



TRAFFIC ANALYSES FOR RANGE OF ALTERNATIVES



301



NO BUILD - EXISTING CONDITION

NO BUILD ALTERNATIVE

Congestion Relief Rating: VERY POOR

- Failing conditions (LOS F) on US 301 and Boyds Corner Road
- Congestion (LOS F) on SR 299 through Middletown
- High traffic volumes on local roads, such as Cedar Lane Road (LOS E)
- New Summit Bridge required to prevent LOS F
- Does not separate truck traffic & local traffic



4 LANES - CONTROLLED ACCESS - ALONG EXISTING ROADWAYS

YELLOW ALTERNATIVE

Congestion Relief Rating: FAIR

- Reduces volumes on US 301 (although still LOS F) and Boyds Corner Road (LOS E)
- Volumes on SR 299 nearly 50% lower than No Build Alternative
- Provides a bypass projected to operate at LOS B
- Reduces traffic volumes on local roads, such as Cedar Lane Road
- Increases traffic on SR 1 C&D Canal Bridge (LOS E), but bridge can be re-striped to add capacity



4 LANES - CONTROLLED ACCESS - NEW LOCATION & ALONG EXISTING ROADWAYS

ORANGE ALTERNATIVE

Congestion Relief Rating: GOOD

- Reduces volumes on US 301 (although still LOS F) and Boyds Corner Road (LOS E)
- Moderate reduction in volumes on Summit Bridge (LOS E)
- Volumes on SR 299 are 50% lower than No Build Alternative
- Provides a bypass projected to operate at LOS B
- Significantly Reduces traffic volumes on local roads, such as Cedar Lane Road
- Increases traffic on SR 1 C&D Canal Bridge (LOS F), but bridge can be re-striped to add capacity



4 LANES - CONTROLLED ACCESS - NEW LOCATION & ALONG EXISTING ROADWAYS

PURPLE ALTERNATIVE

Congestion Relief Rating: GOOD

- Reduces volumes on US 301 (although still LOS F) and Boyds Corner Road (LOS E)
- Volumes on SR 299 nearly 50% lower than No Build Alternative
- Moderate reduction in volumes on Summit Bridge (LOS E)
- Provides a bypass projected to operate at LOS B
- Reduces traffic volumes on local roads, such as Cedar Lane Road
- Increases traffic on SR 1 C&D Canal Bridge (LOS F), but bridge can be re-striped to add capacity

What is Level of Service (LOS)?

- A grading system for evaluating traffic operations
- Grades range from LOS A (best) to LOS F (worst)
- Influenced by traffic volumes, truck percentages,

Roadway Segment		2003 Existing	Recommended Range of Alternatives									
			No Build	Yellow	Orange	Purple	Brown	Green	Blue - N	Blue - S	Red	
1	Summit Bridge, SR 896 Across C&D Canal	ADT	29,300	70,000	65,000	60,000	64,000	72,000	58,000	69,000	90,000	
	LOS	B	F	F	E	E	F	D	F	F	F	
2	US 301, North of Middletown	ADT	22,600	44,000	31,000	33,000	32,000	27,000	36,000	43,000	44,000	
	LOS	E	F	F	F	F	E	F	F	F	F	
2	Bypass, North of Middletown	ADT	n/a	38,000	42,000	38,000	55,000	41,000	n/a	n/a	53,000	
	LOS	n/a	n/a	B	B	C	B	n/a	n/a	C		
3	US 301 at MD/DE State Line	ADT	11,200	19,000	28,000	28,000	29,000	28,000	26,000	25,000	29,000	
	LOS	D	E	A	A	A	A	A	A	A	A	
4	Cedar Lane Road, South of SR 896	ADT	4,600	17,000	7,000	5,000	7,000	6,000	4,000	13,000	16,000	
	LOS	C	E	C	C	C	C	C	D	E	C	
5	Boyd's Corner Road, West of Cedar Lane Road	ADT	16,100	36,000	29,000	28,000	29,000	26,000	28,000	29,000	32,000	
	LOS	E	F	E	E	E	E	E	E	F	F	
5	Bypass, West of Cedar Lane Road	ADT	n/a	30,000	41,000	32,000	32,000	44,000	26,000	20,000	n/a	
	LOS	n/a	n/a	B	B	B	B	A	A	n/a		
6	SR 299, West of SR 1	ADT	17,700	26,000	15,000	13,000	14,000	15,000	13,000	22,000	24,000	
	LOS	E	F	E	D	E	E	D	E	E	E	
7	St. Georges Bridge, US 13 Across C&D Canal	ADT	10,000	26,000	26,000	25,000	26,000	24,000	26,000	27,000	28,000	
	LOS	A	C	C	C	C	C	C	C	C	B	
8	SR 1 Across C&D Canal	ADT	62,200	98,000	107,000	112,000	107,000	105,000	113,000	99,000	98,000	
	LOS	C	E	E	F	E	E	F	E	E	D	
9	SR 1, South of SR 896	ADT	36,100	61,000	51,000	50,000	50,000	48,000	67,000	63,000	50,000	
	LOS	B	C	C	C	C	C	B	C	C	C	
10	US 13, South of SR 896	ADT	19,600	32,000	30,000	29,000	31,000	29,000	30,000	31,000	32,000	
	LOS	A	B	B	B	B	B	B	B	B	B	

