

# **Chapter 7: Project Evaluation Results**

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# CENTRAL VIRGINIA LONG RANGE TRANSPORTATION PLAN 2040 UPDATE CHAPTER 7



The final evaluation results, including the Benefit Score, Benefit-Cost Score, and Readiness Scores of every reviewed project is provided in Figure 7.1. Projects in this table are ordered by locality and assigned an ID number that corresponds to project maps. Projects 1–29 are part of the current VDOT Fiscal Year 2016 Six Year Improvement Program (SYIP) and were not reviewed as part of this evaluation process. The SYIP projects are listed in Chapter 8.

The technical appendix includes map and data that informed the project identification and selection process. As part of this process, each project was discussed with the local planning staff in order to ensure that the general intent and need could be clearly understood for the project evaluation process.

# CENTRAL VIRGINIA LONG RANGE TRANSPORTATION PLAN 2040 UPDATE CHAPTER 7



### Figure 7.1: Full Project Evaluation Results

Map ID	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated Cost	Benefit Score	Benefit- Cost Rating	Readiness Rating
30	Amherst County	29	South Amherst Highway	Amherst St (Rt 163)	S Coolwell Rd (Rt 604)	Traffic Operations/ Signal Coordination	\$1,625,500	76.73	High	Medium
31	Amherst County	29	South Amherst Highway	Amherst St (Rt 163)		Add ramp to complete interchange	\$12,000,000	78.63	High	Low
32	Amherst County	29	Monacan Parkway	Izaak Walton Rd (Rt 663)		New access ramps	\$10,000,000	53.20	Low	Low
33	Amherst County	60	Richmond Highway	US 29 Bypass	Rt 606W	2 lane improvements	\$9,349,000	54.05	Medium	Low
34	Amherst County	60	Richmond Highway	Rt 606W	CVMPO Boundary	2 lane improvements	\$14,904,000	57.81	Low	Low
35	Amherst County	130	Elon Rd	NS Railroad	South Amherst Highway (US 29 Bus)	Widen to four lanes	\$40,556,500	57.28	Low	Low
36	Amherst County	163	South Amherst Highway	River Rd (Rt 685)	US 29 Business	Widen to 4 lanes with bike lane	\$34,153,000	61.30	Medium	Low
37	Amherst County	210	Colony Rd	Rt 163	Rt 1034	2 lane reconstruction with shoulder	\$2,815,000	48.00	Medium	Low
38	Amherst County	622	New Wright Shop Rd	Colony Rd (Rt 210)	Dixie Airport Rd (Rt 677)	Reconstruct 2 lane road	\$19,657,000	53.24	Medium	Low
39	Amherst County	652	Cedar Gate Rd	Rt 657	Rt 675	2 lane reconstruction	\$6,271,000	43.56	Low	Low
40	Amherst County	661	Old Stage Rd	Sweet Briar Ln (Rt 624)	London Ln	2 lane improvements	\$2,849,000	45.83	Low	Low
41	Amherst County	663	Izaak Walton Rd	Glade Rd (Rt 130)	S Coolwell Rd (Rt 604)	Reconstruct 2 lane roadway	\$25,651,000	45.30	Low	Low
42	Amherst County	675	Winesap Rd	Rt 652	Rt 795	Widen pavement to 22 ft	\$17,671,000	42.06	Low	Low
43	Amherst County	677	Dixie Airport Rd	Amelon Rd (Rt 699)	Galts Mill Rd (Rt 622)	Reconstruct 2 lane roadway	\$10,255,500	45.90	Medium	Low
44	Amherst County	682	Woody's Lake Rd	South Amherst Hwy (US 29 Bus)	End	Reconstruct Roadway	\$7,202,500	52.64	Low	Low
45	Amherst County	685	River Rd	NS Railroad	Rt 163	Reconstruct 2 lane roadway	\$21,459,500	48.94	Low	Low
46	Amherst County	685	River Rd	Rt 130	NS Railroad	Reconstruct 2 lane roadway	\$26,877,000	50.45	Low	Low
47	Amherst County	795	Winridge Rd	Rt 130	Rt 675	Reconstruct 2 lane roadway	\$9,429,000	45.46	Low	Low
48	Amherst		(New Road)	South Amherst Highway (US	Fernwood Dr	New 2 lane connector road	\$6,232,000	47.56	Low	Low
49	County Bedford	221	Forest Rd	29 Bus) Gristmill Dr (Rt 1426)	Graves Mill Rd (Rt 126)	Access Management and Intersection	\$3,140,000	82.76	High	Medium
