

5 PREFERRED ALTERNATIVE

5.1 FHWA Preferred Alternative (E-Shift Modified)

Based on the evaluation and comparison of the alternatives, potential impacts, and public and agency input, **Alternative E-Shift Modified** has been identified as the **Federal Highway Administration (FHWA) Preferred Alternative** (see **Figure 5-1**). **Alternative E-Shift Modified** is the **environmentally preferable alternative and most publicly desirable alternative**. Alternative E-Shift Modified offers several advantages over the other build alternatives that make it the preferred alternative for this project.

Alternative E-Shift Modified meets the project purpose and need, as identified in **Chapter 1.6** and **Chapter 1.7**, by providing a consistent link in the regional transportation system, primarily between I-68 and I-76. This link would complete the development of Corridor N of the Appalachian Development Highway System and support increased economic opportunities in the region.

Below is a list of advantages that make Alternative E-Shift Modified the environmentally preferable alternative:

- **Fewest number of property impacts**
- **Fewest impacted noise receptors**

- **Least wetland impacts**
- **Least forestland impacts**

Equivalent to Alternative E Modified, Alternative E-Shift Modified has the least impact to:

- Prime farmland soils
- Productive farms
- Historic structures
- Maple sugar production forests
- 1% annual chance floodplains
- Bat hibernacula
- Streams
- Indirect and cumulative effects

Alternative E-Shift Modified was developed in response to input received at public meetings from residences along Old Salisbury Road to move the alignment as far away as possible from homes in that area. Consequently, unlike Alternatives DU Modified and E Modified, Alternative E-Shift Modified is sufficiently far enough away from the residences on Old Salisbury Road that it is anticipated to have less potential for noise impacts.

However, the project team was constrained by the historic boundary of Tomlinson Inn and Little Meadows. Project engineers designed Alternative E-Shift Modified to situate the alignment as far away from Old Salisbury Road as possible, while also avoiding the Tomlinson Inn and Little Meadows

Preferred Alternative: E-Shift Modified

1. **Least environmentally damaging**
2. **Most publicly desirable alternative**
3. **Fewest property impacts**
4. **Fewest impacted noise receptors**
5. **Least wetland, waterway, and forestland impacts**
6. **Lowest impact to above ground historic resources**

historic boundary. Alternative E-Shift Modified is also aligned so that it does not preclude future consideration of potential access to existing U.S. 219 south of Old Salisbury Road in Maryland.

Alternatives E Modified and **E-Shift Modified would result in the least overall harm to Section 4(f) resources**, with a *de minimis* use of the historic Miller Farm. Alternatives DU Modified and DU-Shift Modified would result in two additional Section 4(f) impacts to the historic Lowry Farm and Deal Farm.

The preliminary cost estimate for Alternative E-Shift Modified is \$310.4 million.

