to Lakeland. This CSX line, proposed for rehab/upgrade to passenger service, passes thru Bonita Springs, Fort Myers, Punta Gorda, Arcadia, to Lakeland. This line should act as a connector with another proposed project reconnecting passenger service between Collier Co. and Tampa, connecting in Punta Gorda with new 8-mile track from Fort Ogden to North Port [locate depot at mile marker 172 on I-75] thru to, Sarasota, picking up TBARTA rail in Sarasota to Tampa. The project between Collier and Hardee Co. is estimated at \$70 million. The project between Fort Ogden and Sarasota is estimated at \$46 million. All costs include construction of rail, depots, and bridges. All land is rail-banked except for 30-foot ROW of three-quarter-mile for purchase somewhere near mile markers 200-203 on I-75. Land purchase not included in estimate." The "new 8-mile track" referred to above would be mostly on the abandoned Charlotte Harbor and Northern Railroad right-of-way.

This project is identified with a "near-term" timeframe of 1 to 5 years at a total estimated cost of \$116 million in 2009 dollars. The project description lists the rail line in Lee County as a CSXT line, but this is actually the SGLR corridor that is being discussed. Infrastructure improvements are identified in general terms to allow for intercity passenger rail. Refined costs

and project details would be developed at a later date. These improvements would need to be considered in conjunction with the Phase 1 and Phase 2 projects discussed above. No funding sources have been identified for this project to date.

This project is mentioned here as information only. Any initiative to implement light rail or commuter rail in the SGLR would need to be considered in conjunction with this initiative.

5. Existing and Potential Freight Terminal Facilities

The SGLR does not operate any bulk transfer or intermodal facilities on their route at the present time. SGLR provides rail service to individual industrial rail customers who deal with their specific commodity types at their respective facilities. An exception to this would be the two locations where scrap metal loading is handled on SGLR by outside parties.

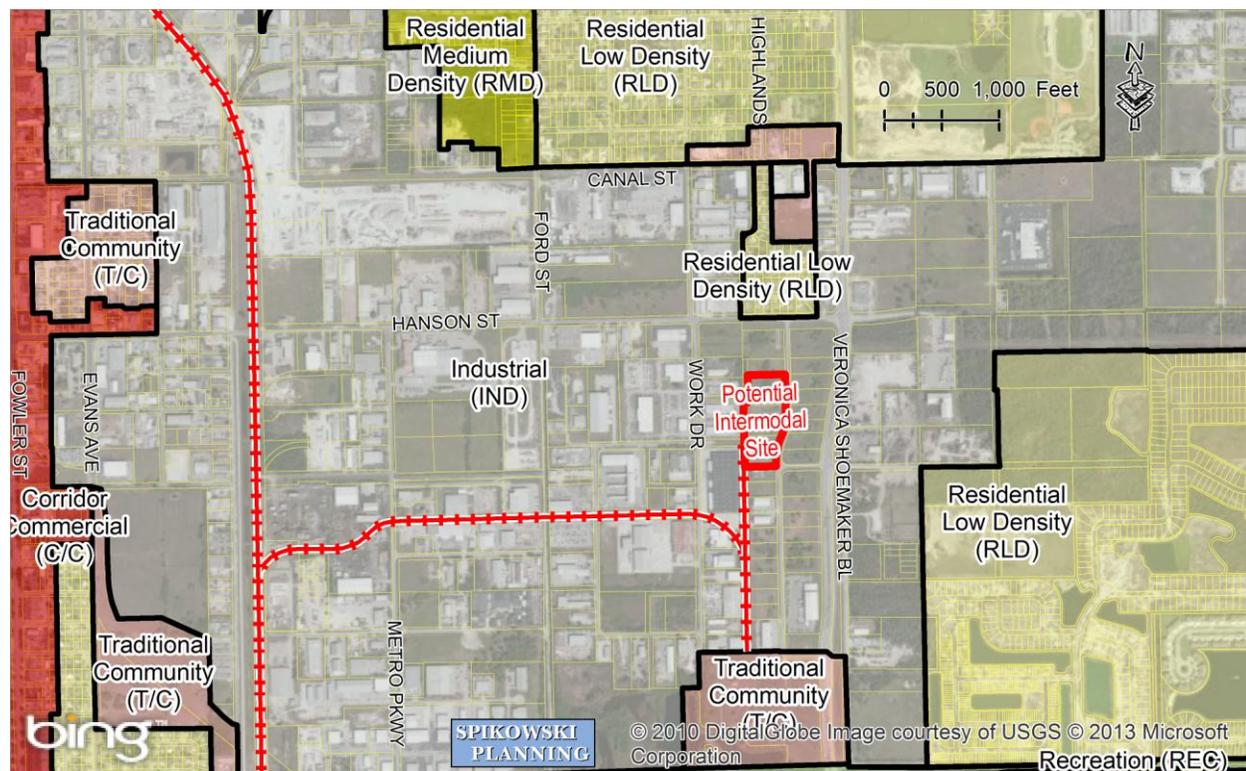
Lee County MPO acted as the "Agency Reporting Need" for two potential terminal facilities that are listed in the FRSP. No funding sources have been identified to date for either project.

