

Oconee County Transit Feasibility Study

Implementation Plan Presentation

September 25, 2014



URS

Commute Patterns (O&D Study)

- US Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) data was analyzed to determine the census tract location of Oconee employees residing in the communities of Clemson, Seneca, Walhalla, and Westminster



Commute Patterns (O&D Study)

- Findings:
 - Many Oconee County residents commute in direction of Anderson or Greenville
 - Fairly significant interaction between all four communities that were analyzed
 - More people than expected traveling between Walhalla and Westminster
 - Note: Commute patterns to Walhalla may be overstated due to public educator's work location being identified as the Board of Education instead of their assigned school



Service Implementation Plan

- Purple Route: Seneca to Walhalla
- Green Route: Seneca to Westminster
- Gold Route: Walhalla to Westminster
- Re-charge units at Medical Center and downtown Seneca



SENECA AREA EXISTING AND POTENTIAL NEW TRANSIT SERVICE

LEGEND

EXISTING SENECA ROUTES

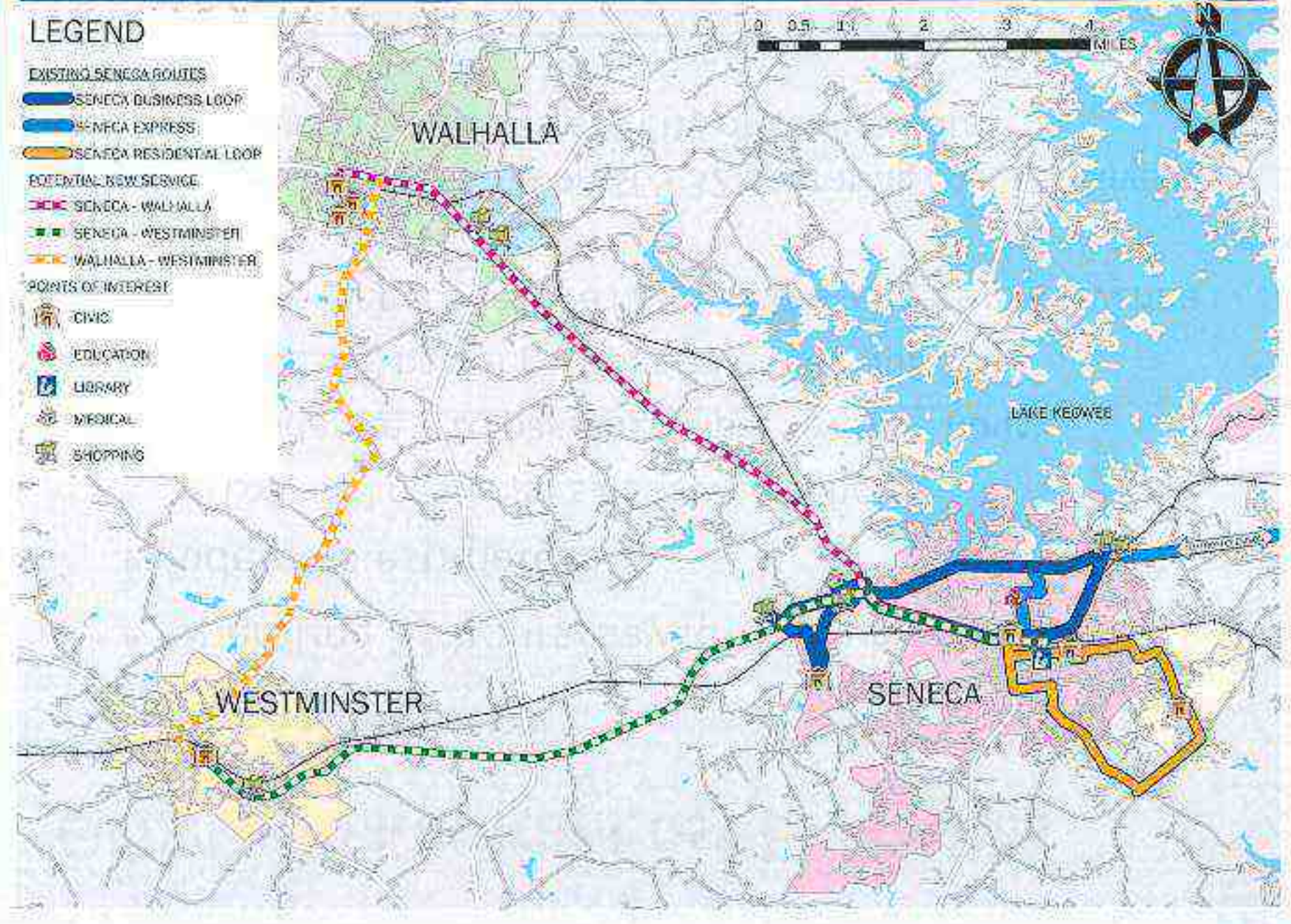
- SENECA BUSINESS LOOP
- SENECA EXPRESS
- SENECA RESIDENTIAL LOOP

POTENTIAL NEW SERVICE

- SENECA - WALHALLA
- SENECA - WESTMINSTER
- WALHALLA - WESTMINSTER

POINTS OF INTEREST

- CIVIC
- EDUCATION
- LIBRARY
- MEDICAL
- SHOPPING



O&M and Capital Cost Estimates

- Assumptions

- Operating 12 hours/day for 255 weekdays/year

- Ridership estimates:

