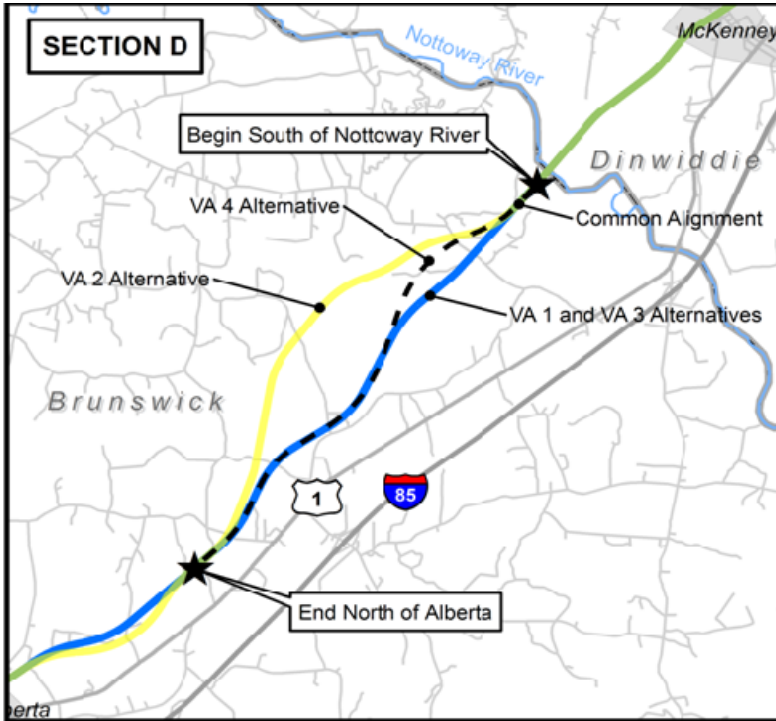


Section D- Comparison of Alternatives

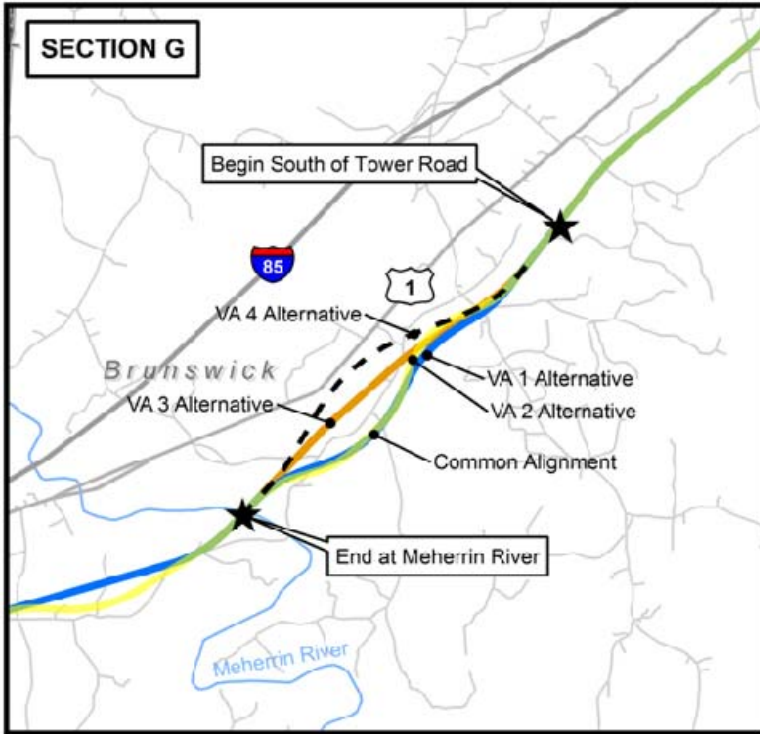


In Section D Alternative VA4 was developed to minimize impacts to wetlands, historic resources and an endangered plant species.

The table below compares impacts to the human and natural environment for the alternatives in this section. It also provides information on the costs and constructability of the alternatives. All alternatives are still under consideration- no decisions have been made.

