

ES.4 Appendix A

BNSF Capacity Analysis of Chicago to Wyanet

Line Capacity Planning: Chicago – Wyanet Amtrak service

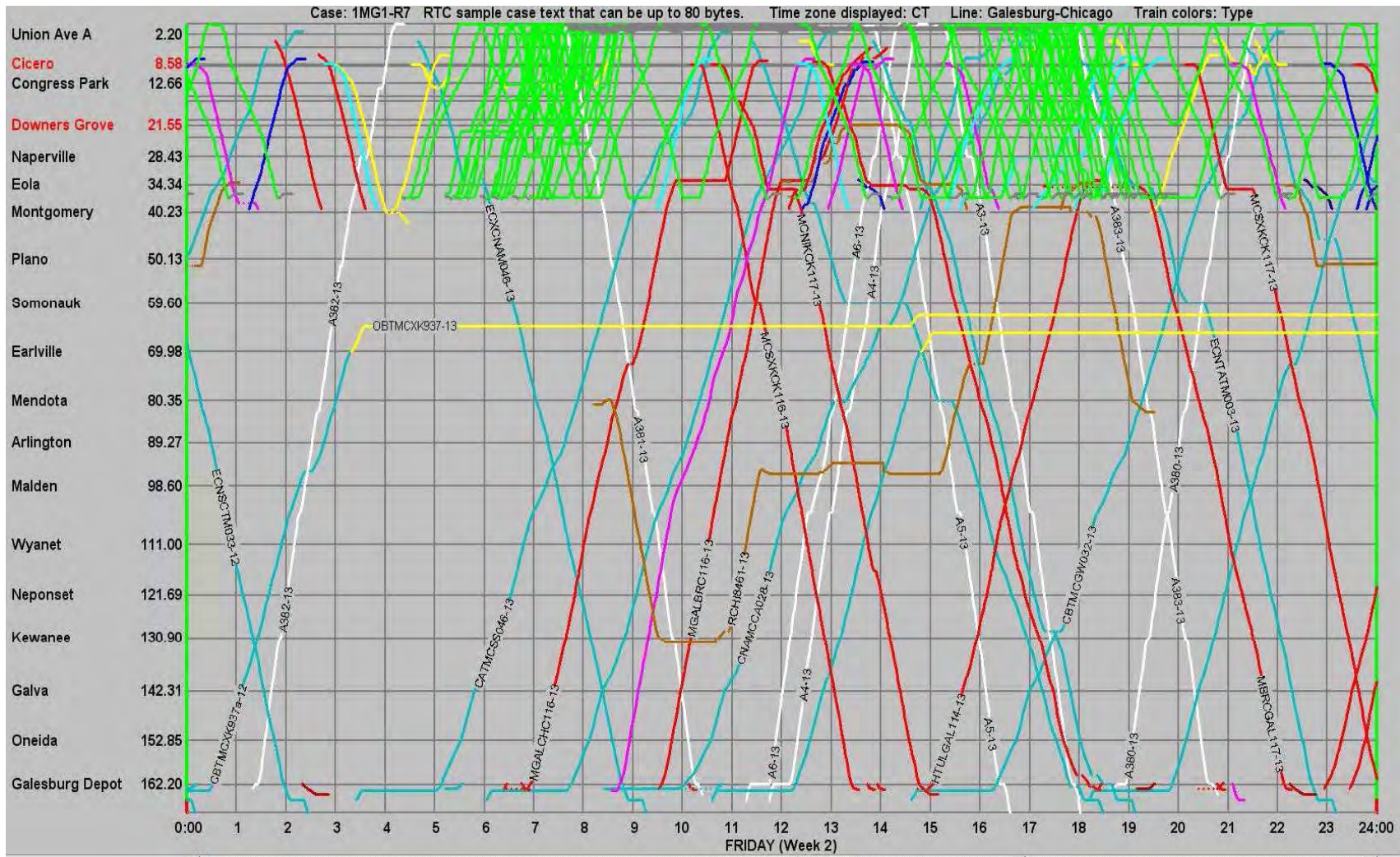
• Current train service on Rock Island Spur:

