

3 ENVIRONMENTAL CONSEQUENCES

This section describes the potential impacts on social, cultural and historic, natural and physical resources to the approved EA as a result of adding a new station at Fort Florida Road and Maitland, and minor changes to the park-and-ride lot at the Longwood Station. In addition to the above, the station at the DeBary/Saxon Boulevard Extension is deleted.

Included in each subsection is a description of the existing environment along the Project Corridor as it relates to each subject area, and an assessment of potential impacts for the proposed Project scope changes. Mitigation measures, to reduce or eliminate potential environmental impacts, are described where necessary.

3.1 Land Use and Related Socio-Economic Characteristics

3.1.1 Land Use

Land use patterns vary across the Corridor and have not changed significantly since the approval of the EA. Detailed existing land use mapping for each of the changed conditions in the area adjacent to the Fort Florida Road Station, Longwood Station, and Maitland Station is included in Appendix A.

For both the existing and future land use analyses, data were compiled, generalized, and analyzed within a ½-mile radius of the rail alignment and from each proposed Project scope changes.

Changed Conditions

Fort Florida Road Station: The added Fort Florida Road Station site is located at the intersection of Fort Florida Road and US 17/92. The station platforms and proposed 2nd track are located within the existing CSX right-of-way which is approximately 422 feet from the top of bank of the Florida Power and Light (FPL) cooling canal. The second main line track will be added to the east of the existing single track. The park-and-ride lot and associated facilities will be located east of the CSX track on the largely undeveloped area between the track and US 17/92. It is approximately 370 to 422 feet east to the edge of pavement on US 17/92 from the track. A convenience store/gas station is located at the corner of Fort Florida Road and US 17/92 and will not be included as part of the purchase for this project. The stormwater generated from the Fort Florida Station will be conveyed to an existing FDOT water retention pond located to the east side of US 17/92. The existing FDOT water retention pond stores stormwater collected from US 17/92. The existing pond has sufficient storage potential to accommodate the water from the Fort Florida Road Station. Refer to Appendix A for the Fort Florida Road Station site plan.

US 17/92 is a major north-south arterial that parallels Interstate 4 and connects to downtown Orlando. The majority of land use within one-half mile of the station site is undeveloped. There is some residential (a small trailer park) use located 422 feet from the banks of Lake Konomac and on the east side of the CSX tracks and north of the station site. The remaining land use to the south of the station and on the east side of the CSX track is primarily commercial in the form of auto repair shops, golf cart and tire shops. The marine and boat repair and storage business is on the east side of the tracks and located 264 feet from the top of bank of the canal.

This site has Transit Oriented Development (TOD) potential, as it is largely vacant and is a short distance to the DeBary Town Center. US 17/92 also has the potential to develop as a pedestrian friendly corridor connecting the town center and the commuter rail station. Adjacent under utilized land on the east side of the station has the potential for mixed-use development and commercial/retail use. Appendix A-2 shows the existing and future land use associated with the Fort Florida Road Station. The existing land use on the east side of the CSX tracks consists primarily of infrastructure with some vacant and agricultural uses. The future land use is designated residential and commercial in the local jurisdiction's Future Land Use Element.

To the west of the CSX right of way is the Florida Power and Light cooling water canal to Lake Konomac. There is a 422 ft to 475 foot buffer between the tracks and the eastern top of bank on the canal. The buffer continues down the CSX track to the power plant which is located .9 miles or 4,750 feet to the south. The park-and-ride lot and bus drop off area will require 7.6 acres and 275 parking spaces.

This site is considered an origin station. While most of the potential riders will utilize the park-and-ride lot or access the station by feeder bus, many will come from new development surrounding the proposed site. Analysis of a catchment area that is within a 3-mile radius of the station indicates that the population is projected to be 16,847 in 2030, a 56% increase from existing. Likewise, employment is projected to be 10,266 in 2030, a 74% increase. The continued growth in this area will be guided by the local comprehensive planning process and enhanced by the introduction of commuter rail.

Maitland Station: The added Maitland Station is located on the west side of US 17/92 (Orlando Avenue) approximately ½ mile north of the new Maitland Downtown Center. The current land use is comprised of a mixture of commercial and vacant land uses. The owners of the land adjacent to the proposed station property are the Parker Lumber Company and VJR Properties. Refer to Appendix A for the proposed site plan for the Maitland Station. Directly to the west of the station and the west side of the CSXT corridor is the Greenwood Gardens subdivision, a single and mixed multi-family residential area. A new at-grade pedestrian crossing is planned from this neighborhood directly to the proposed station. This project will include the construction of the station platform. The City of Maitland will provide bus access and 250 park-and-ride structured spaces through a joint use development agreement with local developers.

The CRT station site will have strong pedestrian connection to the new town center. The new Maitland downtown will include a new city hall and public safety complex, new recreation and pedestrian facilities, as well as public plazas that will be scattered among new private development. Recent development has included high density residential development, directly across the street and within easy walking distance of the proposed station.

Approximately 3 miles to the west of the CRT station is the Maitland Center development with approximately 5,500,000 square feet of office space and projected plans to increase to approximately 9,000,000 square feet. This is the largest suburban office sub-market in the Orlando Metropolitan area. The CRT station is located approximately ¼ mile from the Maitland Boulevard interchange with US 17/92. Maitland Boulevard is the principal arterial connecting I-4 and the Maitland Center development.

As previously mentioned, the City of Maitland has adopted a master plan that includes the development of a new city office complex. The City is finalizing plans for the Town Square, which includes the Maitland City Hall, public safety complex and private development and provides the community with a sense of place. This is at the edge of the ½ mile radius of the station and well within the 3 mile radius from the station.

The remaining developable properties in Maitland are zoned for multi-family residential. Residential mixed projects are becoming popular in the City's downtown revitalization effort. Downtown revitalization efforts and promotion of the west side over the next five years will encourage strong growth. Appendix A shows the existing land use and future land use for the area within ½ mile of the station area. Land use within ½ mile of the station site is evenly divided between commercial and government uses and medium density residential uses across US 17/92.

Parker Lumber Company owns the northern half of the site and VJR Properties own the Northbridge Center on southern half of the site. Each has 125 transit parking spaces to be provided to the CRT station. The bus drop off is part of the public access to the site.

The Northbridge Center development partnership is in the amendment process to include the transit parking and bus access. Parker Lumber site plans are required to have the transit parking and bus access as part of their development order.

The City of Maitland has required both of the developers to provide this area for the public access and transit parking.

A total of 4.75 acres is needed for the public access/bus drop off and 250 parking spaces.

Currently, site work is being completed by The Northbridge Center developer. The Parker Lumber conceptual site is under plans review by the City of Maitland. If necessary, temporary surface parking will be provided until the structured parking is completed. The City of Maitland is prepared to construct the public access and bus drop off if necessary.

The area adjacent to the proposed station has the potential for TOD. The City of Maitland is establishing a TOD and TCEA that will both accommodate and encourage the use of the station. City of Maitland representatives have had preliminary discussions with several developers to establish this type of development. The current plan includes mixed-use development, structured parking adjacent and parallel to the rail tracks, a bike/pedestrian trail, plaza and bus turnaround and drop off at the station.

This is considered an origin station. Due to the convenient location on US 17/92 and the interchange with Maitland Boulevard, the majority of the customers will utilize the park-and-ride lot or access the station by feeder bus. The City of Maitland has instituted a connectivity committee for the purpose of increasing and enhancing alternative forms of connectivity within the city. In 2000, the population within a 3 mile radius of the station was 89,554. The employment in this area was 91,993 in the year 2000. As a comparison, the population is projected to be 105,781 in 2030, which represents an increase of 18%. Employment is projected to be 140,156 in 2030 which would be an increase of 52%. The new employment is concentrated in the Maitland Office Park development adjacent to I-4.

Longwood Station: The current land use as described in the approved EA has not changed. The City of Longwood has requested some minor changes to the previously approved park-and-ride lot configuration in order to enhance the potential for Transit Oriented Development (TOD). The approved EA indicated that the park-and-ride lot for the Longwood Station would be located immediately adjacent to the platform from Palmetto Street to Church Avenue. The land use surrounding the new parking lot area is primarily comprised of the City of Longwood Public Works Facility and one residence. The existing City water plant and pump station will not be impacted by this change. Also, the new location encourages transit oriented mixed use development adjacent to the station. The park-and-ride lot and bus drop off area requires 5.53 total acres. This is an additional 1.15 acres from the original EA. The total number of parking spaces provided is 354. Refer to Appendix A for the proposed site plan for the Longwood station.

3.1.2 Community Cohesion

The current community impact assessment is found in the approved EA. The maps included in the original EA were reviewed in order to evaluate the effects of the changes as a result of added stations at Fort Florida Road and Maitland, and modification of the Longwood park-and-ride lot. Maps from Appendix A have been updated to show the new station locations.

Mitigation

No permanent impacts to the neighborhoods along the Corridor have been identified, therefore no mitigation is required. Temporary impacts would result during construction of new rail facilities. There would also be long-term benefits. For many neighborhoods without strong activity centers, the rail stations provide opportunities to: focus new development; enhance bicycle and pedestrian access and connectivity; and institute streetscape improvements and other benefits associated with the transit stations and station areas. The Full Build Alternative including the proposed Project scope changes would benefit the region by increasing mobility choices and improve access to employment centers, education facilities, activity centers and shopping.

The introduction of new station sites at Fort Florida Road and Maitland, and reconfiguration of the park-and-ride lot at the Longwood Station will not create physical barriers that will lead to community isolation/exclusion/separation. As a result, the two proposed stations will not adversely impact existing community cohesion and/or character.

The Maitland Station will improve the mobility access to the Greenwood Gardens neighborhood since a new at-grade pedestrian crossing is proposed at the station. The proposed Transit Oriented Development adjacent to the Longwood Station and park-and-ride lot will enhance the City of Longwood town center.