- Low - 10 passengers per revenue hour;

- Moderate - 20 passengers per revenue hour;

- High - 30 passengers per revenue hour

- Note: Seneca service has ~ 35 passengers per revenue hour

- O&M costs based on \$65.32 operating cost per revenue hour based on current City of Seneca data



O&M and Capital Cost Estimates

Purple Route: Seneca to Walhalla – Phase I

Annual Service Statistics	60 Minute Frequency
Peak Vehicles	1
Fleet Vehicles	2
Vehicle Revenue Hours	3,060
Vehicle Revenue Miles	67,300
Annual O&M Cost ¹	\$199,879
<i>Estimated Cost per Revenue Hour</i>	<i>\$65.32</i>

1. O&M costs based on current City of Seneca data



O&M and Capital Cost Estimates

Green Route: Seneca to Westminster – Phase II

Annual Service Statistics	60 Minute Frequency
Peak Vehicles	1
Fleet Vehicles	2
Vehicle Revenue Hours	3,060
Vehicle Revenue Miles	67,300
Annual O&M Cost¹	\$199,879
<i>Estimated Cost per Revenue Hour</i>	<i>\$65.32</i>

1. O&M costs based on current City of Seneca data



O&M and Capital Cost Estimates

Gold Route: Walhalla to Westminster – Phase III

Annual Service Statistics	30 Minute Frequency
Peak Vehicles	1
Fleet Vehicles	2
Annual Vehicle Revenue Hours	3,060
Annual Vehicle Revenue Miles	91,800
Annual O&M Cost ¹	\$199,879
<i>Estimated Cost per Revenue Hour</i>	<i>\$65.32</i>

1. O&M costs based on current City of Seneca data



O&M and Capital Cost Estimates

Summary

Annual Service Statistics	Purple Route Only	Purple and Green Routes	Gold Route Only	Purple, Green, and Gold Routes
	60 Minute Frequency	60 Minute Frequency	30 Minute Frequency	
Peak Vehicles	1	2	1	3
Fleet Vehicles	2	3	1	4
Annual Vehicle Revenue Hours	3,060	6,120	3,060	9,180
Annual Vehicle Revenue Miles	67,300	125,400	91,800	217,200
O&M Cost ¹	\$199,879	\$399,758	\$199,879	\$599,638
Estimated Cost per Revenue Hour	\$65.32	\$65.32	\$65.32	\$65.32

1. O&M costs based on current City of Seneca data



O&M and Capital Cost Estimates

- Capital Requirements
 - One to four buses
 - Potential for up to 87% Federal capital contribution for ADA accessible buses
 - Approximately eleven shelter locations
- Capital Cost Estimates
 - Dependent on type of bus, shelters and signage



O&M and Capital Cost Estimates

Estimated Transit Vehicle Capital Costs

Statistics	Small Bus/Van	Large Diesel Bus	Large Electric Bus
Estimated Transit Vehicle Cost	\$80,000	\$450,000	\$1,000,000
Estimated Vehicle Requirement	4	4	4
Total Fleet Cost	\$320,000	\$1,800,000	\$4,000,000
Federal Share (80%)	\$256,000	\$1,440,000	\$3,200,000
State Share (10%)	\$32,000	\$180,000	\$400,000
Local Share (10%)	\$32,000	\$180,000	\$400,000
Useful Life - Years ¹	4	12	12
Annual Local Accrual for Replacement ²	\$8,000	\$13,322	\$29,604

1. Typical useful life for Small bus/van is 4 years. SCDOT allows replacement after 7 years. Additionally, there is a risk that if service is successful, vehicle capacity could be exceeded.

2. Small Bus: Assumed an initial balance of \$0.00 and an average annual rate of return of 2.5 percent and this return was adjusted for an expected inflation rate of 2.5 percent per year.

Large Diesel Bus and Large Electric Bus: Assumed an initial balance of \$0.00 and an average annual rate of return of 4.75 percent. This return was then adjusted for an expected inflation rate of 2.5 percent per year.

