

NCDOT SENC PASSENGER STUDY

| ALT 1 - NORTHBOUND | Cumulative | Time | | Incr. MRT | 6% | Cumulative | Additional Time |
|---|------------|------|------|-----------|---------------------|--------------|-----------------|
| Stations | Miles | Hrs | Min | (min) | Train Handling/TSOs | Minutes | (min) |
| Wilmington | 0.00 | | | | | | 3.0 |
| New Jct.at Wilmington Sub. | 1.25 | | 0.0 | 0.0 | 0.00 | 3.0 | 4.0 |
| Burgaw | 22.72 | | 26.7 | 26.7 | 1.60 | 35.3 | 1.0 |
| Wallace | 35.82 | | 41.0 | 14.3 | 0.86 | 51.5 | 1.0 |
| Warsaw | 54.92 | 1 | 1.5 | 20.5 | 1.23 | 74.2 | 1.0 |
| Mount Olive | 70.32 | 1 | 18.2 | 16.7 | 1.00 | 92.9 | 1.0 |
| Goldsboro | 83.92 | 1 | 33.8 | 15.6 | 0.94 | 110.4 | 1.0 |
| Turnout at MP 160.0 on CSX W&W Sub | 84.12 | 1 | 34.7 | 0.9 | 0.05 | 112.4 | 1.0 |
| MP 0.22 on new connecting track to realign turnout north of station | 84.18 | 1 | 35.2 | 0.5 | 0.03 | 113.9 | 1.0 |
| Turnout at MP 128.5 on NS H Line | 84.40 | 1 | 36.6 | 1.4 | 0.08 | 116.4 | 1.0 |
| MP 127.9 on NS H Line to realign turnout | 84.46 | 1 | 37.1 | 0.5 | 0.03 | 117.9 | 1.0 |
| Selma | 103.50 | 1 | 58.6 | 21.5 | 1.29 | 141.7 | 1.0 |
| Raleigh | 131.80 | 2 | 25.0 | 26.4 | 1.58 | 170.7 | |
| | | | | | | | |
| ALT 2 - NORTHBOUND | Cumulative | Time | | Incr. MRT | 6% | Cumulative | Additional Time |
| Stations | Miles | Hrs | Min | (min) | Train Handling/TSOs | Minutes | (min) |
| Wilmington | 0.00 | | | | | | 6.5 |
| US 117 | 1.48 | | 0.0 | 0.0 | 0.00 | 6.5 | |
| Navassa | 4.88 | 0 | 8.4 | 8.4 | 0.50 | 15.4 | 1.0 |
| Riegelwood/Acme | 18.98 | 0 | 29.6 | 21.2 | 1.27 | 38.9 | 1.0 |
| Bladenboro | 54.18 | 1 | 6.4 | 36.8 | 2.21 | 78.9 | 1.0 |
| Lumberton | 67.78 | 1 | 21.4 | 15.0 | 0.90 | 95.8 | 1.0 |
| Pembroke | 79.36 | 1 | 35.7 | 14.3 | 0.86 | 111.9 | 1.0 |
| Fayetteville (then back into Selma) | 110.16 | 2 | 3.4 | 27.7 | 1.66 | 142.3 | 3.0 |
| Selma | 159.30 | 2 | 50.1 | 46.7 | 2.80 | 194.8 | 2.0 |
| Raleigh | 187.25 | 3 | 16.0 | 25.9 | 1.55 | 224.3 | |
| | | | | | | | |
| ALT 3 - NORTHBOUND | Cumulative | Time | | Incr. MRT | 6% | Cumulative | Additional Time |
| Stations | Miles | Hrs | Min | (min) | Train Handling/TSOs | Minutes | (min) |
| Wilmington | 0.00 | | | | | | 3.0 |
| New Jct.at Wilmington Sub. | 1.25 | | 0.0 | 0.0 | 0.00 | 3.0 | 4.0 |
| Burgaw | 22.72 | | 26.7 | 26.7 | 1.60 | 35.3 | 1.0 |
| Wallace | 35.82 | | 41.0 | 14.3 | 0.86 | 51.5 | 1.0 |
| Warsaw | 54.92 | 1 | 1.5 | 20.5 | 1.23 | 74.2 | 1.0 |
| Mount Olive | 70.32 | 1 | 18.2 | 16.7 | 1.00 | 92.9 | 1.0 |
| Goldsboro | 83.92 | 1 | 33.8 | 15.6 | 0.94 | 110.4 | 1.0 |
| NS Diamond at MP 159.8 on the CSX W&W Sub | 84.32 | 1 | 35.1 | 1.3 | 0.08 | 112.8 | |
| Contentnea | 105.12 | 1 | 56.7 | 21.6 | 1.30 | 135.7 | |
| Wilson | 108.22 | 2 | 0.4 | 3.7 | 0.22 | 139.6 | 1.0 |
| Rocky Mount | 124.32 | 2 | 15.3 | 14.9 | 0.89 | 156.4 | |
| | | | | | | | |

