2019 Rate Model Report

Florida Commission for the Transportation Disadvantaged

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Executive Summary

The Florida Commission for the Transportation Disadvantaged (FCTD) engaged Thomas Howell Ferguson (Team) to conduct an assessment and analysis of the current rate model used to manage disbursement of State grant funds for the coordination of transportation services to ensure cost effectiveness and to comply with Florida Statute and Florida Administrative Code. Our analysis included an understanding of Florida Statute 427.013, Chapter 41-2 Florida Administrative Code, and the duties and responsibilities of FCTD. Our approach included interviews with program administrators, review of relevant documentation, and other applicable methods as needed to document and communicate related findings and recommendations.

Working with FCTD, the Team visited seven of the 58 Community Transportation Coordinators (CTC) to conduct on-site meetings. The seven CTCs provide services across 20 counties within 15 service areas. The Team gained an understanding of the respective FCTD and CTC missions, strategic plans, goals, and objectives. The Team reviewed rate model processes and outputs. Our analysis, coupled with the interviews and surveys of CTC program administrators, allowed the Team to better understand the issues, limitations, and potential improvements associated with the current rate model from FCTD and the end-user perspective.

To meet FCTD's project objectives and to provide achievable recommendations, the Team needed to address and answer the question of "***How the Rate Model Works***." Our report provides the basis of the Team's Observations and Recommendations. Based on the analysis provided in this report, the Team has provided options for FCTD to consider when evaluating potential changes to the current rate model. The Report provides three options for FCTD to consider as noted below:

- Option 1: Keep the Same Model,
- Option 2: Simplify the Existing Model, or
- Option 3: Alternative Methodologies.

Option 1: Keep the Same Model

The current model offers strengths and areas for consideration for improvement or refinement.

Strengths

- Consistent approach used by 58 CTCs
- Comparability between CTCs
- Comparability across fiscal years
- Provides FCTD the ability to fulfill monitoring and oversight

Areas for Improvement

- Make the identification of FCTD matching funds more prominent
- Identify direct (e.g. operating) and indirect costs (e.g. administrative)
- More prominently identify FCTD funding as a percent of CTC total program
- Relocate the fiscal year end date to the general information page
- Reconsider use of Contract-based rates
- Provide instructions for the model

Option 2: Simplify the Existing Model

The benefit of a simplified rate model will allow FCTD to monitor the use of State grant funds to ensure State funds are used in a cost-effective manner for coordinated transportation services provided by the CTCs. Simplifying the rate model will provide for:

- Better comparability of data
- Reduced data entry error
- Improved consistency of output
- The establishment of key performance indicators
- Decrease CTC end-user time required to complete the model

Recommendations to simplify the model:

- Reduce number of fields for data entry
- Decrease the number of tabs and calculations
- Utilize audited financial statements to report actuals, instead of projected budgets
- Summarize revenues to a higher level i.e. Federal, State, local
- Categorize summarized revenues by funding sources by FCTD, local match, and other
- Summarize expenditures to fewer categories i.e. Administration, Operating, and Depreciation
- Simplify the overall rate calculation by dividing total expenditures by total miles (or trips), instead of using weighted differentials
- Consider eliminating subsidy revenue from the rate calculation
- Provide a detailed online instruction manual

Option 3: Alternative Methodologies

A Fixed Funding Model is a specified amount of money that the State (FCTD) would allocate to the CTCs for a specific purpose. The purpose of FCTD allocation to the CTCs is for the transportation of older adults, persons with disabilities, persons of low income and children at risk.

The alternative methods of funding CTCs could involve hybrid models that factor in some or all of the following variables. These options would have to be analyzed to determine if the cost provides the best benefit to the State.

A. Fixed Funding Model – reimbursement based on performance metrics
B. Prior Year Actual Model – reimbursement based on prior years expenditures
C. Hybrid Model Based on Selected Variables
    - Base rate per mile (IRS rate)
    - CTC organization type (for profit, not for profit, government)
    - Network type (fully brokered, partially brokered, sole source)
    - Rural / Urban
    - Weighted average by ride types
    - Utilize the Annual Operating Report (AOR) total expenditures divided by total miles (or trips) reported

- Geographic rates based on regions in Florida
- Population rates based on County populations
- Direct and indirect cost allocations

Alternative Models have pros and cons noted below.

Pros

- Stable funding source
- Reduces financial risk
- Streamlined reporting requirements
- Emphasizes monitoring of Key Performance Indicators

Cons

- Reactive response to Service variability (demand)
- Subject to Service interruptions
- Subject to appropriation limits
- Limited flexibility and increased restrictions on use of funds
- Must negotiate performance metrics with each CTC
- Legal support to write the contracts
- Negotiation of multiple contract terms and conditions

As part of this project, the Team searched the internet for reports and documents regarding provision of transportation to financially, physically, and mentally disadvantaged citizens. The research is limited in its applicability to the FCTD. Several reports held up FCTD's model as one of the best in the nation.

The challenge in reviewing cost-based rates for CTCs is the number of variables including geographic differences, levels of service, and proximity to trip destinations. The CTCs vary greatly in size, entity type, network type, service areas, and services provided. Most CTCs manage a wide array of programs, not just transportation for people. In some service areas, they must drive patients many miles as the needed facilities are located far from their clients. Other service areas have many facilities near their clients. With so many different programs and funding sources, CTCs use different methods to allocate and report costs. The model calculates the costs per mile and per trip and provides supporting documentation of the correlation between the CTC provided services and the users of that service. Implementing one of the Options will support FCTD in its efforts to improve the model.

Objectives, Scope, and Methodology

The Thomas Howell Ferguson (THF) consulting team (Team) conducted an assessment and analysis of the current rate model used by the Florida Commission for the Transportation Disadvantaged (FCTD) in managing the use of State grant funds for the coordination of transportation services for older adults, persons with disabilities, persons of low income and children at risk. The coordinated transportation services are provided by the Community Transportation Coordinators (CTCs), under the statutory direction of Planning Agencies, and Local Coordinating Boards.

Our analysis included an understanding of Florida Statute 427.013, Chapter 41-2 Florida Administrative Code, and the duties and responsibilities of FCTD. Our approach included interviews with program administrators, review of relevant documentation, and other applicable methods as needed to document and communicate related findings and recommendations.

FCTD monitors the model output and uses the information as part of their responsibility of administering the Transportation Disadvantaged Trust Fund and part of the trip and equipment grant program. FCTD engaged the Team to analyze and provide feedback on the current rate model. The feedback included recommendations to simplify or improve the current rate model or provide alternative solutions that could be used in place of the current model.

The Team reviewed the model, inputs, assumptions, and calculations as part of the analysis. The Team provided FCTD with observations and recommendations regarding the model's efficiency, effectiveness, and compliance with regulatory or statutory requirements. These observations and recommendations are provided within the context of providing model revisions or enhancements, as illustrated in Figure 1.

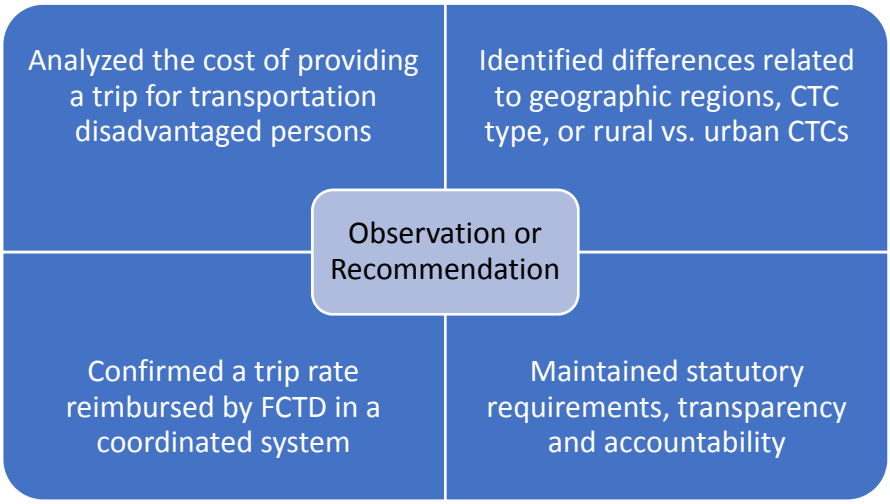


Figure 1: Observation of Recommendation Framework

The Team provided observations and recommendations that are not administratively burdensome, maintained the correlation between the cost and benefit of the transportation services, and simplified the model.

Approach and Work Plan

We developed our approach and work plan with input from FCTD as well as the users of the current rate model (CTCs). Our project approach consisted of the four phases illustrated is Figure 2:

Figure 2: Project Phases

The following sections provide an overview of the Team's tasks performed within each phase.

A. Planning the Engagement

The Team developed a work plan based on FCTD's project objectives, as illustrated in Figure 3:

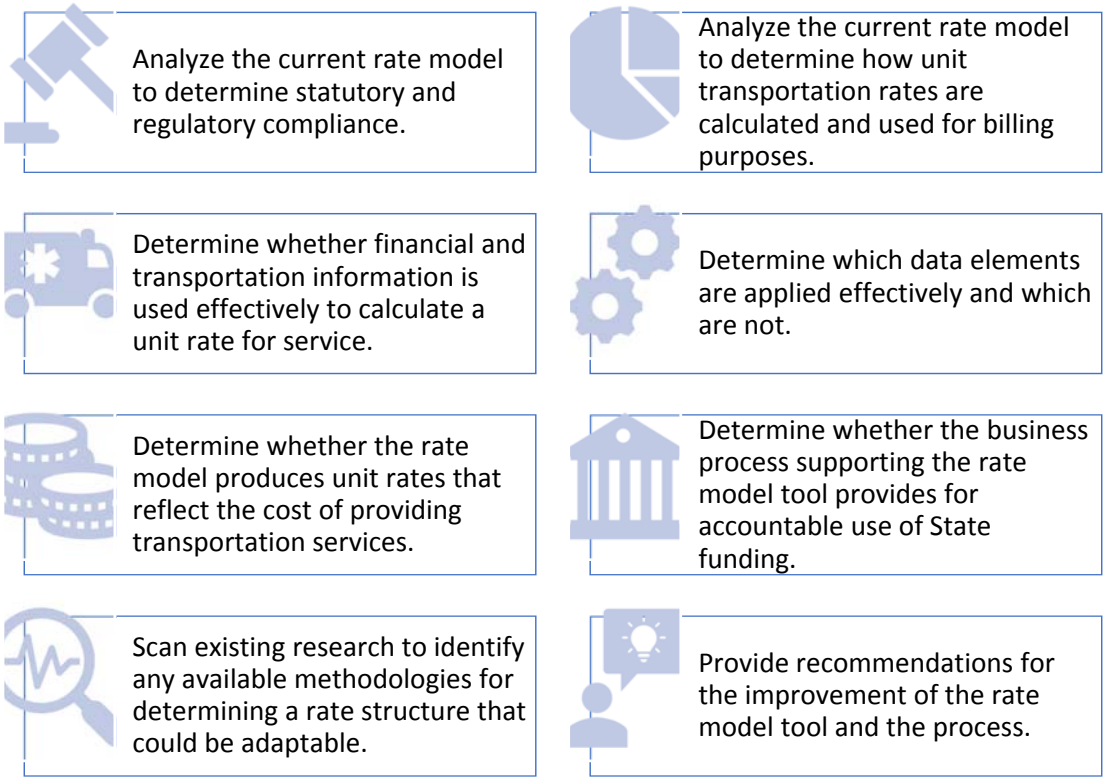


Figure 3: FCTD Project Objectives

The Team, with FCTD approval, completed the project work plan elements illustrated in Figure 4. To meet FCTD's objectives illustrated in Figure 3, the THF team interviewed FCTD staff located in Tallahassee as well as conducted on-site interviews and data collection at CTCs located throughout the State of Florida.

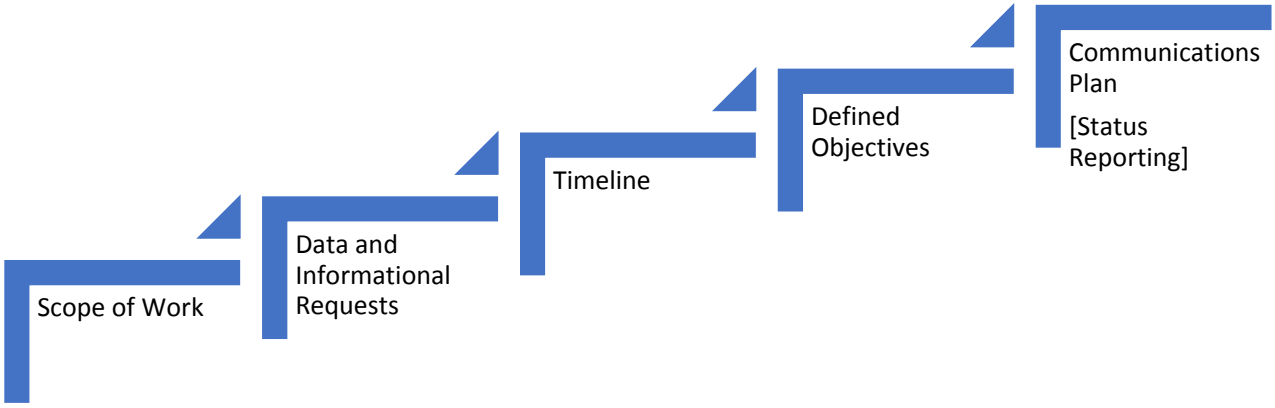


Figure 4: THF Work Plan Elements

The Team, working with FCTD, selected seven of the 58 CTCs to conduct on-site visits and data collection. The seven CTCs, illustrated in Figure 5, provide services across 20 counties within 15 service areas.

CTCs Visited

- Big Bend Transit, Inc [Gadsden, Jefferson, Madison, Taylor Counties]
- Broward County Transit [Broward County]
- LakeXpress [Lake County Board of County Commissioners]
- MV Contract Transportation, Inc [Alachua County, Desoto, Hardee, Highlands, Okeechobee Counties]
- Palm Tran [Palm Beach County]
- Suwanee Valley Transit Authority [Columbia, Hamilton,Suwannee Counties]
- Suwannee River Economic Council, Inc [Bradford, Dixie, Gilchrist, Lafayette, Union Counties]

Figure 5: List of CTCs Visited

The purpose of the on-site interviews was to seek CTC input and feedback on the rate model process from providers representing different attributes identified in Figure 6. Based on the results of the interviews, the Team requested input from the remaining 39 CTCs using a survey questionnaire from the respective rate model users to analyze and assess responses for improvements to the current model or related processes.

Service Area Density	Organizational Type	Network Type
Rural	For Profit	Fully Brokered
Urban	Governmental	Partially Brokered
	Non-Profit	Sole Source

Figure 6: CTC Attributes

In addition to the Project Work Plan, the Team conducted weekly conference calls to update FCTD on the overall project status and discuss preliminary results.

Figure 7 illustrates the 58 service areas covering the State's 67 counties.