Rating Criteria	Traffic Impacts - Summary of Rating Criteria									
	No Build	Yellow	Orange	Purple	Brown	Green	Blue (North)	Blue (South)	Red	
Impact on Eastern Canal Crossings (SR 1 and US 13)	○	○	○	○	○	○	○	○	○	
Impact on Western Canal Crossings (Summit Bridge)	○	○	○	○	○	○	○	○	○	
Magnitude of Improvements Needed on SR 896 / US 301 North of Canal	○	○	○	○	○	○	○	○	○	
Impact on Local Roads	○	○	○	○	○	○	○	○	○	
Impact on Existing US 301 and Boyd's Corner Road	○	○	○	○	○	○	○	○	○	
Separates Through and Local Truck Traffic	○	○	○	○	○	○	○	○	○	
Impact on Safety along US 301	○	○	○	○	○	○	○	○	○	
Relative Utilization of New Bypass	○	○	○	○	○	○	○	○	○	
Score	2	10	12	11	11	13	5	5	10	
Rating	Very Poor	Fair	Good	Good	Good	Good	Poor	Poor	Fair	

Values
 ○ = 0 points
 ○ = 1 point
 ● = 2 points

Ratings
 1-4: Very Poor
 5-7: Poor
 8-10: Fair
 11-13: Good
 14-16: Very Good



4 LANES - CONTROLLED ACCESS - ON NEW LOCATION

BROWN ALTERNATIVE

Congestion Relief Rating: GOOD

- Reduces volumes on US 301 and Boyds Corner Road (largest reduction of all alternatives - both LOS E)
- Volumes on SR 299 are 50% lower than No Build Alternative
- Provides a bypass projected to operate at LOS C
- Reduces traffic volumes on local roads, such as Cedar Lane Road
- Increases traffic on SR 1 C&D Canal Bridge (LOS E), but bridge can be re-striped to add capacity
- Increases traffic on Summit Bridge (LOS F)
- New Summit Bridge required to prevent LOS F

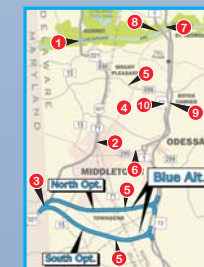


4 LANES - CONTROLLED ACCESS - NEW LOCATION

GREEN ALTERNATIVE

Congestion Relief Rating: GOOD

- Reduces volumes on US 301 (although still LOS F) and Boyds Corner Road (LOS E)
- Volumes on SR 299 are 50% lower than No Build Alternative
- Provides a bypass projected to operate at LOS B
- Reduces traffic volumes on local roads, such as Cedar Lane Road
- Increases traffic on SR 1 C&D Canal Bridge (LOS F), but bridge can be re-striped to add capacity
- Provides largest decrease in traffic on Summit Bridge (LOS D)



4 LANES - CONTROLLED ACCESS - NEW LOCATION

BLUE ALTERNATIVE

Congestion Relief Rating: POOR

- Does not significantly reduce traffic volumes on:
 - US 301 (LOS F)
 - Boyds Corner Road (LOS F for South Option)
 - SR 299 (LOS E)
 - local roads
- Bypass is underutilized compared to other alternatives (No local access)



4 LANES - CONTROLLED ACCESS - NEW LOCATION & ALONG EXISTING ROADWAY

RED ALTERNATIVE

Congestion Relief Rating: FAIR

- Reduces volumes on US 301 and Boyds Corner Road (although both are still LOS F)
- Does not significantly reduce traffic volumes on Boyds Corner Road (LOS F)
- Reduces No Build volumes on SR 299 by nearly 50%
- Increases traffic significantly on Summit Bridge (LOS F)
- Requires new Summit Bridge
- Requires substantial roadway improvements on SR 896 north of the C&D Canal, including:
 - Converting all intersections to interchanges
 - Major improvements to the I-95/SR 896 interchange