Project 288 of the FRSP identifies the "Lee County Intermodal Transfer Terminal" project as follows: "Design and construct an intermodal transfer terminal that will facilitate centralized rail car-truck transloading, including both trailer on flat car/container on flat car (TOFC/COFC) and non containerized "team track" operations. An intermodal terminal will boost the local economy. The site is located close to the intersection of Hanson Street and Veronica Shoemaker Parkway. Alternative locations are also available which would require site acquisition and development costs, and may require environmental assessments." This project is identified with a "near-term" timeframe of 1 to 5 years at an estimated cost of \$3 million in 2009 dollars.

SGLR had identified three potential sites for this facility. The vacant site near Hanson Street and Veronica Shoemaker Parkway, which is owned by SGLR, is preferred over sites at the Farmers Market and at I-75/SR 78 that were also considered. This site near Hanson Street was included in the 2035 Long Range Transportation Plan (LRTP). An intermodal facility at this location would be compatible with existing industrial site usage in the area. SGLR industrial trackage already comes close to the site and extending the trackage to serve such a new facility would be relatively simple. It is not known if any traffic projections for this proposed facility have been done. Figure 5-1 shows the location of this proposed facility.

Prior to constructing this intermodal facility, the Phase 1 and potentially some Phase 2 SGLR track and bridge infrastructure improvements discussed previously should be constructed. For such a facility to be viable in Fort Myers, increased train speeds and an upgraded, reliable track and bridge infrastructure would be necessary. This intermodal facility on the SGLR in Fort Myers would have to compete with the proposed CSXT Winter Haven ILC. CSXT envisions this Winter Haven facility as a major intermodal and automotive distribution point for the Tampa and Orlando areas. The site will also be able to serve as a distribution point to other locations in southwest Florida, including Lee County.