3.1.3 Environmental Justice

This section identifies how areas protected under the Environmental Justice Executive Order (EO) 12898 were defined and the extent to which areas of low-income and minority population would be affected by the proposed Project scope modifications. Table 3-1 presents the summary of impacts to low-income, minority and/or transit-dependent populations as a result of the proposed Project scope changes.

Fort Florida Road Station: There are no low-income, transit-dependent or minority populations above the county average within the station area. Refer to Figure 3-1 for the demographic indicators surrounding the Fort Florida Road Station.

Longwood Station: No change from the approved EA.

Maitland Station: The demographic indicators show that that the Maitland Town Center Development Area has transit dependent population above the county average. There are no low - income or minority populations above the county average within the station area. Refer to Figure 3-2 for the demographic indicators surrounding the Maitland Station.

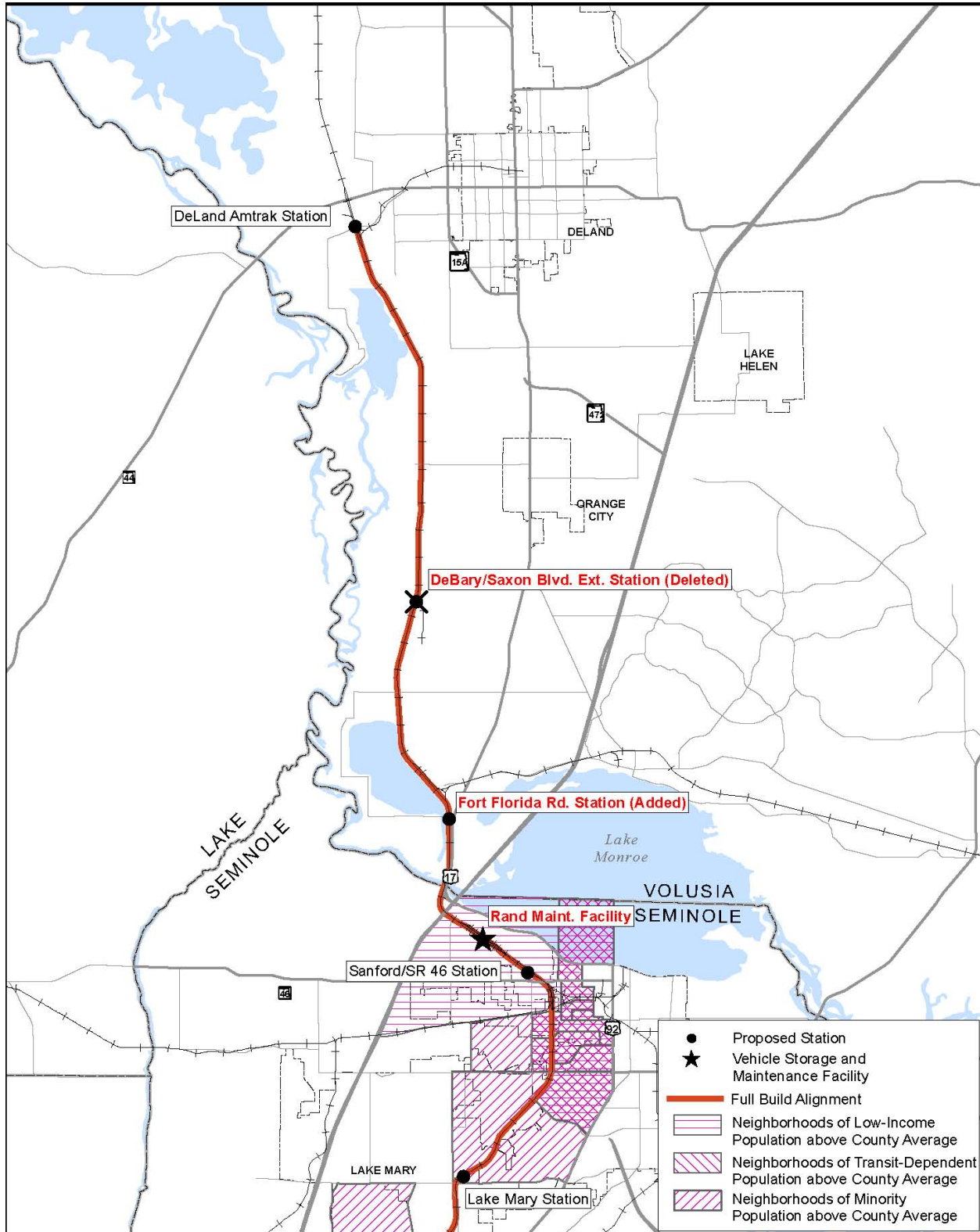


Figure 3-1 Demographic Indicators – Volusia

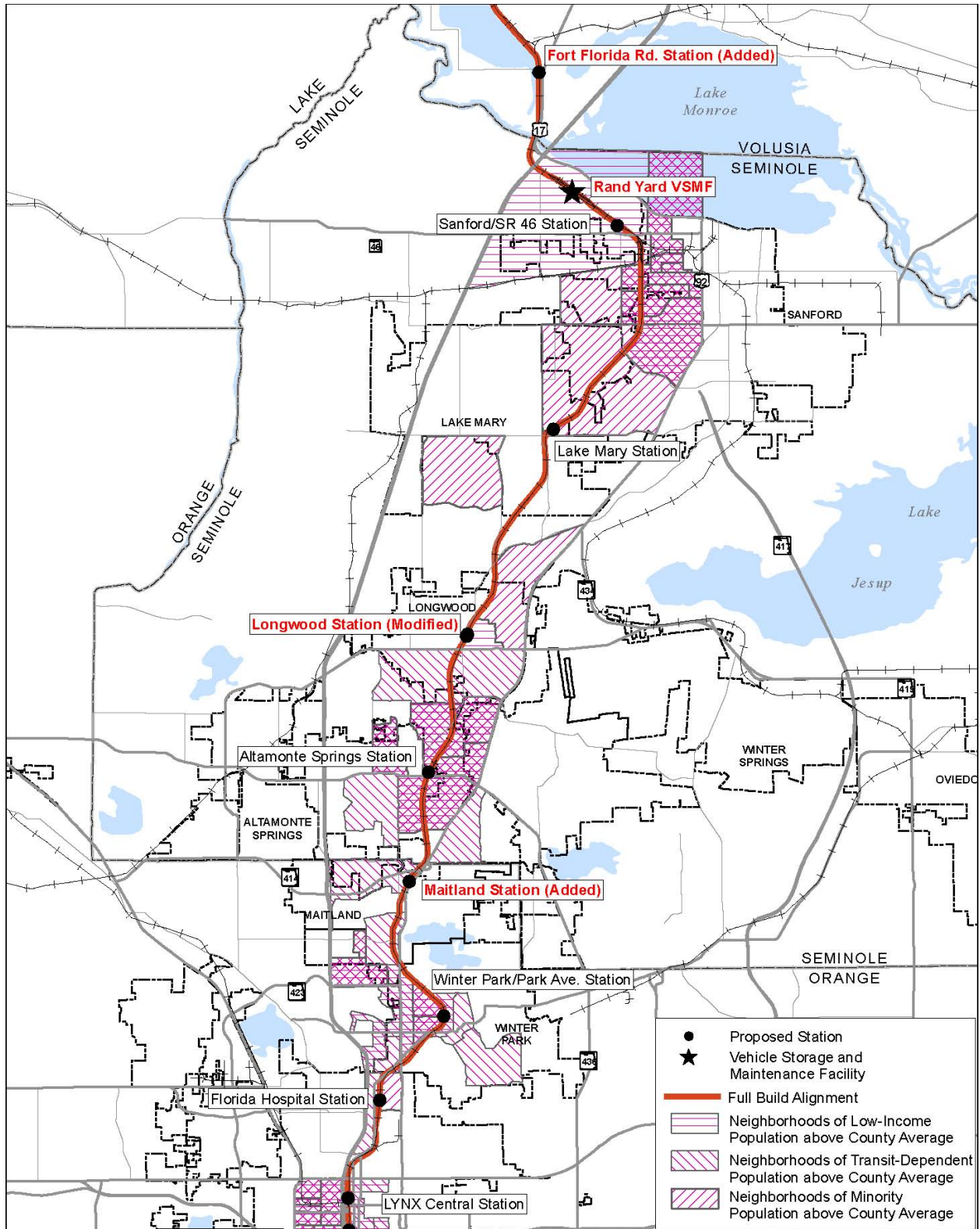


Figure 3-2 Demographic Indicators – Seminole/Orange

Changed Conditions**Table 3-1 Summary of Impacts to Low-Income, Minority and/or Transit-Dependent Populations**

County	Station Name	Noise Impacts (mitigated)		Displacement / Relocation		Parkland Impacts		SUMMARY		
		Total Impacted	Minority, Low Income and/or Transit-Dependent	Total Impacted	Minority, Low Income and/or Transit-Dependent	Total Impacted	Minority, Low Income and/or Transit-Dependent	Impacts to Low-Income, Minority and/or Transit-Dependent Populations	Transit Access Benefit Provided to Low-Income, Minority and/or Transit-Dependent Populations (located within 1/2 mile)	Disproportionate Impacts to Low-Income, Minority and/or Transit-Dependent Populations
Volusia	Ft. Florida Rd Added	0	-	0	-	0	-	-	-	-
	DeBary / Saxon Boulevard Extension - Deleted	0	-	0	-	0	-	-	-	-
Seminole	Longwood – change in parcel layout	0	0	1 occupied residences and 1 active businesses	0	0	0	0	Yes	No
Orange	Maitland – added	0	0	0	0	0	0	0	Yes	No

- Notes:
1. Assessment area for each station includes to mid-point between adjacent stations.
 2. “-” Indicates no defined EJ population within station assessment area.
 3. This analysis was based on Census Tract designations for low income, minority and transit-dependent populations. Status of specific impacted property and business owners relative to being minority, low-income, or transit dependent has been verified by field survey at Altamonte Springs Station only.