50	County Bedford	460	E Lynchburg Salem Turnpike	Goode Rd (Rt 668)	Thomas Jefferson Rd (Rt 811)	Improvements Construct paved shoulder and access	\$8,000,000	64.67	High	Low
51	County Bedford	501	Boonsboro Rd	Winding Creek Ln (Rt 647)		management  Relocate intersection, construct turn lane	\$1,625,500	56.89	Medium	Low
52	County Bedford	621	Cottontown Rd	Hooper Rd (Rt 662)	Hawkins Mill Rd (Rt 660)	Reconstruct 2 lane roadway	\$12,793,000	42.06	Low	Low
53	County Bedford	621	Cottontown Rd	Coffee Rd (Rt 644)	Hooper Rd (Rt 662)	Reconstruct 2 lane roadway	\$28,660,000	43.56	Low	Low
54	County Bedford	622	Waterlick Rd	Thomas Jefferson Rd (Rt 811)	Campbell County Corp Limits	Widen to 4 lanes	\$19,211,500	60.72	Medium	Low
55	County Bedford	622	Everett Rd	Kensington Pkwy	Gladden Cir (Rt 646)	Reconstruct 2 lane roadway	\$14,330,000	42.06	Low	Low
56	County Bedford	623	Turkey Foot Rd	Thomas Jefferson Rd (Rt 811)	Campbell County Corp Limits	Widen pavement to 24 ft	\$9,030,000	46.67	Low	Low
57	County Bedford	644	Coffee Rd	Elk Valley Rd (Rt 665N)	Lynchburg Corp Limit	Reconstruct 2 lane roadway	\$45,140,500	45.50	Low	Low
58	County Bedford	659	Hawkins Mill Rd	Old Farm Rd (Rt 660)	Lynchburg Corp Limits	Reconstruct 2 lane roadway	\$9,783,000	45.66	Low	Low
59	County Bedford	663	Perrowville Rd	Quail Ridge Rd (Rt 1431)	Coffee Rd (Rt 644)	Reconstruct 2 lane roadway	\$15.047.000	42.06	Low	Low
60	County Bedford	811	Thomas Jefferson Rd	Forest Rd (Rt 221)	Waterlick Rd (Rt 622)	Widen to 4 lanes	\$34,153,000	59.58	Medium	Low
61	County Bedford	811	Thomas Jefferson Rd	Waterlick Rd (Rt 622)	Great Oak Rd (Rt 704)	Widen to 4 lanes	\$49,095,000	52.11	Low	Low
62	County Bedford	811	Thomas Jefferson Rd	Great Oak Rd (Rt 704)	US 460	Widen to 4 lanes	\$25,615,000	52.11	Medium	Low
63	County Campbell	29	US 29 Southern Bypass	S of Rt 24	Richmond Highway (US 460)	New 4 lane limited access facility	\$244,951,000	75.06	Low	Low
64	County Campbell	29	(Western Alternative) US 29 Southern Bypass	S of Rt 24	E Lynchburg Salem Turnpike	New 4 lane limited access facility	\$363,245,000	75.06	Low	Low
65	County Campbell	29	(Eastern Alternative) Wards Rd	Calohan Rd (Rt 685)	(US 460)  City of Lynchburg corp limits	Widen road (rural 6 lane with median)	\$63,784,500	69.92		
66	County Campbell	29			Calohan Rd (Rt 685)		\$23,486,000		Medium	Low
	County Campbell		Wards Rd	Colonial Highway (Rt 24)	, ,	Widen road (rural 6 lane with median)		63.31	Medium	Low
67	County Campbell	29	Wards Rd	S of Calohan Rd (Rt 685)	City of Lynchburg Corp Limits	Access mgmt, traffic ops, safety improvements	\$10,000,000	73.18	High	Medium
68	County Campbell	29	Wards Rd  East Lynchburg Salem	English Tavern Rd (Rt 738)	Terminal Dr	Access Management	\$16,000,000	82.72	High	Medium
69	County Campbell	460	Turnpike	Waterlick Rd (Rt 622)	Campbell Ave (Rt 501)	Increase to 6 lanes	\$173,356,000	71.48	Medium	Low
70	County	460	Timberlake Rd	Waterlick Rd (Rt 622)		Median & turn lane improvements, add lanes	\$2,344,000	82.51	High	Medium
71	County	501	Campbell Highway	Village Rd (Rt 24)	Suburban Rd (Rt 680)	Widen to 4 lanes	\$27,387,500	59.24	Low	Low
72	County	622	Waterlick Rd	Bedford County Corp Limit	Rainbow Forest Dr (Rt 1520)	Widen to 4 lanes	\$23,480,500	68.26	Medium	Low
73	County	622	Waterlick Rd	Timberlake Rd (US 460)	Leesville Rd (Rt 682)	Widen to 4 lanes	\$20,889,000	60.94	Medium	Low
74	County	681	Sunburst Rd	Richmond Highway (US 460)	Waterlick Rd (Rt 622)	Reconstruct 2 lane roadway	\$21,736,000	52.23	Low	Low
75	County	682	Leesville Rd	City of Lynchburg corp limits	Richmond Highway (US 460)	Widen to 4 lanes	\$41,663,500	51.80	Medium	Low
76	Campbell County	726	Mt. Athos Rd	Richmond Highway (US 460)	Babcock and Wilcox	Upgrade existing 2 lane road	\$13,614,000	53.29	Medium	Low

