



COMMUNITIES - ROADWAY / TRAFFIC / NOISE

301 US 301 Project Development

Communities - Roadways, Traffic, and Noise

- Effects on communities are an important component of project alternatives analysis. To understand the variety of effects of each alternative, DelDOT conducted a comparison of roadway, traffic, and noise effects on project area communities. Key elements of this comparison are presented in the tables at right. Other community effects, such as access to community services and facilities, community mobility, and effects on the local economy are also considered as part of the overall alternatives evaluation.
- DelDOT identified a number of existing and planned communities that are near the alternatives. In general, these communities consist of named subdivisions or other clusters of residences or businesses. Properties that are not located within these communities are also included in the alternatives evaluation even though they are not presented here. Effects to all properties will be considered in making an informed decision on a recommended preferred alternative, the next step in the project development process.
- The following factors are included in the community roadway, traffic, and noise effects presented in the tables:

Roadways:

- Distance to Right-of-Way (ROW):** The proposed distance or range of distances from the nearest community properties to the alternative's ROW.
- Right-of-Way Width:** The width of the alternative's ROW at the nearest location to the community.
- Roadway Elevation:** The preliminary, estimated alternative's vertical alignment (above grade, at grade, and below grade) at the nearest location to the community. Roadway elevations are expected to change somewhat as alternatives continue to be refined.

Traffic:

- Traffic Volumes:** The estimated number of vehicles per day (vpd) using the segment(s) of roadway at the nearest location to the community.

Noise

- Noise:** The projected noise environment based on current alternative plans. Effects from noise are provided for communities that are within 800 feet of a proposed alternative. Beyond this distance, effects from noise from the US 301 Project generally do not exceed the Federal Highway Administration criteria for a "noise impact." Where applicable, noise effects are identified for each affected.