3.1.4 Public Safety, Security and Community Services

The addition of the station at Maitland does not change the approved EA finding that the Build Alternative will improve safety and security.

In meetings with adjacent land owners, Florida Power and Light has indicated that a Dam Safety Plan is necessary at the Fort Florida Station. Requirements for construction beyond 420 feet of the canal will be coordinated with FPL representatives. FDOT is coordinating with FPL on a Dam Safety Plan that will be implemented prior to construction activities.

3.1.5 Economic Impacts

The finding that the Full Build Alternative would result in a \$615 million capital investment in the region does not significantly change with the addition of the station in Maitland. The approved corridor remains the same as the Fort Florida Road Station is replacing the DeBary/Saxon Station. Materials and labor for the construction would be purchased within the four-county region. The revenue from local purchases of material and labor would far outweigh the taxable revenue lost.

3.1.6 Utilities

The positive economic impacts of the Project as a whole are documented in the approved EA. There should be additional opportunities for TOD around the new Fort Florida Road and Maitland Stations and modified Longwood Station parking area.

Florida Power and Light (FPL) has a generating plant that is located approximately .9 miles from the Fort Florida Road Station. It is approximately 475 feet west of the CSX right-of-way. The construction of the Fort Florida Road park-and-ride lot and platform is not expected to impact the canal. Contact information on the utilities is located in Appendix C of the approved EA.

3.1.7 Railroads

Passenger platforms at the new stations at Fort Florida Road, and Maitland will be designed to be compliant with applicable FRA regulations pertaining to rail lines with freight and passenger operations. This does not change from the original approved EA.

3.1.8 Displacements and Relocations

The acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and relocation resources will be available to all relocated business and residents without discrimination. Table 3-2 presents a summary of property takings for the proposed Project scope changes.

Appendix D contains a list of impacted parcels, relocations and easements that were cleared as part of the approved EA. However, since the approved EA, additional title and boundary survey information has further defined the ownership of these parcels.

Fort Florida Road Station: A total of 7.63 acres of right-of-way is required for the Fort Florida Road Station affecting one parcel owned by Florida Power and Light. In addition, one small field office will need to be relocated. As a result, FDOT is committed to carrying out a Right-of-Way and Relocation Program in accordance with Florida Statute 339.09 and the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970 (Public Law 91-646 as amended by Public Law 100-17). The brochures that describe in detail the Department's Relocation Assistance Program and Right-of-Way Acquisition Program will be made available upon request, as previously documented in the approved EA.

Maitland Station: No right-of-way is required for the Maitland Station park-and-ride lot since the City of Maitland is working with developers to provide joint use parking. The parking being proposed by the City for use by commuter rail patrons consists of two 125 space parking garages (Refer to site plan in Appendix A). No relocations of buildings are expected at the proposed locations of the parking garages.

Parker Lumber Company owns the northern half of the site and VJR Properties own the Northbridge Center on southern half of the site. Each has 125 transit parking spaces to be provided to the CRT station. The bus drop off is part of the public access to the site.

The Northbridge Center development partnership is in the amendment process to include the transit parking and bus access. Parker Lumber site plans are required to have the transit parking and bus access as part of their development order.

The City of Maitland has required both of the developers to provide this area for the public access and transit parking.

A total of 4.7 acres is needed for the public access/bus drop off and 250 parking spaces.

Currently, site work is being completed by The Northbridge Center developer. The Parker Lumber conceptual site is under plans review by the City of Maitland. If necessary, temporary surface parking will be provided until the structured parking is completed. The City of Maitland is prepared to construct the public access and bus drop off if necessary.

To construct the east platform, a 7.5' strip is required. The city is coordinating with the developer to donate the strip or provide a permanent easement for the station construction as part of the site plan approval process, therefore no taking is shown.

Longwood Station: The revised location of the park-and-ride lot requires a total of 5.53 acres. This is approximately 1.15 acres additional right-of-way than what was originally documented in the approved EA. Only one resident and one business (City of Longwood) will need to be relocated. FDOT is committed to carrying out a Right-of-Way and Relocation Program, as previously documented in the approved EA.

Since the DeBary/Saxon Boulevard Extension Station has been dropped and the VSMF location remains within the limits Rand Yard, there is a net reduction of 3.14 acres overall needed for the park-and-ride right-of-way associated with this project.

Table 3-2 Summary of Property Takings for the Proposed Project Scope Changes

County	Station	Parcel Area (AC)	Take Area (ac)	Relocations Required?
Volusia County	Ft. Florida Road Station	7.63	7.63	1 business – FPL Field Office, 628 South US 17/92, DeBary, FL 32713
	DeBary/ Saxon Boulevard Extension DELETED	-16.30	-16.30	No
Seminole County	Longwood Modified park and ride lot	5.53	5.53	1 occupied residence - 279 E Jessup Ave Longwood, FL 32750 1 active business – City of Longwood Public Works, 180 East Warren Avenue, Longwood
Orange County	Maitland	0.00	0.00	No
	TOTALS	-3.14	-3.14	-----

3.2 Cultural and Historical Resources

3.2.1 Archaeological and Historic Resources

This section summarizes the findings of separate above ground historic property and archaeological reconnaissance surveys conducted for the proposed Project scope changes along the CRT Corridor. The results and recommendations of these surveys are intended to provide information that will facilitate consultation between the Project sponsors and the responsible review agencies to determine whether the construction of the Project has the potential to adversely affect any of the properties judged to be potentially eligible for the National Register of Historic Places (NRHP).

Additional historical/architectural and archaeological field surveys were conducted between October and December 2007 within the Project Area of Potential Effect (APE) defined as the zone within approximately 100 feet from the edge of each side of the existing CSXT ROW and the footprint and immediately adjacent property of each proposed station and other ancillary facility.

All the archaeological and historical resources within the APE were identified through background research and field survey. The resulting Cultural Resource Assessment Survey Report⁵ was reviewed by the SHPO as a stand alone technical report (Appendix C). In a letter⁶ from the State Historic Preservation Officer, the Division of Historical Resources found that the proposed CRT Project scope changes will have no effect on historic properties (provided in Appendix C).

Table 3-3 presents the ineligible historic resources associated with the proposed Project scope changes. Locations of the NRHP listed, determined eligible and potentially eligible historic resources associated with the CRT Full Build Alternative including the proposed Project scope changes are depicted on Figure 3-3.

Existing Conditions and Survey Results

Fort Florida Road Station: Based on the results of background research and archaeological and historical/architectural field surveys⁷ no archaeological sites or historic resources which are listed, determined eligible, or considered potentially eligible for listing in the NRHP are located within the proposed Fort Florida Road Station location. Thus, station development will have no effect on significant cultural resources.

Maitland Station: Background research and field survey were conducted⁸ at the proposed location of the park and ride parking lot at Maitland Station. Resources at the Parker Lumber Company were identified (one previously recorded structure and four additional historic structures). Due to numerous alterations and additions, none of the four newly recorded buildings is considered potentially eligible for listing in the NHRP, either individually or collectively. Archaeological survey yielded negative results.

⁵ Archaeological Consultants, Inc., *Cultural Resources Assessment Survey Report*, [December 10, 2007]

⁶ Florida Dept. of State, Division of Historical Properties, Letter, *Central Florida Commuter Rail*, June 20, 2008.

⁷ Archaeological Consultants, Inc., Memo, *Central Florida Commuter Rail Transit (CFCRT), Fort Florida Road Station, Volusia County, Florida*, October, 2007

⁸ Archaeological Consultants, Inc., Memo, *Central Florida Commuter Rail Transit (CFCRT), Maitland Station, Orange County, Florida*, December, 2007

Longwood Station: The new areas for the park-and-ride lot were assessed for their archaeological and historic resources⁹. A new site, 8SE2339 was recorded and found to be not eligible for listing in the NRHP. It was determined that the station development will have no effect on significant cultural resources.

Table 3-3 NRHP Ineligible Listed Historic Resources

FMSF No.	Name	Location	NRHP Status
8SE2339	Residence	217 E. Warren St, Longwood	Previously recorded- not eligible
OR9761	851 North Orlando Avenue	851 North Orlando Ave., Maitland	Not Eligible
OR9770	Building 2	851 North Orlando Ave., Maitland	Not Eligible
OR9771	Building 3	851 North Orlando Ave., Maitland	Not Eligible
OR9772	Building 4	851 North Orlando Ave., Maitland	Not Eligible
OR9773	Building 5	851 North Orlando Ave., Maitland	Not Eligible
OR9774	Parker Lumber Company Resource Group	Encompasses all buildings above	Not Eligible

The FDOT will continue to coordinate the design of the proposed improvements (e.g., stations) with the SHPO staff so that potential visual and aesthetic effects can be avoided or minimized, and to ensure that historic integrity at nearby historic properties and districts is maintained.

The FDOT is committed to provide a high level of design treatment for proposed improvements. Such treatments may include ensuring that the design of station platforms and canopies are architecturally and aesthetically compatible with the design of nearby historic resources; as well as using landscaping to reduce the potential visual effects of parking lots.

In a letter dated June 20, 2008 (Appendix C), SHPO has determined that the proposed scope changes as it relates to Fort Florida, Longwood and Maitland Station sites will have no effect on any significant historic structures or districts, including those properties listed, determined eligible, or considered potentially NRHP-eligible.