O&M and Capital Cost Estimates

Local Match and Annual Capital Accrual Estimates for Transit Vehicles

Statistics	Small Bus/Van	Large Diesel Bus	Large Electric Bus
One Bus Local Match	\$8,000	\$45,000	\$100,000
One Bus Local Accrual	\$2,000	\$3,330	\$7,401
Two Buses Local Match	\$16,000	\$90,000	\$200,000
Two Buses Local Accrual	\$4,000	\$6,660	\$14,802
Three Buses Local Match	\$24,000	\$135,000	\$300,000
Three Buses Local Accrual	\$6,000	\$9,991	\$22,203
Four Buses Local Match	\$32,000	\$180,000	\$400,000
Four Buses Local Accrual	\$8,000	\$13,322	\$29,604
Five Buses Local Match	\$40,000	\$225,000	\$500,000
Five Buses Local Accrual	\$10,000	\$16,652	\$37,005



O&M and Capital Cost Estimates

Capital Facility Improvement Cost Estimates			
Type	Units	Estimated Unit Cost	Total
Purple Route: Seneca to Walhalla			
Charging Station	1	\$300,000	\$300,000
Shelters	8	\$6,000	\$48,000
Bus Stops	3	\$250	\$750
			\$348,750
Annual Local Accrual*			\$2,709
Green Route: Seneca to Westminster			
Shelters	2	\$6,000	\$12,000
Bus Stops	3	\$250	\$750
			\$12,750
Annual Local Accrual*			\$99
Gold Route: Walhalla to Westminster			
Shelters	1	\$6,000	\$6,000
			\$6,000
Annual Local Accrual*			\$47
Grand Total			\$367,500
Federal Share (80%)			\$294,000
State Share (10%)			\$36,750
Local Share (10%)			\$36,750
Annual Local Accrual*			\$2,855

* Assumes Ten Year Useful Life



Financial Plan

- System expansion operating and maintenance costs based on actual Seneca costs
- System expansion would receive FTA Section 5311 operating assistance funds that would cover 50 percent of the transit service operations cost
- System may be eligible to receive an allocation of operating assistance from SCDOT at the current Seneca system level of twenty-five percent



Financial Plan

- Oconee County, Walhalla, Westminster, and/or other jurisdictions would provide the local match of twenty-five percent of operating cost
- The system expansion would be fare-free
- Vehicle purchases would be funded through FTA discretionary grant programs



O&M and Capital Cost Estimates

Annual O&M and Capital Cost Estimate Summary

Annual Service Statistic Estimates	Purple Route Only	Purple and Green Routes	Gold Route Only	Purple, Green, and Gold Routes
	60 Minute Frequency	60 Minute Frequency	30 Minute Frequency	
Peak Vehicles	1	2	1	3
Fleet Vehicles	2	3	1	4
Annual Vehicle Revenue Hours	3,060	6,120	3,060	9,180
Annual Vehicle Revenue Miles	67,300	125,400	91,800	217,200
Estimated Low Ridership ¹	30,600	61,200	30,600	91,800
Estimated Moderate Ridership	61,200	122,400	61,200	183,600
Estimated High Ridership	91,800	183,600	91,800	275,400
Total Operating and Maintenance Cost ²	\$199,879	\$399,758	\$199,879	\$599,638
Federal Share - O&M (50%)	\$99,940	\$199,879	\$99,940	\$299,819
State Share - O&M (25%)	\$49,970	\$99,940	\$49,970	\$149,909
Local Share - O&M (25%)	\$49,970	\$99,940	\$49,970	\$149,909
Capital Facility Improvement Local Accrual	\$2,709	\$2,808	\$47	\$2,855
Capital Accrual Cost - Small Bus/Van	\$4,000	\$6,000	\$2,000	\$8,000
Capital Accrual Cost - Large Diesel Bus	\$6,660	\$9,991	\$3,330	\$13,322
Capital Accrual Cost - Large Electric Bus	\$14,802	\$22,203	\$7,401	\$29,604
Total Annual Local Cost - Small Bus/Van	\$56,679	\$108,748	\$52,016	\$160,764
Total Annual Local Cost - Large Diesel Bus	\$59,339	\$112,739	\$53,346	\$166,086
Total Annual Local Cost - Large Electric Bus	\$67,481	\$124,951	\$57,417	\$182,368



1. Low ridership is 10 pax/rev. hr.; Moderate is 20 pax/rev. hr.; High is 30 pax/rev. hr.
2. O&M costs based on current City of Seneca data.

Policy Considerations

- Governance
- Phasing
- System Route Realignment
- Designated Bus Stops
- Passenger Fare



Discussion



Next Steps

- Summarize and consider TATFC comments
- Finalize Policy Considerations
- Finalize Implementation Plan Report