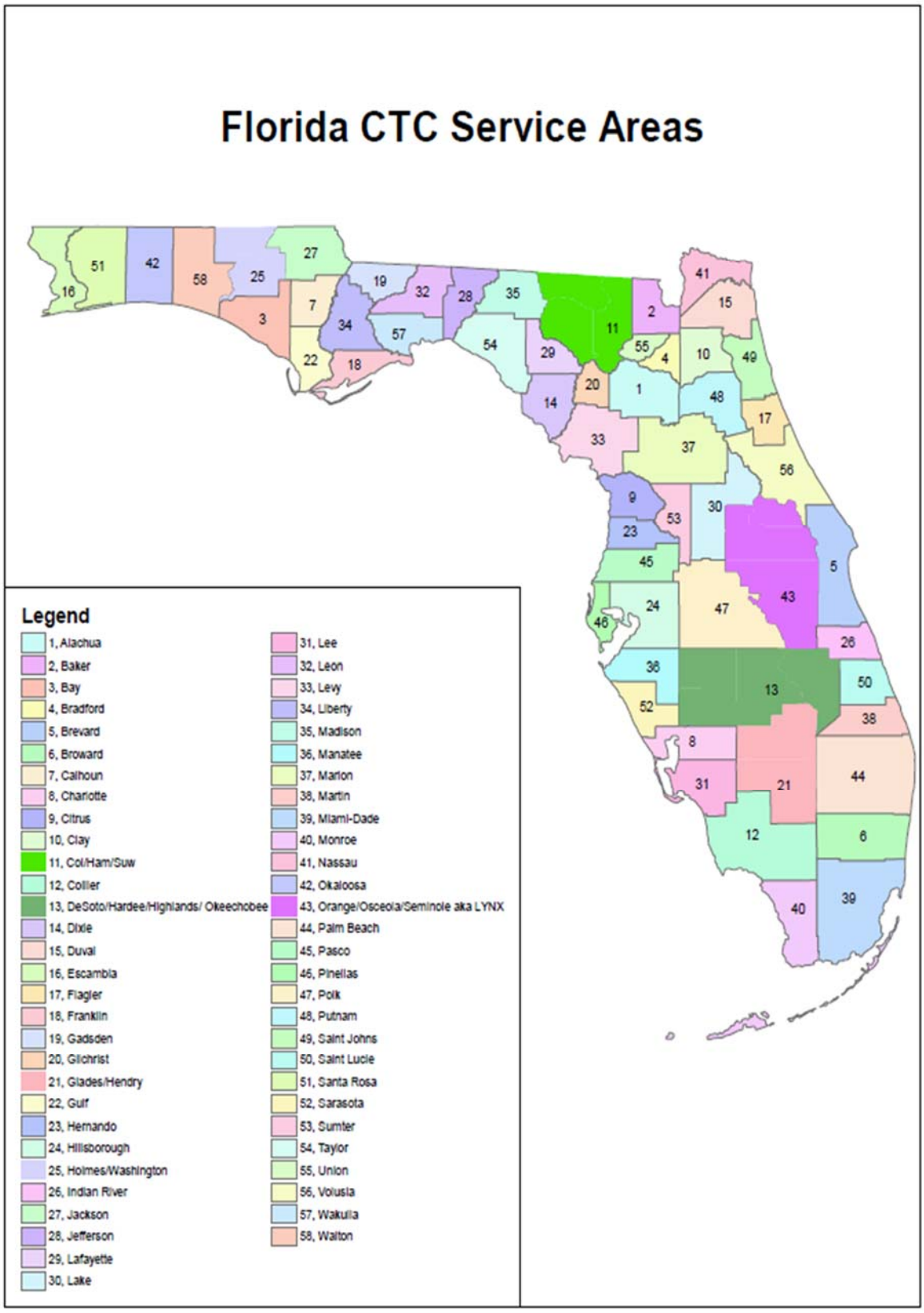


Figure 7: CTCs by Service Area

B. Data Gathering and Fieldwork

The data gathering and fieldwork efforts allowed the Team to refine the approach and gather supplemental information throughout the duration of the project. As information was collected and analyzed, the Team obtained supporting documentation from interviews, data and analysis, and inquiries of rate model users.

To accomplish the data gathering and fieldwork effort, the Team completed numerous tasks as illustrated in Figure 8.

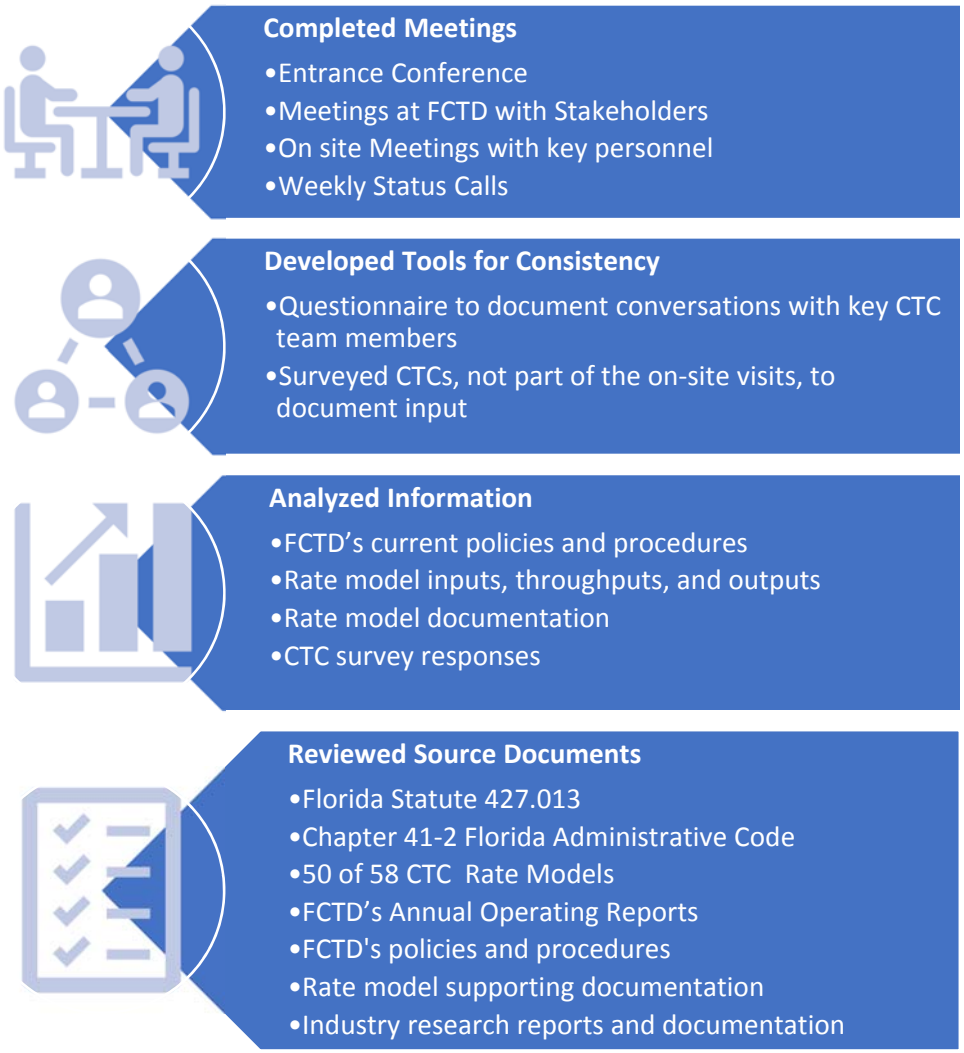


Figure 8: Data Gathering and Field Work Tasks

The Team gained an understanding of the rate model process and the outputs. The Team also gained an understanding of the respective FCTD and CTC missions, strategic plans, goals, and objectives. Our analysis, coupled with the interviews and surveys of CTC program administrators, allowed the Team to better understand the issues, limitations, and potential improvements associated with the current rate model from FCTD and the end-user perspective.

C. Data Analysis

The team completed the following procedures during the data analysis phase. Figure 9 illustrates the procedures performed.

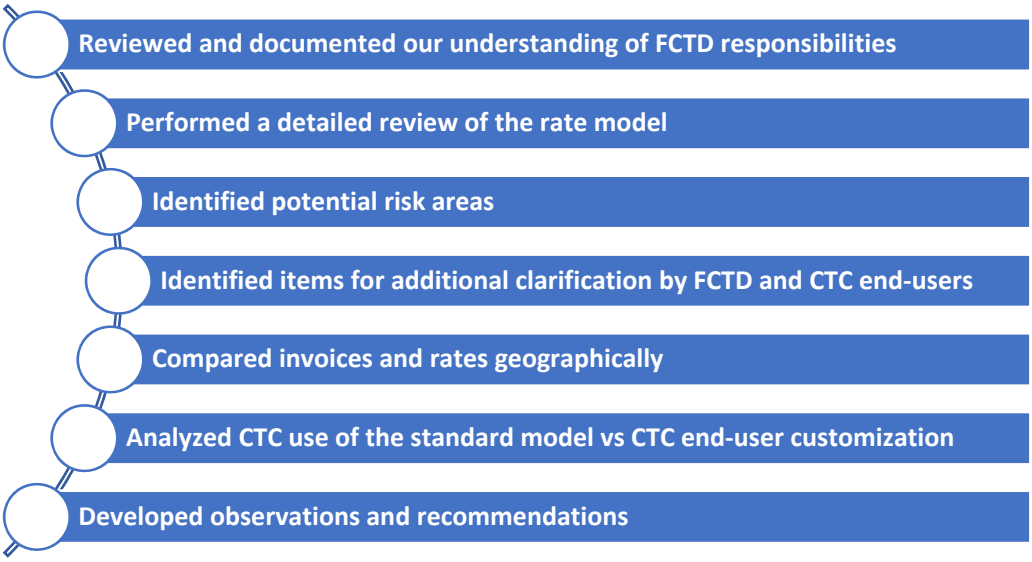


Figure 9: Analyses Performed by the Team

During the data analysis phase, observations were noted and developed, and included recommendations for improvement. These observations and risk areas were then reviewed with FCTD and the CTCs and became the basis for the recommendations. The Team discussed additional options related to the rate model and processes were discussed with FCTD and the CTCs during the data analysis phase.

Observations of the Current Rate Model

To meet FCTD's project objectives and to provide achievable recommendations, the Team needed to understand the current rate model and answer ***How the Rate Model Works***. The following narrative provides an assessment of the current rate model and serves as the basis for the Team's Observations and Recommendations.

Current Model Overview

The model calculates and provides two rates. The CTC may request a monthly reimbursement from FCTD for their respective FCTD Non-Sponsored Trip and Equipment grant funds using one of the two calculated rates, which are:

- per mile, and
- per trip.

Each participating CTC completes and submits their rate model to FCTD in the spring each year (March to May). FCTD reviews and approves the rates during May to June. The CTCs begin billing FCTD using the approved rates at the onset of FCTD's new fiscal year (July 1, annually). Each CTC selects which Rate Model rate they will use to bill the FCTD. Each participating CTC can elect to bill the Per Mile rates, the Per Trip rates, or a contracted per mile or trip rate. The base model formula to calculate a per trip rate for a service is as illustrated in Figure 10.

$$\frac{Adjusted\ expenditure\ rate\ base}{Total\ trips\ weighted\ by\ service\ differentiation\ factors} \times Service\ differentiation\ factor$$

Figure 10: Base Model Formula

The base model formula changes if a CTC end-user selects "yes" to questions related to preferences for:

1) charging a contract-based rate;
2) charging escort fees; or
3) offering group loading services.

The following describes how each of the rate model worksheets function. For explanation purposes, the Team has included sample numbers and we have described the functions of the base model given the complexity and variability of end-user inputs.

Figure 11 provides a summary for each worksheet within the Microsoft Excel model and a description of each worksheet in the model.

Preliminary Information

- CTC contact information
- Organizational type
- Network type

Comprehensive Budget

- Prior year actual
- Current year budgeted
- Proposed year budget
- Includes revenues and expenditures

Rate Base Adjustment

- Analysis of prior year actuals
- Catagorizes into rate model generated
- Compares local match versus actual subsidy revenue
- Not in current use

Budgeted Rate Base

- Classification of proposed year's budget revenues into: subsidy revenue or rate-generated revenue
- Calculation of adjusted expenditure rate base *[numerator]*

Program-wide Rates

- Applicants enter total projected miles and total projected trips *[denominator]*
- Calculates one general per mile rate, one general per trip rate, and average length of a trip.

Multiple Service Rates

- Calculates the per mile, per trip or contracted rates CTCs may use to request funds from CTD.
- Calculates per mile and per trip rates for the categories of: ambulatory, wheel chair, stretcher, and group.
- Calculates variations of base model rates if CTC prefers to use contract rates, to charge escort fees (not reimburseable by CTD) or offers group loading services.

Figure 11: Description of Rate Model Worksheets

The Team's analysis and descriptions of the frequency of use of the base model and the three variations can be found in the analysis section. Of the 50 models reviewed, several CTC end-users used the model to compute one of the three variation preferences as noted below:

- contract rates [4 CTC end-users],
- escort fees [2 CTC end-users], or
- group loading [2 CTC end-users].

See Appendix A for a list of formulas, variables provided by the CTCs, and assumptions that are embedded in the rate calculations.

Preliminary Information Worksheet

Figure 12 shows the CTCs contact information, entity type and network type. For entity type, the CTCs are either government, non-profit, or for profit. For network type, the CTCs may be partially brokered, fully brokered or be the sole source. The other worksheets may change wording based on the organizational type that is marked on this worksheet. For example, "PROFIT" appears on the Comprehensive Budget worksheet if the entity type is "for-profit".

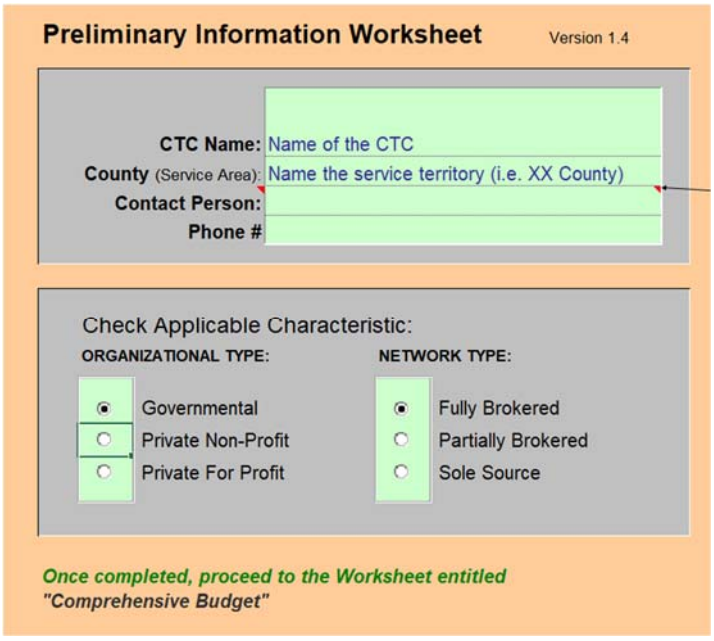


Figure 12:Preliminary Information Worksheet

Comprehensive Budget Worksheet

Figure 13 provides financial details on revenues and expenses for prior year (actuals), current year budgeted, and next year's preliminary budget.