NCDOT SENC PASSENGER STUDY

| ALT 1 - SOUTHBOUND | Cumulative | Time | | Incr. MRT | 6% | Cumulative | Additional Time |
|--|------------|------|------|-----------|---------------------|--------------|-----------------|
| Stations | Miles | Hrs | Min | (min) | Train Handling/TSOs | Minutes | (min) |
| Raleigh | 0.00 | | | | | | |
| Selma | 28.30 | | 26.4 | 26.4 | 1.58 | 28.0 | 1.0 |
| Turnout at MP 128.5 on NS H Line | 47.40 | | 47.9 | 21.5 | 1.29 | 51.8 | 1.0 |
| MP 0.06 on new connecting track to realign turnout | 47.46 | | 48.4 | 0.5 | 0.03 | 53.3 | 1.0 |
| Turnout at MP 0.27 on new connecting track | 47.67 | | 49.8 | 1.4 | 0.08 | 55.8 | 1.0 |
| MP 160.06 on CSX W&W Sub to realign turnout north of station | 47.74 | | 50.4 | 0.6 | 0.04 | 57.4 | 1.0 |
| Goldsboro | 47.88 | | 51.1 | 0.7 | 0.04 | 59.2 | 1.0 |
| Mount Olive | 61.48 | 1 | 6.9 | 15.8 | 0.95 | 76.9 | 1.0 |
| Warsaw | 76.88 | 1 | 23.6 | 16.7 | 1.00 | 95.6 | 1.0 |
| Wallace | 95.98 | 1 | 44.0 | 20.4 | 1.22 | 118.2 | 1.0 |
| Burgaw | 109.08 | 1 | 58.4 | 14.4 | 0.86 | 134.5 | 1.0 |
| New Jct.at Wilmington Sub. | 130.55 | 2 | 24.8 | 26.4 | 1.58 | 163.5 | 7.0 |
| Wilmington | 131.80 | | | | | 170.5 | |
| ALT 2 - SOUTHBOUND | Cumulative | Time | | Incr. MRT | 6% | Cumulative | Additional Time |
| Stations | Miles | Hrs | Min | (min) | Train Handling/TSOs | Minutes | (min) |
| Raleigh | 0.00 | | | | | | |
| Selma (then back out to MP 109.5 on NS H Line) | 28.44 | | 28.7 | 28.7 | 1.72 | 30.4 | 4.0 |
| Fayetteville | 77.09 | 1 | 12.6 | 43.9 | 2.63 | 81.0 | 1.0 |
| Pembroke | 108.17 | 1 | 41.8 | 29.2 | 1.75 | 112.9 | 1.0 |
| Lumberton | 119.47 | 1 | 54.7 | 12.9 | 0.77 | 127.6 | 1.0 |
| Bladenboro | 133.07 | 2 | 9.7 | 15.0 | 0.90 | 144.5 | 1.0 |
| Riegelwood/Acme | 168.27 | 2 | 46.5 | 36.8 | 2.21 | 184.5 | 1.0 |
| Navassa | 182.37 | 3 | 7.6 | 21.1 | 1.27 | 207.9 | 1.0 |
| US 117 | 185.77 | 3 | 15.8 | 8.2 | 0.49 | 217.5 | 6.5 |
| Wilmington | 187.25 | | | | | 224.0 | |
| ALT 3 - SOUTHBOUND | Cumulative | Time | | Incr. MRT | 6% | Cumulative | Additional Time |
| Stations | Miles | Hrs | Min | (min) | Train Handling/TSOs | Minutes | (min) |
| Rocky Mount | 0.00 | | | | | | |
| Wilson | 16.10 | | 15.0 | 15.0 | 0.90 | 15.9 | 1.0 |
| Contentnea | 19.20 | | 18.4 | 3.4 | 0.20 | 20.5 | |
| NS Diamond at MP 159.8 on the CSX W&W Sub | 40.00 | | 40.3 | 21.9 | 1.31 | 43.7 | |
| Goldsboro | 40.40 | | 41.7 | 1.4 | 0.08 | 45.2 | 1.0 |
| Mount Olive | 54.00 | | 57.5 | 15.8 | 0.95 | 63.0 | 1.0 |
| Warsaw | 69.40 | 1 | 14.2 | 16.7 | 1.00 | 81.7 | 1.0 |
| Wallace | 88.50 | 1 | 34.6 | 20.4 | 1.22 | 104.3 | 1.0 |
| Burgaw | 101.60 | 1 | 48.9 | 14.3 | 0.86 | 120.4 | 1.0 |
| New Jct.at Wilmington Sub. | 123.07 | 2 | 15.4 | 26.5 | 1.59 | 149.5 | 7.0 |
| Wilmington | 124.32 | | | | | 156.5 | |

