

TABLE OF CONTENTS

Table of Contents

1	PURPOSE AND NEED FOR PROPOSED ACTION.....	1-1
1.1	Purpose.....	1-1
1.2	Description of Project.....	1-3
1.3	Relevant Corridor Planning Activities.....	1-6
1.4	Need for Transportation Improvements.....	1-8
1.4.1	Roadways and Traffic.....	1-8
1.4.2	Transit Services.....	1-10
1.5	Population and Employment.....	1-12
1.6	Land Use.....	1-12
1.6.1	Activity Centers and Developments of Regional Impacts.....	1-14
1.7	Role of the EA in Project Development.....	1-15
1.8	Summary.....	1-15

Table of Contents

2	ALTERNATIVES	2-1
2.1	Alternatives Analysis.....	2-1
2.1.1	Alternatives Analysis 2004 Report.....	2-2
2.1.2	Alternatives Screening and Selection Process in the AA.....	2-3
2.2	Changes in Alternatives Following the AA.....	2-5
2.2.1	Federal Agency Coordination.....	2-6
2.2.2	State and Regional Agency Coordination.....	2-6
2.2.3	County and Municipal Agency Coordination	2-7
2.2.4	CSX Transportation Coordination.....	2-7
2.3	Definition of EA Alternatives.....	2-7
2.3.1	Technologies Considered	2-8
2.3.2	No-Build Alternative.....	2-8
2.3.3	TSM/Baseline Alternative.....	2-9
2.3.4	CRT Build Alternative	2-14
2.3.5	Operating Plans.....	2-21
2.3.6	Stations	2-25
2.3.7	Vehicle Storage and Maintenance and Layover Facilities	2-39
2.3.8	Grade Crossings.....	2-49
2.4	Ridership, Revenues, Costs, and Financial Requirements	2-50
2.4.1	Ridership and Revenues.....	2-50
2.4.2	Capital Costs.....	2-51
2.4.3	Operating Costs.....	2-51
2.4.4	Anticipated Financial Plan.....	2-52
2.5	Summary.....	2-53

Table of Contents

3	ENVIRONMENTAL CONSEQUENCES	3-1
3.1	Land Use and Related Socio-Economic Characteristics	3-1
3.1.1	Land Use	3-1
3.1.2	Community Cohesion.....	3-6
3.1.3	Environmental Justice	3-11
3.1.4	Public Safety, Security and Community Services	3-21
3.1.5	Economic Impacts	3-22
3.1.6	Utilities	3-24
3.1.7	Railroads	3-25
3.1.8	Displacements and Relocations.....	3-26
3.2	Cultural and Historical Resources	3-28
3.2.1	Archaeological and Historic Resources	3-28
3.2.2	Recreation and Parkland Resources	3-35
3.3	Natural and Physical Impacts.....	3-41
3.3.1	Pedestrian and Bicycle Facilities/Access	3-41
3.3.2	Visual and Aesthetic Resources	3-45
3.3.3	Air Quality	3-53
3.3.4	Noise	3-57
3.3.5	Project Start-up Noise Monitoring	3-68
3.3.6	Vibration.....	3-68
3.3.7	Ecosystems	3-70
3.3.8	Wetlands.....	3-73
3.3.9	Water Quality	3-76
3.3.10	Contamination	3-82
3.3.11	Farmlands.....	3-86

3.3.12 Energy 3-88

3.3.13 Construction Impacts..... 3-89

3.4 Summary..... 3-91

Table of Contents

4	TRANSPORTATION IMPACTS.....	4-1
4.1	Traffic and Roadways.....	4-1
4.1.1	Existing Traffic Conditions	4-1
4.1.2	Traffic and Roadway Impact Analysis Approach and Methodology	4-3
4.1.3	Roadway and Intersection Turning Movement Analysis.....	4-4
4.1.4	Station Areas and Intersections	4-14
4.1.5	Roadway At-Grade Crossings Delays.....	4-17
4.1.6	Mitigation.....	4-19
4.1.7	Traffic and Roadway Summary	4-20
4.2	Parking	4-24
4.2.1	On-Street Parking.....	4-24
4.2.2	Station Parking.....	4-25
4.3	Transit	4-27
4.3.1	Existing Transit and Related Services	4-28
4.3.2	Geographic Areas of Service	4-30
4.3.3	Travel Times and Reliability	4-31
4.3.4	Frequency and Hours of Service	4-32
4.3.5	Integration of Regional Transit Services.....	4-33
4.3.7	Transit Impacts Summary	4-34
4.4	Travel Demand Forecasting Model.....	4-34
4.4.1	Modeling Modifications.....	4-35
4.4.2	Analysis.....	4-37
4.5	Freight.....	4-37
4.5.1	Freight Rail.....	4-37
4.5.2	Trucking	4-39