Figure 5-1: Location of Proposed Intermodal Transfer Terminal



Source: Spikowski Planning

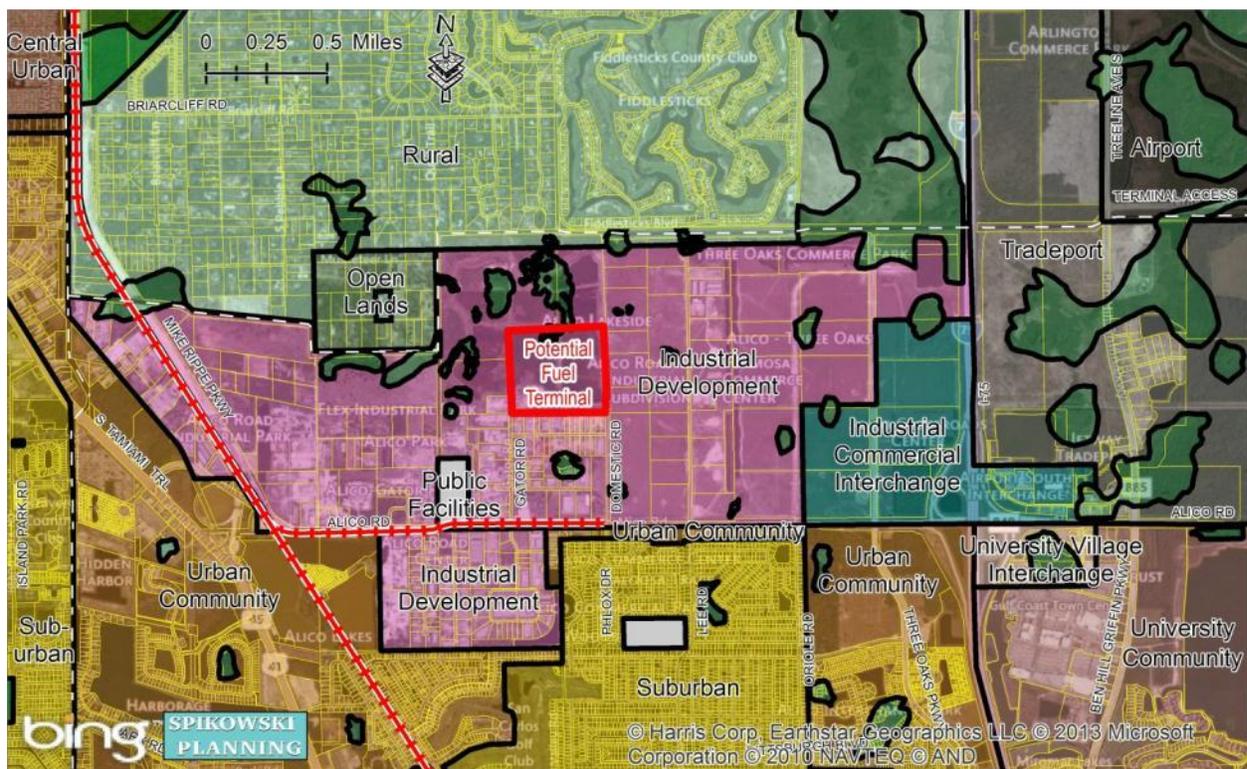
A trailer or container arriving by rail at the new CSXT Winter Haven ILC could be transported by truck to the Fort Myers area in under three hours. However, the same trailer or container would require a significantly longer time to be transported by rail from the Plant City/Lakeland area to a new SGLR intermodal facility in Fort Myers. The CSXT trackage between the Plant City/Lakeland area and Arcadia traverses the Bone Valley phosphate area. This CSXT trackage generally operates at speeds of 35 mph or less, with heavy freight traffic. The CSXT rail distance between Plant City/Lakeland and the interchange with SGLR in Arcadia is approximately 72 miles. The distance between Arcadia and Fort Myers on the SGLR is approximately 54 miles. Hence, in order for an intermodal facility in Fort Myers to be competitive with the CSXT ILC in Winter Haven, increased train speeds and an upgraded, reliable track infrastructure would need to be provided on the SGLR between Fort Myers and Arcadia, as well on CSXT north of Arcadia.

Project 289 of the FRSP identifies the "Rail Intermodal Yard" project as follows: "A rail intermodal yard in the vicinity of SW Florida International Airport and off Alico Road for transloading and storing petroleum products such as gasoline, diesel fuel, and aviation kerosene type jet fuel (Jet A Fuel) transported by rail. The project will also include the delivery of jet fuel to the airport fuel farm from the rail yard by pipeline. Project includes site development, environmental assessment, design, and construction." This project is identified with a "near-term" timeframe of 1 to 5 years at an estimated cost of \$8 million in 2009 dollars.