⁹ Archaeological Consultants, Inc., Memo, *Central Florida Commuter Rail Transit (CFCRT), Longwood Station, Seminole County, Florida*, October, 2007

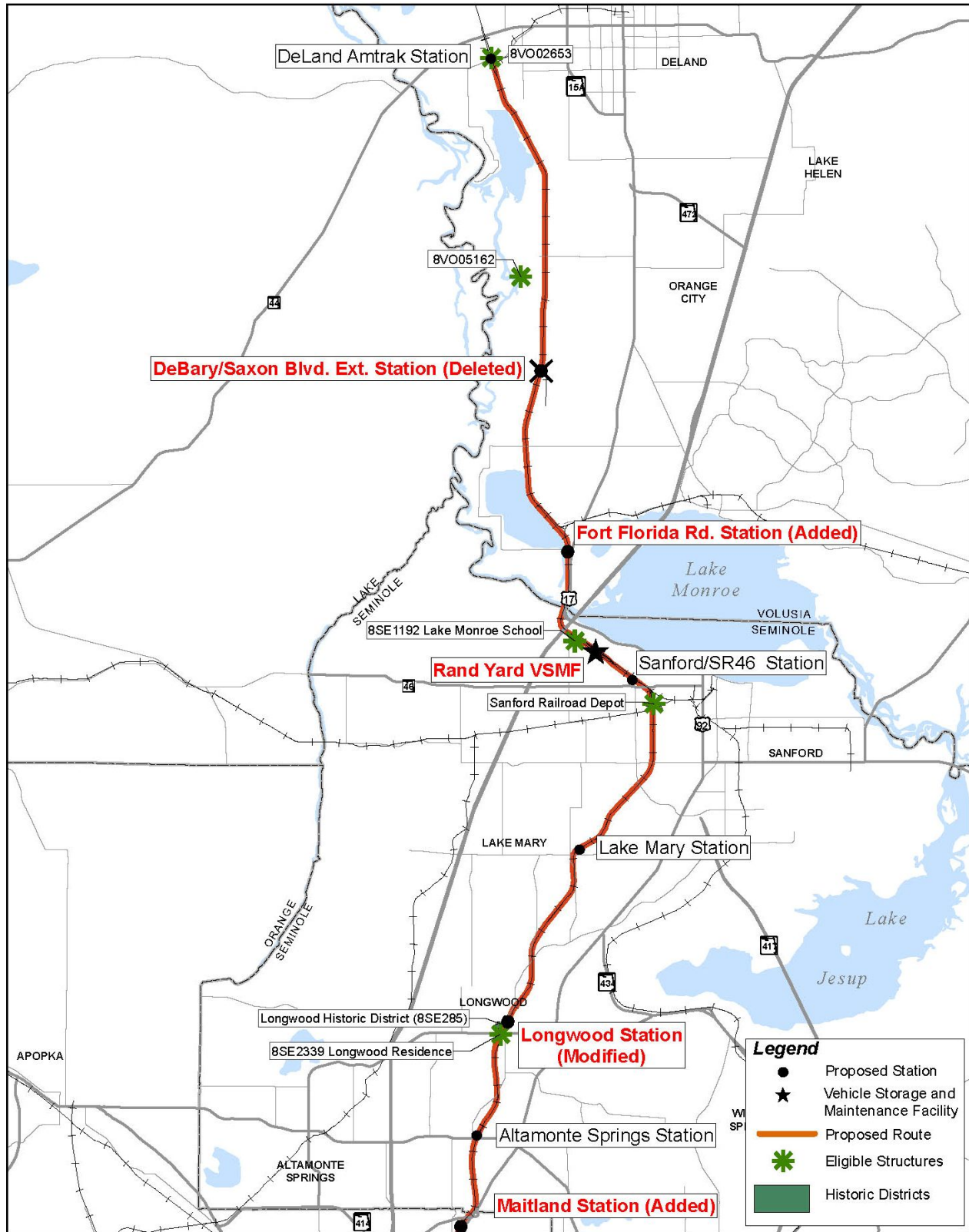


Figure 3-3a NRHP Listed and Potentially Eligible Historic Resources – Sheet 1 of 2

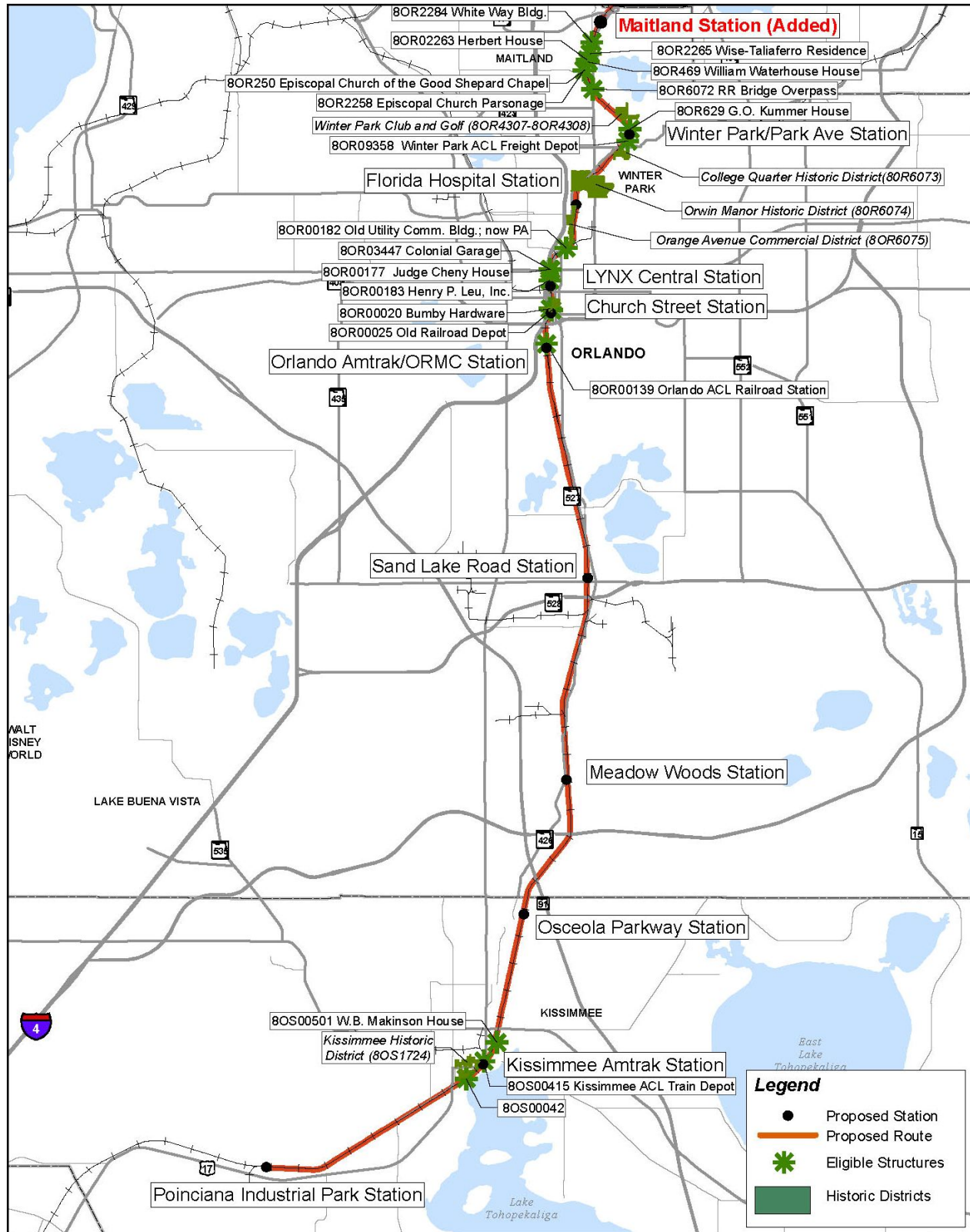


Figure 3-3b NRHP Listed and Potentially Eligible Historic Resources – Sheet 2 of 2

3.2.2 Recreation and Parkland Resources

This section summarizes the potential impacts of the proposed Project scope changes on existing recreation and parkland resources along the Project Corridor.

Methodology

Existing parklands mapping and site investigations along the CRT corridor were used to identify existing public parks, recreation areas and wildlife refuges. Information on park size, ownership, existing facilities and use, and any future plans or improvements was gathered. All of the parks and recreation areas identified lie in close proximity to the Project Corridor and generally are visible from the rail ROW or afford park users views of the rail ROW.

Existing Conditions

Table 3-4 lists the 4 parks identified along the CRT Corridor that are located in the vicinity of the new and modified stations. The location of the parks is noted on Figure 3-4. No publicly-owned wildlife refuges are located along the corridor.

Gemini Springs County Park is approximately 2 miles from the Fort Florida Road Station, Lake Monroe Park is approximately 1.5 miles from the station and Lake Monroe Wayside Park is situated approximately 1.6 miles. Hill Passive Park is approximately 900 feet from the Maitland Station.