4.5.3 Marine Transportation4-39

4.6 Summary.....4-41

Table of Contents

5	EVALUATION OF ALTERNATIVES AND IMPLEMENTATION	5-1
5.1	Approach to the Evaluation	5-1
5.2	Summary of Results	5-1
5.3	Implementation Plan.....	5-8
5.3.1	Short Term-Plan	5-8
5.3.2	Long-Term Plan	5-9
5.4	Project Phasing.....	5-9
5.4.1	North Corridor - Initial Operating Segment (IOS)	5-10
5.5	Identification of Key Milestones.....	5-10
5.6	Compliance and Consistency with Environmental Laws, Regulations and Programs	5-11

Table of Contents

6	COMMENTS, CONSULTATION AND COORDINATION	6-1
6.1	Public Involvement Program	6-1
6.2	Alternatives Workshops.....	6-6
6.3	CFCRT Public Hearings.....	6-17
6.4	Agency Coordination	6-18
6.4.1	Advance Notification.....	6-19
6.4.2	Florida Department of State, Division of Historical Resources	6-20

List of Appendices

- APPENDIX A LIST OF PREPARERS
- APPENDIX B LAND USE AND COMMUNITY COHESION MAPS
- APPENDIX C LIST OF EA RECIPIENTS
- APPENDIX D LIST OF TECHNICAL REPORTS
- APPENDIX E AGENCY CORRESPONDENCE
- APPENDIX F GLOSSARY
- APPENDIX G LIST OF ABBREVIATIONS AND ACRONYMS
- APPENDIX H ADVANCE NOTIFICATION
- APPENDIX I UTILITY CONTACT INFORMATION
- APPENDIX J FDOT-CSXT MEMORANDUM OF UNDERSTANDING
- APPENDIX L IMPACTED PARCELS AND POTENTIAL RELOCATIONS
- APPENDIX M NOISE IMPACT LOCATION KEY MAPS

LIST OF FIGURES

List of Figures

Figure 1-1 Regional Location Map	1-2
Figure 1-2 Project Study Area	1-4
Figure 1-3 CRT Stations	1-7
Figure 1-4 Existing Level of Service.....	1-9
Figure 1-5 Projected Level of Service	1-11
Figure 1-6 Generalized Land Use.....	1-13
Figure 1-7 Major Employment & Activity Centers.....	1-14

List of Figures

Figure 2-1	CRT Alternative Analysis Alignment and Stations	2-4
Figure 2-2	2025 EA No-Build Alternative	2-10
Figure 2-3	2025 EA TSM (New Starts Baseline)	2-12
Figure 2-4	Proposed CRT Station and Existing - Double Track Sections	2-16
Figure 2-5	2025 CRT Full Build and Proposed Double Track	2-17
Figure 2-6	Locally Preferred Alternative (LPA) with Proposed Double Track	2-18
Figure 2-7	LPA Phase 1 – North Corridor Initial Operating Segment (IOS)	2-19
Figure 2-8	Prototypical Station without Parking	2-27
Figure 2-9	Prototypical Station with Parking	2-28
Figure 2-10	Prototypical Intermodal Station	2-29
Figure 2-11	Prototypical Station without Overhead Pedestrian Walkway	2-30
Figure 2-12	Prototypical Station with Overhead Pedestrian Walkway	2-30
Figure 2-13	Conceptual Station Site Plan – DeBary/Saxon Blvd Extension	2-31
Figure 2-14	Conceptual Station Site Plan – Sanford/SR46	2-31
Figure 2-15	Conceptual Station Site Plan – Lake Mary	2-32
Figure 2-16	Conceptual Station Site Plan – Longwood	2-32
Figure 2-17	Conceptual Station Site Plan – Altamonte Springs	2-33
Figure 2-18	Conceptual Station Site Plan – Winter Park/Park Avenue	2-33
Figure 2-19	Conceptual Station Site Plan – Florida Hospital	2-34
Figure 2-20	Conceptual Station Site Plan – LYNX Central Station	2-34
Figure 2-21	Conceptual Station Site Plan – Church Street	2-35
Figure 2-22	Conceptual Station Site Plan – Orlando Amtrak/ORMC	2-35
Figure 2-23	Conceptual Station Site Plan – Sand Lake Road	2-36
Figure 2-24	Conceptual Station Site Plan – Meadow Woods	2-36