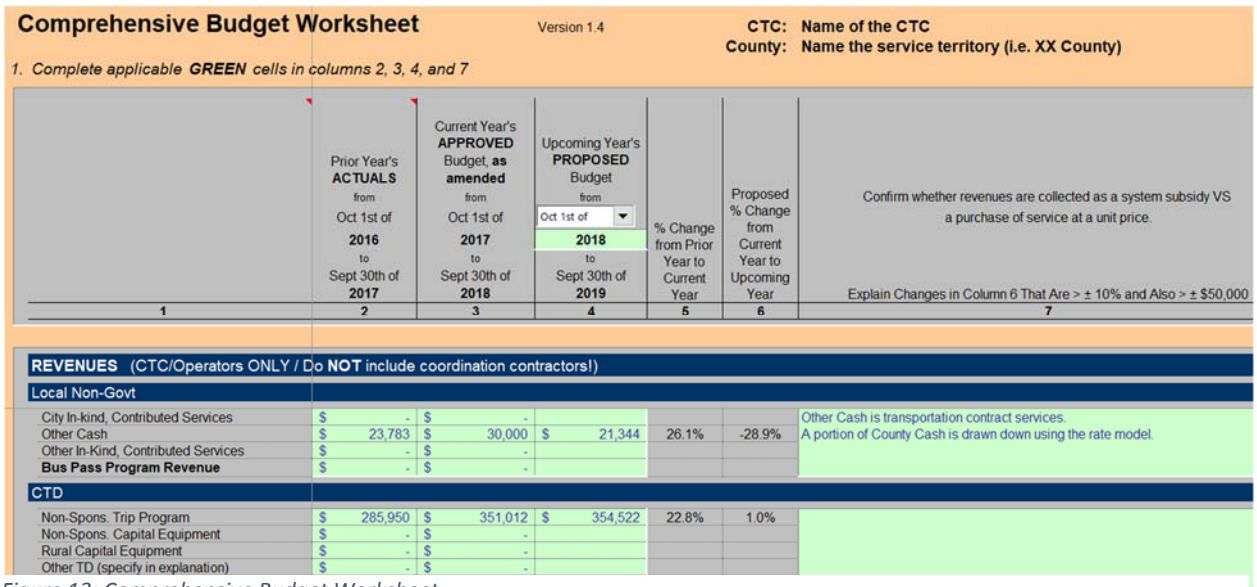
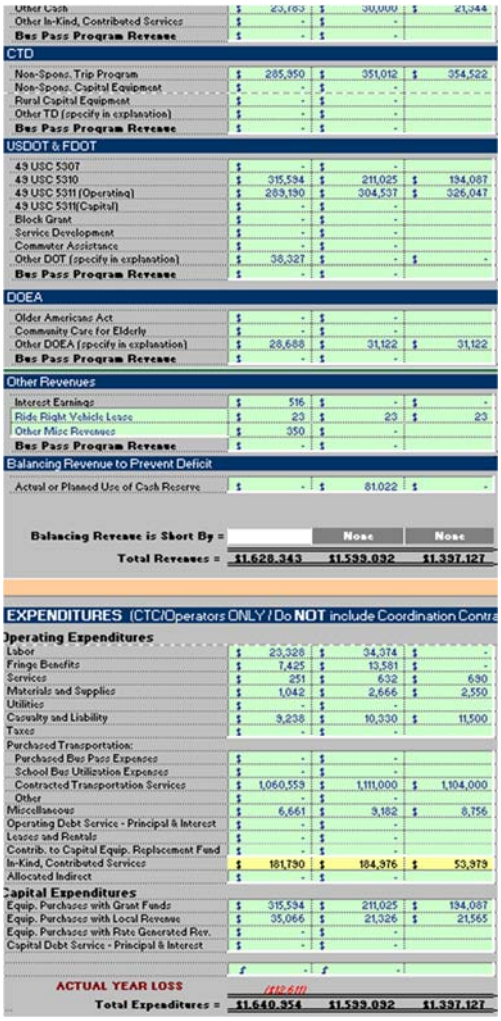


Figure 13: Comprehensive Budget Worksheet

The data in the prior year actuals column roll forward onto the Rate Base Adjustment worksheet for further analysis. The figures in the next year preliminary budget column roll forward onto the Budgeted Rate Base worksheets. The figures in the Current Year's Approved Budget appears to be for comparison purposes



Other In-Kind, Contributed Services	$ -	$ -	
Bus Pass Program Revenue	$ -	$ -	
CTD			
Non-Spons. Trip Program	$ 285,350	$ 351,012	$ 354,522
Non-Spons. Capital Equipment	$ -	$ -	
Rural Capital Equipment	$ -	$ -	
Other TD (specify in explanation)	$ -	$ -	
Bus Pass Program Revenue	$ -	$ -	
USDOT & FDOT			
49 USC 5307	$ -	$ -	
49 USC 5310	$ 315,594	$ 211,025	$ 194,087
49 USC 5311 (Operating)	$ 289,190	$ 304,537	$ 326,047
49 USC 5311(Capital)	$ -	$ -	
Block Grant	$ -	$ -	
Service Development	$ -	$ -	
Commuter Assistance	$ -	$ -	
Other DOT (specify in explanation)	$ 38,327	$ -	$ -
Bus Pass Program Revenue	$ -	$ -	
DOEA			
Older Americans Act	$ -	$ -	
Community Care for Elderly	$ -	$ -	
Other DOEA (specify in explanation)	$ 28,688	$ 31,122	$ 31,122
Bus Pass Program Revenue	$ -	$ -	
Other Revenues			
Interest Earnings	$ 516	$ -	$ -
Ride Right Vehicle Lease	$ 23	$ 23	$ 23
Other Misc Revenues	$ 350	$ -	
Bus Pass Program Revenue	$ -	$ -	
Balancing Revenue to Prevent Deficit			
Actual or Planned Use of Cash Reserve	$ -	$ 81,022	$ -
Balancing Revenue is Short By =		None	None
Total Revenues =	$1,628,343	$1,599,032	$1,397,127
EXPENDITURES (CTC/Operators ONLY / Do **NOT** include Coordination Contra			
Operating Expenditures			
Labor	$ 23,328	$ 34,374	$ -
Fringe Benefits	$ 7,425	$ 13,581	$ -
Services	$ 251	$ 632	$ 690
Materials and Supplies	$ 1,042	$ 2,666	$ 2,550
Utilities	$ -	$ -	
Casualty and Liability	$ 9,238	$ 10,330	$ 11,500
Taxes	$ -	$ -	
Purchased Transportation:			
Purchased Bus Pass Expenses	$ -	$ -	
School Bus Utilization Expenses	$ -	$ -	
Contracted Transportation Services	$ 1,060,559	$ 1,111,000	$ 1,104,000
Other	$ -	$ -	
Miscellaneous	$ 6,661	$ 9,182	$ 8,756
Operating Debt Service - Principal & Interest	$ -	$ -	
Leases and Rentals	$ -	$ -	
Contrib. to Capital Equip. Replacement Fund	$ -	$ -	
In-Kind, Contributed Services	$ 181,790	$ 184,376	$ 53,979
Allocated Indirect	$ -	$ -	
Capital Expenditures			
Equip. Purchases with Grant Funds	$ 315,594	$ 211,025	$ 194,087
Equip. Purchases with Local Revenue	$ 35,066	$ 21,326	$ 21,565
Equip. Purchases with Rate Generated Rev.	$ -	$ -	
Capital Debt Service - Principal & Interest	$ -	$ -	
	$ -	$ -	
ACTUAL YEAR LOSS	(12,611)		
Total Expenditures =	$1,640,354	$1,599,032	$1,397,127

Figure 14: Revenue by Source

Revenues are listed in Figure 14 by source type (federal, state, local government, and other). While there are 74 revenue types listed, Figure 14 provides an example of 14 common revenue types used by the CTCs. The 74 revenue types are classified into five categories and sub-categories. For purposes of the model, the categories are noted below, and an example sub-category is shown parenthetically.

- Non-Government (Fare box)
- Local Government (City / County Contributions)
- Federal (US Department of Transportation (DOT))
- FCTD & Florida DOT
- Other Florida Agencies (Florida Department of Elder Affairs)

Also provided in Figure 14 are the categories that detail operating and capital expenditures.

Total revenues and total expenditures are the basis for the next section ***Budgeted Rate Base Worksheet***. The total expenditures for the "Upcoming Year's Proposed Budget" and the "Prior Year's Actual Loss" carry forward to subsequent worksheets.

Observation

During the site visits, several CTCs noted the difficulty in preparing the annual rate model. The CTC end-user did not realize that the reporting period date can be changed to its respective fiscal year. The end-users also had difficulty in gathering supporting documentation for the annual rate model since their entities did not issue interim reports for month ending June 30, which is the FCTD's fiscal year end. The most common CTC fiscal year end is September 30 or December 31.

Rate Base Adjustment Worksheet

Figure 15, ***Rate Base Adjustment Worksheet***, is hidden from view and was not completed by the CTC end users for the 2019 rate models. The prior year actuals entered on the Comprehensive Budget worksheet are linked from column 2 of this worksheet. The CTC is then asked to enter amounts in column 3 of any revenue shown in column 2 generated by charging the per unit rate or used as local match. Column 4 self-populates with the remainder (prior year actuals – local match and per unit rate revenue), and calls this "Actual Subsidy Revenue". Revenues used to purchase equipment are then subtracted to determine "Actual Operating Subsidy Revenue". The difference between the year's Actual Operating Rate Subsidy Revenue and the Total Budgeted Operating Rate Subsidy Revenue is the "Rate Base Adjustment." Several rows of the worksheet are hidden to show the headings and the "Rate Base Adjustment" calculation.

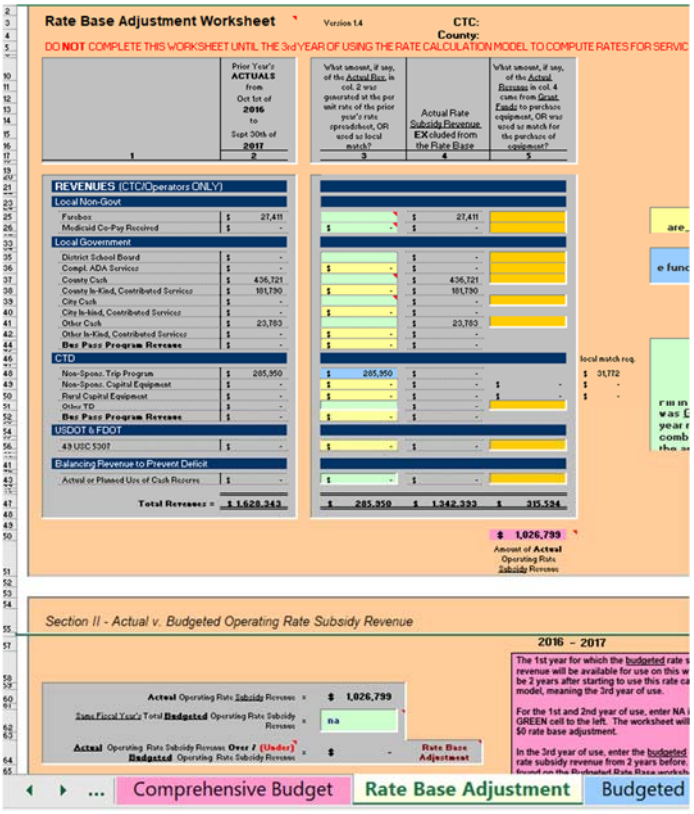


Figure 15: Rate Base Adjustment Worksheet

Observation

The Rate Base Adjustment Worksheet is not currently used by the CTC end-user. The worksheet is hidden from view. FCTD should consider removing the worksheet from the model.

Budgeted Rate Base Worksheet

The ***Budgeted Rate Base Worksheet*** provides the numerator for calculating the rates: Adjusted Expenditures are included in Rate Base. The formula and an example, shown as Figure 16 are denoted below:

(Next Year Preliminary Budget Expenditures − Subsidy Revenue)
± Rate Base Adjustment
= Adjusted Expenditure Rate Base

$$(\$1{,}397{,}127 - 248{,}089) + 12{,}611 = \$1{,}161{,}649$$

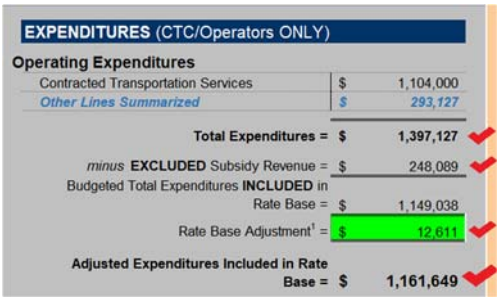
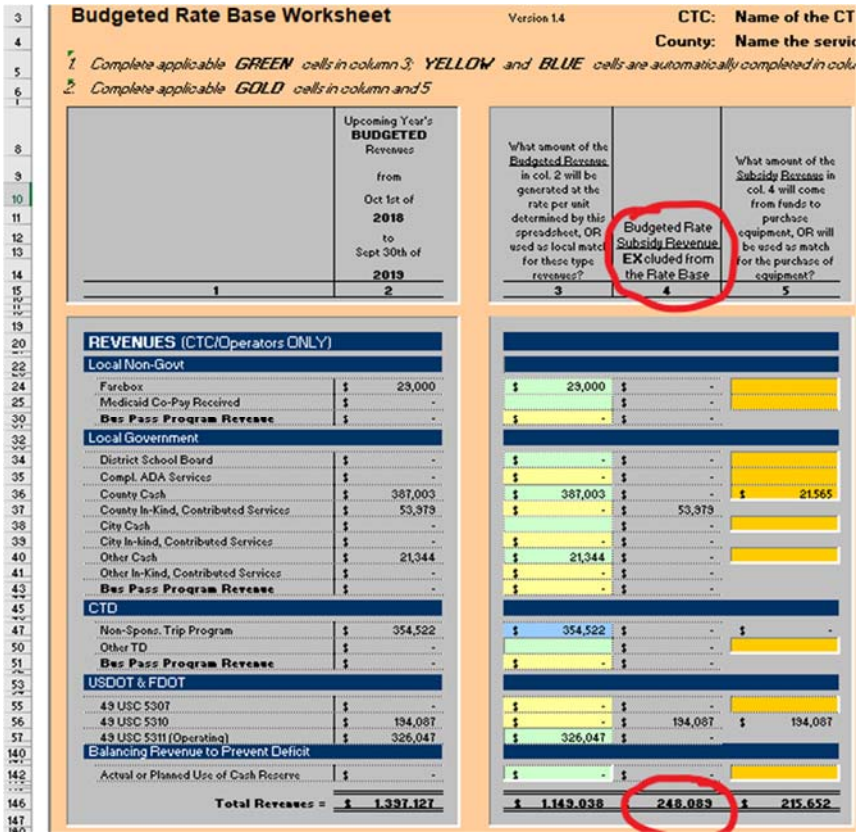


Figure 16: Adjusted Expenditure Base Formula and Model Screen Shot

The ***Budgeted Rate Base Worksheet*** shows the supporting detail for calculating the adjusted expenditure rate base. The revenues and expenditures from the projected next year preliminary budget column of the Comprehensive Budget worksheet flow into the first column of this worksheet. Figure 17 illustrates the classification of the rate generated revenue compared to subsidy revenue.