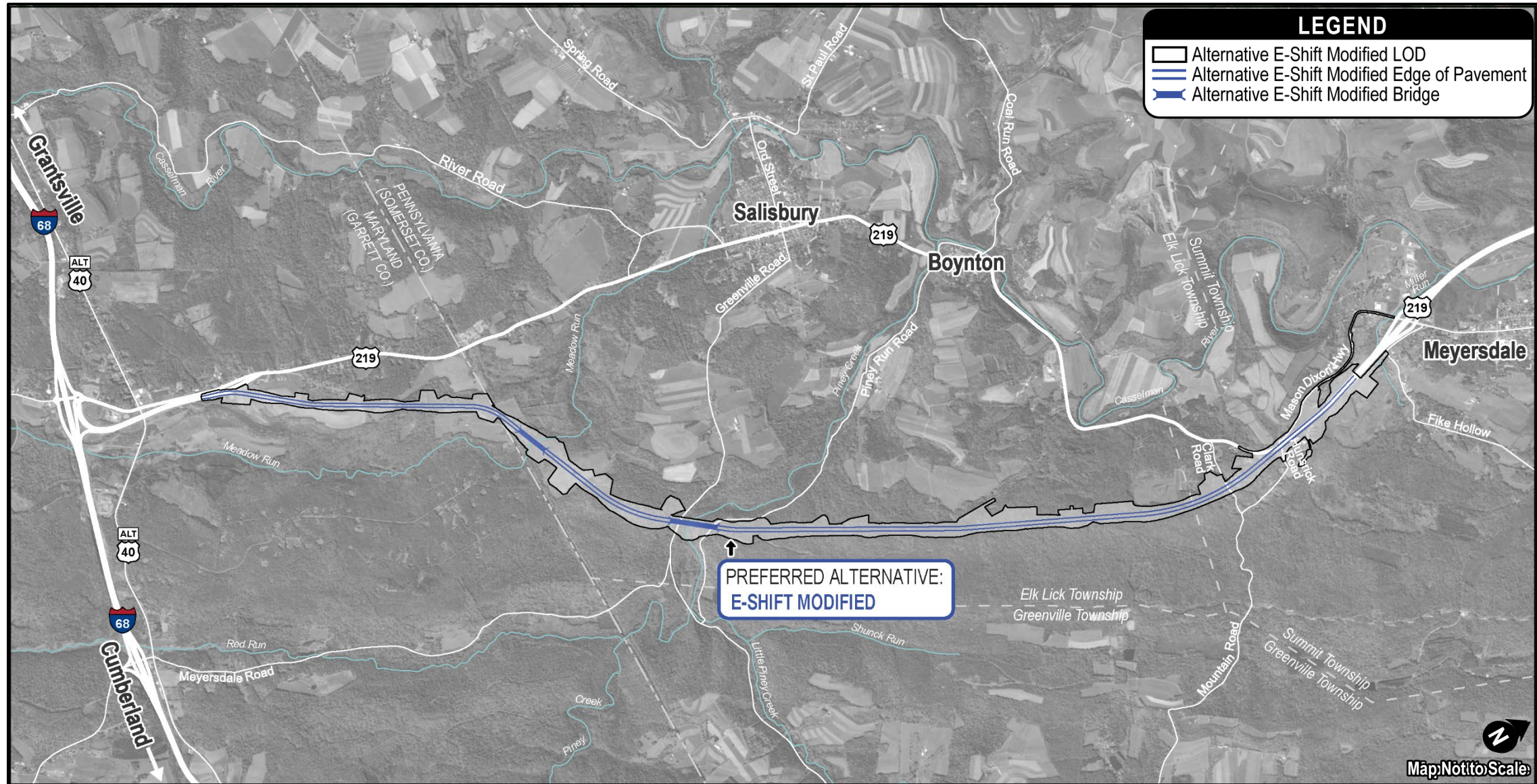


Figure 5-1: Preferred Alternative – E-Shift Modified

5.2 Alternatives Not Recommended

In accordance with the National Environmental Policy Act (NEPA), comparison of a full range of engineering, operational, environmental, and cost factors was considered in the identification of a Preferred Alternative. This section describes why each of the following alternatives was not identified as the Preferred Alternative.

5.2.1 No Build Alternative

The No Build Alternative is included in the environmental impact analysis as the baseline condition for comparison. The No Build Alternative is not identified as the Preferred Alternative because it would not meet the purpose and need of the project. It would not improve regional system linkage and would not improve safe and efficient access for trucks and other motorists on U.S. 219. Moreover, the No Build Alternative would not provide the transportation infrastructure to support economic opportunities in existing and planned communities, employment centers, and industries within the Appalachian Region.

5.2.2 Build Alternatives

While each of the four build alternatives meets the purpose and need of the project, the build alternatives differ in impacts (see **Table 5-1**) and benefits. Moreover, each build alternative provides a consistent link in the regional system, primarily

between I-68 and I-76. This link would complete the development of Corridor N of the Appalachian Development Highway System and support increased economic opportunities by enhancing freight mobility, commercial access, and employee access between population centers. However, the build alternatives differ in impacts (see **Table 5-1**) and benefits. The DU alternatives have significantly greater physical impact to both surface and deep mining areas than the E alternatives. Greater impact to mining areas may result in the loss of economic opportunities. Preliminary cost estimates show that Alternatives DU Modified and DU-Shift Modified are generally \$170 million greater than Alternatives E Modified and E-Shift Modified.