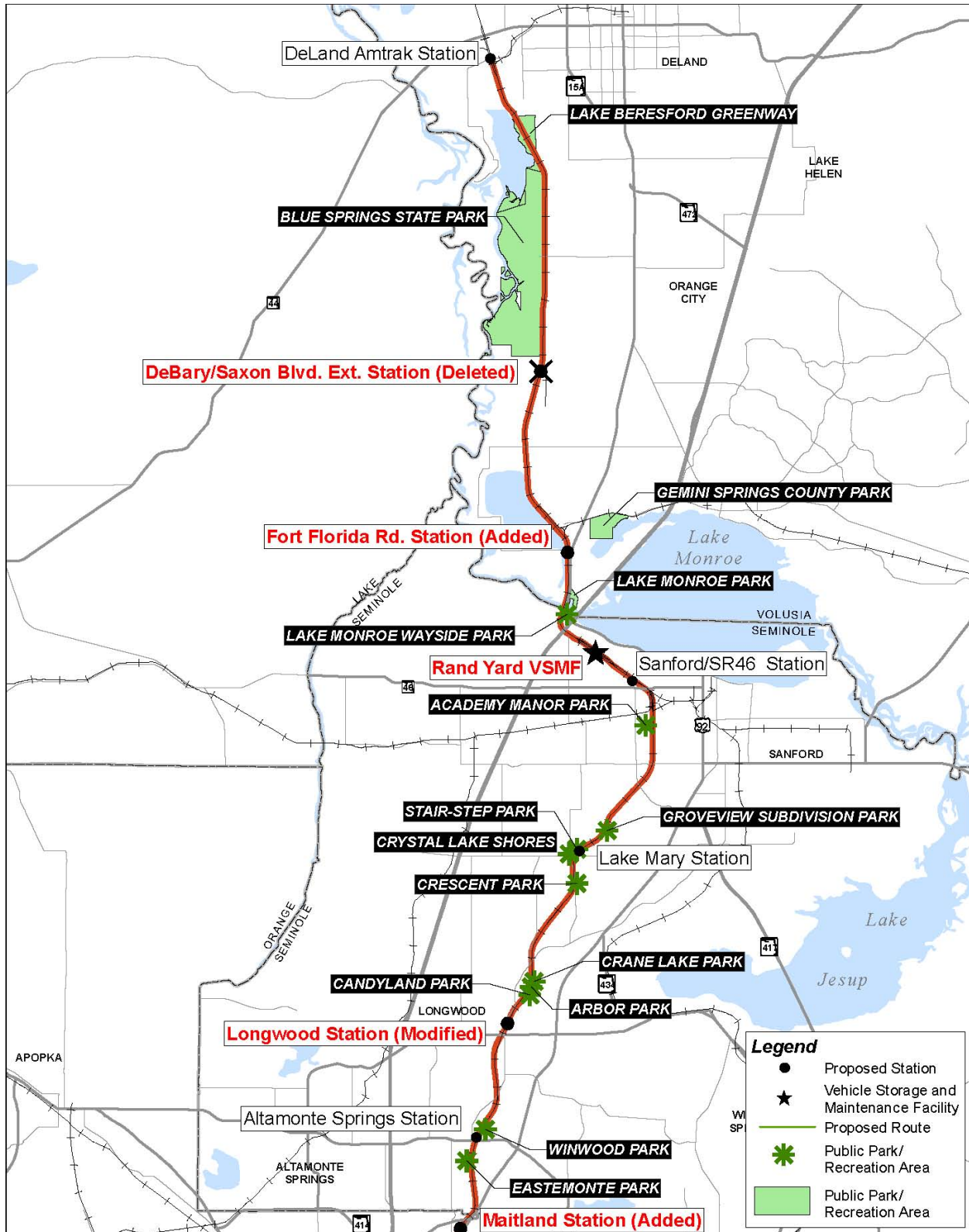


Figure 3-4a Publicly-Owned Parks & Recreation Areas – Sheet 1 of 2

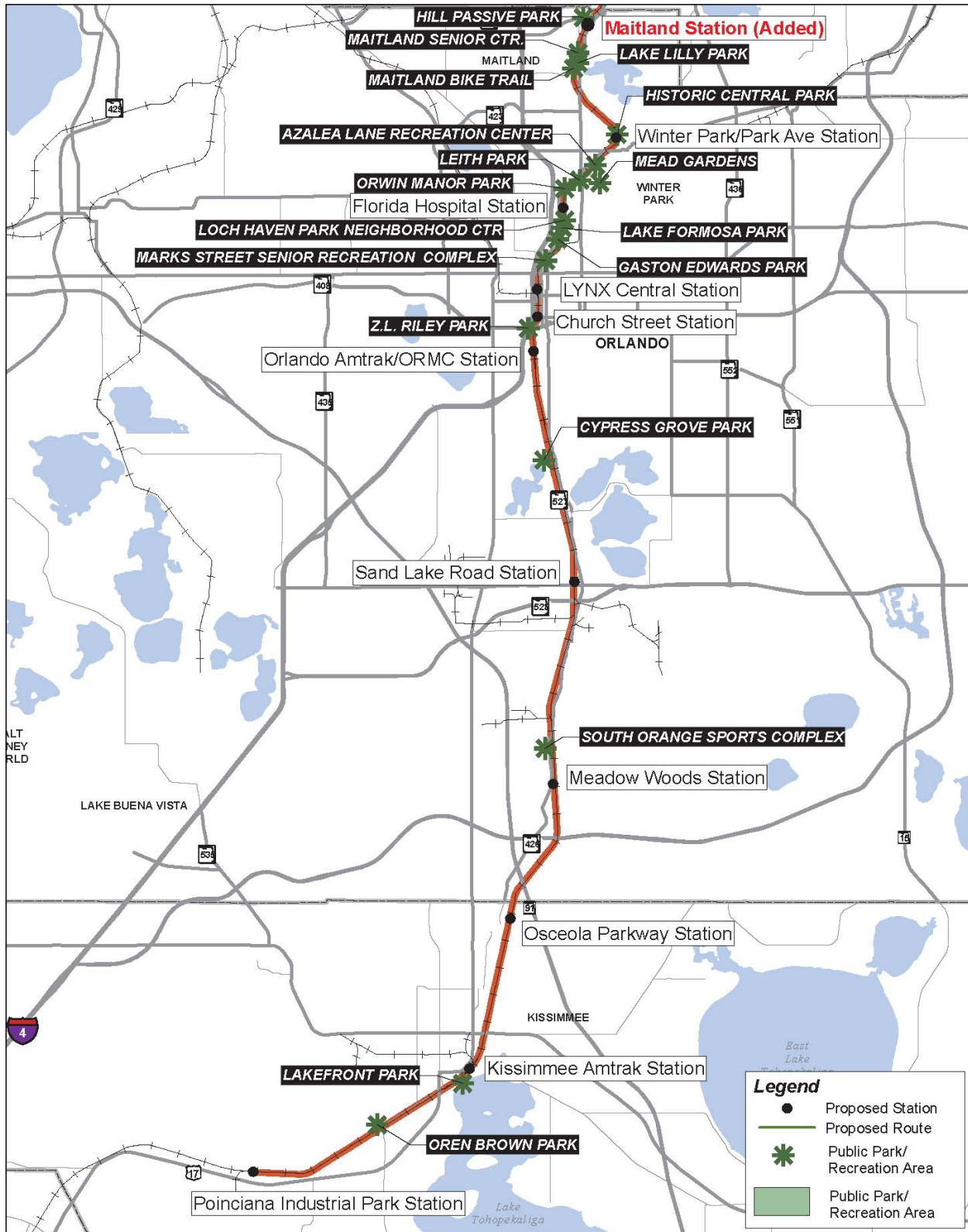
**Figure 3-4b Publicly-Owned Parks & Recreation Areas – Sheet 2 of 2**

Table 3-4 Parks and Recreation Areas Located Along the CRT Corridor

Name	Location	Jurisdiction	Activities
Gemini Springs County Park	DeBary	Volusia County	Camping, picnicking, swimming, scuba diving, canoeing and educational programs
Lake Monroe Park	DeBary	Volusia County	Camping, fishing, boat ramp, picnic tables, playground, volleyball
Lake Monroe Wayside Park	Sanford	Seminole County	Fishing, boat ramp, picnic tables
Hill Passive Park	Maitland	City of Maitland	Undeveloped parcel that, by deed restrictions, must remain in its natural state

Impacts and Benefits

Proposed station construction will not directly impact any identified park or recreation area. Temporary construction activities may affect access to and use of adjacent parks and recreational resources. Construction impacts that would temporarily affect park and recreational experiences include physical separation of parks and recreational resources from users (e.g., fencing of a street ROW); increased noise, dust, and truck traffic; and restricted or altered access. Full-Build Alternative CRT service is not planned for weekend or holiday periods when the parks in the vicinity of the stations are most heavily used.

Section 4(f) and Constructive Use

The proposed action will not require the use of any properties as defined by Section 4(f) of the U.S. Department of Transportation Act. FTA has determined that Section 4(f) does not apply.

Section 6(f) – Land and Water Conservation Fund

Lake Monroe Park on the St. Johns River in Volusia County (located to the east of the corridor across Route 17/92) was purchased, in part, with Federal Land and Water Conservation funds. The CRT Project will not impact this park; therefore Section 6(f) of the Land and Water Conservation Act of 1965 will not apply to this project.

Mitigation

No adverse impacts from operation of the Full-Build Alternative including the proposed Project scope changes are anticipated therefore no mitigation measures are required. Potential temporary construction period impacts (noise, dust, access restrictions) will be minimized to the greatest extent possible.

3.3 Natural and Physical Impacts**3.3.1 Pedestrian and Bicycle Facilities/Access**

Impacts and benefits to pedestrian and bicycle facilities for the proposed Project scope changes are discussed below.

Fort Florida Road Station: The Fort Florida Road Station will have improved access as future development occurs along US 17/92 to connect the station with the DeBary Town Center.

Longwood Station – In the vicinity of this station, sidewalks are currently provided along existing streets with handicap ramps at intersections. Existing sidewalks would be available for pedestrians accessing the site. There is no change from the original approved EA.

Maitland Station: This station, located adjacent to the Greenwood Gardens subdivision, would provide access to the bikeway that connects Maitland Community Park and the existing Maitland City Hall. Future plans for the new Maitland Town Center include strengthening the pedestrian connection along US 17/92 and expanding the bike trails to connect to Lake Lilly Park.

3.3.2 Visual and Aesthetic Resources

No negative visual impacts are anticipated; therefore, no specific mitigation measures are necessary.