NS H Line: Speed Increase Scenario 2

| From | To | mph | |
|-------|-------|-----|-----------|
| 80.9 | 81.3 | 20 | |
| 81.3 | 83.4 | 70 | curves |
| 83.4 | 84.2 | 60 | curve |
| 84.2 | 85.4 | 50 | curves |
| 85.4 | 85.9 | 70 | curve |
| 85.9 | 88.1 | 79 | |
| 88.1 | 88.9 | 50 | curves |
| 88.9 | 90 | 79 | |
| 90 | 90.4 | 60 | curve |
| 90.4 | 92.2 | 70 | curves |
| 92.2 | 94.5 | 79 | |
| 94.5 | 95.2 | 70 | curve |
| 95.2 | 95.2 | 49 | bridge |
| 95.2 | 96.5 | 79 | |
| 96.5 | 97.3 | 70 | curves |
| 97.3 | 105.9 | 79 | |
| 105.9 | 106.9 | 70 | curves |
| 106.9 | 108.7 | 79 | |
| 108.7 | 109.3 | 49 | crossings |

**Speed changes Raleigh to Selma
for Alternatives 1 and 2 with CTC.**

| | | | |
|-------|-------|----|--|
| | | | Speed Changes for Alternative 1 with CTC Selma to Goldsboro |
| 109.3 | 109.4 | 20 | Over CSXT Diamonds |
| 109.4 | 109.6 | 40 | curves |
| 109.6 | 110 | 40 | curves |
| 110 | 110.3 | 60 | Curves |
| 110.3 | 117.4 | 79 | |
| 117.4 | 117.7 | 79 | Raised speed for crossing |
| 117.7 | 119.7 | 79 | |
| 119.7 | 120 | 79 | Raised speed for "Crossings" |
| 120 | 124.6 | 79 | |
| 124.6 | 124.8 | 70 | Raised speed for "Crossings" |
| 124.8 | 126.7 | 79 | |
| 126.7 | 127.5 | 70 | |
| 127.5 | 128.5 | 10 | To New connection at Mulberry St. Alternative 1 |