Additionally, all build alternatives could cause minor indirect impacts, including new elements affecting visual quality of the natural and cultural environments, right-of-way acquisitions of community or agricultural resources, commercial and residential displacements, increased runoff and sedimentation, altered hydrology, and introduction of non-native plant species. The minor direct and indirect impacts of the U.S. 219 project, in combination with impacts from past, present, and reasonably foreseeable future projects, would result in minor cumulative effects.

A. Alternative DU Modified

Alternative DU Modified is not the Preferred Alternative, as Alternative DU Modified would result

in greater impacts to:

- Number of properties, fourteen more properties than the Preferred Alternative and the largest number among the build alternatives.
- Forestland, impacting approximately 42.6 more acres than the Preferred Alternative and the most acres among the build alternatives.
- Wetlands, impacting approximately 1.36 more acres than the Preferred Alternative, and the most acres among the build alternatives.
- Approximately 1,604 more linear feet of stream impacts than the Preferred Alternative, the second highest impact to streams among the build alternatives.
- Noise receptors along Old Salisbury Road, impacting four more receptors than the Preferred Alternative and tied for the most impacted receptors among the build alternatives.

Equal (or roughly equal) to Alternative DU-Shift Modified, Alternative DU Modified has the greatest impact to:

- Residential displacements, with nine displacements versus eight displacements for the Preferred Alternative.
- Productive farms, with impacts to three additional farms compared to the Preferred Alternative.

- Prime farmland soils, with impacts to 13 additional acres compared to the Preferred Alternative.
- 1% annual chance floodplains, with impacts to 7.6 additional acres compared to the Preferred Alternative.
- Bat hibernacula, with potential impacts to three hibernacula, while the Preferred Alternative does not directly impact any known hibernacula.
- Areas of high probability for prehistoric archaeology, impacting approximately 1.4 more acres than the Preferred Alternative.
- Areas of high probability for historic archaeology, impacting approximately 2.7 more acres than the Preferred Alternative.

Alternative DU Modified would have an adverse effect to above ground historic properties and requires greater than *de minimis* use of Section 4(f) resources, including the historic Lowry Farm and Deal Farm.

The preliminary cost estimate for Alternative DU Modified is \$483 million.

B. Alternative DU-Shift Modified

Alternative DU-Shift Modified is not the Preferred Alternative, as Alternative DU-Shift Modified would result in greater impacts to:

- Number of properties, eleven more properties than the Preferred Alternative and the second largest number among the build alternatives.
- Forestland, impacting approximately 41.2 more acres than the Preferred Alternative and the second most acres among the build alternatives.
- Wetlands, impacting approximately 1.23 more acres than the Preferred Alternative, and the second most acres among the build alternatives.
- Approximately 1,619 more linear feet of stream impacts than the Preferred Alternative, the highest impact to streams among the build alternatives.

Equal (or roughly equal) to Alternative DU Modified, Alternative DU-Shift Modified has the greatest impact to:

- Residential displacements, with nine displacements versus eight displacements for the Preferred Alternative.
- Productive farms, with impacts to three additional farms compared to the Preferred Alternative.
- Prime farmland soils, with impacts to 13 additional acres compared to the Preferred Alternative.
- 1% annual chance floodplains, with impacts to 7.6 additional acres compared to the Preferred Alternative.

- Bat hibernacula, with potential impacts to three hibernacula, while the Preferred Alternative does not directly impact any known hibernacula.
- Areas of high probability for prehistoric archaeology, impacting approximately 1.4 more acres than the Preferred Alternative.
- Areas of high probability for historic archaeology, impacting approximately 2.7 more acres than the Preferred Alternative.