3.3.3 Air Quality

As documented in the approved EA, the CRT Project is not located in a Non-attainment Area, and accordingly the Transportation Conformity Rule and its air quality requirements do not apply to the Project. The emissions inventory performed in the approved EA indicated that there are only very minor differences in emissions between the No-Build, TSM, and Full Build alternatives at the regional and for local CO concentrations. All estimated CO concentrations are less than applicable standards and this is not changed by the proposed Project scope changes in this supplement to the approved EA. The proposed Project scope changes have only minor net change in operation of the system compared to the system as defined in the approved EA. Therefore, no mitigation measures are required as a result of the proposed Project scope changes items.

3.3.4 Noise

A detailed noise and vibration assessment was performed along the Project Corridor, from DeLand in Volusia County to Poinciana Boulevard in Osceola County as part of the approved EA. Figure 3-5 presents the noise and vibration monitoring locations along the Project corridor.

Noise

The number of predicted FTA noise impacts along the proposed Project scope changes is five moderate impacts and one severe impact due to the use of the DMU warning horns at the grade crossings. To further reduce these noise impacts, the DMU warning horns could be modified or re-designed to reduce the sideline noise while still maintaining the Federal Railroad Administration's minimum noise requirement of 96 dBA L_{max} measured at a distance of 100 feet from the centerline of the horn. The FEIS prepared for the Utah Transit Authority Weber County to Salt Lake City Commuter Rail Project (April 2005), based the results of the noise analysis using a sheet metal shroud packed with 4-inch foam rubber as mitigation. The sideline noise levels from the train horns were estimated to be reduced by up to 22 dBA while maintaining full level of on-axis output and

would be consistent with FRA requirements. Applying this mitigation technique or similar redesign of the horn to reduce sideline noise of the DMU warning horns can be expected to eliminate all moderate impacts and severe impacts of the CRT. Table 3-5 presents the predicted CRT train operational noise levels at receptor locations for the proposed Project scope changes.

FDOT is committed to constructing a commuter rail Project that will not have adverse noise impacts on a corridor community with existing high noise exposure. During the start-up period of commuter rail operations, FTA, with the assistance of FDOT, will prepare a detailed noise assessment. This assessment will verify the predicted Project noise levels in the approved EA and this supplement to the approved EA and test the efficacy of its operational and horn noise analysis and mitigation measures to ensure that there will be minimal community noise impacts from this Project. The sheet metal shroud and foam rubber insulation shall be installed on all locomotives as described in the Mitigation Section of the approved EA. Table 3-6 presents the recommended mitigation plan to eliminate all noise impacts along the Project corridor through the use of custom modified train horns on the proposed DMU fleet.

If noise monitoring during the start-up period reveals that the selected mitigation does not adequately control noise, the Project sponsor is committed to adopting additional measures to reduce noise. In this case, the goal will be to eliminate all impacts in the “severe” range and to minimize the number of impacts in the “moderate” range. Such an outcome is consistent with FTA’s approved original EA for the Project.

Vibration

FTA criteria are related to ground-borne vibration levels expressed in VdB that are expected to result in human annoyance. These criteria were used to assess annoyance due to ground-borne vibration from the DMU transit operations. The Full Build Alternative including the proposed Project scope changes will not result in adverse vibration impacts along the corridor; therefore, no mitigation measures are required.

Table 3-5 Predicted CRT Train Operational Noise Levels at Receptor Locations for the Proposed Project Scope Changes

No.	Measurement Locations Receptor Description	Town	FTA Category	Date	Start Time	Duration	Measured Ambient Noise Level (dBA)	FTA Moderate Impact** Criterion (dBA)	FTA Severe Impact** Criterion (dBA)
1	25 Jason Drive*	DeBary	2	5/10/05	0715 hrs	24-hours	68 L _{dn}	63 L _{dn}	68 L _{dn}
4	115 West Pine Avenue	Longwood	2	5/6/05	1800 hrs	24-hours	74 L _{dn}	66 L _{dn}	72 L _{dn}
5	425 Lake Seminary Circle	Maitland	2	5/6/05	1700 hrs	24-hours	68 L _{dn}	63 L _{dn}	68 L _{dn}
5B	Lake Lily Park	Maitland	3	5/9/05	1400 hrs	1-hour	56 L _{eq} (h)	56 Leq(h)	62 Leq(h)

** Total Noise Level = Logarithmic sum of Measured + Predicted CRT train operational noise level without warning horns.
Source: KM Chung Environmental Inc.

Table 3-6 FTA Severe Noise Impacts from the Proposed Project Scope Changes with Proposed Mitigation

Region	Description/ Station Area	Number of Severe Impacts Before Mitigation	Proposed Mitigation	Number of Severe Impacts After Mitigation
2	DeBary/Saxon	0	Modify train horn	0
5	Longwood	0	Modify train horn	0

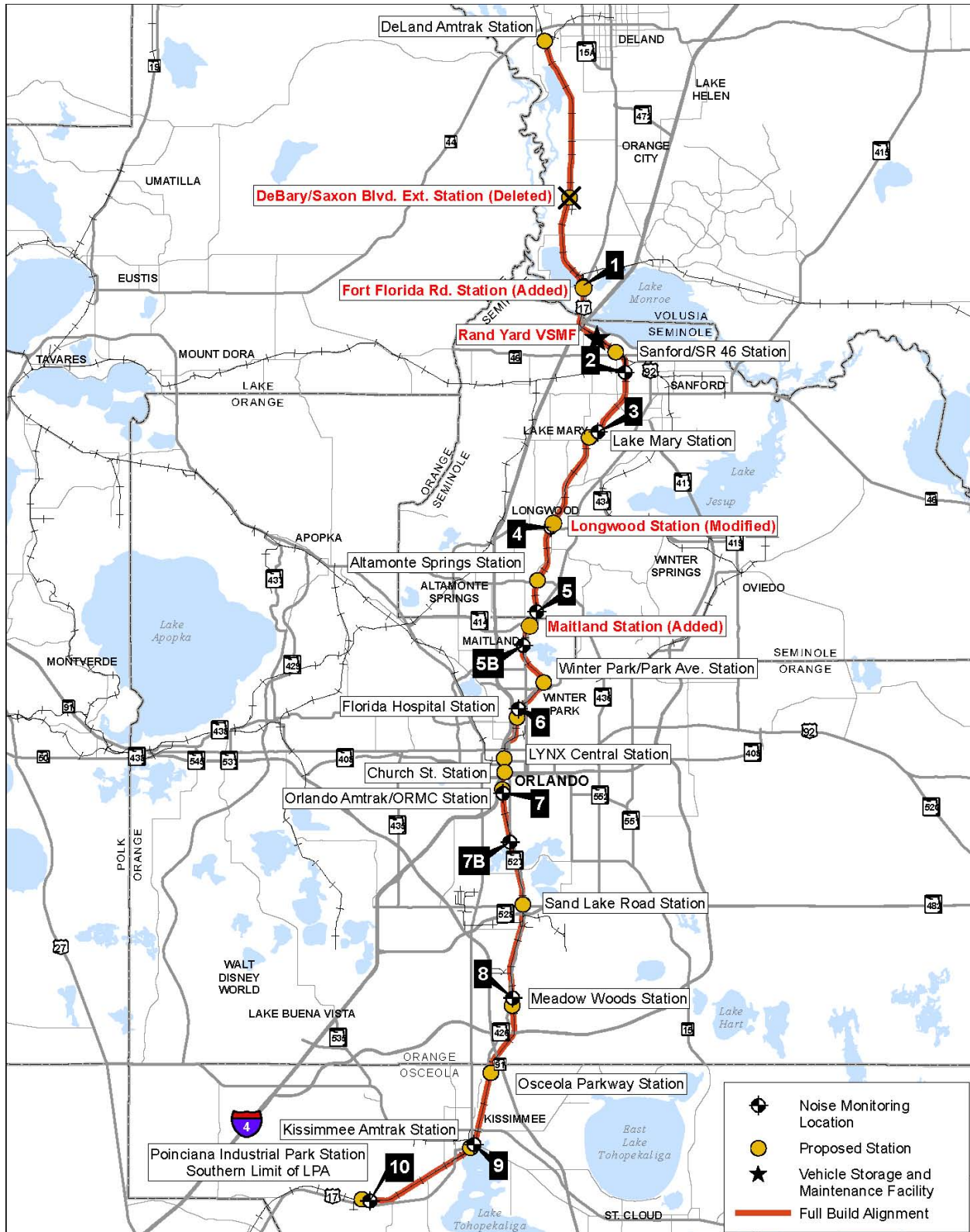


Figure 3-5 Noise & Vibration Monitoring Locations

3.3.5 Ecosystems

The Endangered Species Biological Assessment (ESBA) that was conducted in accordance with Section 7 of the Endangered Species Act of 1973 to assess potential effects on protected species and their habitats with the Project corridor was reviewed and it was found that the area around the Fort Florida Road station contains Upland, Scrub, Pine and Hardwood forest. The Longwood Station contains an area identified as Pine Flatwood habitat. The Rand Yard VSMF contains an area identified as Live Oak Woodland habitat. However, the areas surrounding the Maitland Station, Longwood and Station do not contain any protected species.

Therefore, no significant adverse impacts are anticipated to the regional populations of the federally or state-listed species protected by the Endangered Species Act of 1973, amended (16 U.S.C. 1531 et seq.) as a result of the proposed Project scope changes. However, all ecosystem commitments contained within the approved EA will be met.

3.3.6 Wetlands

In accordance with Executive Order 11990 (Protection of Wetlands) and USDOT Order 5660.1A, the Project Corridor was evaluated for any wetlands that have potential involvement with the proposed improvements.

The maximum (worst case) wetland and other surface water feature impacts are estimated at 23.36 acres for the entire 61-mile corridor. Of these impacts, 18.01 acres are directly associated with station locations.