CSXT South End Sub.: Speed Increase Scenario 2

| From | To | mph | |
|-------|-------|--------|---|
| 119.7 | 119.9 | Use 40 | No speed changes on South End Sub. |
| 119.9 | 120.1 | 40 | Station at MP 119.8 |
| 120.1 | 121.7 | 79 | |
| 121.7 | 125.4 | 70 | |
| 125.4 | 129.9 | 79 | |
| 129.9 | 135.1 | 70 | |
| 135.1 | 136.9 | 50 | |
| 136.9 | 138.9 | 79 | |
| 138.9 | 139.3 | 60 | Contentnea MP 138.9 |
| 139.3 | 146.8 | 79 | |
| 146.8 | 151 | 70 | |
| 151 | 152.6 | 79 | |
| 152.6 | 153 | 70 | |
| 153 | 157.9 | 79 | |
| 157.9 | 161 | 70 | |
| 161 | 161 | 50 | |
| 161 | 164.5 | 70 | New Selma connection MP 161.1 |
| 164.5 | 165.1 | 60 | |
| 165.1 | 169.4 | 70 | |
| 169.4 | 172 | 79 | |
| 172 | 176.3 | 70 | |
| 176.3 | 179.4 | 79 | |
| 179.4 | 180.3 | 55 | |
| 180.3 | 185.2 | 79 | |
| 185.2 | 187.3 | 45 | |
| 187.3 | 190.4 | 70 | |
| 190.4 | 207.4 | 79 | |
| 207.4 | 207.6 | 60 | |
| 207.6 | 209 | 45 | |
| 209 | 209.7 | 35 | |
| 209.7 | 209.7 | 25 | |
| 209.7 | 210.1 | 35 | |
| 210.1 | 210.8 | 40 | |
| 210.8 | 216.1 | 70 | |
| 216.1 | 218.4 | 60 | |
| 218.4 | 218.6 | 45 | |
| 218.6 | 219.1 | 60 | |
| 219.1 | 227.7 | 79 | |
| 227.7 | 233.8 | 70 | |
| 233.8 | 240.7 | 79 | |
| 240.7 | 241.4 | 50 | New Pembroke connection at 241.2 |
| 241.4 | 243.3 | 79 | |

CSXT Wilmington Sub.: Speed Increase Scenario 2

| From | To | mph | |
|-------|-------|-----|--|
| 285.7 | 295 | 59 | New Pembroke connection MP 285.7 |
| 295 | 296.7 | 59 | |
| 296.7 | 297.7 | 40 | |
| 297.7 | 298.8 | 59 | Raised speed in town |
| 298.8 | 354 | 59 | |
| 354 | 356.8 | 40 | |
| 356.8 | 364.1 | 25 | Davis Yard to Castle Hayne Jct. switch at MP 364.1 |
| 364.1 | 371.8 | 40 | Raised speed Castle Hayne Jct switch at MP 364.1 to connection to restored W&W Sub. |

CSXT W&W Sub.: Speed Increase Scenario 2

| From | To | mph | |
|-------|--------|------|-------------------------|
| 139 | 156.5 | 59 | |
| 156.5 | 159.8 | 59 | Raised speed in town |
| 159.8 | 159.8 | STOP | DIAMOND |
| 159.8 | 160.9 | 25 | Old Station is at 160.2 |
| 160.9 | 160.9 | 15 | DIAMOND |
| 160.9 | 164.6 | 59 | Raised speed in town |
| 164.6 | 186.5 | 59 | |
| 186.5 | 208.1 | 59 | |
| 208.1 | 234.8 | 59 | Restored segment |
| 234.8 | 234.8 | 25 | BRIDGE Swing bridge |
| 234.8 | 235.17 | 59 | Restored segment |