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ID	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated Cost	Benefit Score	Benefit- Cost Rating	Readiness Rating
77	Campbell County	738	English Tavern Rd	Suburban Rd (Rt 680)	Wards Rd (US 29)	Widen to 24 ft	\$13,376,000	47.16	Medium	Low
78	Campbell County	738	English Tavern Rd	Wards Rd (US 29)	Suburban Rd (Rt 680)	Widen to 24 ft	\$10,032,000	48.65	Medium	Low
79	City of Lynchburg	29	Lynchburg Expressway	Main St/Church St		Improve interchange	\$2,700,000	74.71	High	Low
80	City of Lynchburg	29	Lynchburg Expressway	Miller St/Robbin Rd		Improve interchange	\$200,000	74.66	High	Medium
81	City of Lynchburg	29	Lynchburg Expressway	Kemper St/ Campbell Ave		Improve interchange	\$14,900,000	76.21	High	Low
82	City of Lynchburg	29	Lynchburg Expressway	James St/Stadium Rd		Improve interchange	\$12,220,000	76.21	High	Low
83	City of Lynchburg	29	Lynchburg Expressway	Odd Fellows Rd		Improve interchange	\$7,320,000	83.67	High	Low
84	City of Lynchburg	29/501	Lynchburg Expressway	Candlers Mountain Rd (Rt 501)		Improve interchange	\$16,220,000	92.71	High	Low
85	City of Lynchburg	163	5th St	Jackson St	Taylor St	Streetscape improvements	\$2,000,000	55.47	High	Low
86	City of Lynchburg	163	5th St	Taylor St	NS Railway Bridge	Reconstruct road and ped, add streetscape	\$2,000,000	61.23	High	Low
87	City of Lynchburg	163	Memorial Ave	NS Railway	Langhorne Ave	Reconstruct road and ped, add streetscape	\$2,000,000	68.89	High	Low
88	City of Lynchburg	221	Lakeside Dr	Lynchburg Expressway (Rt 501)	Forest Brook Rd	Widen to 4 lanes	\$19,211,175	80.09	Medium	Low
89	City of Lynchburg	460/29	Richmond Highway	Campbell Ave (Rt 501)	Monacan Parkway (US 29)	Widen to 6 lane limited access highway	\$39,927,900	82.70	Medium	Low
90	City of Lynchburg	501	Lynchburg Expressway	S of Rt 221	Northwest Expressway (Rt 501)	New 4 lane road (One way pairs)	\$37,383,000	93.26	High	High
91	City of Lynchburg	501	Candlers Mountain Rd	Richmond Highway (US 460)	Lynchburg Expressway (US 29)	Widen to 6 lanes	\$23,068,000	89.37	High	Low
92	City of Lynchburg	501	Northwest Expressway	Old Forest Rd	Wiggington Rd (Rt 620)	Widen to 4 lanes	\$27,652,950	70.49	High	Low
93	City of Lynchburg	501	Campbell Ave	Edmunds St	Florida Ave	Roundabouts, Road Diet, Rail to Trail	\$6,100,000	66.83	High	Low
94	City of Lynchburg	670	Candlers Mountain Rd	Mayflower Dr (Rt 128)	Richmond Highway (US 460)	Widen to 4 lanes	\$17,283,000	68.86	Medium	Low
95	City of Lynchburg		Downtown Streets		-	Implement downtown complete streets	\$50,000,000	72.79	Medium	Low
96	City of Lynchburg		Odd Fellows Rd	Richmond Hwy (US 460)	Lynchburg Expressway (US 29)	Roundabouts, bridge replacement, corridor balance	\$13,000,000	63.91	Medium	Low
97	City of Lynchburg		Wards Ferry Rd	Harvard St.	-	Construct Roundabout	\$1,100,000	61.15	High	Low
98	City of Lynchburg		Wards Ferry Rd	Atlanta Ave		Add turn lanes	\$495,000	53.42	High	Low
99	City of Lynchburg		New Road	Campbell Ave (Rt 501)	Odd Fellows Rd	Construct new roadway	\$10,000,000	53.56	Low	Low