The Fort Florida Road Station has a 1.45 acre impact on wetlands. The net decrease is 0.2 acres after the 1.65 acres from the DeBary/Saxon Boulevard Extension Station is deducted. The Fort Florida Road Station site has a wetland forested mix covering 1.45 acres. These impacts are proposed to highly disturbed wetland fringes within the existing railroad corridor and station location.

The original Longwood Station contained 0.9 acre of Willow and Elderberry wetlands. The revised park-and-ride lot layout has a total of 0.8 acre of wetlands. This includes 0.37 acre of Freshwater marshes, 0.35 acre of Willow and Elderberry wetlands and 0.08 acre of streams and waterways. This is a net reduction of 0.1 acre of impacted wetlands for this site.

There is no change from the approved EA as a result of the addition of the Maitland Station.

In the locations where new parking lots are required, efforts will be made to avoid direct impacts to any extant wetland resources. Wetland impacts will be mitigated pursuant to S. 373.4137 FS to satisfy all mitigation requirements of Part IV Chapter 373, F.S. and 33 U.S.C.s. 1344 as indicated in the approved EA.

3.3.7 Water Quality

No change from the approved EA. Figure 3-6 (Sheets 1 and 2) presents the floodplains in relation to the proposed Project scope changes.

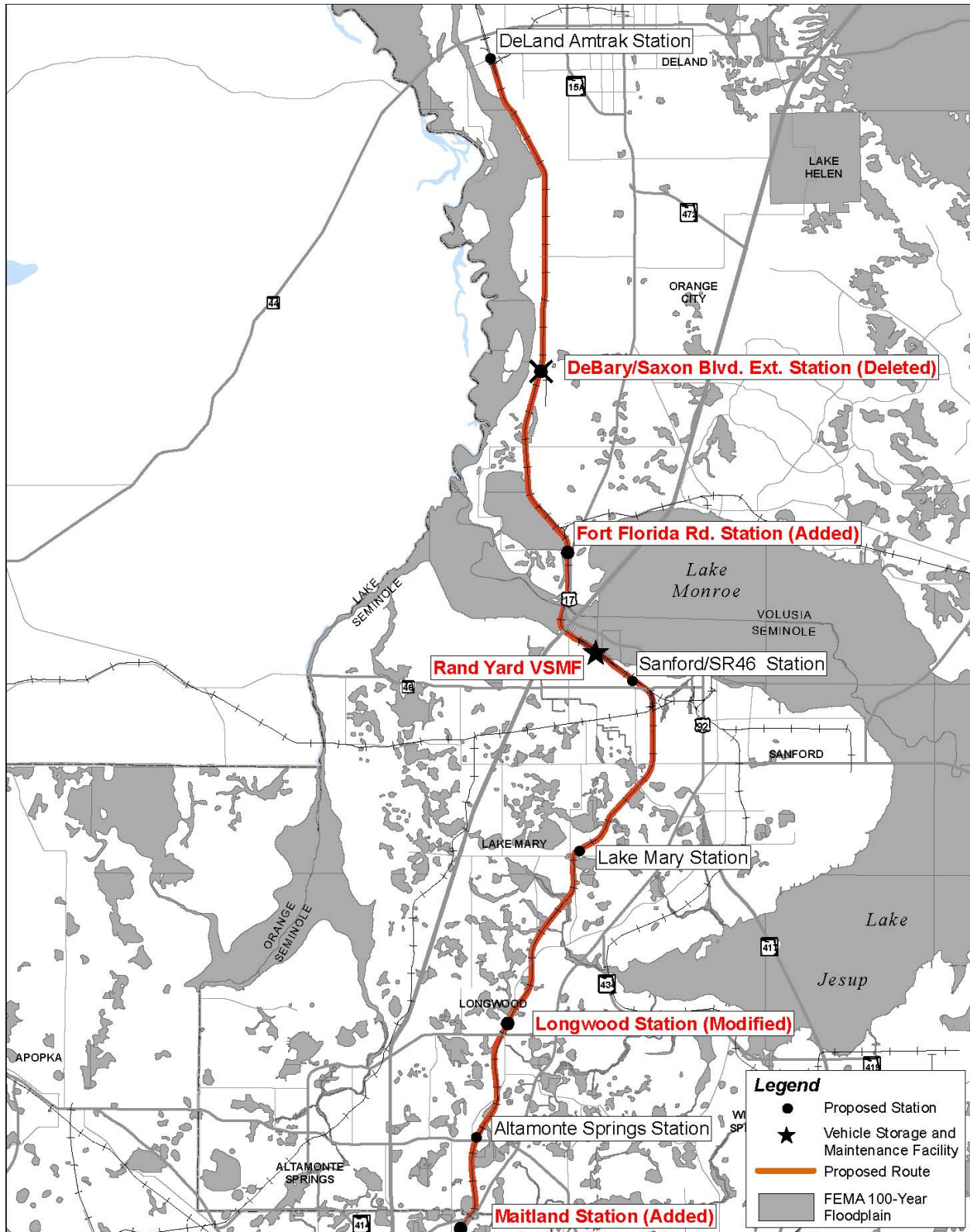
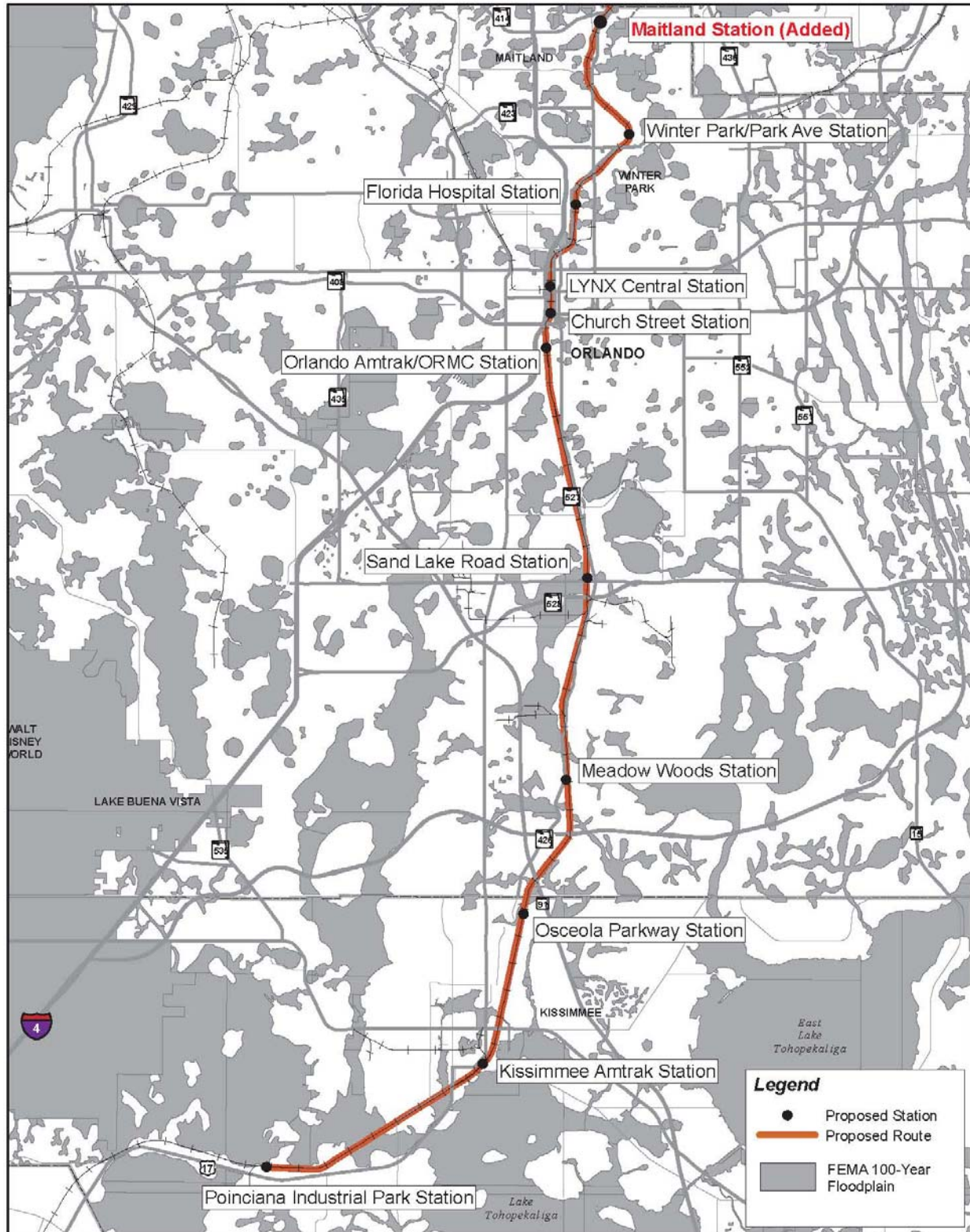


Figure 3-6a Floodplains Sheet 1 of 2

**Figure 3-6b Floodplains Sheet 2 of 2**

3.3.8 Contamination

There is a potential liability associated with acquisition of property that is contaminated. Additionally, contamination can have an impact on construction, particularly dewatering, since any contaminated groundwater that may be encountered would require treatment and special permitting. Contaminated soil would require special treatment and disposal and could not likely be used as fill. Figure 3-7 shows the ratings for contamination risk by location.

Changed Conditions

Fort Florida Road Station: A Contamination Screening Evaluation Report (CSER) Addendum (Appendix B) was prepared for the Fort Florida Road Station site¹⁰. The Florida Power and Light (FP&L) land was rated as medium and the adjacent properties rated as high. Although the CRT Project is only purchasing the FP&L land, the CSER rated the proposed station site risk as high.