- M-GALCLI is a Galesburg – Clinton manifest train scheduled to operate 5 days per week (SMTW--S). Scheduled time on the Barstow – Rock Island segment is 2355 - 0209.
 - This train operated 68 times April - June on a plan of 65 times.
 - Departing Barstow: average of 5,221 horsepower per train, 2,238 feet per train, and 1,600 tons per train.
 - Arriving Clinton: average of 4,955 horsepower per train, 2,042 feet per train, and 1,309 tons per train.
- M-CLIGAL is a Clinton - Galesburg manifest train scheduled to operate 5 days per week (SMTWT--). Scheduled time on the Rock Island – Barstow segment is 0018 - 0300.
 - This train operated 60 times April - June on a plan of 65 times.
 - Departing Clinton: average of 4,588 horsepower per train, 2,076 feet per train, and 3,492 tons per train.
 - Arriving Barstow: average of 7,096 horsepower per train, 4,071 feet per train, and 6,141 tons per train.
- R-CHI4271 is a Barstow – Bettendorf – Barstow local train scheduled to operate 6 days per week (-MTWTFS). Scheduled time on the Barstow – Rock Island segment time is 1000 – 1215 on the outbound trip and 1633 – 1811 on the return trip.
 - This train operated 64 times April – June on a plan of 78 times.
 - Departing Barstow: average of 4,167 horsepower per train, 2,636 feet per train, and 3,240 tons per train.
 - Departing Rock Island (on return): average of 3,853 horsepower per train, 2,418 feet per train, and 2,993 tons per train.
- R-CHI4281 is also a Barstow – Bettendorf – Barstow local train scheduled to operate 6 days per week (SMTWTF-). Scheduled time on the Barstow – Rock Island segment is 2000 – 2215 on the outbound trip and 0233 – 0411 on the return trip.
 - This train operated 38 times April – June on a plan of 78 times.
 - Departing Barstow: average of 3,953 horsepower per train, 2,484 feet per train, and 2,836 tons per train.
 - Departing Rock Island (on return): average of 4,000 horsepower per train, 2,332 feet per train, and 2,742 tons per train.
- So, overall there are up to 6 one way BNSF freight train trips per day between Barstow and Rock Island. There were a handful of unit grain train moves as well, but only enough to equate to about 1 train per week.

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- Colona crossing (Barstow subdivision) based on January – June 2010 data:
 - Average of 15.74 trains per day
 - Average of 7,541 tons per train
 - Average of 9,920 horsepower per train
 - Average of 5,652 feet per train
- Colona Crossing (Barstow subdivision) based on June 2010 data only:
 - Average of 17.77 trains per day
 - Average of 6,980 tons per train
 - Average of 9,593 horsepower per train
 - Average of 5,574 feet per train