The CTC end-user enters the projected revenues that are expected to be generated by the rates calculated in this workbook into column 3. The CTC also enters local match amounts into column 3. The remainder (Next Year Preliminary Budget Revenues – Revenues to be generated by the rate model rate and local match) defaults into the "Subsidy Revenue" (column 4), while column 5 identifies the amount of revenue used by the CTC to procure capital equipment.



Budgeted Rate Base Worksheet Version 1.4 CTC: Name of the CT County: Name the servic

1. Complete applicable **GREEN** cells in column 3; **YELLOW** and **BLUE** cells are automatically completed in colu
2. Complete applicable **GOLD** cells in column and 5

	1	2	3	4	5
		Upcoming Year's BUDGETED Revenues from Oct 1st of 2018 to Sept 30th of 2019	What amount of the Budgeted Revenue in col. 2 will be generated at the rate per unit determined by this spreadsheet, OR used as local match for these type revenues?	Budgeted Rate Subsidy Revenue EXcluded from the Rate Base	What amount of the Subsidy Revenues in col. 4 will come from funds to purchase equipment, OR will be used as match for the purchase of equipment?
	REVENUES (CTC/Operators ONLY)				
	Local Non-Govt				
	Farebox	$ 23,000	$ 23,000	$ -	
	Medicaid Co-Pay Received	$ -	$ -	$ -	
	Bus Pass Program Revenue	$ -	$ -	$ -	
	Local Government				
	District School Board	$ -	$ -	$ -	
	Compl. ADA Services	$ -	$ -	$ -	
	County Cash	$ 387,003	$ 387,003	$ -	$ 21,565
	County In-Kind, Contributed Services	$ 53,979	$ -	$ 53,979	
	City Cash	$ -	$ -	$ -	
	City In-kind, Contributed Services	$ -	$ -	$ -	
	Other Cash	$ 21,344	$ 21,344	$ -	
	Other In-Kind, Contributed Services	$ -	$ -	$ -	
	Bus Pass Program Revenue	$ -	$ -	$ -	
	CTD				
	Non-Spons. Trip Program	$ 354,522	$ 354,522	$ -	$ -
	Other TD	$ -	$ -	$ -	
	Bus Pass Program Revenue	$ -	$ -	$ -	
	USDOT & FDOT				
	49 USC 5307	$ -	$ -	$ -	
	49 USC 5310	$ 194,087	$ -	$ 194,087	$ 194,087
	49 USC 5311 (Operating)	$ 326,047	$ 326,047	$ -	
	Balancing Revenue to Prevent Deficit				
	Actual or Planned Use of Cash Reserve	$ -	$ -	$ -	
	Total Revenues =	$ 1,397,127	$ 1,149,038	$ 248,089	$ 215,652

Figure 17: Budget Rate Base Worksheet Supporting Detail

Observation

There is variability as to how the CTCs enter data in:

- Figure 17, column 3, "Budgeted Revenue to be generated from the rates" and
- Figure 17, column 4 "Budgeted Rate Subsidy Revenue".

Per our analysis:

- Almost half of the CTCs entered revenues in column 3,
- More than 20 of the CTCs allowed their USDOT grants to default into column 4, and
- More than half of the CTCs allowed their non-FCTD funds to default into column 4. (Please see Figure 19 for rate calculations with and without subsidy.)

Program-wide Rates Worksheet

The ***Program-wide Rates Worksheet*** shows "subsidized" and "unsubsidized" rates based upon the CTCs entry of projected total miles and projected total passenger trips formulated as shown in Figure 18. In Figure 19, the Team provided the backup to demonstrate how the rates were calculated. Subsidized rates exclude the amount provided in Figure 17, column 4. Unsubsidized rates have no exclusions and provides an adjustment for including Subsidizing Revenue and excluding Bus Pass Revenue. Average trip length identified in Figure 18, is equal to Total Projected Passenger Miles divided by Total Projected Passenger Trips, or 476,198/57,246 or 8.3 miles.

Figure 18: Program-wide Rate Calculations

Trip or Mile Data	Subsidized Rates	Unsubsidized Rates
Projected Passenger Miles 476,198	Rate per Mile = $\frac{Adjusted\ expenditure\ rate\ base}{Total\ Projected\ Passenger\ Miles}$ $\$2.44 = \frac{\$1,161,649}{476,198}$	Rate per Mile = $\frac{Adjusted\ expenditure\ rate\ base + (Subsidizing\ Revenue - Bus\ Pass\ Revenue)}{Total\ Projected\ Passenger\ Miles}$ $\$2.96 = \frac{\$1,161,649 + (\$248,089 - \$0)}{476,198}$
Projected Passenger Trips 57,246	Rate per Trip = $\frac{Adjusted\ expenditure\ rate\ base}{Total\ Projected\ Passenger\ Trip}$ $\$20.29 = \frac{\$1,161,649}{57,246}$	Rate per Trip = $\frac{Adjusted\ expenditure\ rate\ base + (Subsidizing\ Revenue - Bus\ Pass\ Revenue)}{Total\ Projected\ Passenger\ Miles}$ $\$24.63 = \frac{\$1,161,649 + (\$248,089 - \$0)}{57,246}$

Figure 19: Program-wide Rate Sheet Calculations

Observation
Bus pass revenues are excluded from the "rates if no revenue subsidies" shown on the Program-wide rates worksheet. Bus pass revenues and expenditures are discussed in the ***Results*** section.

Multiple Service Rates Worksheet

FCTD allows the CTCs to bill for rates developed from the ***Multiple Service Rates Worksheet***. The CTCs invoice FCTD for services rendered in the prior month from available program funds for their respective service areas. The ***Multiple Services Rates Worksheet*** further delineates total projected miles and trips into the following categories:

- Ambulatory,
- Wheel chair,
- Stretcher, and
- Group.

The worksheet provides a weighted average by:

- Service differentiation factor based on load time to project a service cost per mile, and
- Per trip cost for each category noted above.

On the worksheet, the CTC identifies its applicable service categories, contracted services, whether it charges an escort fee, and whether it provides a group loading service.

For this example, the CTC entered the total miles and trips by service type as shown in Figure 20. The figure shows that of the majority of the 476,198 miles entered were for Ambulatory service. In this example, the CTC did not identify miles for Stretcher or Group services.

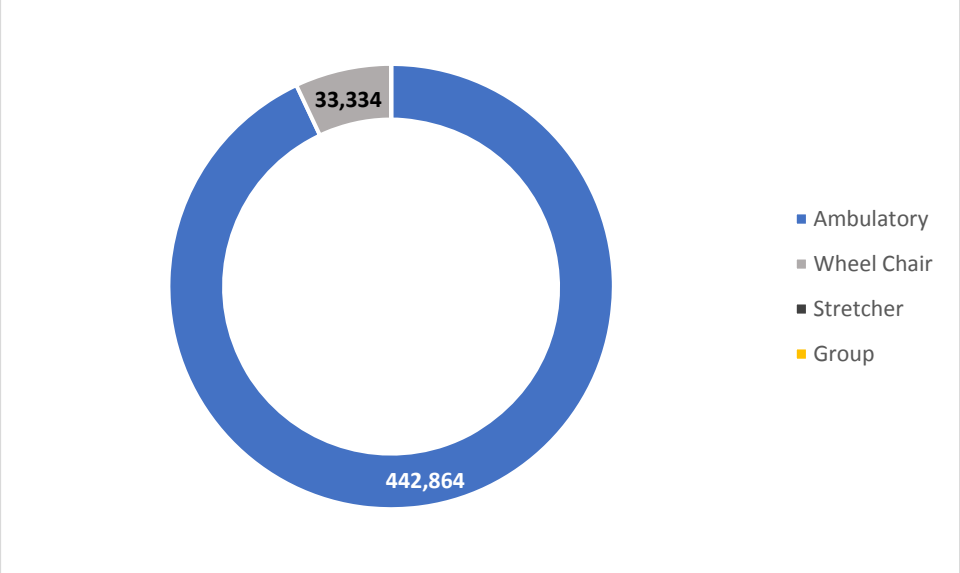


Figure 20: Projected Passenger Miles by Service

Generally, the rates are calculated as follows:

- Service differentiation factors were created for each different service type based upon load/unload time.
- The Group service differentiation factor is different if the CTC offers a Group Loading Service.

Figure 21 denotes the differentiation factor utilized by the current rate model. The current rate model established Ambulatory as the baseline and the factors below are utilized for each of the CTCs when computing multiple service rates. To see how group loading service impacts the calculated rates, see ***Appendix B Advanced Model Functions***.

Description	Ambulatory	Wheel Chair	Stretcher	Group per individual
Average # minutes for pick-up per stop	7	12	25	3
Average # of minutes for drop-off per stop	7	12	25	7
Minutes	14	24	50	10
Average wait time in hours (minutes/60)	*0.23*	0.40	0.83	0.17
Service factor = Average wait in hours / Baseline service avg wait	*baseline*	=0.4/0.23	=0.83/0.23	=0.17/0.023
Service Differentiation Factor (Ambulatory=1.0)	***1.000***	**1.714**	**3.571**	**0.714**

Figure 21: Service Differentiation Factors

When multiplying the output from Figure 20 to Figure 21, the model computes the weighted service differentiation mileage total. The 500,008 miles are categorized as illustrated in Figure 22.

Observation

Most CTCs did not identify the following options:

- calculate rates as per their contracts;
- charge escort fees; or
- provide group loading service.

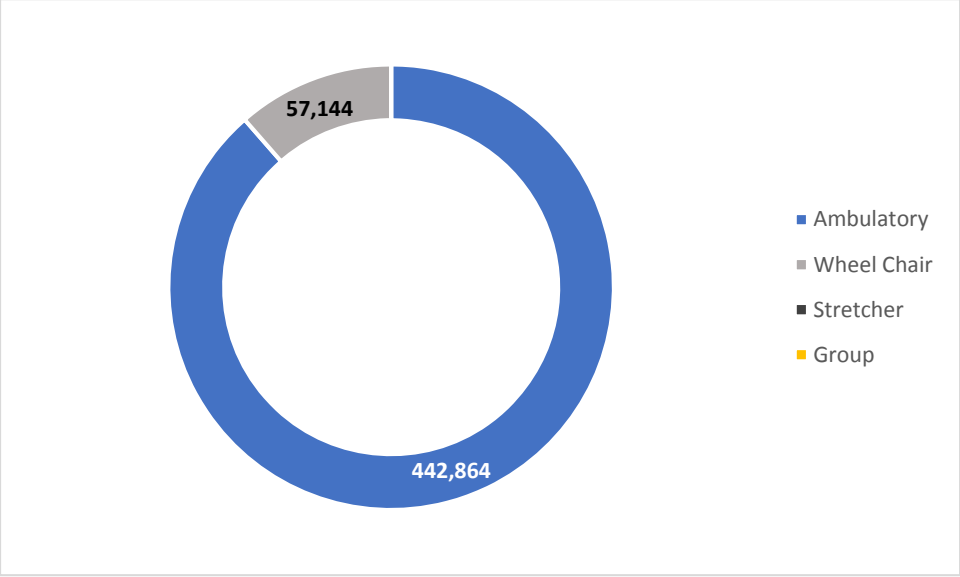


Figure 22: Weighted Service Differentiation Mileage

Figure 23 illustrates how the current rate model computes the service rate per passenger mile.

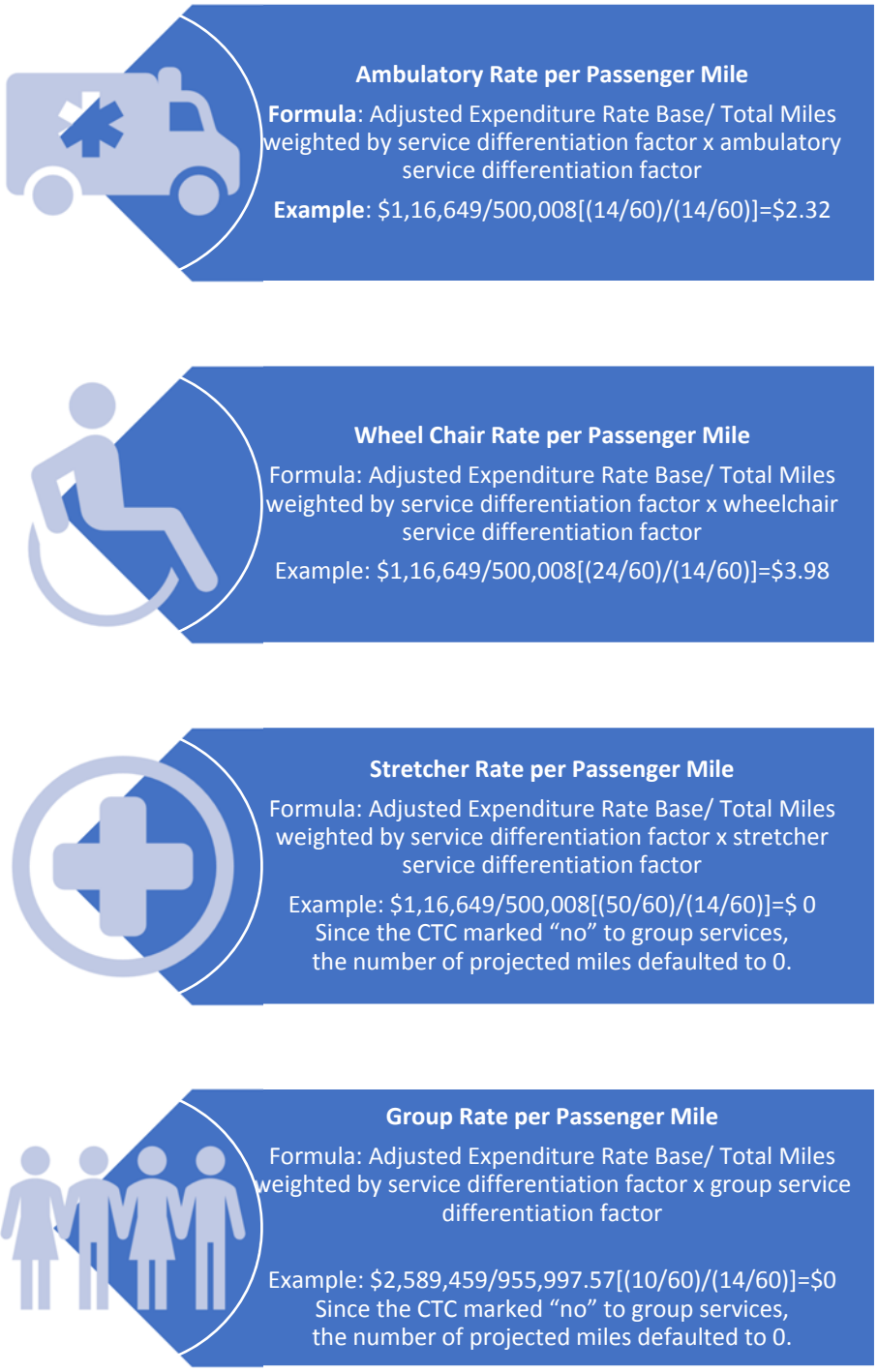


Figure 23: service Rate per Passenger Mile

The per passenger miles rates, shown in Figure 24, are calculated using the respective formulas in Figure 21.