#### **Average Evaluation Results**

In order to utilize the results from each evaluation category, three rankings were assigned to each project: Rank by Benefit Score, Rank by Benefit-Cost Score, and Rank by Readiness Score. (Readiness score rankings were determined by first ordering the projects in order of High, Medium, and Low readiness categories, and then ordering all the projects within the same readiness category by Benefit Score). Next, an average of the three rankings was calculated for each project. The final project rankings were assigned by ordering the projects by this average ranking. A list of the region's high benefit projects (benefit score greater than 66.7), ordered by average ranking, is provided in Figure 7.2:

Figure 7.2: Average Evaluation Ranking of High Benefit Projects

ID#	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated Cost	Benefit Score	Rank	Benefit- Cost	Rank	Readiness Rating	Rank	Average Ranking	Final Rank
49	Bedford County	221	Forest Rd	Gristmill Dr (Rt 1426)	Graves Mill Rd (Rt 126)	Access Management and Intersection	\$3,140,000	82.76	5	Rating High	4	Medium	2	3.7	1
70	Campbell County	460	Timberlake Rd	Waterlick Rd (Rt 622)	-	Median & turn lane improvements, add lanes	\$2,344,000	82.51	8	High	3	Medium	4	5.0	2
90	City of Lynchburg	501	Lynchburg Expressway	S of Rt 221	Northwest Expressway (Rt 501)	New 4 lane road (One way pairs)	\$37,383,000	93.26	1	High	15	High	1	5.7	3
30	Amherst County	29	South Amherst Highway	Amherst St (Rt 163)	S Coolwell Rd (Rt 604)	Traffic Operations/ Signal Coordination	\$1,625,500	76.73	11	High	2	Medium	5	6.0	4
68	Campbell County	29	Wards Rd	English Tavern Rd (Rt 738)	Terminal Dr	Access Management	\$4,000,000	82.72	6	High	11	Medium	3	6.7	5
91	City of Lynchburg	501	Candlers Mountain Rd	Richmond Highway (US 460)	Lynchburg Expressway (US 29)	Widen to 6 lanes	\$23,068,000	89.37	3	High	10	Low	9	7.3	6
83	City of Lynchburg	29	Lynchburg Expressway	Odd Fellows Rd	1	Improve interchange	\$7,320,000	83.67	4	High	8	Low	10	7.3	7
84	City of Lynchburg	29/ 501	Lynchburg Expressway	Candlers Mountain Rd (Rt 501)		Improve interchange	\$16,220,000	92.71	2	High	13	Low	8	7.7	8
80	City of Lynchburg	29	Lynchburg Expressway	Miller St/Robbin Rd	1	Improve interchange	\$200,000	74.66	17	High	1	Medium	6	8.0	9
67	Campbell County	29	Wards Rd	S of Calohan Rd (Rt 685)	City of Lynchburg Corp Limits	Access mgmt, traffic ops, safety improvements	\$10,000,000	73.18	18	High	7	Medium	7	10.7	10
89	City of Lynchburg	460/ 29	Richmond Highway	Campbell Ave (Rt 501)	Monacan Parkway (US 29)	Widen to 6 lane limited access highway	\$39,927,900	82.70	7	Medium	18	Low	11	12.0	11
31	Amherst County	29	South Amherst Highway	Amherst St (Rt 163)	-	Add ramp to complete interchange	\$12,000,000	78.63	10	High	14	Low	13	12.3	12
82	City of Lynchburg	29	Lynchburg Expressway	James St/Stadium Rd		Improve interchange	\$12,220,000	76.21	12	High	12	Low	14	12.7	13
88	City of Lynchburg	221	Lakeside Dr	Lynchburg Expressway (Rt 501)	Forest Brook Rd	Widen to 4 lanes	\$19,211,175	80.09	9	Medium	19	Low	12	13.3	14
79	City of Lynchburg	29	Lynchburg Expressway	Main St/Church St	1	Improve interchange	\$2,700,000	74.71	16	High	6	Low	18	13.3	15
81	City of Lynchburg	29	Lynchburg Expressway	Kemper St/ Campbell Ave	1	Improve interchange	\$14,900,000	76.21	12	High	17	Low	15	14.7	16
87	City of Lynchburg	163	Memorial Ave	NS Railway	Langhorne Ave	Reconstruct road and ped, add streetscape	\$2,000,000	68.89	23	High	5	Low	23	17.0	17
63	Campbell County	29	US 29 Southern Bypass (Western Alternative)	S of Rt 24	Richmond Highway (US 460)	New 4 lane limited access facility	\$244,951,000	75.06	14	Low	25	Low	16	18.3	18
64	Campbell County	29	US 29 Southern Bypass (Eastern Alternative)	S of Rt 24	E Lynchburg Salem Turnpike (US 460)	New 4 lane limited access facility	\$363,245,000	75.06	14	Low	26	Low	17	19.0	19
92	City of Lynchburg	501	Northwest Expressway	Old Forest Rd	Wiggington Rd (Rt 620)	Widen to 4 lanes	\$27,652,950	70.49	21	High	16	Low	21	19.3	20
95	City of Lynchburg		Downtown Streets			Implement downtown complete streets	\$50,000,000	72.79	19	Medium	23	Low	19	20.3	21
93	City of Lynchburg	501	Campbell Ave	Edmunds St	Florida Ave	Roundabouts, Road Diet, Rail to Trail	\$6,100,000	66.83	26	High	9	Low	26	20.3	22
69	Campbell County	460	East Lynchburg Salem Turnpike	Waterlick Rd (Rt 622)	Campbell Ave (Rt 501)	Increase to 6 lanes	\$173,356,000	71.48	20	Medium	24	Low	20	21.3	23
65	Campbell County	29	Wards Rd	Calohan Rd (Rt 685)	City of Lynchburg corp limits	Widen road (rural 6 lane with median)	\$63,784,500	69.92	22	Medium	22	Low	22	22.0	24
94	City of Lynchburg	670	Candlers Mountain Rd	Mayflower Dr (Rt 128)	Richmond Highway (US 460)	Widen to 4 lanes	\$17,283,000	68.86	24	Medium	20	Low	24	22.7	25
72	Campbell County	622	Waterlick Rd	Bedford County Corp Limit	Rainbow Forest Dr (Rt 1520)	Widen to 4 lanes	\$23,480,500	68.26	25	Medium	21	Low	25	23.7	26