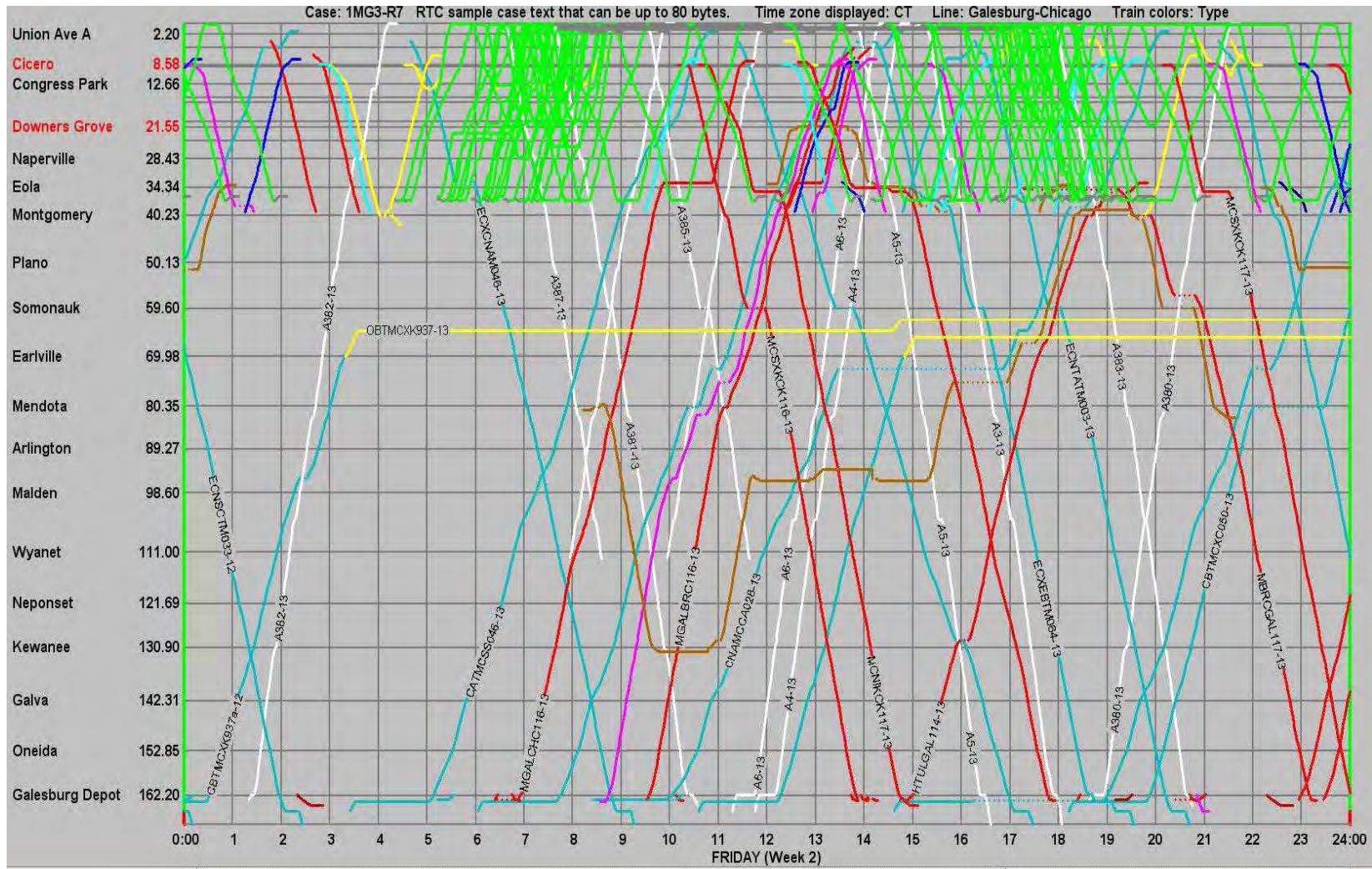
Line Capacity Planning: Chicago – Wyanet Amtrak service