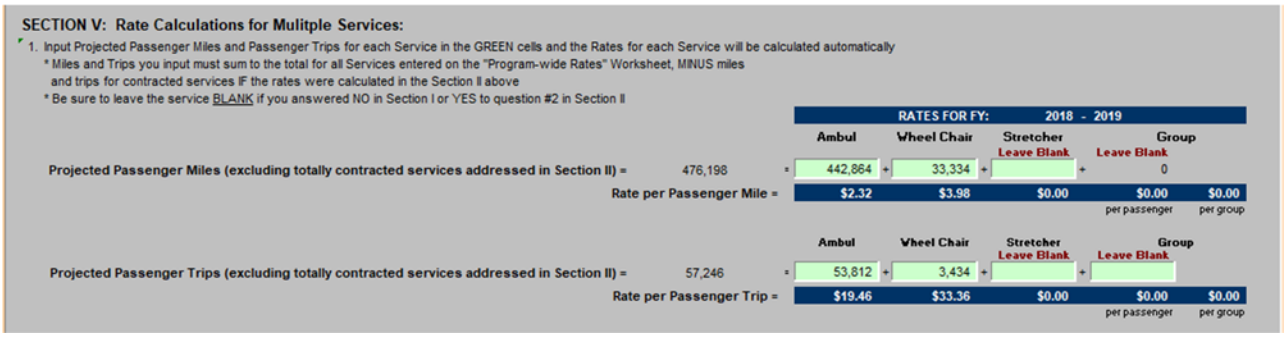


Figure 24: Service Rate per Passenger Mile

Unsubsidized Ambulatory Rate per Passenger Mile is illustrated in Figure 25.

$$\text{Rate per Mile} = \frac{[\text{Adjusted expenditure rate base} + (\text{Subsidizing Revenue} - \text{Bus Pass Revenue})]}{\text{Total Weighted Passenger Miles}} \times \text{Service differentiation factor}$$

$$\$2.82 = \frac{\$1{,}161{,}649 + (\$248{,}089 - \$0)}{500{,}008} \times 1.00$$

Figure 25: Unsubsidized Ambulatory Rate per Passenger Mile

Figure 26 illustrates how the Unsubsidized Ambulatory Rate per Passenger Mile is presented in the current rate model.

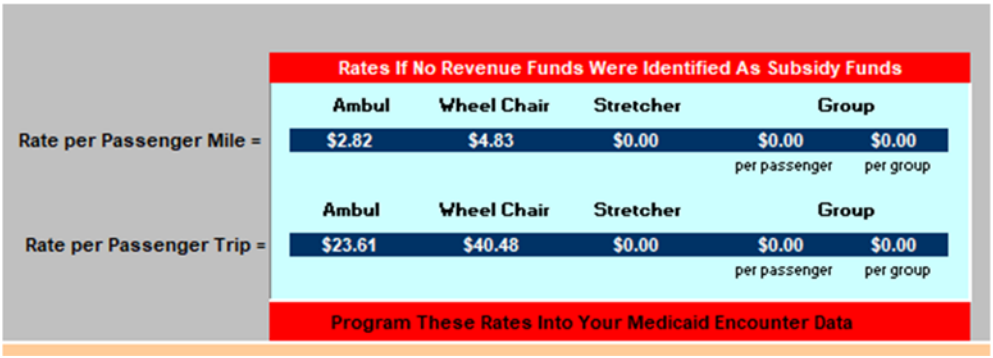


Figure 26: Unsubsidized Ambulatory Rate per Passenger Mile denoted in the Current Rate Model

The per passenger trip rates are calculated using the respective formulas in Figure 21 except for replacing the word “miles” with “trips.”

Analysis of CTC data in the FY19 Rate Models

The 67 counties of Florida are divided into 58 Community Transportation Coordinator (CTC) service areas which are managed by 46 entities. Rate models for 50 of the CTC service areas were available for this review.

Preliminary Information worksheet

The worksheet shows the CTCs contact information, entity type and network type. Figure 27 provides a geographic illustration of the CTCs by Organizational Type. Of the 50 rate models reviewed, 26 were governmental, 22 non-profits, and 2 for-profits.

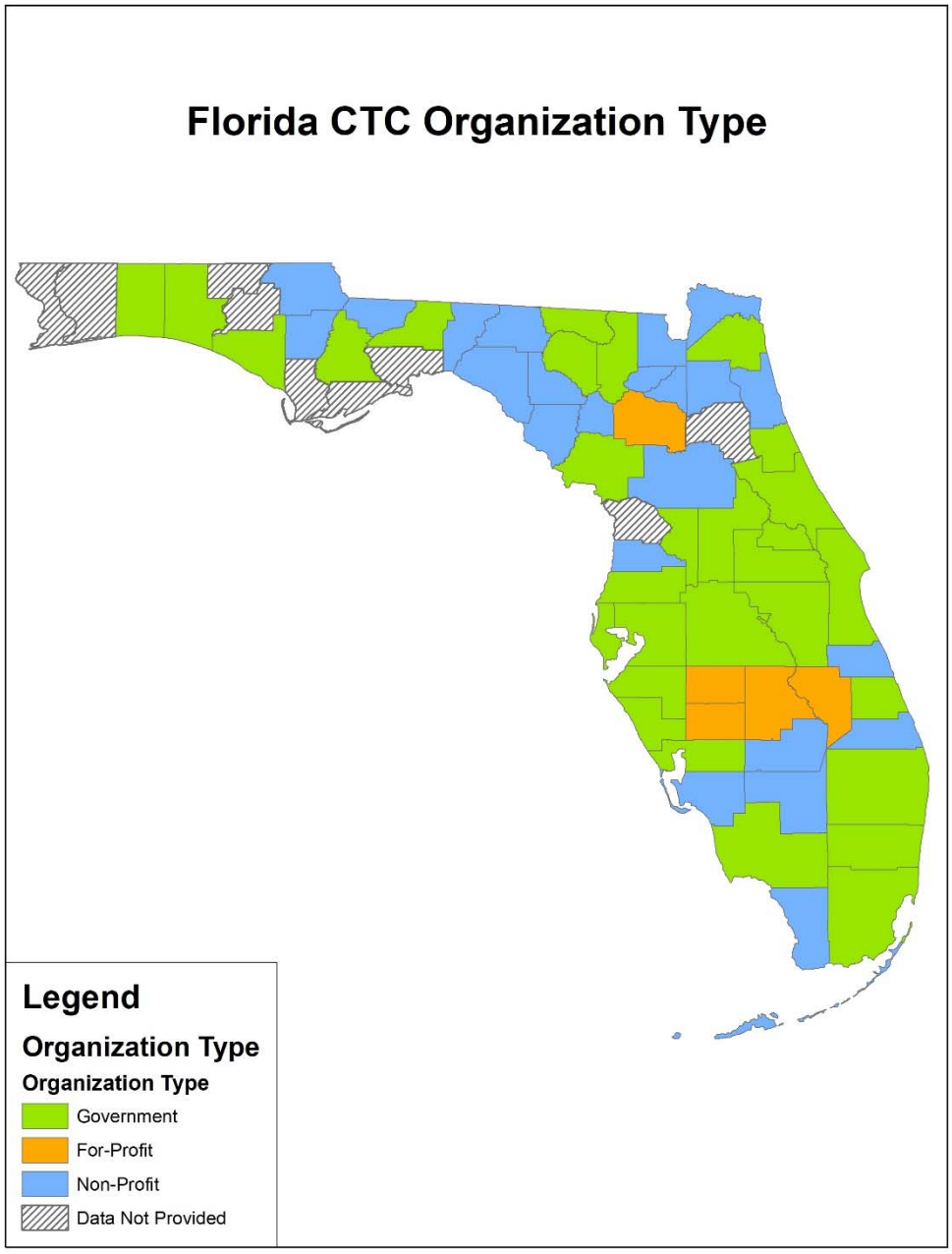


Figure 27: CTCs by Organizational Type

Figure 28 provides a geographic illustration of the CTCs by Network Type. Of the 50 rate models reviewed, 9 were Fully Brokered, 22 Partially Brokered, and 19 Sole Sourced.

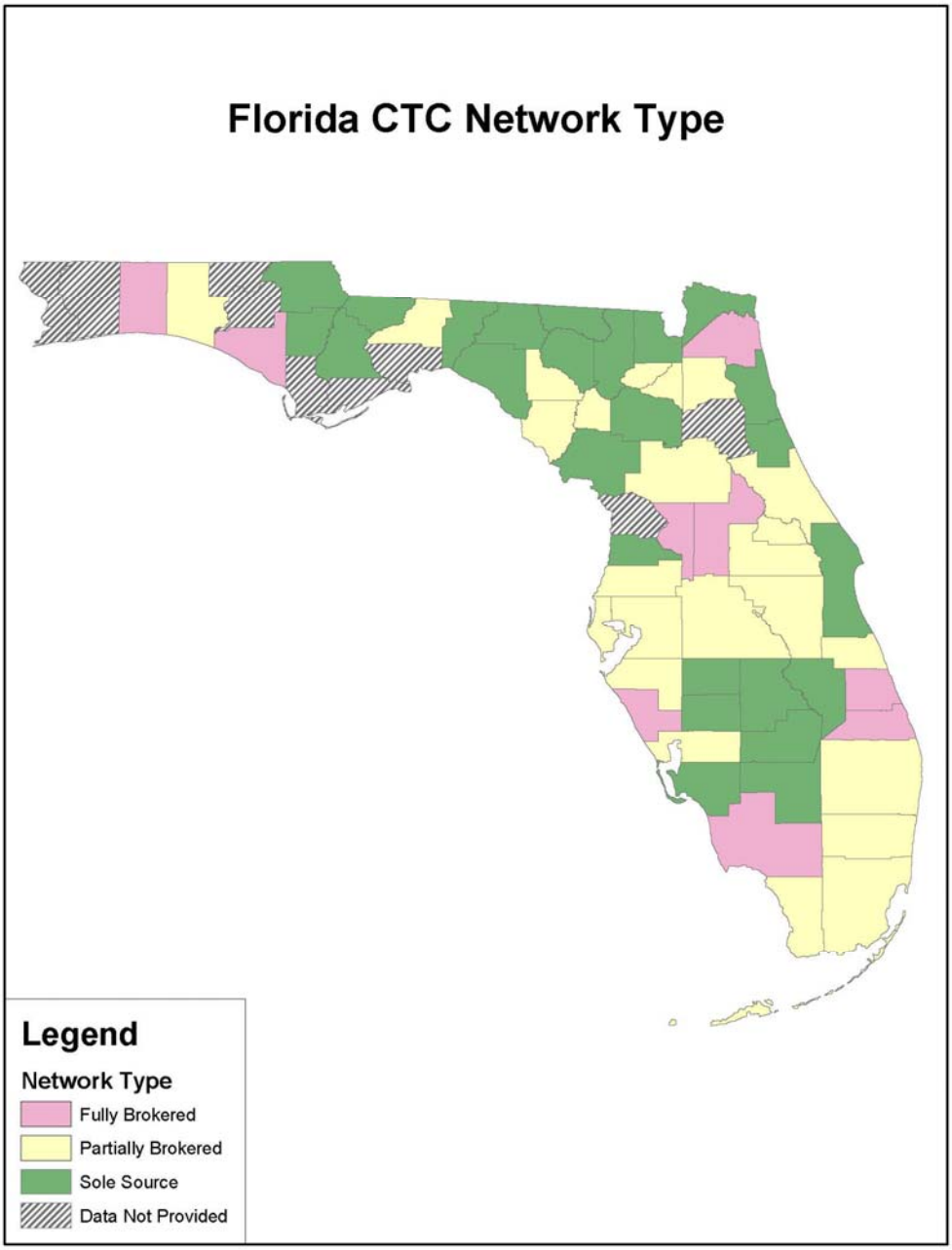


Figure 28: CTCs by Network Type

Comprehensive Budget worksheet

Reporting Periods

During our site visits and surveys, we collected fiscal year end dates and compared them to the dates used in the rate models. Many of the CTCs were unaware they could change the reporting periods to match their own fiscal years by changing the dates in column 4 “Upcoming Year’s Proposed Budget.”

Revenues

Figure 29 lists the five most used revenue categories in the FY19 rate models. Twenty-three of the 74 revenue categories had no entries by the CTCs.

Count of Revenue Category Useage by entity type

MOST USED REVENUE CATEGORIES								
	Government	Non-Profit	For-Profit	Total	Rural	Urban1	Urban2	Total
REVENUES								
Local Non-Govt								
Farebox	22	16	2	40	13	19	8	40
Other	10	13	1	24	12	8	4	24
Local Government								
County Cash	23	15	2	40	13	19	8	40
CTD								
Non-Spons Trip Program	26	22	2	50	19	22	9	50
USDOT & FTOD								
49 USC 5311 (Operating)	12	17	2	31	18	13	0	31

	Frequency of Use	**# of Categories**
Five categories were used more than twenty times.	greater than 20	5
Twenty-one categories were used zero times.	0	21
Forty-two categories were used less than three times.	less than 3	42
Forty-eight categories were used less than five times.	less than 5	48

Figure 29: Frequently Used Revenue Categories

Grants management leading practices (leading practices) suggest matching funds need to be reported for compliance. The rate model distinguishes between types of matching funds. In addition, leading practices suggest program revenues and their use should also be reported. The current rate model adequately reports program revenues. The CTCs reported an average of 8 different revenue sources. Thirty-five of the CTCs reported more than 5 different revenue sources.

Observation
With these caveats in place, many of the listed State Agencies have created other methods of purchasing transportation services, including the procurement of their own transportation providers. At the time of this Report, it appears the other State Agencies will continue to coordinate their respective transportation needs.

Florida Statute 427.0135 allows State agencies to use alternative providers (instead of CTCs) if the following occurs:

- The Agency may contract for the same services in a more cost-effective manner, and a comparable or higher quality and standards, or
- The Agency is unable to "reach mutually acceptable contract terms with the Commission."

Expenditures

A table of frequency of use of each expense category suggests we could shorten this list to help simplify the rate model. Best practices in cost assignment suggest it is often helpful to separate expenses into the categories of operating and administrative. Some of the expenditure lines, such as casualty and liability insurance, are directly linked to Florida statutory requirements, which supports compliance.

Budgeted Rate Base Worksheet

The Budgeted Rate Base Worksheet provides the numerator for calculating the rates. The most common items categorized as "subsidy revenue" as denoted in the model are labeled as "local non-government farebox revenues, county cash, and USDOT 5307, 5310 and 5311 revenues."