#### **Future Priority Projects**

Given the results shown in Figure 7.2, the CVMPO has identified the top ten projects from that list as the region's future priority projects. These projects, which are shown again in Figure 7.3 below, provide improvements that are most consistent with the region's transportation needs and priorities, and should be given priority access to future funding as it becomes available.

Following this page, the individual project score sheets for each of the ten projects are provided in order of final ranking. These score sheets present all of the information that was used to determine the project ratings. These sheets, along with the score sheets for every project reviewed during the planning effort, are also provided in Technical Appendix A.

Figure 7.3: Future Priority Projects

ID #	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated Cost	Final Rank
49	Bedford County	221	Forest Rd	Gristmill Dr (Rt 1426)	Graves Mill Rd (Rt 126)	Access Management and Intersection Improvements	\$3,140,000	1
70	Campbell County	460	Timberlake Rd	Waterlick Rd (Rt 622)		Median & turn lane improvements, add lanes	\$2,344,000	2
90	City of Lynchburg	501	Lynchburg Expressway	S of Rt 221	Northwest Expressway (Rt 501)	New 4 lane road (One way pairs)	\$37,383,000	3
30	Amherst County	29	South Amherst Highway	Amherst St (Rt 163)	S Coolwell Rd (Rt 604)	Traffic Operations/ Signal Coordination	\$1,625,500	4
68	Campbell County	29	Wards Rd	English Tavern Rd (Rt 738)	Terminal Dr	Access Management	\$4,000,000	5
91	City of Lynchburg	501	Candlers Mountain Rd	Richmond Highway (US 460)	Lynchburg Expressway (US 29)	Widen to 6 lanes	\$23,068,000	6
83	City of Lynchburg	29	Lynchburg Expressway	Odd Fellows Rd		Improve interchange	\$7,320,000	7
84	City of Lynchburg	29/501	Lynchburg Expressway	Candlers Mountain Rd (Rt 501)		Improve interchange	\$16,220,000	8
80	City of Lynchburg	29	Lynchburg Expressway	Miller St/Robbin Rd		Improve interchange	\$200,000	9
67	Campbell County	29	Wards Rd	S of Calohan Rd (Rt 685)	City of Lynchburg Corp Limits	Access mgmt, traffic ops, safety improvements	\$10,000,000	10