Base Case



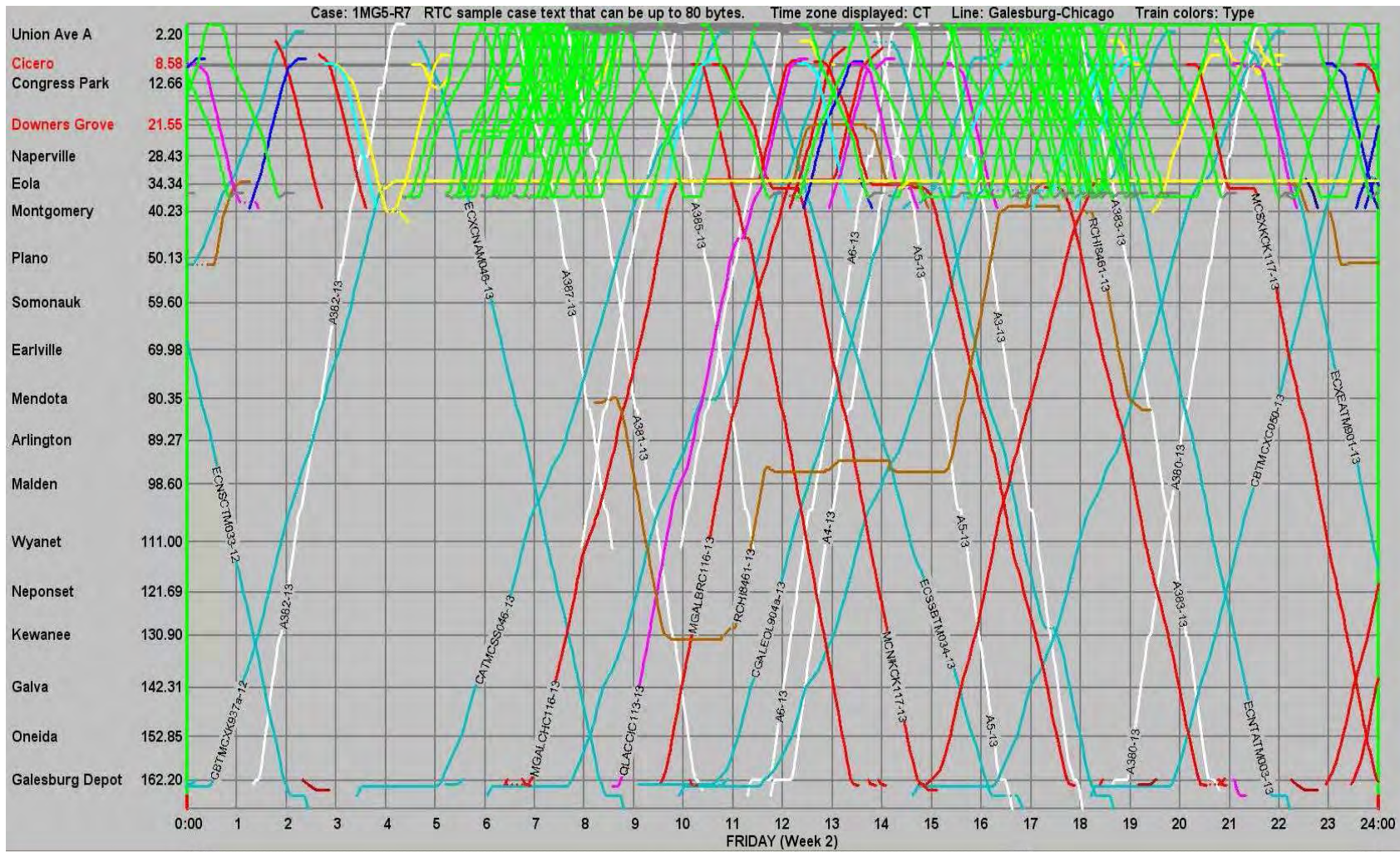
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Add Wyanet Amtrak Trains



Line Capacity Planning: Chicago – Wyanet Amtrak service



Add Wyanet trains plus Eola improvements



Line Capacity Planning: Chicago – Wyanet Amtrak service

- **TPC runs generated from RTC:**

- Westbound times 1st train:

- 0620 Chicago Union Station
- 0649 LaGrange Road
- 0705 Naperville
- 0729 Plano
- 0757 Mendota
- 0817 Princeton
- 0825 Wyanet

- Eastbound times 1st train:

- 0756 Wyanet
- 0806 Princeton
- 0826 Mendota
- 0854 Plano
- 0918 Naperville
- 0933 LaGrange Road
- 0950 Chicago Union Station

- **TPC runs generated from RTC:**

- Westbound times 2nd train:

- 0930 Chicago Union Station
- 0948 LaGrange Road
- 1005 Naperville
- 1029 Plano
- 1057 Mendota
- 1117 Princeton
- 1125 Wyanet