Observation
Aggregating the individual revenue types into fewer categories would simplify and improve consistency of the rate model while leaving the rate model integrity intact.

CTCs have the option to further adjust the expenditure rate base in the "Rate Base Adjustment" cell as shown in Figure 30. One goal of the rate model is to minimize actual gains or losses. This Rate Base Adjustment was intended as a mechanism to balance over/under funding the CTCs. If a CTC realized a gain in the prior year, that gain would be subtracted, resulting in a lower billable rate for the coming year. If a CTC realized a loss in the prior year, the loss would be added. Below is a table showing rate results under the three scenarios:

	RATE BASE ADJUSTMENT FUNCTION		
	No Rate Base Adjustment	**Subtract Prior Year Gain**	**Add Prior Year Loss**
Expenditure Rate Base	$ 2,589,459	$ 2,589,459	$ 2,589,459
Rate Base Adjustment		(500,000)	500,000
Adjusted Expenditure Rate Base	$ 2,589,459	$ 2,089,459	$ 3,089,459
divided by			
Total Projected Passenger Miles	880,351	880,351	880,351
Program-wide Rate	**$ 2.94**	**$ 2.37**	**$ 3.51**

Figure 30: Rate Base Adjustment Function

Observation

Of the 50 rate models reviewed, 16 entered Rate Base Adjustments in the FY19 rate models. Twenty-four CTCs showed prior year gains or losses. Six of the rate models included rate base adjustments to offset prior year actual gains or losses. Both the categorization into subsidy versus non-subsidy revenue and the optional rate base adjustment cell impact the resulting calculated rates.

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Program-wide Rates Worksheet

The program-wide worksheet shows "subsidized" and "unsubsidized" rates based upon the CTCs entry of projected total miles and projected total passenger trips. The rates calculated on this page were not used in any of the other worksheets, and these are not used for billing TD. These rates are graphically illustrated in the Figures 31 to 33 and are overlayed on a population density map. The density maps are based on population per square mile.

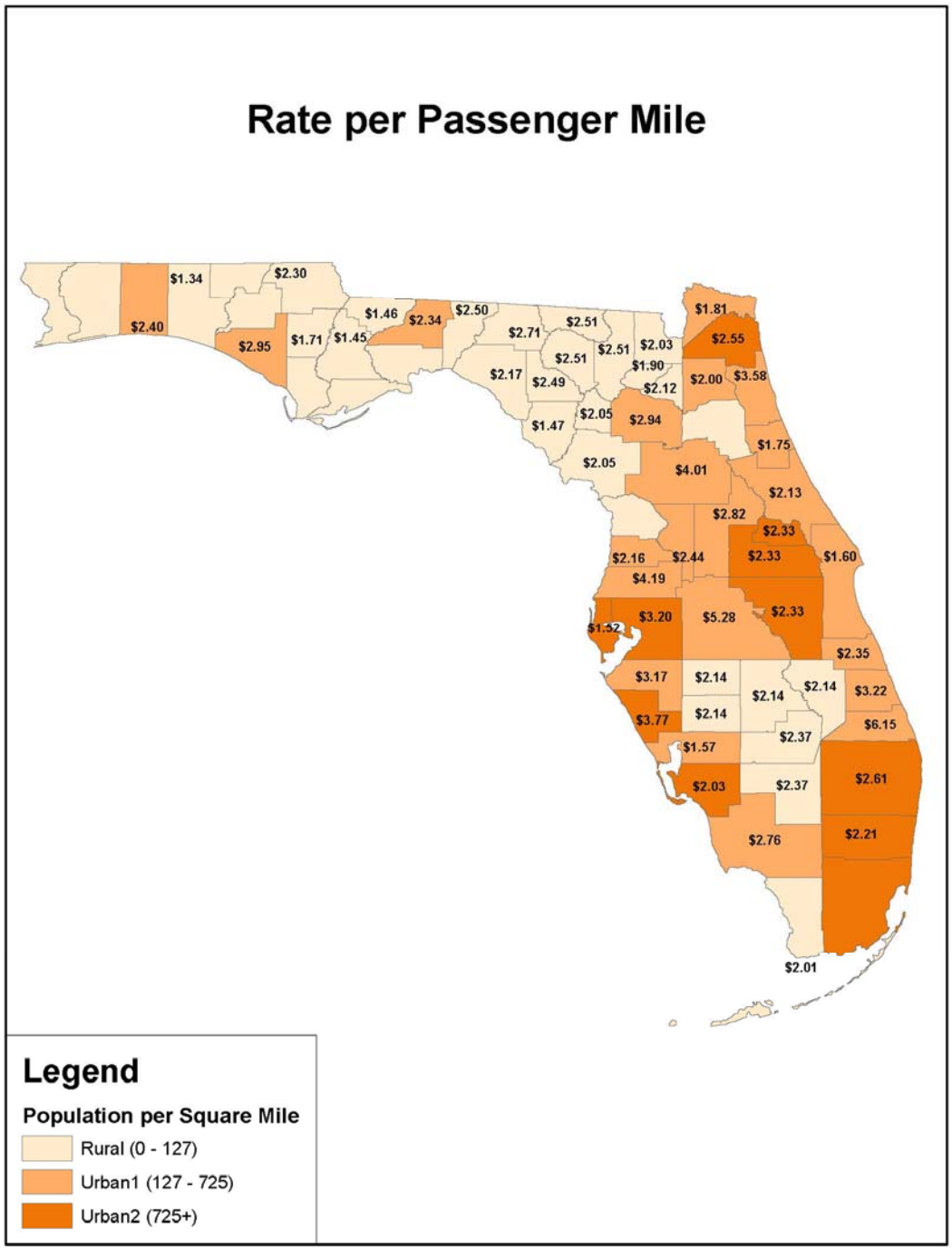

Figure 31: Rate per Passenger Mile

Figure 32 graphically illustrates the program-wide Rate per Passenger Trip, per CTC service area. Data was not provided for service areas that do not show a rate. The Program-wide rate is overlaid on the population density map illustrating population per square mile.

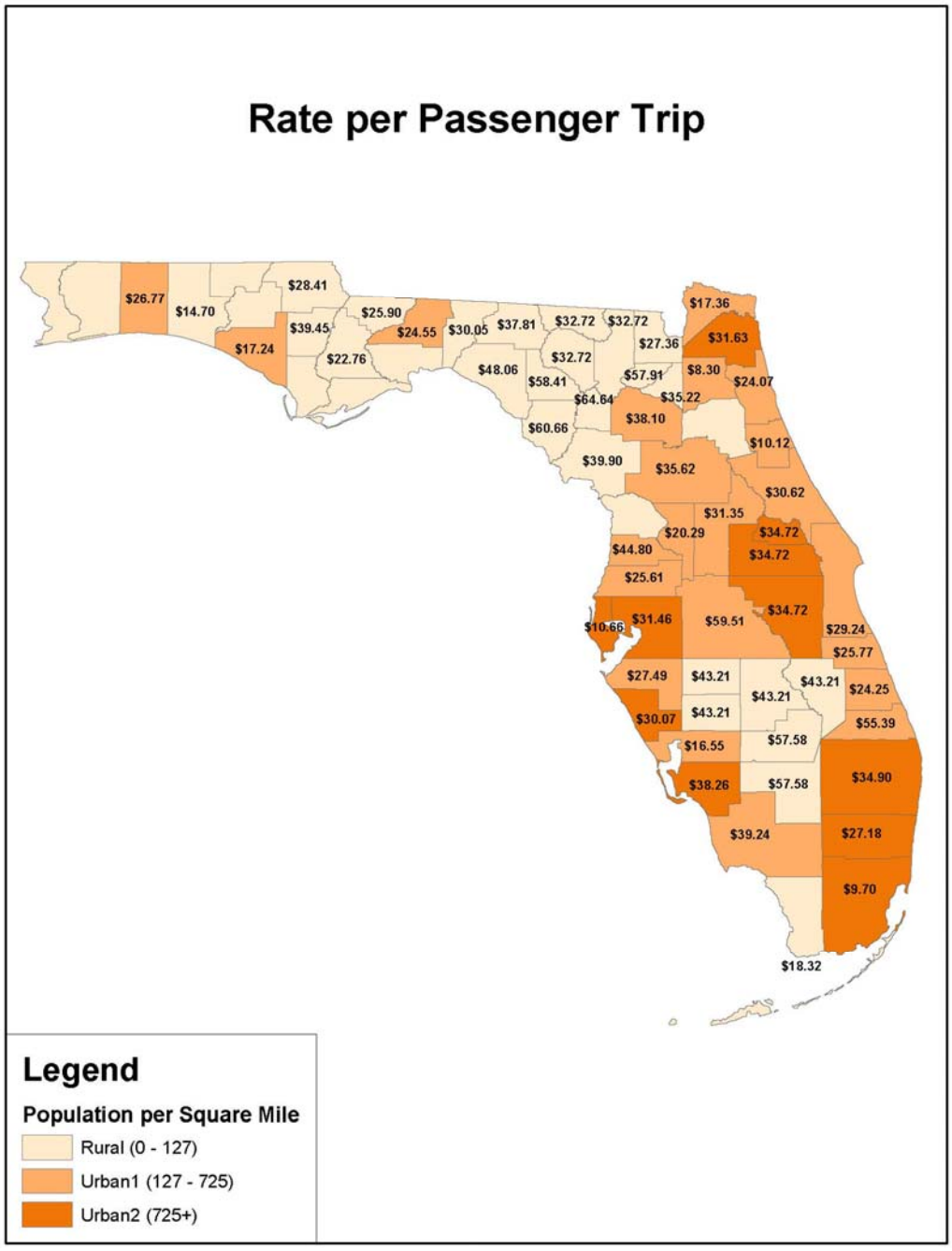

Figure 32: Program-wide Rate per Passenger Trip

Figure 33 graphically illustrates the average trip length per CTC service area. Data was not provided for service areas that do not show a trip length. The average trip length is overlaid on the population density map illustrating population per square mile. The average trip length denoted in the rural CTCs (counties) is consistent with the information collected from the on-site interviews, data analysis, and survey results. A common point of emphasis from the rural CTCs is the greater trip length required to transport the passengers to facilities providing the medically necessary services.

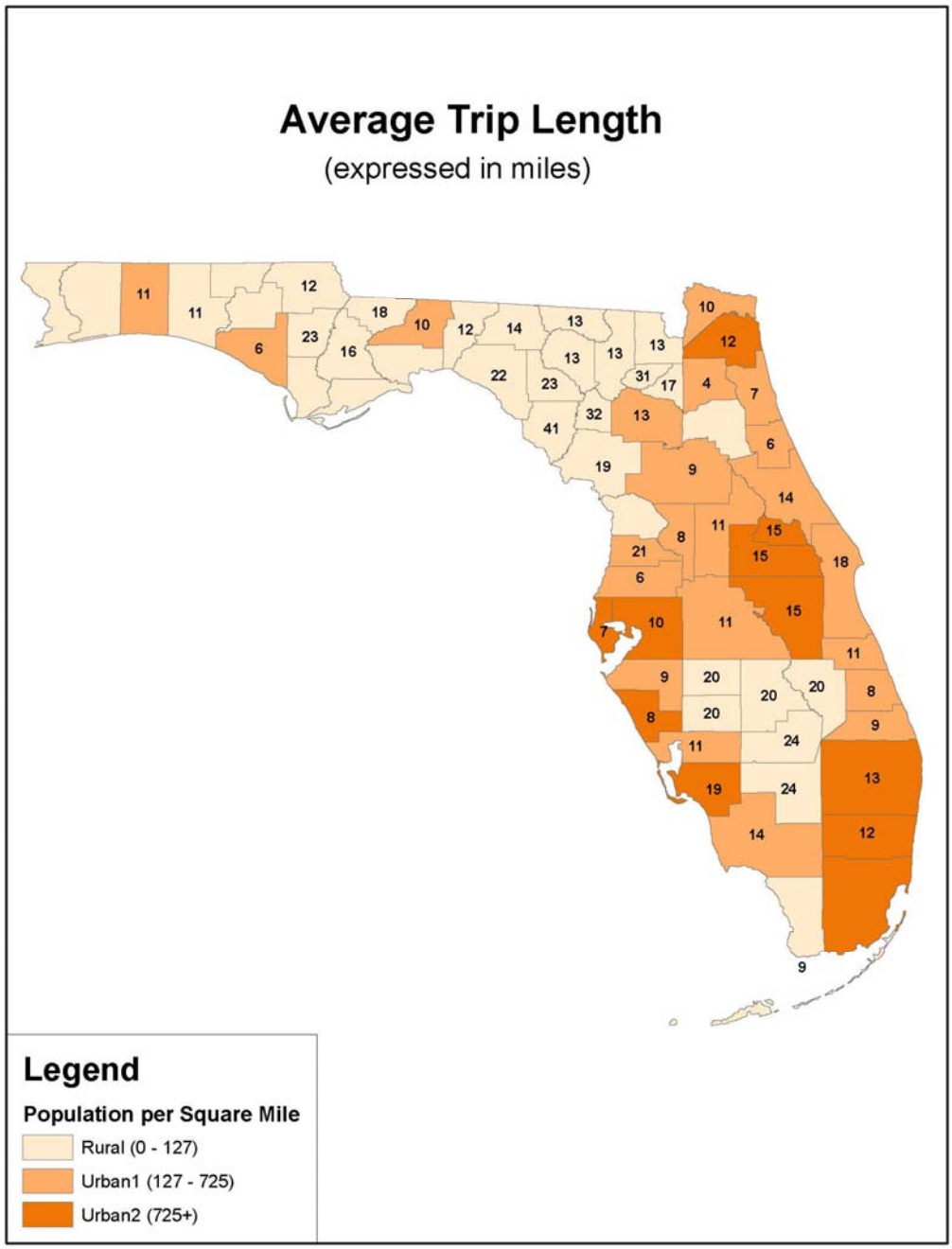

Figure 33: Average Trip Length

Bus pass revenue

Bus pass revenue is excluded from the "unsubsidized" rate calculations. Bus pass revenues were treated in a wide variety of ways by the CTCs. FCTD may reimburse up to 90% of the cost of a bus pass. Fifteen of CTCs receive bus pass reimbursements from FCTD. Amongst CTCs who receive the bus pass reimbursement, only eight showed bus pass revenues and expenses in the rate models. One of the service areas visited has an electronic data collection system that is capable of tracking bus pass users' daily miles and numbers of trips. That one CTC is governmental and operates in highly dense (urban2) area. Another factor to consider is that the FCTD trust fund allocations are made based on the number of miles and trips a CTC can report.

Observation

The current rate model does not track the numbers of bus passenger miles or bus passenger trips. Most CTCs do not have the technology in place to readily track or monitor the number of bus passenger trips or bus passenger miles to a specific bus pass. Given the variability of bus pass usage (daily, weekly, monthly, etc) by respective CTCs, each CTC would need to consider the cost-benefit of implementing an electronic data collection system.

Multiple Service Rates Worksheet

The ***Multiple Service Rates Worksheet*** are the rates each CTCs may bill to FCTD to request the available funds for their service area. The CTCs entered their projected passenger miles and projected passenger trips in a very consistent manner by service type.