| Section D- Alternatives VA1, VA3 on Common Alignment, Alternatives VA2 and VA4 on Different Alignments | | | | | | | | | |
|--|-----------|-------|-------|--------|---|-----------|---------|---------|---------|
| Summary of Potential Human and Natural Impacts | | | | | Summary of Operational & Physical Characteristics | | | | |
| By Section | | | | | By Section | | | | |
| Topic | SECTION D | | | | Topic | SECTION D | | | |
| | VA1 | VA2 | VA3 | VA4 | | VA1 | VA2 | VA3 | VA4 |
| Federally Listed T&E Species Impacted | 1 | 0 | 1 | 0 | Mainline Track Length (miles) | 6.07 | 6.41 | 6.07 | 6.17 |
| Number of Stream Crossings | 14 | 12 | 14 | 13 | Limiting Speed** | 110 | 110 | 110 | 110 |
| Impacts to Streams (linear feet) | 2,050 | 2,575 | 2,050 | 2,069 | Operability/Constructability*** | neutral | neutral | neutral | neutral |
| Impacts to Wetlands (acres) | 0.99 | 7.37 | 0.99 | 2.32 | Roadwork (miles) | 1.6 | 1.5 | 1.6 | 2.1 |
| FEMA Floodplain Crossings | 0 | 4 | 0 | 0 | | | | | |
| Federal/State Designated Rivers (crossings) | 0 | 0 | 0 | 0 | | | | | |
| Impacts to Prime and Other Important Farmland (acres) | 80.45 | 54.45 | 80.45 | 89.27 | | | | | |
| Forested uplands (acres) | 90.99 | 92.24 | 90.99 | 107.72 | Rail and Road Construction Cost (millions \$) | \$67.20 | \$53.40 | \$67.20 | \$67.00 |
| Hazardous Materials Sites | 0 | 1 | 0 | 1 | Utility Relocation Cost (millions \$) | \$1.28 | \$0.66 | \$1.28 | \$1.30 |
| Residential Relocations | 3 | 2 | 3 | 3 | Right-of-Way Cost (millions \$) | \$1.82 | \$1.00 | \$1.82 | \$1.85 |
| Business Relocations | 2 | 0 | 2 | 2 | TOTAL COSTS (millions \$) | \$70.30 | \$55.06 | \$70.30 | \$70.15 |
| Public Schools Impacted | 0 | 0 | 0 | 0 | ** Limiting Speed is the maximum train speed through the most restrictive curve within the section based on current design assumptions; average running speed through the section could be greater. *** Positive-negative-neutral denotes significant differences in operability or constructability between the alternatives (see DEIS Section 2.2.1.3 for more details). | | | | |
| Noise (Impacted Receptors) | 2 | 3 | 2 | 4 | | | | | |
| Noise (Severely Impacted Receptors) | 2 | 1 | 2 | 2 | | | | | |
| Vibration (Impacted Structures) | 3 | 1 | 3 | 2 | | | | | |
| Section 4(f) Uses- Historic | 1 | 0 | 1 | 0 | | | | | |
| Section 4(f) Uses- Parks | 0 | 0 | 0 | 0 | | | | | |
| Section 4(f) De Minimis- Historic | 0 | 1 | 0 | 1 | | | | | |
| Section 4(f) De Minimis- Parks | 0 | 0 | 0 | 0 | | | | | |
| Section 106 Adverse Effects | 1 | 0 | 1 | 0 | | | | | |

Section G- Comparison of Alternatives



In Section G Alternative VA4 was developed to avoid impacts to historic resources and reduce property impacts (compared to VA3).

The table below compares impacts to the human and natural environment for the alternatives in this section. It also provides information on the costs and constructability of the alternatives. All alternatives are still under consideration- no decisions have been made.

Section G- Alternatives VA1, VA2, VA3, VA4 on Different Alignments

| Summary of Potential Human and Natural Impacts | | | | | Summary of Operational & Physical Characteristics | | | | |
|---|-----------|-------|-------|-------|---|-----------|----------|----------|----------|
| By Section | | | | | By Section | | | | |
| Topic | SECTION G | | | | Topic | SECTION G | | | |
| | VA1 | VA2 | VA3 | VA4 | | VA1 | VA2 | VA3 | VA4 |
| Federally Listed T&E Species Impacted | 0 | 0 | 0 | 0 | Mainline Track Length (miles) | 3.61 | 3.66 | 3.55 | 3.62 |
| Number of Stream Crossings | 7 | 7 | 6 | 9 | Limiting Speed** | 110 | 90 | 110 | 110 |
| Impacts to Streams (linear feet) | 654 | 914 | 500 | 1,095 | Operability/Constructability*** | neutral | negative | positive | positive |
| Impacts to Wetlands (acres) | 0.21 | 0.49 | 0.21 | 0.21 | Roadwork (miles) | 0.7 | 0.3 | 0.6 | 0.91 |
| FEMA Floodplain Crossings | 1 | 1 | 1 | 1 | | | | | |
| Federal/State Designated Rivers (crossings) | 1 | 1 | 1 | 1 | | | | | |
| Impacts to Prime and Other Important Farmland (acres) | 25.02 | 24.96 | 28.98 | 49.43 | | | | | |
| Forested uplands (acres) | 45.54 | 44.59 | 43.58 | 47.55 | Rail and Road Construction Cost (millions \$) | \$35.90 | \$29.00 | \$36.20 | \$40.00 |
| Hazardous Materials Sites | 0 | 0 | 0 | 0 | Utility Relocation Cost (millions \$) | \$0.19 | \$0.16 | \$0.19 | \$0.19 |
| Residential Relocations | 0 | 0 | 2 | 1 | Right-of-Way Cost (millions \$) | \$0.37 | \$0.31 | \$0.53 | \$0.54 |
| Business Relocations | 0 | 0 | 0 | 0 | TOTAL COSTS (millions \$) | \$36.46 | \$29.47 | \$36.92 | \$40.73 |
| Public Schools Impacted | 0 | 0 | 0 | 0 | ** Limiting Speed is the maximum train speed through the most restrictive curve within the section based on current design assumptions; average running speed through the section could be greater. *** Positive-negative-neutral denotes significant differences in operability or constructability between the alternatives (see DEIS Section 2.2.1.3 for more details). | | | | |
| Noise (Impacted Receptors) | 0 | 1 | 2 | 2 | | | | | |
| Noise (Severely Impacted Receptors) | 0 | 0 | 0 | 0 | | | | | |
| Vibration (Impacted Structures) | 1 | 0 | 1 | 0 | | | | | |
| Section 4(f) Uses- Historic | 1 | 0 | 1 | 0 | | | | | |
| Section 4(f) Uses- Parks | 0 | 0 | 0 | 0 | | | | | |
| Section 4(f) De Minimis- Historic | 0 | 1 | 0 | 0 | | | | | |
| Section 4(f) De Minimis- Parks | 0 | 0 | 0 | 0 | | | | | |
| Section 106 Adverse Effects | 1 | 0 | 1 | 0 | | | | | |