Project	Project Number		Category	Access Manager	nent and Safety	Proje	ct List	Vision
Jurisdiction Route		Name	Route Number	From		Т	'o	Length (mi)
Bedford County	Fore	st Rd	221	Gristmill Dr	(Rt 1426)	Graves Mill	Rd (Rt 126)	0.2
Proposed Im	provement	Access Man	agement and	Intersection Im	provements	Est. Cost	\$3,14	0,000
Capacity/ Traffic Ops			Primary	Modes Served	Auto		Streetscaping	None
Project Benefi	t Score	82.8	Project Benefit	t-Cost Rating	High	Project Readin	ess Rating	Medium

#### **Benefit Score Calculation**

Vision Theme: Mobility and Accessibility

Category	Result	Rating	Points	Weight	Score
Congestion	2040 V/C: 1.10	High	100	37%	37.0
Traffic Volume	2040 Weighted Traffic Flow: 456 vph	High	100	23%	23.0
Freight	Truck Volume: 1.24%	Low	33.3	20%	6.7
Alternative Transportation	None included	Low	66.7	20%	13.3
Total Mobility and Accessibility Score				80.0	

#### **Vision Theme: Safety**

Category	Result	Rating	Points	Weight	Score
Accident Rate	2011-2013: 170 accidents per mile	High	100	61%	61.0
Safety Features	Primary: Access mgmt and intersection design	High	100	39%	39.0
			To	otal Safety Score	100.0

#### Vision Theme: Economy

Category	Result	Rating	Points	Weight	Score
Economic Development Plans	Not included in recommendations	Low	33.3	25%	8.3
Commuter Travel	Primary commuter corridor with congestion	High	100	44%	44.0
Employment Density	1-4 jobs per acre	Medium	66.7	31%	20.7
		Total Economy Score			73.0

#### Vision Theme: Community and Nature

Category	Result	Rating	Points	Weight	Score
Cultural and Env. Resources	Resource Score: 13	High	100	30%	30.0
Corridor Beautification	No streetscaping features	Low	66.7	30%	20.0
Right of Way Sufficiency	No additional ROW needed	High	100	40%	40.0
Total Community and Nature Score					90.0

#### **Vision Theme: Operational Efficiency**

Category	Result	Rating	Points	Weight	Score
Functional Classification	Urban Minor Arterial	Medium	66.7	20%	13.3
Plan Coordination	Rt 221 Corridor Plan	Medium	66.7	38%	25.3
Distribution of Benefits	Bedford County, City of Lynchburg	Medium	66.7	42%	28.0
Total Operational Efficiency Score					66.7

Vision Theme	Points	Weight	Score		
Mobility and Accessibility	80.0	20%	16.0		
Safety	100.0	25%	25.0		
Economy	73.0	25%	18.3		
Community and Nature	90.0	15%	13.5		
Operational Efficiency	66.7	15%	10.0		
	Total Proje	Total Project Benefit Score			

	Benefit Score	82.8
Benefit-Cost Calculation	Estimated Cost	\$3,140,000
	Estimated Users	43743
	Benefit-Cost Score	1152.88
	Benefit-Cost Rating	High

	NEPA Screening	1
Calculation	Right of Way Acquisition	1
	Ongoing Project	0
	Readiness Score	2
	Readiness Rating	Medium



Project	Number	70	Category	Intersection Re	econstruction	Project List		Vision
Jurisdiction Route Name		Route Number	Fro	om To		'o	Length (mi)	
Campbell County	Timber	lake Rd	460	Waterlick R	Rd (Rt 622)		-	0.25
Proposed Improvement Median			& turn lane in	nprovements, a	dd lanes	Est. Cost	\$2,34	4,000
Capacity/ Traffic Ops	Improves traffic ops	Safety Priority	Primary	Modes Served	Auto		Streetscaping	Secondary
Project Benefit Score 82.5		Project Benefit	t-Cost Rating	High	Project Readin	ess Rating	Medium	