COMMUNITIES	2003 Existing	2003 No-Build	ALTERNATIVES RETAINED FOR DETAILED EVALUATION								
			YELLOW	BROWN NORTH	BROWN SOUTH	PURPLE +SPUR	GREEN NORTH +SPUR	GREEN SOUTH +SPUR			
BUNKER HILL & B											
Distance to Right of Way (ft.)			0	3,000	3,000	3,000	3,000	3,000	3,000		
Road Right of Way (ft.)			400	325	325	325	325	325	325		
Roadway Elevation (ft.)			Above Grade	Below Grade to Above Grade	Below Grade to Above Grade	Below Grade to Above Grade	Below Grade to Above Grade	Below Grade to Above Grade	Below Grade to Above Grade		
Traffic Volumes (vpd)											
to North - US 301 Frontage Road (yellow only)	N/A	N/A	16,700	N/A	N/A	N/A	N/A	N/A	N/A		
to South - Bunker Hill Road	4,000	16,500	9,600	7,600	7,600	7,500	6,900	6,900			
to East - Existing US 301 (or Proposed US 301 - yellow only)	12,100	27,600	37,600	17,000	17,000	17,100	17,000	17,000			
to West - Choptank Road	950	17,800	10,800	56,000	56,000	53,700	56,700	56,700			
Community Impact Summary			*All properties within the Bunker Hill & B development would be impacted by the Yellow Alternative. *The Brown, Purple, and Green Alternatives are more than 1/2 mile from Bunker Hill & B. *The community would be a complete take under the Yellow Alternative; noise analysis is not applicable. *Noise effects from the Brown, Purple, and Green Alternatives do not meet the FHWA and DelDOT standard for noise impact to commercial properties.								
MATAPASKA											
Distance to Right of Way (ft.)			> 3,000*	600 to 1,200*	600 to 1,200*	600 to 1,200*	600 to 1,200*	600 to 1,200*	600 to 1,200*		
Road Right of Way (ft.)			N/A	330*	330*	330*	330*	330*	330*		
Roadway Elevation (ft.)			N/A	At Grade to Below Grade	At Grade to Below Grade	At Grade to Below Grade	At Grade to Below Grade	At Grade to Below Grade	At Grade to Below Grade		
Traffic Volumes (vpd)											
to South - Bunker Hill Road	1,300	17,600	12,100	9,100	9,100	10,300	9,800	9,800			
to North - Bunker Hill Road	950	17,800	10,800	56,000	56,000	53,700	56,800	56,800			
to East - Choptank Road (no-build and yellow only) OR Proposed US 301	43	51	-/-	47 / 47	47 / 47	47 / 47	47 / 47	47 / 47			
Lowest Level / Highest Level			-/-	4	4	4	4	4			
Increased Level - East				0	0	0	0	0			
No. of Noise Impacts			0	0	0	0	0	0			
Community Impact Summary			*Some properties in the Matapaska community are within 500 feet of the Brown, Purple, and Green Alternatives. *The Brown, Purple, and Green Alternatives are expected to be below grade near Matapaska. *Compared to existing conditions, residents would experience increased noise from Brown, Purple and Green; these effects would be less than under the No-Build. *Noise effects do not meet the FHWA and DelDOT criteria for a noise impact under any alternative.								
MIDLETOWN VILLAGE											
Distance to Right of Way (ft.)			200	200 to 2,000*	200 to 2,000*	200 to 2,000*	200 to 2,000*	200 to 2,000*	200 to 2,000*		
Road Right of Way (ft.)			300 - 400*	250 - 320*	250 - 320*	250 - 320*	250 - 320*	250 - 320*	250 - 320*		
Roadway Elevation (ft.)			Above Grade	Below Grade to Above Grade	Below Grade to Above Grade	Below Grade to Above Grade	Below Grade to Above Grade	Below Grade to Above Grade	Below Grade to Above Grade		
Traffic Volumes (vpd)											
to South - Bunker Hill Road	4,000	16,500	9,600	7,600	7,600	7,500	6,900	6,900			
to East - Existing US 301 (or Proposed US 301 - yellow only)	12,100	27,600	37,600	17,000	17,000	17,100	17,000	17,000			
to West - Choptank Road (no-build and yellow only) OR Proposed US 301	950	17,800	10,800	56,000	56,000	53,700	56,700	56,700			
Noise - East	46 / 57	48 / 58		-/-	-/-	-/-	-/-	-/-			
Lowest Level / Highest Level - East			53 / 57								
Increased Level - East			6 / 10								
Noise - West	(45)	47									
Lowest Level / Highest Level - West			-/-	57 / 57	57 / 57	57 / 57	57 / 57	57 / 57			
Increased Level - West				12	12	12	12	12			
No. of Noise Impacts - East & West			6	15	15	15	15	15			
Community Impact Summary			*All alternatives are located within 500 feet of the nearest Middletown Village properties. *Compared to the No-Build Alternative, the Yellow, Brown, Purple, and Green Alternatives would reduce traffic on Bunker Hill Road. *The Yellow, Brown, Purple and Green Alternatives would have noise effects that meet the FHWA and DelDOT criteria for a noise impact. *Further, noise effects would be less than under the No-Build Alternative, except for the Purple and Green Alternatives, which would be less than under the No-Build. *An earthen berm is being proposed to visually screen Springfield from the Brown, Purple, and Green Alternatives.								
SPRINGMILL											
Distance to Right of Way (ft.)			87	1,000 to 1,500*	1,000 to 1,500*	600 to 1,500*	600 to 1,500*	600 to 1,500*	600 to 1,500*		
Road Right of Way (ft.)			525*	300*	300*	300*	300*	300*	300*		
Roadway Elevation (ft.)			Above Grade	At Grade to Above Grade	At Grade to Above Grade	At Grade to Above Grade	At Grade to Above Grade	At Grade to Above Grade	At Grade to Above Grade		
Traffic Volumes (vpd)											
to North - Armstrong Corner Road	1,000	6,900	3,300	4,100	4,100	7,200	7,900	7,900			
to East - Existing US 301 (or Proposed US 301 - yellow only)	19,700	38,200	66,000	30,300	30,300	21,000	21,700	21,700			
to West - Choptank Road (no-build and yellow only) OR Proposed US 301	950	17,800	10,800	56,000	56,000	53,700	56,700	56,700			
Noise - East	54 / 62	54 / 62	50 / 63			-/-	-/-	-/-			
Lowest Level / Highest Level - East			1								
Increased Level - East	8	35 / 41	35 / 41								
Noise - West											
Lowest Level / Highest Level - West			-/-	43 / 48	43 / 48	43 / 48	43 / 48	43 / 48			
Increased Level - West				7 / 8	7 / 8	7 / 8	7 / 8	7 / 8			
No. of Noise Impacts - East & West			0	0	0	0	0	0			
Community Impact Summary			*The Yellow Alternative would be within 100 feet of the east side of Springfield. *The Brown Alternative would be more than 1,000 feet from the west side of Springfield; the Purple and Green Alternatives would be 600 - 1,300 feet from the northwest corner. *With the Yellow Alternative, traffic volumes increase on US 301; however, truck traffic would move to maintain Yellow, away from Springfield. *Noise effects do not meet the FHWA and DelDOT criteria for a noise impact under any alternative. *An earthen berm is being proposed to visually screen Springfield from the Brown, Purple, and Green Alternatives.								
THE LEGENDS WEST											
Distance to Right of Way (ft.)			430	> 3,000*	> 3,000*	> 3,000*	> 3,000*	> 3,000*	> 3,000*		
Road Right of Way (ft.)			400 - 550*	N/A	N/A	N/A	N/A	N/A	N/A		
Roadway Elevation (ft.)			Above Grade	N/A	N/A	N/A	N/A	N/A	N/A		
Traffic Volumes (vpd)											
to North - Main St Road	3,000	9,300	7,600	7,600	7,600	8,100	7,600	7,600			
to East - Cedar Lane Road	4,700	9,300	6,500	6,500	6,500	6,300	5,300	5,300			
to West - Existing US 301 (or Proposed US 301 - Yellow Only)	19,300	37,600	66,000	20,300	20,300	21,000	21,700	21,700			
Noise	53	53	58 / 58	-/-	-/-	-/-	-/-	-/-			
Lowest Level / Highest Level			5								
Increased Level			0								
No. of Noise Impacts			0	0	0	0	0	0			
Community Impact Summary			*The Yellow Alternative would be within 430 feet of the west side of The Legends West. *The Brown, Purple, and Green Alternatives would be more than 3,000 feet from The Legends West. *With the Yellow Alternative, traffic volumes increase on the existing US 301; however, truck traffic would move to maintain Yellow, away from Springfield. *Noise effects do not meet the FHWA and DelDOT criteria for a noise impact under any alternative.								
BOHEMIA HILL ROAD											
Distance to Right of Way (ft.)			4,400	1,300	1,300	1,300	1,300	1,300	1,300		
Road Right of Way (ft.)			N/A	300	300	300	300	300	300		
Roadway Elevation (ft.)			N/A	Above Grade	Above Grade	Above Grade	Above Grade	Above Grade	Above Grade		
Traffic Volumes (vpd)											
to East - Choptank Road	3,100	16,200	12,800	5,100	5,100	5,300	5,100	5,100			
Noise	60	68	61 / 61	58 / 58	58 / 58	58 / 58	58 / 58	58 / 58			
Lowest Level / Highest Level			-2	2	2	2	2	2			
Increased Level			0	0	0	0	0	0			
No. of Noise Impacts			0	0	0	0	0	0			
Community Impact Summary			*All Alternatives are more than 1,300 feet from the Bohemia Hill Road Community (west of Choptank Road). *Compared to the No-Build Alternative, all build Alternatives would decrease traffic on Choptank Road. *Compared to the No-Build Alternative, all build Alternatives would result in a decreased noise level. *Because of the decrease in traffic on Choptank Road, noise levels under the Brown, Purple and Green Alternatives would decrease compared to existing conditions.								