NCDOT SENC Passenger Rail Feasibility Study

Scenario 2 Alternative 1

Order-of-Magnitude Capital Cost Summary

| | Track Section | | | | |
|------------------------------------|-------------------------------------|----------------------------------|-------------------------------|-----------------------------|---------------|
| Item | CSXT Wilmington-Castle Hayne | CSXT Castle Hayne-Wallace | CSXT Wallace-Goldsboro | NS Goldsboro-Raleigh | Totals |
| Track | \$153,500 | \$0 | \$397,500 | \$9,542,000 | \$10,093,000 |
| Grade Crossings | \$16,000 | \$0 | \$48,000 | \$304,000 | \$368,000 |
| Train Control Systems | \$0 | \$0 | \$0 | \$0 | \$0 |
| Structures | \$0 | \$0 | \$0 | \$0 | \$0 |
| Drainage | \$0 | \$0 | \$0 | \$0 | \$0 |
| Utility Allowance | \$0 | \$0 | \$0 | \$0 | \$0 |
| Allowance for Right-of-Way | \$0 | \$0 | \$0 | \$0 | \$0 |
| Contractor Mobilization | \$8,475 | \$0 | \$22,275 | \$492,300 | \$523,050 |
| Design and Permitting | \$8,475 | \$0 | \$22,275 | \$492,300 | \$523,050 |
| Environmental Documentation | \$0 | \$0 | \$0 | \$0 | \$0 |
| Construction Management | \$13,560 | \$0 | \$35,640 | \$787,680 | \$836,880 |
| Contingencies | \$33,900 | \$0 | \$89,100 | \$1,969,200 | \$2,092,200 |
| Inflation Factor | \$9,450 | \$0 | \$24,838 | \$548,934 | \$583,221 |
| Total | \$243,360 | \$0 | \$639,628 | \$14,136,414 | \$15,019,401 |

NCDOT SENC Passenger Rail Feasibility Study

Scenario 2 Alternative 2

Order-of-Magnitude Capital Cost Summary

| | Track Section | | | |
|------------------------------------|--------------------------------------|---------------------------------|--------------------------|---------------|
| | | | | |
| Item | CSXT Wilmington- Pembroke | CSXT Pembroke- Selma | NS Selma- Raleigh | Totals |
| Track | \$40,000 | \$0 | \$4,622,000 | \$4,662,000 |
| Grade Crossings | \$64,000 | \$0 | \$176,000 | \$240,000 |
| Train Control Systems | \$0 | \$0 | \$0 | \$0 |
| Structures | \$0 | \$0 | \$0 | \$0 |
| Drainage | \$0 | \$0 | \$0 | \$0 |
| Utility Allowance | \$0 | \$0 | \$0 | \$0 |
| Allowance for Right-of-Way | \$0 | \$0 | \$0 | \$0 |
| Contractor Mobilization | \$5,200 | \$0 | \$239,900 | \$245,100 |
| Design and Permitting | \$5,200 | \$0 | \$239,900 | \$245,100 |
| Environmental Documentation | \$0 | \$0 | \$0 | \$0 |
| Construction Management | \$8,320 | \$0 | \$383,840 | \$392,160 |
| Contingencies | \$20,800 | \$0 | \$959,600 | \$980,400 |
| Inflation Factor | \$5,798 | \$0 | \$267,498 | \$273,296 |
| Total | \$149,318 | \$0 | \$6,888,738 | \$7,038,056 |

**NCDOT SENC Passenger Rail Feasibility Study
Scenario 2 Alternative 3**

Order-of-Magnitude Capital Cost Summary

Track Section

| Item | CSXT Wilmington-Castle Hayne | CSXT Castle Hayne-Wallace | CSXT Wallace-Goldsboro | CSXT Goldsboro-Contentnea | CSXT Contentnea-Rocky Mount | Totals |
|------------------------------------|-------------------------------------|----------------------------------|-------------------------------|----------------------------------|------------------------------------|---------------|
| Track | \$153,500 | \$0 | \$397,500 | \$261,000 | \$0 | \$812,000 |
| Grade Crossings | \$16,000 | \$0 | \$48,000 | \$48,000 | \$0 | \$112,000 |
| Train Control Systems | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Structures | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Drainage | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Utility Allowance | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Allowance for Right-of-Way | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Contractor Mobilization | \$8,475 | \$0 | \$22,275 | \$15,450 | \$0 | \$46,200 |
| Design and Permitting | \$8,475 | \$0 | \$22,275 | \$15,450 | \$0 | \$46,200 |
| Environmental Documentation | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Construction Management | \$13,560 | \$0 | \$35,640 | \$24,720 | \$0 | \$73,920 |
| Contingencies | \$33,900 | \$0 | \$89,100 | \$61,800 | \$0 | \$184,800 |
| Inflation Factor | \$9,450 | \$0 | \$24,838 | \$17,227 | \$0 | \$51,515 |
| Total | \$243,360 | \$0 | \$639,628 | \$443,647 | \$0 | \$1,326,635 |