#### **Benefit Score Calculation**

Vision Theme: Mobility and Accessibility

Category	Result	Rating	Points	Weight	Score
Congestion	2040 V/C: 1.21	High	100	37%	37.0
Traffic Volume	2040 Weighted Traffic Flow: 595 vph	High	100	23%	23.0
Freight	Truck Volume: 1.39%	Truck Volume: 1.39% Low 33.3 20%		6.7	
Alternative Transportation	None included	Low	33.3	20%	6.7
Total Mobility and Accessibility Score					73.3

#### Vision Theme: Safety

Category	Result	Rating	Points	Weight	Score
Accident Rate	2011-2013: 164 accidents per mile	High	100	61%	61.0
Safety Features	Primary: Intersection Redesign	High	100 39%		39.0
			To	otal Safety Score	100.0

#### Vision Theme: Economy

Category	Result	Rating	Points	Weight	Score
Economic Development Plans	Corridor of Statewide Significance	Medium	66.7	25%	16.7
Commuter Travel	Primary commuter corridor with congestion	High	100	44%	44.0
Employment Density	1-4 jobs per acre	Medium	66.7	66.7 31%	
Total Economy Score				81.4	

#### Vision Theme: Community and Nature

Category	Result	Rating	Points	Weight	Score
Cultural and Env. Resources	Resource Score: 14	High	100	30%	30.0
Corridor Beautification	Includes median area	Medium	66.7	30%	20.0
Right of Way Sufficiency	Minor additional ROW needed	Medium 66.7 40%		26.7	
Total Community and Nature Score					76.7

#### **Vision Theme: Operational Efficiency**

Category	Result	Rating	Points	Weight	Score
Functional Classification	Urban Other Principle Arterial	High	100	20%	20.0
Plan Coordination	VDOT STARS II	Medium	66.7	38%	25.3
Distribution of Benefits	Campbell County, City of Lynchburg	Medium	66.7	42%	28.0
Total Operational Efficiency Score					73.4

Vision Theme	Points	Weight	Score		
Mobility and Accessibility	73.3	20%	14.7		
Safety	100.0	25%	25.0		
Economy	81.4	25%	20.3		
Community and Nature	76.7	15%	11.5		
Operational Efficiency	73.4	15%	11.0		
	Total Project Benefit Score				

	Benefit Score	82.5
Benefit-Cost Calculation	Estimated Cost	\$2,344,000
	Estimated Users	57146
	Benefit-Cost Score	2011.56
	Benefit-Cost Rating	High

	NEPA Screening	1
Readiness	Right of Way Acquisition	0
	Ongoing Project	1
	Readiness Score	2
	Readiness Rating	Medium



Project	Number	90	Category	Roadway Red	construction	Project List		Vision
Jurisdiction	ion Route Name Route From To		'o	Length (mi)				
City of Lynchburg	Lynchburg	Expressway	501	S of Rt 221 Northwest Ex			1	
Proposed Imp	Proposed Improvement New 4 lane road (One way pairs) Est. Cost \$					\$37,38	33,000	
Capacity/ Traffic Ops	Improves operations	Safety Priority	Primary	Modes Served	Auto	, Ped	Streetscaping	Secondary
Project Benefit Score 93.3			Project Benefit	t-Cost Rating	High	Project Readin	ess Rating	High

#### **Benefit Score Calculation**

Vision Theme: Mobility and Accessibility

Category	Result Rating Points Weight		Weight	Score	
Congestion	2040 V/C: 1.14	High	100	37%	37.0
Traffic Volume	2040 Weighted Traffic Flow: 580 vph	High	100	23%	23.0
Freight	Truck Volume: 2.4%	Medium	66.7	20%	13.3
Alternative Transportation	Adds sidewalks Medium 66.7 20%		13.3		
	Total Mobility and Accessibility Score				86.7

#### Vision Theme: Safety

Category	Result Rating Points Weight		Score		
Accident Rate	2011-2013: 46 accidents per mile	High	100	61%	61.0
Safety Features	Safety intersection design, seperates modes	High	100	39%	39.0
			To	otal Safety Score	100.0

#### Vision Theme: Economy

Category	Result	Rating	Points Weight		Score
Economic Development Plans	Recommended in Region 2000 CEDS	High	100	25%	25.0
Commuter Travel	Primary commuter corridor with congestion	High	100	44%	44.0
Employment Density	1-4 jobs per acre	Medium	66.7 31%		20.7
	Total Economy Score				89.7

