



Executive Summary:

Service and Fare Equity Analysis for CTrail Hartford Line Proposed Fares

In May 2018, the Connecticut Department of Transportation (CTDOT) will introduce new rail service, known as **CTrail** Hartford Line. **CTrail** and **Amtrak** will provide train service on the rail line between New Haven, Connecticut and Springfield, Massachusetts. The current Amtrak service will not be reduced because of **CTrail** Hartford Line service. In fact, when the **CTrail** Hartford Line begins, Amtrak will also increase its train service on the rail line.

This Service and Fare Equity (SAFE) Analysis evaluates the upcoming Hartford Line train service and the proposed train fares to determine whether either the service and fares will have a “disparate impact” on minority populations or place a “disproportionate burden” on low-income populations based on the CTDOT’s Disparate Impact and Disproportionate Burden Policies.

The **CTrail** Hartford Line rail service proposes to provide eight (8) roundtrips each weekday between New Haven and Hartford and all intermediate stops. This represents a total of 16 additional one-way trips between New Haven and Hartford, Connecticut. Three (3) of the aforementioned roundtrips will continue to Springfield, including all intermediate stops, representing a total of six (6) additional one-way trips along this segment of the line.

Additionally, Amtrak will continue to operate its current six (6) roundtrip trains and add three (3) additional roundtrips between New Haven and Springfield in 2018.

The combination of the **CTrail** trains and Amtrak trains will provide 17 roundtrips each weekday.

Service Equity Analysis

The evaluation of service equity was based upon the proportion of minority and low income populations within each station service area. The station service area consists of a 2.5 mile proposed radius area surrounding each station. The proportion of minority and low income populations within each station area was tabulated individually. If a station areas proportion of minority and/or low income residents exceeded the system wide average, it was designated as a Minority and/or Low Income Station Area. New Haven, Hartford, and Springfield met the thresholds for both minority and low-income and were designated Minority and Low Income Station Areas.



The Table below indicates the number of weekday trips provided to each station:

2018 Station Stops	*New Haven (Union)	*New Haven (State St)	Wallingford	Meriden	Berlin	*Hartford	Windsor	Windsor Locks	*Springfield
Amtrak Northbound	9	1	8	9	8	9	8	9	9
Amtrak Southbound	9	1	8	9	8	9	8	9	9
Hartford Line North	8	8	8	8	8	8	3	3	3
Hartford Line South	8	7	8	8	8	8	3	3	3
Total Proposed Station Stops	34	17	32	34	32	34	22	24	24

* New Haven, Hartford, and Springfield are designated Minority and Low Income Station Areas.

The number of weekly stops at each station along the New Haven to Springfield corridor was calculated based on the proposed Amtrak and CT*rail* schedule, and then between Minority; Minority and Low Income; and Non-Minority/Non-Low Income Station Areas. Nearly 80% of minority and low income residents live in Minority and/or Low Income Station Areas. The average number of weekday stops at Minority and/or Low Income Station Areas is 63; it is 60 for Non-Minority Station Areas. There is no appreciable difference in train service between these areas. Nevertheless, the average number of weekday stops at Minority and/or Low Income Station Areas surpasses the number of average stops at Non-Minority Station Areas. Therefore, the SAFE Analysis indicates that there is no disparate impact or disproportionate burden of service at Minority and/or Low Income Station Areas.

Fare Equity Analysis

CTDOT’s Title VI Policy (the Policy) specifies that, when considering a total package of fare changes, a fare change is deemed to have a “disparate impact” on minority populations if the proposed fare changes borne by minority riders is at least five percentage points (5%) higher than the aggregate percentage of impacts on the overall rider population.

The Policy further indicates that, when considering a total package of fare changes, the change will be deemed to have a “disproportionate burden: on low-income populations if the proposed fare changes borne by low-income riders is at least five percent (5%) greater than the aggregate percentage of impacts on the overall rider population.

A range of proposed fares were evaluated, including a number of discounting and multi-ride pass options for each station pair.

The proposed fare and multi-ride pass options were analyzed to determine if there is a “disparate impact” on minority population groups or a “disproportionate burden” on low-income groups. The eight proposed fare options range from a one-way single fare, to a 10-trip monthly pass. A cost per



mile, per trip, was calculated for each fare class using the total distance traveled between stations in the denominator for this calculation.

The table below shows the proposed one-way fares on the CTrail Hartford Line. A listing of all proposed CTrail Hartford fares is included in the detailed analysis.

Proposed CTrail Hartford Line One-way Fares

		New Haven	Wallingford	Meriden	Berlin	Hartford	Windsor	Windsor Locks
	MP	0.0	13.0	18.6	25.9	36.6	43.0	47.4
Wallingford	13.0	\$3.50						
Meriden	18.6	\$4.75	\$3.00					
Berlin	25.9	\$6.00	\$3.50	\$3.00				
Hartford	36.6	\$8.00	\$5.50	\$4.50	\$3.25			
Windsor	43.0	\$9.25	\$6.75	\$5.75	\$4.50	\$3.00		
Windsor Locks	47.4	\$10.00	\$7.50	\$6.50	\$5.25	\$3.25	\$3.00	
Springfield, MA	62.0	\$12.75	\$10.25	\$9.25	\$8.00	\$6.00	\$4.75	\$4.00

Ticket is good for 60 days.

Station pairs were then classified according to minority and low income designation criterion described above – creating two sets of data: costs per mile per trip for minority and non-minority routes, and for low- and non-low-income labelled routes.

A fare analysis was performed to compare the average fare-per-mile for Minority versus Non-Minority station pairs. There are seven Minority Station Area Pairs. The analysis determined that the average cost-per-mile on minority routes is the same or lower than that on Non-Minority Station Pairs. This difference is consistent across all fare types. Therefore, based on CTDOT’s Title VI policy, the proposed fare structure presents no “disparate impact” on minority populations.

Another analysis was conducted to determine the effect of the proposed fare structure on low income populations. Sixteen station pairs were classified as Low-Income Station Pairs because they met the low-income threshold of 33.33% of route miles occurring in census tracts that are classified as low income. As with Minority Station Pairs, an analysis was conducted for the low income and non-low income serving station pairs. Low-income station pairs, on average, tend to have lower fares, per mile, per trip. This difference is consistent across all fare types. The result of this second analysis indicates that the fare structure places no “disproportionate burden” on low-income populations.



Conclusion

In summary, the foregoing analysis of the proposed *CTrail* service and fares show no disparate impact on minority populations or disproportionate burden on low-income populations.