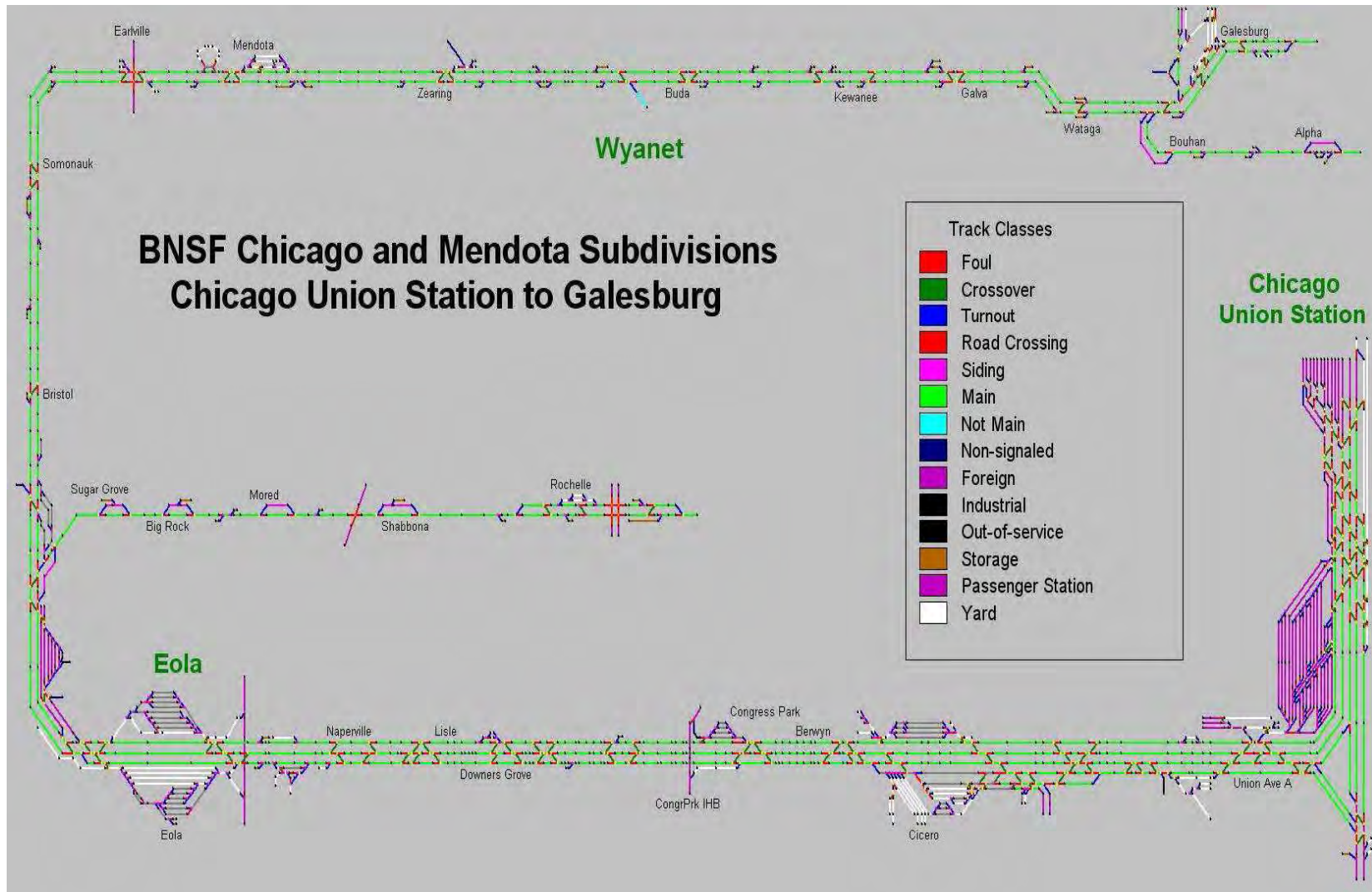
- Eastbound times 2nd train:

- 0956 Wyanet
- 1005 Princeton
- 1026 Mendota
- 1054 Plano
- 1118 Naperville
- 1134 LaGrange Road
- 1150 Chicago Union Station