SGLR had previous discussions with a potential shipper who was considering developing this terminal that would handle loaded rail cars of jet fuel for airport use; the terminal would include a pipeline to transport jet fuel to the airport's fuel farm. The terminal would also handle

loaded rail cars of gasoline and diesel fuel that would be transloaded to trucks for distribution in the Fort Myers area. This proposed bulk transfer facility would be served from the SGLR Baker Spur which currently extends as far east as Domestic Avenue. The proposed site location is shown in Figure 5-2. It is not known if traffic projections for this proposed facility have been done. SGLR has acknowledged that, prior to constructing such a facility, the Phase 1 and potentially some Phase 2 SGLR track and bridge infrastructure improvements discussed previously would need to be constructed. This project is included in the 2035 LRTP. The project is not moving forward at this time.

Figure 5-2: Potential Site Location for Intermodal Fuel Transloading Facility



Source: Spikowski Planning

6. Future Freight Rail Considerations

As part of the work effort for this report, consideration has been given to restoring some former rail corridors to active freight rail service. Figure 6-1 shows former rail corridors that are no longer in active service. At one time, the former Atlantic Coast Line (ACL) route that is now the SGLR line through Lee County extended as far south as Collier City. The Seaboard Air Line (SAL) also operated a route south from Fort Ogden through Gilchrist and Fort Myers through Lee County to Naples. This SAL line had its own crossing of the Caloosahatchee River and generally ran parallel to the ACL line from Fort Myers south to Naples. A major portion of this former SAL line is now occupied by Ten Mile Canal in the Fort Myers area. Other portions of the former SAL line are now occupied by new development. The SAL also had a line that

extended west from the San Carlos/Alico Road area to Punta Rassa. Another SAL line extended east from Fort Myers to LaBelle.

Figure 6-1: Existing and Former Rail Corridors



Source: Spikowski Planning

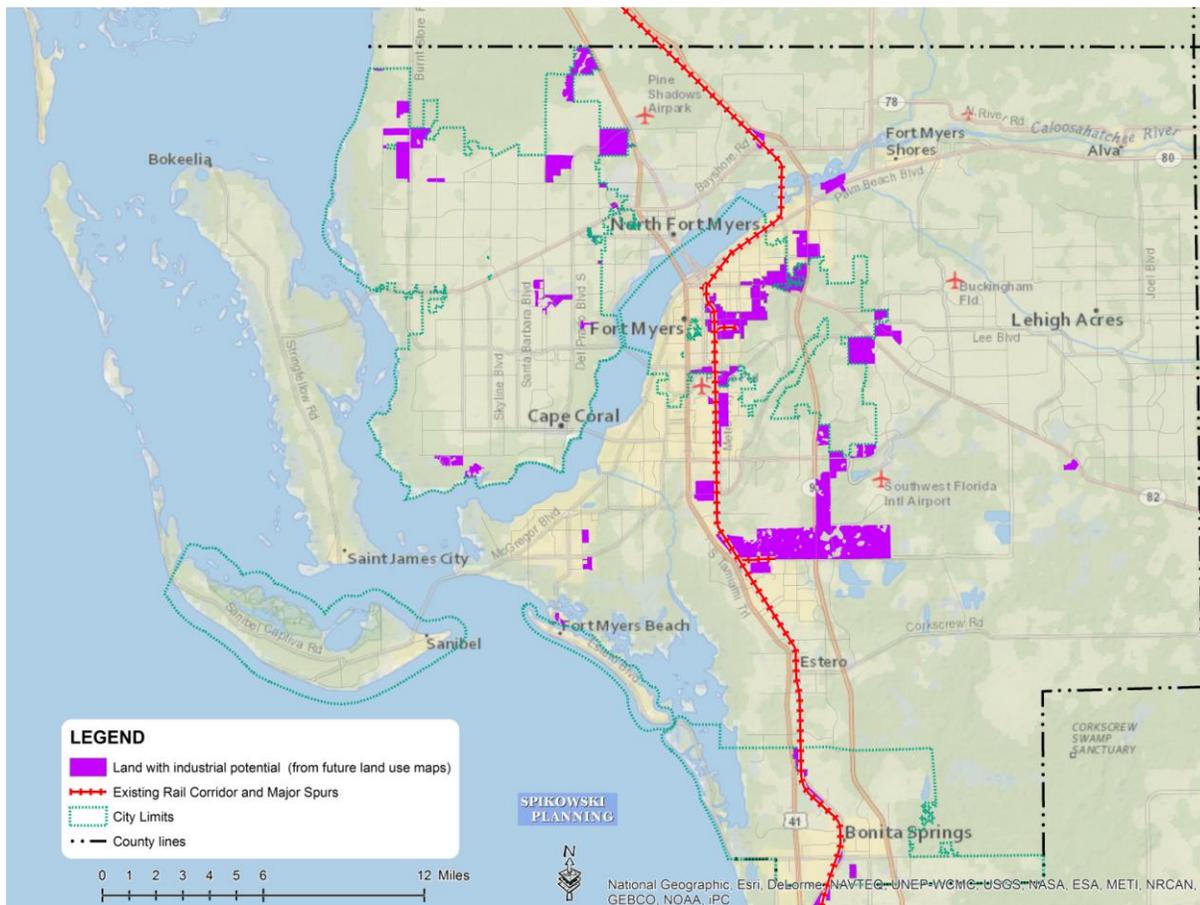
Some portions of these former rail lines may have the potential to be considered for providing access to potential new industrial customers. Additional studies would need to be done if consideration is to be given to restoring portions of any of these former corridors to service. First a viable rail traffic need would have to be identified. Then the proposed reuse of the respective corridors would need to be examined relative to existing land uses and other environmental considerations. While some former rail corridors have been restored to service in the United States, there are many physical, environmental and administrative challenges that must be overcome to implement such initiatives. This is especially true where the corridors were not preserved as intact segments, which is the case for the former rail corridors in Lee County.