Figures 34 and 35 summarize the service types in miles and trips. Ambulatory trips and miles account for nearly 80% of the provided services.

	Sum of Ambulatory Miles	Sum of Wheelchair Miles	Sum of Stretcher Miles	Sum of Group Miles	Grand Total	% Total Miles by Service Territory Population Density	# of Models Reviewed
Rural	5,170,659	794,155	11,577	42,195	6,018,586	13%	19
Urban1	8,960,541	2,355,869	6,860	436,461	11,759,731	26%	22
Urban2	21,534,484	6,088,375	200	551,614	28,174,673	61%	9
Grand Total	**35,665,684**	**9,238,399**	**18,637**	**1,030,270**	**45,952,990**	**100%**	**50**
% Total Miles by Service	78%	20%	0.04%	2%	100%		

Figure 34: Total Miles by Service

	Sum of Ambulatory Trips	Sum of Wheelchair Trips	Sum of Stretcher Trips	Sum of Group Trips	Grand Total	% Total Trips by Service Territory Population Density	# of Models Reviewed
Rural	369,687	50,999	795	15,736	437,217	12%	19
Urban1	933,812	245,882	797	42,615	1,223,106	32%	22
Urban2	1,608,036	459,344	10	60,760	2,128,150	56%	9
Grand Total	**2,911,535**	**756,225**	**1,602**	**119,111**	**3,788,473**	**100%**	**50**
% Total Trips by Service Type	77%	20%	0.04%	3%	100%		

Figure 35: Total Trips by Service

Observation

There was only one CTC that preferred to be reimbursed on a per trip rate, and so they did not enter projected miles. For comparability, it would be helpful if both mile and trip fields were required in the rate model.

Figure 36: Reimbursement Rate Type

Type Used	# of CTCs
Ambulatory Mile	21
Wheelchair Mile	21
Stretcher Mile	10
Group Mile	2
Ambulatory Trip	26
Wheelchair Trip	25
Stretcher Trip	3
Group per Passenger	4
Group per Group Service Loading Trip	2
Contracted Mile	2
Monthly Bus Pass	15

ows which rates the CTCs are using to bill the FCTD. As demonstrated in Figure 37, nearly half of the CTCs have chosen to bill by trip, while the other half has chosen to bill by mile. During the site visits, most CTCs responded they can easily bill by trip or by mile, as they collect both data points. Some CTCs said they preferred to be paid per mile because their service area was so large and trip lengths varied greatly. Another CTC preferred to be paid per trip, because they are fully brokered, and they have set their transportation provider contracts to pay per trip. One CTC asked to consider payment per hour. They gave an example of a two-hour route. Some days they have only two riders, which on a per trip basis would not cover the cost of two driver hours. Some days the route will have 12 riders, for which a per trip charge would be overcharging.

CTC Type	Reimbursed by Mile	Reimbursed by Trip
For Profit	1	3
Governmental	9	14
Non-Profit	11	9
Grand Total	**21**	**26**

Figure 37: Reimbursements by Mile or Trip

Service differentiation factors

Service differentiation factors provide the CTCs a consistent approach to differentiate between the costs of the four different service types. As transportation equipment has changed over the years, it may be worthwhile to revisit the load-time assumptions. As noted above, nearly 80% of the trips and miles were for Ambulatory services.

Observation

Ambulatory is the baseline service. Updating the service differentiation load times may impact the other services based on the current multiplier used in the rate model. The impact on the CTCs request of FCTD funds requires additional analysis.

Contracts, Escort Fees, Group Loading Services

Seven of 50 CTCs entered data into one of the service areas: contracts, escort fees, or group loading. Six of the seven CTCs that entered information inaccurately used the yes/no radial buttons, which resulted an unintended application of the conditional rate formulas.

Observation

The CTCs may not understand the impact of the yes/no radial buttons and its unintended effect on the rate model calculations.

Recommendations

Based on the analysis provided in this report, the Team has provided options for FCTD to consider when evaluating potential changes to the current rate model. Figure 38 illustrates these considerations.

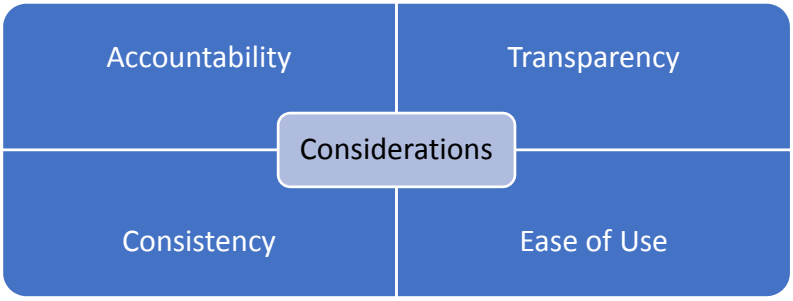

Figure 38: Considerations

Option 1: Keep the Same Model

Figure 39 provides strengths of the current rate as well as areas of improvement or refinement.

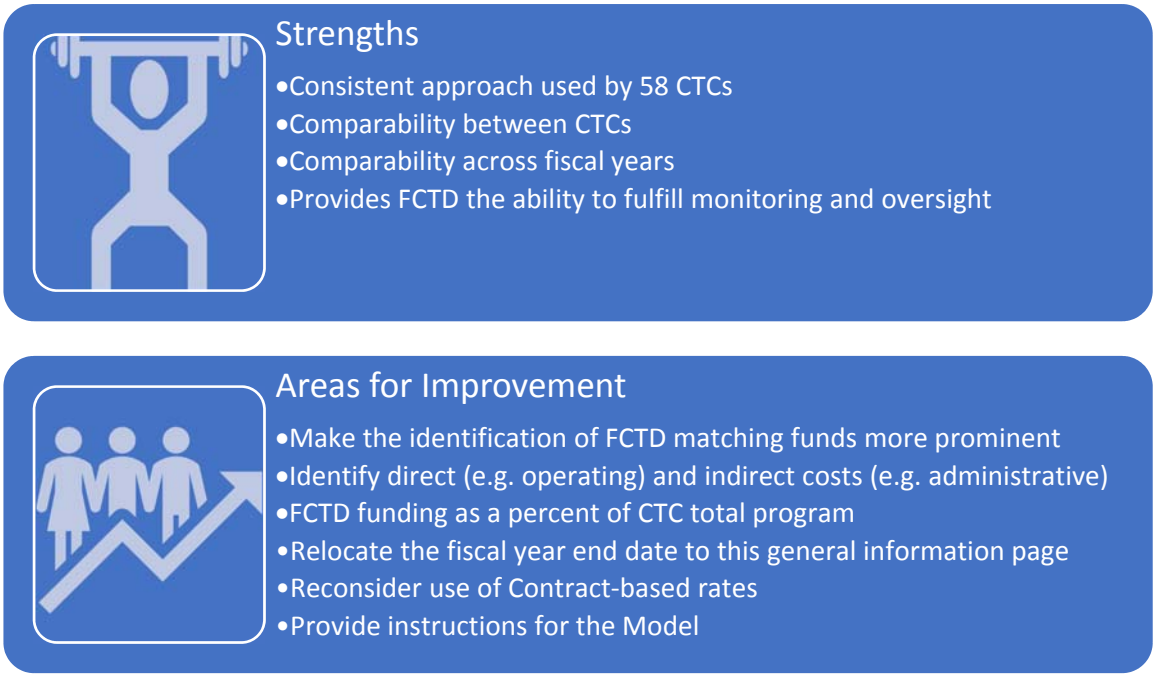

Figure 39: Keep the Same Model

Option 2: Simplify the Existing Model

The recommendations below use the underlying rate formula as the current model. The benefit of a simplified rate model will allow FCTD to monitor the use of State grant funds for coordinated transportation services provided by the CTCs. Simplifying the rate model will provide for:

- Better comparability of data
- Reduced data entry error
- Improved consistency of output
- The establishment of key performance indicators
- Decrease CTC end-user time required to complete the model

Recommendations to simplify the model:

- Reduce number of fields for data
- Decrease the number of tabs and calculations
- Utilize audited financial statements to report actuals, instead of projected budgets
- Summarize revenues to a higher level i.e. Federal, State, local
- Categorize summarized revenues by funding sources by FCTD, local match, and other
- Summarize expenditures to fewer categories i.e. Administration, Operating, and Depreciation
- Simplify the overall rate calculation by dividing total expenditures by total miles (or trips), instead of using weighted differentials
- Consider eliminating subsidy revenue from the rate calculation
- Provide a detailed online instruction manual

Option 3: Alternative Methodologies

If TD determines an alternative solution as listed below they will still maintain statistical data required for the AORs from the CTCs.

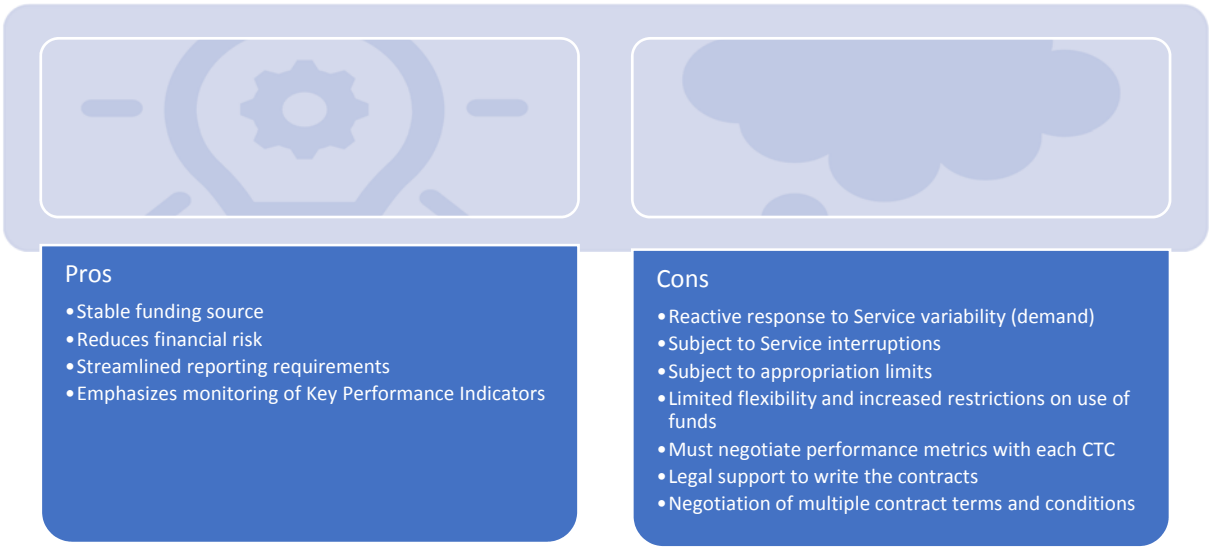

Figure 40: Alternative Methodology Considerations

A. Fixed Funding Model – reimbursement based on performance metrics

A Fixed Funding Model is a specified amount of money that the State (FCTD) would distribute to the CTCs for a specific purpose. The purpose of the FCTD allocation to the CTCs is for the transportation of older adults, persons with disabilities, persons of low income and children at risk. A fixed Simplifying Rate Model has pros and cons outlined in Figure 40.

B. Prior Year Actual Model

Obtain the entities' audited financial statements and actual trips provided and base the funding model upon actual expenditures.

C. Hybrid Model Based on Selected Variables

Start with a base per mile rate (i.e. IRS rate) and add/subtract differentials for CTC organization type; network type; rural/urban; weighted by ride types.

- Base rate per mile (IRS rate)
- CTC organization type (for profit, not for profit, government)
- Network type (fully brokered, partially brokered, sole source)
- Rural / Urban
- Weighted average by ride types
- Utilize the Annual Operating Report (AOR) total expenditures divided by total miles (or trips) reported
- Geographic rates based on regions in Florida
- Population rates based on County populations
- Direct and indirect cost allocations

Next Steps

As part of this project, the Team searched the internet for reports and documents regarding provision of transportation to financially, physically, and mentally disadvantaged citizens. The research is limited in its applicability to the FCTD. Several reports held up FCTD's model as one of the best in the nation.

The challenge in reviewing cost-based rates for CTCs is the number of variables including geographic differences, levels of service, and proximity to medical facilities. The CTCs vary greatly in size, entity type, network type, service areas, and services provided. Most CTCs manage a wide array of programs, not just transportation for people. In some service areas, they must drive patients many miles as the medical clinics are far from client locations. Other service areas have many facilities near their clients. With so many different programs and funding sources, CTCs use different methods to allocate and report costs. The model calculates the costs per mile and per trip and provides supporting documentation of the relationship between the CTC provided services and the users of that service. Implementing one of the Options will support FCTD in its efforts to improve the model. The next steps of this project would include the following:

- Update instructions for the CTCs
- Develop a training program
- Provide training to CTCs at regular intervals
- Define what is represented in Expenditure and Revenue line items (i.e. consider bus passes, purchased transportation)
- Consider inclusion or exclusion of **bus pass items (**revenues, expenses, miles, trips)
- Impact analysis for a change in model
- Review impact of changing differentiated rates versus one blended rate
- Analyze the variables affecting true cost of a trip
    - How does population density impact the cost
    - How does geography impact the cost, should regional differentiations be made between North/Central/South
    - Compare Urban/Rural; For-Profit/Non-Profit/Government; North/Central/South

Appendix A: Rate Model Formulas

RATE MODEL FORMULAS

Example: governmental, urban1, with a rate adjustment for a prior year loss

DATA PROVIDED BY CTC		
Projected Expenditures	$1,397,127.00	
Projected Subsidy Revenue	$248,089	
Optional Rate Adjustment	$12,611	Prior year realized $12,611 loss.
Projected Ambulatory Passenger Miles	442,864	
Projected Wheel Chair Passenger Miles	33,334	
Projected Stretcher Passenger Miles	0	
Projected Group Passenger Miles	0	
Total Passenger Miles	476,198	
Projected Ambulatory Passenger Trips	53,812	
Projected Wheel Chair Passenger Trips	3,434	
Projected Stretcher Passenger Trips	0	
Projected Group Passenger Trips	0	
Total Passenger Trips	57,246	
Projected # of Escort Passenger trips (or miles)	0	
Escort charge per trip (or mile)	0	
Group Loading Service		
Projected Group Vehicle Revenue Miles	0	
Group Loading Service		
Projected Group Vehicle Passenger Miles	0	

DATA ASSUMED BY THE MODEL		
Ambulatory Service Differentiation Factor	=(14/60)/(14/60)	1.000000000
Wheel Chair Service Differentiation Factor	=(24/60)/(14/60)	1.714285714
Stretcher Service Differentiation Factor	=(50/60)/(14/60)	3.571428571
Group Service Differentiation Factor	=(10/60)/(14/60) OR =(0.50*(10/60)/(14/60))+(0.50*(group loading factor))	0.714285714 TBD

