Evaluation of a Second Daily Passenger Train Between Minnesota and Chicago

Presented by

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MNDOT, WisDOT and La Crosse County requested Amtrak to complete a feasibility study of adding a second daily intercity passenger train between the Twin Cities (or St. Cloud) and Chicago, IL.

- RTC modeling task was added after FRA requested validation of CP’s infrastructure cost estimates

Existing Empire Builder route through Illinois and Wisconsin, with several end points in Minnesota.

The purpose of a second daily train is to offer more options to travelers in the corridor by providing better eastbound reliability and increased train frequency.
Second Train Study Benefits

- Potential mobility benefits of the proposed service include:
  - more reliable service with better on-time performance (particularly eastbound)
  - more convenient travel times for shorter, regional trips
  - more seating capacity on the corridor relieving pressure during peak periods
  - improved connections between other trains, intercity buses, local public transit, and air service
Purpose of the Study

A high level, order-of-magnitude assessment of schedules, ridership, revenue, infrastructure investments, operating costs, and equipment needs associated with adding a second daily train.

This assessment will assist the project sponsors in determining whether or not to move the project to the next steps toward implementation.
Station Options

† Existing stations served by the Empire Builder plus Milwaukee Airport

† Terminal Station scenarios in Minnesota
  ◦ Union Depot in St. Paul
  ◦ Target Field Station in Minneapolis
  ◦ St. Cloud with stops at Union Depot and Fridley
  ◦ Northstar Station in lieu of Target Field Station
  ◦ St. Cloud with stops at Union Depot and Target
    Field Station
Corridor Study Area

Railroads:
- BNSF
- MN Commercial
- Canadian Pacific
- Metra
- 499.8 miles

Note; Sturtevant and Glenview are current Hiawatha stops
Schedule Options

- Schedules are designed to complement the current Empire Builder schedule, with arrival and departure times at the endpoints that maximize ridership potential.
  - The westbound train would depart Chicago at 9:25am and arrive at Union Depot at 4:42pm.
  - The study evaluated eastbound departure times from Union Depot at 2:25pm (Option A) and 12:25pm (Option B), arriving in Chicago at 9:54pm and 7:57pm.
  - A third eastbound departure time at 11:46am arriving in Chicago at 7:14pm was identified that varies departure times slightly from Option B to minimize capital infrastructure costs.

Note: Schedules are at planning level only. Schedules will be refined during further study.
RTC Modeling Results

- CP will be hauling an increasingly large amount of rail freight traffic in 2017
- Some infrastructure improvements will be needed to support a 2nd conventional passenger train
- Suggested improvements were reviewed by MnDOT, WisDOT, FRA, CP, BNSF, Amtrak
- East Metro improvements will support 2nd passenger train schedules without negatively impacting freight service
- Stakeholders must jointly determine what the appropriate level of freight operational impact is and negotiate the improvements needed to attain that level
Equipment Needs

Train Consist

- Two train consists – two diesel locomotives, four bi-level coaches, two bi-level snack coaches, and two bi-level cab coaches
- Superliner-type equipment, similar to that used on current Empire Builder

Source: Amtrak
Total Capacity = 280 seats
The annual ridership for all scenarios compares favorably with annual ridership on existing state–supported intercity passenger rail routes in other states with one round–trip per day.

- Ridership varied between 117,800 and 185,100
- Chicago–Union Depot had a ridership of 155,500
- Chicago–St. Cloud via Minneapolis route option had the highest ridership at 185,100
Capital Investment Needs

- Railroad Infrastructure Improvements ($95m – $290M)
- Rolling stock ($46.4 million)*
- Layover facilities ($0.3–0.65 million)
- Chicago–Union Depot route option (ridership of 155,500) had:
  - revenue of $6.8 million
  - the lowest capital cost of $95.2 million
  - require an estimated operating support from the states of $5.6 million/year
- Chicago–St. Cloud via Minneapolis route option (highest ridership at 185,100) had:
  - revenue at $9 million
  - highest capital cost at $210.2 million
  - require an estimated operating support from the states of $4.6 million/year

* If purchased by the States
Recommendations

- MnDOT and WisDOT staff recommend moving forward with the next phase of study to fulfill environmental requirements and be eligible for federal funding.

- Complete next phase of study on an initial start-up service between Chicago and Union Depot in St. Paul, serving all existing stations plus the Milwaukee Airport Rail Station.
Next Steps

- Determine level of environmental clearance for infrastructure improvements based on guidance from FRA
- Conduct further RTC modeling as required by FRA
  - Determine how the 2nd train schedules will be operationally integrated with the Hiawatha Service between Milwaukee and Chicago
  - Advance the “optimized schedule” as a basis for more detailed modeling and schedule integration
- Develop environmental analysis and service development plan