Figure 2-25 Conceptual Station Site Plan – Osceola Parkway2-37

Figure 2-26 Conceptual Station Site Plan – Kissimmee Amtrak2-37

Figure 2-27 Conceptual Station Site Plan – Poinciana Industrial Park2-38

Figure 2-28 Existing CSXT Rand Yard.....2-40

Figure 2-29 VSMF in Rand Yard (Full Build).....2-42

Figure 2-30 Example VSMF Shop Building.....2-43

Figure 2-31 VSMF Typical Vehicle Wash, Fueling, and Track Inspection
Pit.....2-44

Figure 2-32 VSMF Typical Vehicle Wash.....2-44

Figure 2-33 View Inside VSMF Shop Building2-45

Figure 2-34 View of VSMF Shop Building Maintenance Pit2-45

Figure 2-35 DeBary Saxon Extension Station Layover Facility2-49

Figure 2-36 Poinciana Industrial Park Layover Facility2-49

List of Figures

Figure 3-1 Demographic Indicators – Volusia	3-13
Figure 3-2 Demographic Indicators – Seminole.....	3-14
Figure 3-3 Demographic Indicators - Orange.....	3-15
Figure 3-4 Demographic Indicators - Osceola	3-16
Figure 3-5 Historic Resources – Sheet 1 of 2	3-32
Figure 3-6 Historic Resources – Sheet 2 of 2	3-33
Figure 3-7 Publicly-Owned Parks & Recreation Areas – Sheet 1 of 2.....	3-37
Figure 3-8 Publicly-Owned Parks & Recreation Areas – Sheet 2 of 2.....	3-38
Figure 3-9 St. Johns River Drawbridge	3-49
Figure 3-10 Winter Park Country Club.....	3-50
Figure 3-11 Orlando Amtrak Station	3-51
Figure 3-12 Kissimmee Amtrak Station.....	3-52
Figure 3-13 FTA Noise Impact Criteria for Transit Projects	3-59
Figure 3-14 Noise & Vibration Monitoring Locations.....	3-61
Figure 3-15 Floodplains Sheet 1 of 2	3-80
Figure 3-16 Floodplains Sheet 2 of 2	3-81
Figure 3-17 Station Contamination Risk Potential Ratings	3-85

List of Figures

Figure 4-1 Station Turning Movement Volumes I – 2025 Full Build	4-6
Figure 4-2 Station Turning Movement Volumes II – 2025 Full Build	4-7
Figure 4-3 Station Turning Movement Volumes III – 2025 Full Build	4-8
Figure 4-4 Station Turning Movement Volumes IV – 2025 Full Build.....	4-9
Figure 4-5 Station Turning Movement Volumes V – 2025 Full Build.....	4-10
Figure 4-6 Station Turning Movement Volumes VI – 2025 Full Build.....	4-11
Figure 4-7 Station Turning Movement Volumes VII – 2025 Full Build.....	4-12
Figure 4-8 Station Turning Movement Volumes VIII – 2025 Full Build.....	4-13
Figure 4-9 Intersection and Grade Crossing Mitigation – North Corridor	4-22
Figure 4-10 Intersection and Grade Crossing Mitigation – South Corridor.....	4-23
Figure 4-11 Existing CSXT Lift Bridge at St. Johns River.....	4-40