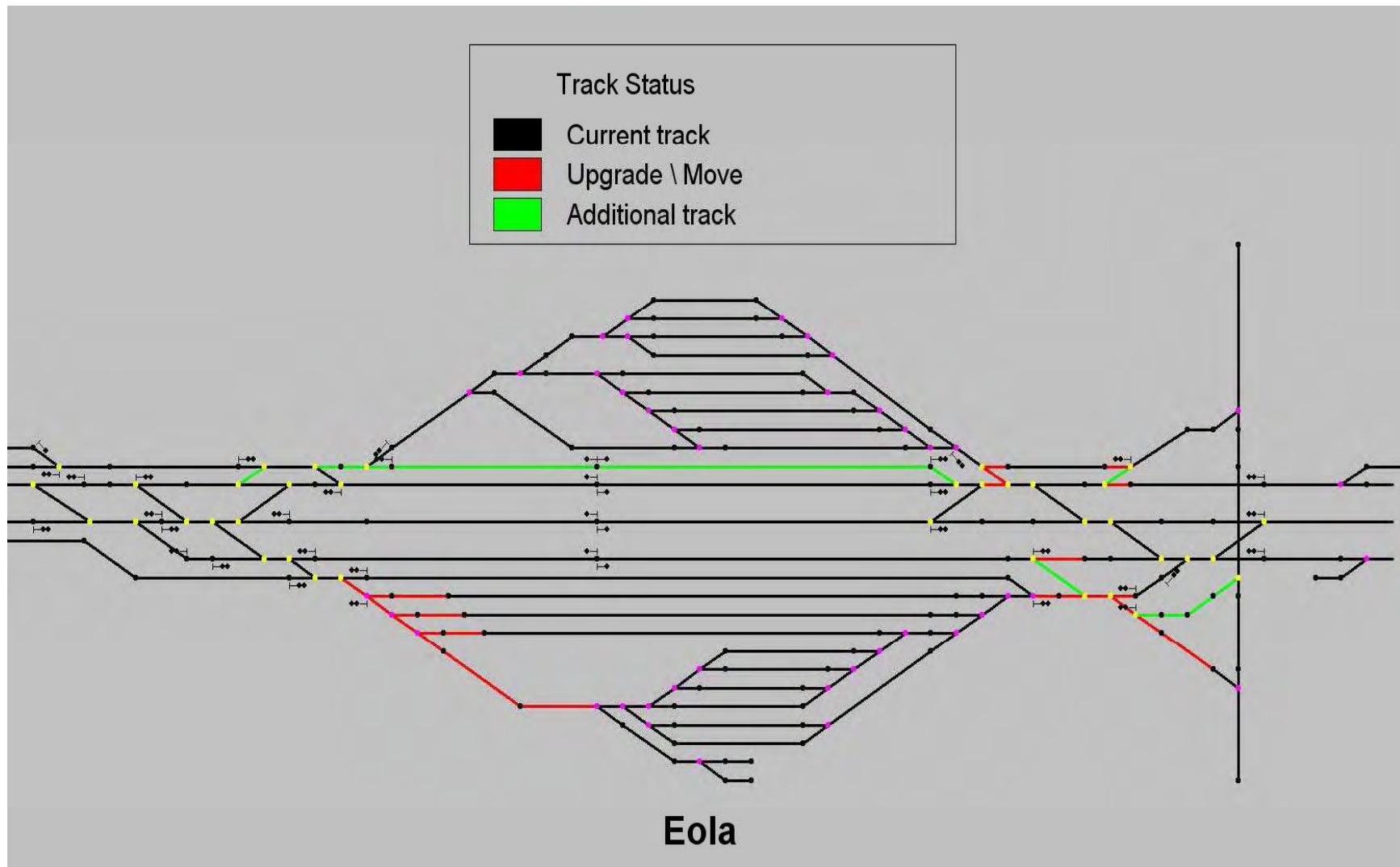
Line Capacity Planning: Chicago – Wyanet Amtrak service

- **Delay ratios generated from RTC:**
 - Freight train delay ratios:
 - 0.1320 Base case
 - 0.1444 Additional Amtrak trains added
 - 0.1207 Additional Amtrak trains added plus Eola improvements
 - Passenger train delay ratios:
 - 0.0205 Base case
 - 0.0335 Additional Amtrak trains added
 - 0.0178 Additional Amtrak trains added plus Eola improvements