Alternative DU-Shift Modified would have an adverse effect to above ground historic properties and requires greater than *de minimis* use of Section 4(f) resources, including the historic Lowry Farm and Deal Farm.

The preliminary cost estimate for Alternative DU-Shift Modified is \$486.3 million.

C. Alternative E Modified

Alternative E Modified is not the Preferred Alternative for the reasons provided below.

While Alternative E-Shift Modified and Alternative E Modified have the same length and only a difference of 2.2 acres for Limit of Disturbance (LOD), Alternative E Modified is closer to the homes along Old Salisbury Road than Alternative E-Shift Modified. Therefore, **Alternative E Modified is anticipated to result in greater residential noise impacts to the Old Salisbury Road community, including impacts to four additional noise**

receptors, compared to the Preferred Alternative. Noise abatement was investigated in this area and noise barriers were found to be feasible but not reasonable due to the cost per benefitted noise receptor. Alternative E Modified and Alternative E-Shift Modified have similar impacts to natural and cultural resources. The preliminary cost estimate for Alternative E Modified is \$307 million.

Table 5-1: Summary of Direct Impacts Per Modified Alternative

Resource	No Build	DU Mod.	DU-Shift Mod.	E Mod.	*E-Shift Mod.
Socioeconomic Resource Impacts					*FHWA Preferred
Parcels Intersected by LOD (#)	0	117	114	106	103
Residential Displacements (#)	0	9	9	8	8
Commercial Displacements (#)	0	2	2	2	2
Impacted Noise Receptors (#)	4	13	9	13	9
Cultural Resource Impacts					
Above Ground Historic Resources (# / Effect)	0 / No Effect	3 / Adverse Effect	3 / Adverse Effect	1 / No Adverse Effect	1 / No Adverse Effect
Areas of High Probability for (acres)	Prehistoric Archaeology	50.0	50.0	48.6	48.6
	Historic Archaeology	16.6	16.6	13.9	13.9
Section 4(f) Resources (# / Type of Use)	0	3 / > De Minimis	3 / > De Minimis	1 / De Minimis	1 / De Minimis
Natural Resource Impacts					
Forestland (acres)	0	431.4	430.0	389.8	388.8
Active Farmland (acres)	0	76.6	76.8	37.9	38.1
Productive Farms (#)	0	9	9	6	6
Prime Farmland Soils (acres)	0	32.9	32.9	19.9	19.9
Soils of Statewide Importance (acres)	0	102.9	102.9	82.0	81.9
Preferential Tax Assessment (acres)	0	74.9	75.2	36.1	36.4
FEMA 1% Annual Chance Floodplains (acres)	0	12.3	12.3	4.7	4.7
Potential Bat Hibernacula (#)	0	3	3	0	0
Wetland (acres)	0	11.30	11.17	10.07	9.94
Streams (linear feet)	0	24,796	24,811	23,192	23,192
Mining & Potential Hazardous Residual Waste					
Surface Mining Boundaries (acres)	0	319.7	319.6	212.7	212.7
Deep Mine Boundaries (acres)	0	22.9	22.9	23.0	23.0
Area of Concern Sites (#)	0	3	3	3	3
Engineering					
Length of Alternative (miles)	0	8.3	8.3	7.9	7.9
LOD (acres)	0	628.7	626.2	560.9	558.7
Preliminary Cost Estimate (Year 2030 Dollars)	\$0	\$483.0 M	\$486.3 M	\$307.0 M	\$310.4 M

Notes: 1) Green shading represents the lowest impact per category by alternative (excluding the No Build, which does not carry any direct impacts other than noise receptors). 2) Four impacted noise receptors are associated with the No Build Alternative because of design year traffic projections. 3) Archaeology impacts include impacts to areas of low, medium, and high archaeological probability. 4) Preliminary construction cost estimates do not include Right of Way Acquisition, Utility Relocation, Mineral Rights, Wildlife Crossings, Intelligent Transportation Systems and Maintenance Facility Final Amenities.