LIST OF TABLES

List of Tables

Table 2-1: TSM/Baseline Stations/Stop Locations and Facilities	2-13
Table 2-2: Operating Requirements for Full Build Alternative.....	2-20
Table 2-3: Feeder Bus Routes for Full Build Alternative	2-21
Table 2-4: Passenger Fares (FY 2005)	2-22
Table 2-5: Span of Service.....	2-23
Table 2-6: Vehicle Capacity and Peak Hour Passenger Loading Standards	2-23
Table 2-7: Full Build Stations and Key Features	2-27
Table 2-8: Daily Boardings by Service Type and Alternative (2025)	2-50
Table 2-9: CRT Capital Cost Estimates (\$million).....	2-51
Table 2-10: Commuter Rail Annual O&M Cost Estimates (2005 dollars)	2-52
Table 2-11: Total Annual O&M Cost Estimates (2005 dollars).....	2-52

List of Tables

Table 3-1 Low Income Population by County: Corridor-wide	3-17
Table 3-2 Total Number of Low-Income Neighborhoods by County	3-17
Table 3-3 Minority Population by County	3-17
Table 3-4 Total Number of Minority Neighborhoods by County.....	3-17
Table 3-5 Transit-Dependent Population by County.....	3-18
Table 3-6 Total Number of Neighborhoods with a Primarily Transit- Dependent Population by County	3-18
Table 3-7 Summary of Impacts to Low-Income, Minority and/or Transit- Dependent Populations.....	3-20
Table 3-8 Summary of Property Takings for Full-Build Alternative	3-27
Table 3-9 NRHP Listed, Determined Eligible and Potentially Eligible Historic Resources	3-31
Table 3-10 Parks and Recreation Areas Located Along the CRT Corridor	3-39
Table 3-11 Intersections Selected for Air Quality Screening Modeling	3-54
Table 3-12 CRT Emissions Analysis.....	3-56
Table 3-13 Maximum Predicted 1-Hour CO Concentrations	3-56
Table 3-14 Maximum Predicted 8-Hour CO Concentrations	3-57
Table 3-15 FTA Land Use Categories and Noise Metrics	3-58
Table 3-16 Predicted CRT Train Operational Noise Levels at Receptor Locations in the CRT Project Corridor	3-60
Table 3-17 Predicted CRT Combined Operational Noise Levels at Receptor Locations in the CRT Project Corridor	3-63
Table 3-18 Predicted CRT Train Operational Noise Levels at Receptor Locations in the CRT Project Corridor	3-65
Table 3-19 FTA Noise Impacts from the CRT Project due to Warning Horns without Mitigation.....	3-66
Table 3-20 FTA Severe Noise Impacts from the CRT Project with Proposed Mitigation	3-67

Table 3-21 Description of Vibration Measurement Locations Along the CRT Corridor.....	3-69
Table 3-22 Summary of Potential Impact for Protected Species for the CRT Study Area.....	3-72
Table 3-20 USFWS Codes/Classifications and Corresponding FLUCFCS Codes/Categories for Wetlands and Surface Waters Identified in the CRT Study Area.....	3-74
Table 3-24 Alternatives Matrix for Wetland Impacts by FLUCFCS Code in Acres.....	3-75
Table 3-25 Summary of Estimated Floodplain Encroachment by County for the Full-Build Alternative.....	3-78
Table 3-26 Indirect Energy Impacts of CRT Project Alternatives – Year 2025.....	3-89

List of Tables

Table 4-1: Future Roadway Improvements – No-Build.....	4-4
Table 4-2: 2025 Vehicle Trips at Stations in Peak Hours	4-5
Table 4-3: Station Traffic Screening Analysis Results	4-15
Table 4-4: Intersection LOS Summary – Significant Potential Impact Locations	4-17
Table 4-5: At-Grade Crossing Study Locations.....	4-18
Table 4-6: Mitigation Summary	4-20
Table 4-7: Station Parking Supply and Impact Summary	4-27
Table 4-8: Level of Transit Service to Major Activity Centers (buses/trains per hour)	4-33
Table 4-9: 2025 Daily Transit Trips (Linked Trips)	4-36
Table 4-10: 2025 Transit Ridership Statistics.....	4-36

List of Tables

Table 5-1: Alternatives Evaluation Matrix	5-3
Table 5-2: Compliance with Federal Laws, Regulations and Programs	5-11
Table 5-3: State of Florida Environmental Laws and Policies	5-14

List of Tables

Table 6-1: Initial CRT Local Government and Institutional Meetings	6-4
Table 6-2: CFCRT Alternatives Workshops	6-6
Table 6-3: Agency and Community CRT Informational Meetings	6-7