A further review of public records will be performed and preliminary soil screening evaluations will take place to detect the presence of contaminants in soil or groundwater prior to acquisition of property or initiation of construction activities. Specific recommendations for this site have been developed and are documented in the CSER Addendum, which is presented in Appendix B. These specific recommendations include conducting soil and groundwater investigations at locations identified as Lil' Sammy's Food Mart, Florida Power and Light's above-ground storage tank (AST), and the southern portion of the Station area, adjacent to ATA GolfCarts.

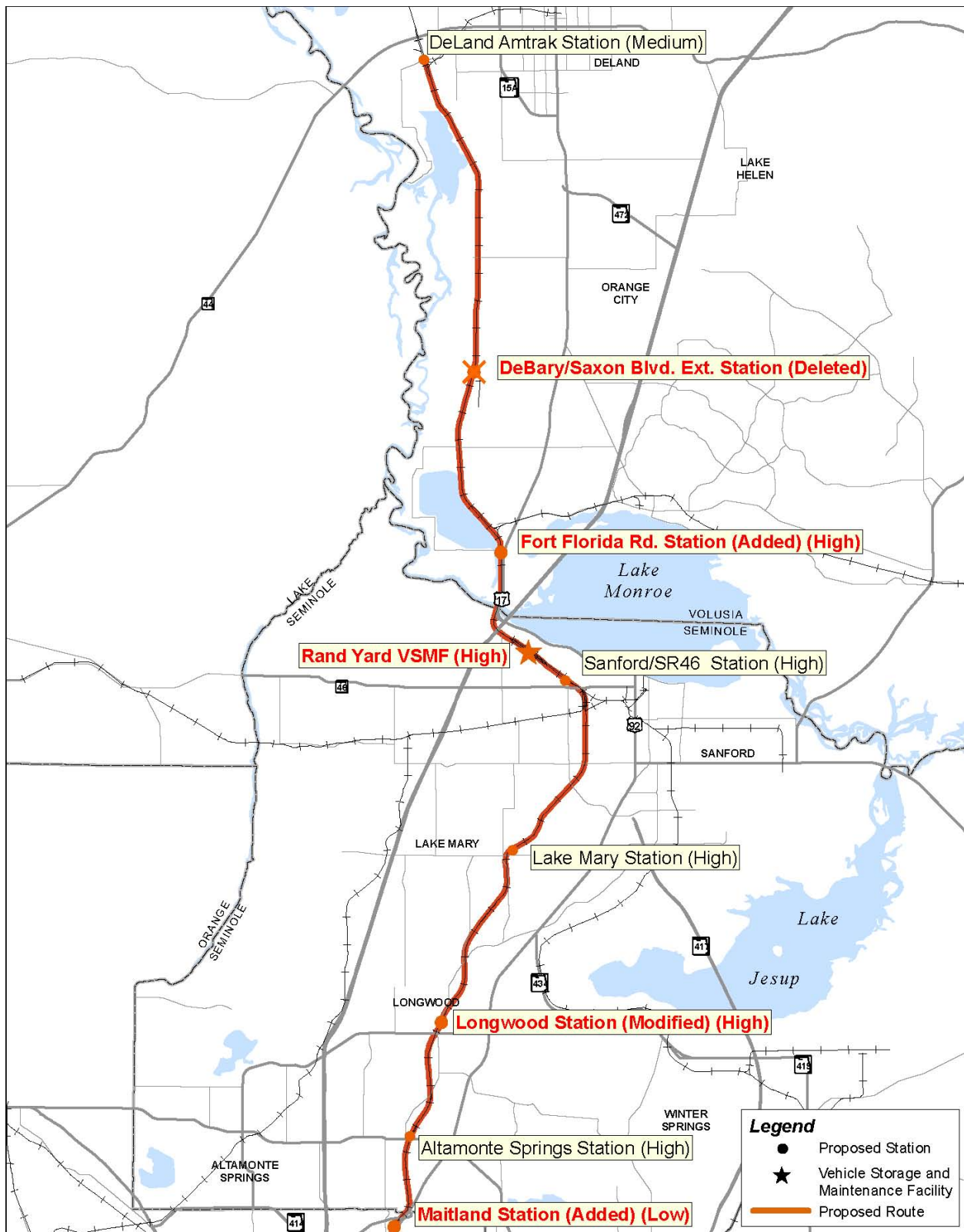
Maitland Station: The Maitland Station was previously rated as No Risk. An updated CSER Addendum (Appendix B) was prepared¹¹ to acknowledge the proposed park and ride lot footprint. Research, field reconnaissance and personal interviews were conducted and indicated the previous removal (1990) of an underground unleaded gasoline storage tank on a portion of the Parker Lumber Company facility (the site of the proposed park-and-ride lot). Although not required in 1990, a Tank Closure Report would be required by current regulations. Given the absence of a Tank Closure Report, and the fact that the current station layout is comprised of a significant portion of the Parker Lumber Company facility including areas where facility operations have historically occurred, a CRPR of Medium has been reassigned to this facility.

An adjacent facility, A Screen Printer, was previously identified as Executive Top Quality Cleaner, and listed as a FINDS and RCRA site. Based on work performed as part of the CSER Addendum (Appendix B), it was discovered that the facility has never operated as a dry cleaner and is not listed as a hazardous waste generator in the public record. As a result, this facility was assigned a CRPR of Low.

The CSER Addendum recommends conducting soil and groundwater investigations on the portion of the Parker Lumber Company that will be utilized for the Maitland Station. The investigations would be conducted to evaluate potential liability associated with right-of-way acquisition and construction of the re-configured parking facility.

¹⁰ Geotechnical and Environmental Consultants, Inc., *Contamination Screening Evaluation Report Addendum for the Central Florida Commuter Rail Transit Project, Proposed Fort Florida Road, Longwood, Altamonte Springs and Maitland Stations in Volusia, Seminole, and Orange Counties*, August, 2007.

¹¹ Geotechnical and Environmental Consultants, Inc., Correspondence from Guilfoyle, Orcino dated December 10, 2007.

**Figure 3-7 Station Contamination Risk Potential Ratings**

Longwood Station: The approved EA listed Longwood as Medium risk. The addition of the City of Longwood Public Works site changed this to High risk¹². This facility was listed with a total of nine storage tanks, of which two were deleted from registration in 2005. One underground storage tank (UST) and three ASTs were removed between 1991, but no tank closure assessment information was available for review. In March, 1989, the facility was placed under consent order by FDEP. Subsequent to cleanup activities conducted under Consent by the City of Longwood, the City paid a fine and was released from any further cleanup and/or assessment requirements in 1991. In addition, an on-site monitoring well was determined to be associated with a nearby drycleaner facility that has been documented as a solvent-contaminated site currently being remediated. Based on this information, the City of Longwood Public Works facility was assigned a CRPR of High.

Recommendations associated with the City of Longwood Public Works facility included conducting soil and groundwater investigations at the former USTs, vehicle repair facility, chemical storage areas, and RCRA area. If information associated with the drycleaner remediation is not available before Level II Assessment activities are initiated at the Longwood Station, it is recommended that assessment activities be conducted to ascertain if the containment plume is impacting the station location.

Based upon updated research, field reconnaissance and personal interviews,¹³ additional areas of the City of Longwood Public Works site (a chemical storage shed and an equipment storage shed) were identified as containing pesticides and herbicides. Based on this information and the information stated in the previous CSER Addendum, Appendix B, this facility retained a CRPR of High.

The latest review and discoveries indicate that additional soil and groundwater investigations should be undertaken in the areas adjacent to the chemical storage shed and equipment storage area to assess the potential for soil and groundwater contamination that may have occurred as a result of on-site land use / activities.

Depending upon the nature and extent of contamination impacts as determined by the Level I and/or Level II contamination assessment activities for these sites, risk analysis for impacts to the Project and the general public will be performed, cost estimates for remediation could be developed, and a communication plan with applicable regulatory agencies will be devised. Mitigation measures, dependent on the results of additional site specific assessments of soils and groundwater will be developed during Project design, as appropriate.

¹² Geotechnical and Environmental Consultants, Inc., *Contamination Screening Evaluation Report Addendum for the Central Florida Commuter Rail Transit Project, Proposed Fort Florida Road, Longwood, Altamonte Springs and Maitland Stations in Volusia, Seminole, and Orange Counties*, August, 2007.

¹³ Geotechnical and Environmental Consultants, Inc., Correspondence from Guilfoyle, Orcino dated August 27, 2007.

3.3.9 Farmlands

Through coordination with the Natural Resources Conservation Service (NRCS), it has been determined that the Project study area, which passes through the urbanized areas of Deltona, Orlando, and Kissimmee, does not meet the definition of farmland as defined in 7 CFR 658. Therefore, the provisions of the Farmland Protection Policy Act of 1984 do not apply to the Project.

3.3.10 Energy

Transportation is Florida's second largest energy use sector with 36 percent of the total. Automobile and truck use make up the vast majority of the transportation energy use total.

Because the implementation of the Full-Build Alternative would result in a reduction in indirect energy usage in the Project study area, no mitigation measures are required.

3.3.11 Construction Impacts

The addition of the two stations would not change the impacts associated with construction.

Noise and vibrations impacts will be from the heavy equipment movement and construction activities such as pile driving and vibratory compaction of embankments. Noise control measures will include those contained in FDOT's "Standard Specifications for Road and Bridge Construction," in addition to those recommended in the Construction Noise and Vibration Mitigation section of this document. Adherence to local construction noise and/or construction vibration ordinances by the contractor will also be required where applicable.

Cleanup and remediation efforts during construction include removal of contaminated soil and/or groundwater. Contaminated soil typically will be stockpiled in designated areas along the alignment, and then transported from the stockpile area for further treatment or disposal. Contaminated groundwater removed as a result of dewatering may be stored in tanks on the construction site, discharged to a local storm drain or sewer in compliance with discharge permit requirements, or transported from the site for treatment or disposal.