COMMUNITIES	2003 Existing	2003 No-Build	ALTERNATIVES RETAINED FOR DETAILED EVALUATION								
			YELLOW	BROWN NORTH	BROWN SOUTH	PURPLE +SPUR	GREEN NORTH +SPUR	GREEN SOUTH +SPUR			
POST AND RAIL FARMS											
Distance to Right of Way (ft.)			> 1,800*	1,000*	1,000*	1,000*	1,000*	1,000*	1,000*		
Road Right of Way (ft.)			500*	350*	350*	350*	350*	350*	350*		
Roadway Elevation (ft.)			Above Grade	Above Grade	Above Grade	Above Grade	Above Grade	Above Grade	Above Grade		
Traffic Volumes (vpd)											
to North - Old Schoolhouse Road	400	3,900	3,900	3,900	3,900	3,900	3,900	3,900			
to East - Existing US 301 (or Proposed US 301 - Yellow only)	19,900	45,500	66,300	25,000	25,000	25,000	22,100	22,200			
to West - Proposed US 301 (Purple, Brown and Green only)	N/A	N/A	N/A	58,900	58,900	58,900	25,800	22,500			
Community Impact Summary			*All alternatives are more than 1,000 feet from Post and Rail Farms. *All alternatives would be above grade at segments adjacent to Post and Rail Farms. *The Brown, Purple, and Green Alternatives would decrease traffic on existing US 301. *Residents will likely be able to hear US 301; however, given the distance from the alternatives, noise effects will not meet the FHWA criteria for a noise impact.								
OLD SCHOOLHOUSE ROAD											
Distance to Right of Way (ft.)				> 2,000*	> 2,000*	> 2,000*	> 2,000*	> 2,000*	> 2,000*		
Road Right of Way (ft.)				630*	N/A	N/A	N/A	N/A	N/A		
Roadway Elevation (ft.)				Above Grade	N/A	N/A	N/A	N/A	N/A		
Traffic Volumes (vpd)											
to North - Old Schoolhouse Road	395	3,900	3,900	3,900	3,900	3,900	3,900	3,900			
to East - Existing US 301 (or Proposed US 301 - Yellow only)	18,300	38,900	62,900	24,000	24,000	24,000	21,300	21,300			
Noise	48	48	52 / 52	-/-	-/-	-/-	-/-	-/-			
Lowest Level / Highest Level			4								
Increased Level			0								
No. of Noise Impacts			0	0	0	0	0	0			
Community Impact Summary			*The Yellow Alternative would be within 340 feet of the Old Schoolhouse Road Community (located south of Meadsbrook Farms). *The Brown, Purple, and Green Alternatives would be more than 2,000 feet from the community. *With the Yellow Alternative, traffic volumes increase on the existing US 301; however, truck traffic would move to maintain Yellow, away from Springfield. *Noise effects do not meet the FHWA and DelDOT criteria for a noise impact under any alternative.								
CHESAPEAKE MEADOWS											
Distance to Right of Way (ft.)			> 3,000*	150*	150*	150*	150*	150*	150*		
Road Right of Way (ft.)			N/A	310*	310*	310*	310*	310*	310*		
Roadway Elevation (ft.)			N/A	Above Grade	Above Grade	Above Grade	Above Grade	Above Grade	Above Grade		
Traffic Volumes (vpd)											
to North - Choptank Road	2,600	4,900	3,900	2,900	2,900	3,000	2,900	2,900			