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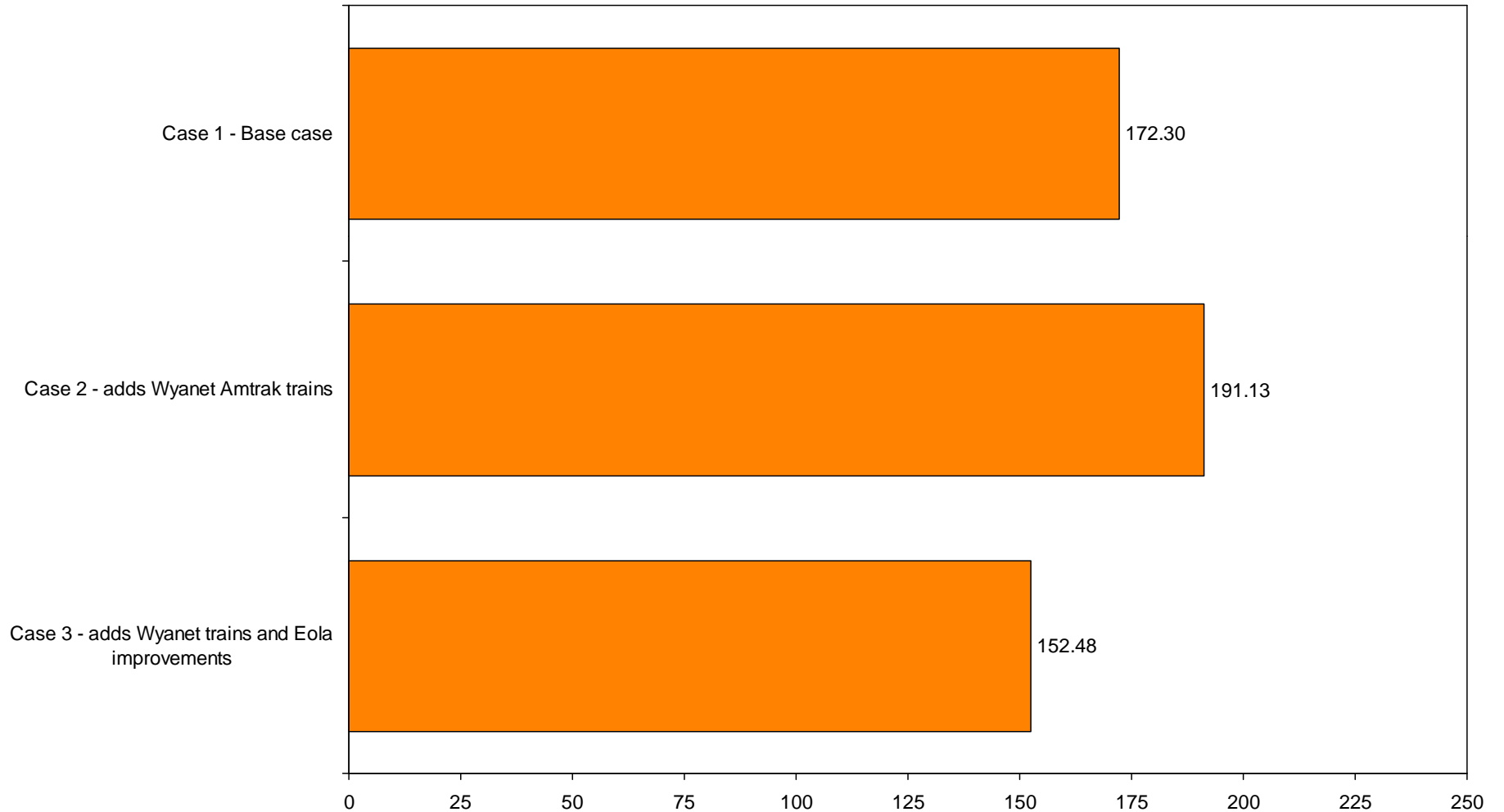
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- **Purpose and need for Eola improvements:**

- BNSF currently stages unit trains destined for Eola interchange on the Mendota sub main line until such time as the connecting RR's can take the trains. There is not enough length in the Eola yard tracks to stage the trains there.
- In RTC we take out a section of track on the Mendota sub by putting form B restrictions on the track. This results in the Mendota sub effectively becoming a single track railroad for one to several days at a time.
- When the new Amtrak trains are added, additional delay is created: not only delay to freight trains caused by the additional Amtrak trains, but also the Amtrak trains delaying each other.
- The issue is not Amtrak dispatching priority – the Amtrak trains are getting the top dispatching priority. The issue is that the railroad itself is down to a single track segment for approximately 13 miles between Somonauk and Earlville, and one Amtrak train will delay another Amtrak train as these trains cycle through the single track segment.
- The Eola improvements will provide adequate length yard tracks to handle unit interchange trains, as well greater flexibility with the three main line tracks to handle through freight and passenger trains.
- With the Eola improvements, the unit trains can be advanced to the Eola yard and stage there waiting for the connecting RR's to accept. That allows the Mendota sub mainline Somonauk – Earlville to go back to operating as a two track mainline.

Line Capacity Planning: Chicago – Wyanet Amtrak service

RTC analysis: Total freight train delay hours per week



Line Capacity Planning: Chicago – Wyanet Amtrak service

RTC analysis: Total Amtrak train delay hours per week