Figure 6-2 shows the "future land use map" designations that would allow and encourage industrial uses for unincorporated Lee County and the cities in Lee County. Based on the latest adopted land-use plans, the abandoned rail corridors discussed above would not serve areas that could support industrial uses. From a land-use perspective, the most viable extensions of

SGLR freight rail trackage would be eastward along the north side of Alico Road along the Baker Spur west of I-75 and northeastward through industrial districts in Fort Myers. The two proposed future intermodal terminal facilities discussed previously would be located in these areas with industrial land use designations. It should be noted that there are not sufficient industrial lands designated in North Fort Myers or Lehigh Acres to justify consideration of new freight rail extensions to these areas.

Figure 6-2 shows land with industrial potential along Alico Road east of the main SGLR corridor. The SGLR Baker Spur runs eastward along Alico Road and terminates at Domestic Road. Several vacant properties east of Domestic Road and west of I-75 have potential for rail-served industrial uses; extensions of the Baker Spur to these properties would be relatively simple to accomplish. While Figure 6-2 also shows land with industrial potential east past I-75 to Airport Haul Road, this land has less potential for rail-served industrial uses. The main reason is the numerous challenges that would need to be overcome to extend the SGLR Baker Spur east of I-75. While the Baker Spur at one time did extend east of I-75, the former right-of-way and track alignment have been consumed by the widening of Alico Road and the I-75 interchange. Also, the I-75 bridge over Alico Road likely would not have adequate vertical clearance to support a rail line extension, and the I-75 ramps north of Alico Road would have to cross such a rail line extension at grade. Recent development north of Alico Road east of I-75 also contributes to make extending rail service less feasible east of I-75.

Figure 6-2: Land Use with Industrial Potential



Source: Spikowski Planning

7. Conclusions

Lee County's location in southwest Florida does not lend itself to attracting significant new industrial development that would require expanded rail service. The SGLR will continue to operate as a low density freight railroad unless significant new freight customers are identified. The FSRP has identified projects that would require public investment for track and bridge improvements and for two potential new intermodal terminals. The costs for track and bridge improvements will vary widely based on the levels of expanded train operations that would need to be supported, but such improvements simply cannot be justified at the present time. Continuation of low density freight operations will allow the SGLR corridor to be viable for potential use as a passenger corridor.