General Formulas with Examples		
Adjusted Expenditure Base	Expenditures - Subsidy Revenue - Optional Rate Adjustment - Escort I	1,397,127-248,089+12,611-0 =1,161,649
Total Miles Weighted by Service Diffentiation Factor	ambulatory miles*ambulatory differential factor +wheel chair miles*wheelchair differential factor +stretcher miles*stretcher differential factor +group miles*group differential factor	442,864*(14/60)/(14/60) +33,334*(24/60)/(14/60) +0*(50/60)/(14/60) +0*(10/60)/(14/60) =500,008
Total Trips Weighted by Service Differentiation Factor	ambulatory trips*ambulatory differential factor +wheel chair trips*wheelchair differential factor +stretcher trips*stretcher differential factor +group trips*group differential factor	53,812*(14/60)/(14/60) +3,434*(24/60)/(14/60) +0*(50/60)/(14/60) +0*10/60)/(14/60) =59,699

Subsidized Service Rates		
Ambulatory Rate per Passenger Mile	Adjusted Expenditure Rate Base /Total Passenger Miles Weighted by Service Diff Factor x Ambulatory Service Differentiation Factor	1,161,649 /500,008 *(14/60)/(14/60) =$2.32
Wheel Chair Rate per Passenger Mile	Adjusted Expenditure Rate Base /Total Passenger Miles Weighted by Service Diff Factor x Wheel Chair Service Differentiation Factor	1,161,649 /500,008 *(24/60)/(14/60) =$3.98
Stretcher Rate per Passenger Mile	Adjusted Expenditure Rate Base /Total Passenger Miles Weighted by Service Diff Factor x Stretcher Service Differentiation Factor	0 /500,008 *(50/60)/(14/60) =$0.00
Group Rate per Passenger Mile	Adjusted Expenditure Rate Base /Total Passenger Miles Weighted by Service Diff Factor x Group Service Differentiation Factor	0 /500,008 *(10/60)/(14/60) =$0.00

Ambulatory Rate per Passenger Trip	Adjusted Expenditure Rate Base /Total Passenger Trips Weighted by Service Diff Factor x Ambulatory Service Differentiation Factor	1,161,649 /59,699 *(14/60)/(14/60) =$19.46
Wheel Chair Rate per Passenger Trip	Adjusted Expenditure Rate Base /Total Passenger Trips Weighted by Service Diff Factor x Wheel Chair Service Differentiation Factor	1,161,649 /59,699 *(24/60)/(14/60) =$33.36
Stretcher Rate per Passenger Trip	Adjusted Expenditure Rate Base /Total Passenger Trips Weighted by Service Diff Factor x Stretcher Service Differentiation Factor	0 /59,699 *(50/60)/(14/60) =$0.00
Group Rate per Passenger Trip	Adjusted Expenditure Rate Base /Total Passenger Trips Weighted by Service Diff Factor x Group Service Differentiation Factor	0 /59,699 *(10/60)/(14/60) =$0.00
UNSUBSIDIZED Service Rates		
Unsbusidzed Ambulatory Rate per Passenger Mile	(Adjusted Expenditure Rate Base+Subsidy Revenue-Bus Pass Revenue) /Total Passenger Miles Weighted by Service Differentiation Factor x Ambulatory Service Differentiation Factor	(1,161,649+248,089-0) /500,008 *(14/60)/(14/60) =$2.82
Unsubsidized Ambulatory Rate per Passenger Trip	(Adjusted Expenditure Rate Base+Subsidy Revenue-Bus Pass Revenue) /Total Passenger Trips Weighted by Service Differentiation Factor x Ambulatory Service Differentiation Factor	(1,161,649+248,089-0) /59,699 *(14/60)/(14/60) =$23.61
Service Differentiation Factors		
Ambulatory Service Differentiation Factor (ambulatory = base)	Ambulatory load & unload minutes/60 minutes /base load & unload minutes/60 minutes	model assumes 7 minutes for load and 7 minutes for unload (14 minutes)
Wheel Chair Service Differentiation Factor	Wheel Chair load & unload minutes/60 minutes /base load & unload minutes/60 minutes	model assumes 12 minutes for load and 12 minutes for unload (24 minutes)
Stretcher Service Differentiation Factor	Stretcher load & unload minutes/60 minutes /base load & unload minutes/60 minutes	model assumes 25 minutes for load and 25 minutes for unload (50 minutes)
Group Service Differentiation Factor	(50%*Group load & unload minutes/60 minutes /base load & unload minutes/60 minutes) + (50%*Group Loading Service Projected Revenue Miles /Group Loading Service Projected Passenger Miles)	Model assumes 10 minutes for load and unload. Group loading service projected revenue and passenger miles are provided by CTC.
Contract Rates	Contract $ Amount/Contract Projected Miles (or trips)	Only two CTCs are using the contract rates. Nine CTCs are fully brokered.
Escort Fees	Projected # of escort passenger trips (or miles) * Escort charge per trip (or mile)	Escort fees are subtracted from the adjusted rate base to calculate per trip and per mile rates for CTC reimbursement.
Group Loading Service	see section on "Group Loading Service and In-Depth Service Differentiation Factors" to see how group loading services affect weighted service differentiation factors	

MULTIPLE SERVICE RATES WHEN CONTRACT RATES ARE ALSO USED

NEW DATA ASSUMPTIONs (PROVIDED BY CTC)

Projected Expenditures	$1,161,969
<Projected Subsidy Revenue>	-$565,766
Optional Rate Adjustment	$0
Adjusted Expenditure Base	$596,203
Projected Ambulatory Passenger Miles	199,355
Projected Wheel Chair Passenger Miles	49,000
Projected Stretcher Passenger Miles	2,500
Projected Group Passenger Miles	-
Total Passenger Miles	250,855
Projected Ambulatory Passenger Trips	17,719
Projected Wheel Chair Passenger Trips	4,555
Projected Stretcher Passenger Trips	225
Projected Group Passenger Trips	0
Total Passenger Trips	22,499
Ambulatory Contract $	$454,462
Wheelchair Contract $	$113,616

FORMULA to calculate Stretcher Rate per Passenger Mile

Non-Contract Expenditure Base	Expenditures - Subsidy Revenue - Optional Rate Adjustment - Escort Fees - Ambulatory Contract $ - Wheelchair Contract $	1,161,969-565,766-0-0-454,462-113,616 =28,125
Non-Contract Service Weighted Miles	(Total ambulatory miles-contract ambulatory miles)*ambulatory diff factor +(Total wheel chair miles-contract wheelchair miles)*wheelchair diff factor +(Total stretcher miles-contract stretcher miles)*stretcher diff factor +(Total group miles-contract group miles)*group diff factor =Total (non-contract) Service Weighted Miles	(199,355-199,355)*(14/60)/(14/60) +(49,000-49,000)*(24/60)/(14/60) +(2,500-0)*(50/60)/(14/60) +0*(10/60)/(14/60) =8,929
Stretcher Rate per Passenger Trip (when other services use Contract rates)	Non-Contract Expenditure Rate Base /Total (non-contract) Service Weighted Miles x Stretcher Service Differentiation Factor	28,125 /8,929 *(50/60)/(14/60) =$11.25

Appendix B: Advanced Model Functions

Based on the 50 rate models reviewed by the Team, only two CTCs used the Advanced Model functions described in the following pages.

Contract Rates

CTCs that contract out any or all of their services may choose a simplified billing rate by marking the "yes" buttons to two questions on the Multiple Service Rates page. The CTC enters a contract amount for the service(s), projected miles and projected passenger trips.

SECTION II: Contracted Services

	Ambulatory	Wheelchair	Stretcher
1. Will the CTC be contracting out any of these Services TOTALLY in the upcoming budget year?....	Yes / No	Yes / No	Yes / No
	Answer # 2 for Ambulatory Service	Answer # 2 for Wheelchair Service	Do Not Complete Section II for Stretcher Service
2. If you answered YES to #1 above, do you want to arrive at the billing rate by simply dividing the proposed contract amount by the projected Passenger Miles / passenger trips?.....	Yes / No	Yes / No	Yes / No
			Do NOT Complete Section II for Stretcher Service
	Complete Cells Below	Complete Cells Below	
3. If you answered YES to #1 & #2 above, how much is the proposed contract amount for the service?	$ 477,871	$ 122,847	
How many of the total projected Passenger Miles relate to the contracted service?	199,355	49,000	
How many of the total projected passenger trips relate to the contracted service?	17,719	4,555	
Effective Rate for **Contracted Services:**	Ambulatory	Wheelchair	Stretcher
per **Passenger Mile** =	$ 2.40	$ 2.51	
per **Passenger Trip** =	$ 26.97	$ 26.97	

By marking "yes" to the questions "Will the CTC be contracting out any of these Services TOTALLY" and "…do you want to arrive at the billing rate by simply dividing the proposed contract amount by projected Passenger Miles/passenger trips", the other areas of the Multiple Service Rates worksheet are disabled.

CTCs may also choose contract rates for up to three services, and non-contract rate for others. If this hybrid solution is chosen, and correct "yes" and "no" buttons are used, then multiple service rate options stay turned on. In order to calculate a proper per contract amount, rate-generated revenue is first subtracted from the Adjusted Rate Base (numerator) and the contract passenger miles/trips are subtracted from the weighted mile and trip bases (denominator).

In the following example, this CTC has fully contracted out ambulatory and wheelchair trips, but it completes stretcher trips with existing staff. First, you will find the cost, miles, and trip assumptions. Second you will see the screen shot of the Stretcher rates. Lastly, the formulas are included for the

stretcher rates, to more easily follow how the contracted rate assumptions affected the regular rate formulas.

ASSUMPTIONS

	Expenses	Rate Generated Revenue	Subsidy Revenue (DOT Op Grant)
Contracted Transport	$ 614,680	$ 568,078	$ 46,602
Other Operating Expenses	$ 547,289	$ 28,125	$ 519,164
TOTAL	$ 1,161,969	$ 596,203	$ 565,766

	Revenues
Rate Generated & Match	$ 596,203
Subsidy (DOT Op Grant)	$ 565,766
TOTAL	$ 1,161,969

"Totally" Contracted Transport Services

	Miles	Trips	Cost
Ambulatory	199,355	17,719	$ 454,462
Wheelchair	49,000	4,555	$ 113,616
	248,355	22,274	$ 568,078

Direct Services (not contracted)

	Miles	Trips	Cost
Stretcher	2,500	225	28,125
TOTAL	250,855	22,499	$ 596,203

SECTION V: Rate Calculations for Mulitple Services:

1. Input Projected Passenger Miles and Passenger Trips for each Service in the GREEN cells and the Rates for each Service will be calculated automatically
   * Miles and Trips you input must sum to the total for all Services entered on the "Program-wide Rates" Worksheet, MINUS miles and trips for contracted services IF the rates were calculated in the Section II above
   * Be sure to leave the service BLANK if you answered NO in Section I or YES to question #2 in Section II

		RATES FOR FY:		2018
		Ambul (Leave Blank)	Wheel Chair (Leave Blank)	Stretcher
Projected Passenger Miles (excluding totally contracted services addressed in Section II) =	2,500			2,500
Rate per Passenger Mile =		$2.28	$2.32	$11.25
		Ambul (Leave Blank)	Wheel Chair (Leave Blank)	Stretcher
Projected Passenger Trips (excluding totally contracted services addressed in Section II) =	225			225
Rate per Passenger Trip =		$25.65	$24.94	$125.00

Please note in the example above, the ambulatory and wheelchair rates were automatically copied down from Section II Contracted Services, and only the Stretcher miles and trips needed to be entered in Section V Rate Calculation for Multiple Services. Below are the formulas used to calculate the Stretcher service unit rates based on the above assumptions.

FORMULA to calculate Stretcher Rate per Passenger Mile		
Total Expenditures	$ 1,161,969	
minus EXCLUDED Subsidy Revenue	(565,766)	
Adjusted Expenditure Rate Base	596,203	
minus "Totally" Contracted Ambulatory $	(454,462)	
minus "Totally" Contracted Wheelchair $	(113,616)	
Non-Contract Expenditure Rate Base	$ 28,125	
(Total ambulatory miles-contract ambulatory miles)*ambulatory diff factor		(199,355-199,355)*(14/60)/(14/60)
+(Total wheel chair miles-contract wheelchair miles)*wheelchair diff factor		+(49,000-49,000)*(24/60)/(14/60)
+(Total stretcher miles-contract stretcher miles)*stretcher diff factor		+(2,500-0)*(50/60)/(14/60)
+(Total group miles-contract group miles)*group diff factor		+0*(10/60)/(14/60)
=Total (non-contract) Service Weighted Miles	8,929	=8,929
Non-Contract Expenditure Rate Base	$ 28,125	
/ Total (non-contract) Service Weighted Miles	8,929	
x Stretcher Service differentiation factor	3.5714286	=(50/60)/(14/60)
Stretcher Rate per Passenger Mile	**$ 11.25**	

Group Loading Service and In-Depth Service Differentiation Factors

Service Differentiation Factors

The service differentiation factors were calculated based on average number of minutes wait/load time for picking up and dropping off the different types of clients. Ambulatory client time was used as the baseline as follows:

	Ambulatory	Wheel Chair	Stretcher	Group (per individual)
Average # minutes for pick-up per stop	7	12	25	3
Average # of minutes for drop-off per stop	7	12	25	7
Minutes	14	24	50	10
Average wait time in hours (minutes/60)	*0.23*	0.40	0.83	0.17
Service differentiation factor formula				
Service avg wait in hours/Baseline service avg wait	*baseline*	=0.4/0.23	=0.83/0.23	=0.17/0.023
Service Differentiation Factor (Ambulatory=1.0)	***1.00***	**1.71**	**3.57**	**0.71**

Service Differentiation Factor with Group Loading Service

If a CTC marks that it provides a Group Loading Service, then the Service Differentiation Factor for Group is calculated as weighted: 50% to Wait time (as above) and 50% to Grouping. The "Grouping" factor is calculated as Group Vehicle Revenue Miles/ Group Service Passenger Miles, and the calculations are as follows:

SECTION IV: Group Service Loading

	You Must Complete This Section!		
1. If the message "You Must Complete This Section" appears to the right, what is the projected total number of Group Service Passenger Miles? (otherwise leave blank).....	211,997		
..... And what is the projected total number of Group Vehicle Revenue Miles?	70,666	Loading Rate 3.00	to 1.00

	Ambulatory	Wheel Chair	Stretcher	Group (per individual)
Average # minutes for pick-up per stop	7	12	25	3
Average # of minutes for drop-off per stop	7	12	25	7
Minutes	14	24	50	10
Average wait time in hours (minutes/60)	*0.23*	0.40	0.83	0.17
Service differentiation factor formula				
Service avg wait in hours/Baseline service avg wait	*baseline*	=0.4/0.23	=0.83/0.23	=0.17/0.023
Service Differentiation Factor (Ambulatory=1.0)	***1.00***	**1.71**	**3.57**	**0.71**

Service Differentiation Factor with Group Loading Service:				
Group Vehicle Revenue Miles				70,666
Group Service Passenger Miles				211,997
Revenue Miles/Passenger Miles = Grouping				**0.33**
Group Service Differentiation Factor		=(0.5*0.71)+(0.5*0.33)		**0.52**
50% x Wait Time + 50% x Grouping				