#### Vision Theme: Community and Nature

Category	Result	Rating	Points	Weight	Score
Cultural and Env. Resources	Resource Score: 14	High	100	30%	30.0
Corridor Beautification	Includes sidewalk space	Medium	66.7	30%	20.0
Right of Way Sufficiency	No additional ROW needed	High	100	40%	40.0
		Total Community and Nature Score			90.0

#### **Vision Theme: Operational Efficiency**

Category	Result	Rating	Points	Weight	Score
Functional Classification	Urban Freeway and Expressway	High	100	20%	20.0
Plan Coordination	City of Lynchburg Comp Plan, Region 2000 CEDS, VTRANS 2035 STP	High	100	38%	38.0
Distribution of Benefits	Regional	High	100	42%	42.0
Total Operational Efficiency Score					100.0

Vision Theme	Points	Weight	Score
Mobility and Accessibility	86.7	20%	17.3
Safety	100.0	25%	25.0
Economy	89.7	25%	22.4
Community and Nature	90.0	15%	13.5
Operational Efficiency	100.0	15%	15.0
	93.3		

	Benefit Score	93.3
	Estimated Cost	\$37,383,000
	Estimated Users	55,680
Calculation	Benefit-Cost Score	138.90
	Benefit-Cost Rating	High

Readiness	NEPA Screening	1
	Right of Way Acquisition	1
	Ongoing Project	1
	Readiness Score	3
	Readiness Rating	High



Project	Number	30	Category	Access Managen	nent and Safety	Proje	ct List	Vision		
Jurisdiction	ction Route Name Route From To		То		Length (mi)					
Amherst County	South Amhe	erst Highway	29	Amherst St (Rt 163)		S Coolwell Rd (Rt 604)		S Coolwell Rd (Rt 604)		3.7
Proposed Im	provement	Traffi	c Operations/	Signal Coordin	ation	Est. Cost	\$1,62	5,500		
Capacity/ Traffic Ops	Improves Traffic Ops	Safety Priority	Secondary	Modes Served	Αι	ıto	Streetscaping	None		
Project Benefit	Project Benefit Score 76.7 Project Benefit-Cost Rating High Project Readiness Rating				Medium					

#### **Benefit Score Calculation**

Vision Theme: Mobility and Accessibility

Category	Result	Result Rating Points Weight		Score	
Congestion	2040 V/C: 0.86	Medium	66.7	37%	24.7
Traffic Volume	2040 Weighted Traffic Flow: 470 vph	High	100	23%	23.0
Freight	Truck Volume: 3.32%	Medium	66.7	20%	13.3
Alternative Transportation	None included Low 33.3 20%		6.7		
	Total Mobility and Accessibility Score				67.7

#### Vision Theme: Safety

Category	Result Rating Points Weight		Score		
Accident Rate	2011-2013: 56.8 accidents per mile	High	100	61%	61.0
Safety Features	Improves traffic operations	Medium	66.7	39%	26.0
			To	otal Safety Score	87.0

#### Vision Theme: Economy

Category	Result	Rating	ing Points Weight		Score
Economic Development Plans	Improves corridor of statewide significance	Medium	66.7	25%	16.7
Commuter Travel	Primary commuter corridor with congestion	High	100	44%	44.0
Employment Density	1-4 jobs per acre	Medium	66.7	66.7 31%	
		Total Economy Score			81.4

#### **Vision Theme: Community and Nature**

Category	Result	Rating	Points	Weight	Score
Cultural and Env. Resources	Resource Score: 13	High	100	30%	30.0
Corridor Beautification	No streetscaping features	Low	33.3	30%	10.0
Right of Way Sufficiency	No additional ROW needed	High	100	40%	40.0
Total Community and Nature Score				80.0	

#### **Vision Theme: Operational Efficiency**

Category	Result	Rating	Points	Weight	Score
Functional Classification	Urban Other Principle Arterial	High	100	20%	20.0
Plan Coordination	Not recommended in other plans	Low	33.3	38%	12.7
Distribution of Benefits	Amherst County, City of Lynchburg	Medium	66.7	42%	28.0
Total Operational Efficiency Score				60.7	

Vision Theme	Points	Weight	Score
Mobility and Accessibility	67.7	20%	13.5
Safety	87.0	25%	21.8
Economy	81.4	25%	20.3
Community and Nature	80.0	15%	12.0
Operational Efficiency	60.7	15%	9.1
	Total Proje	76.7	

	Benefit Score	76.7
Benefit-Cost	Estimated Cost	\$1,625,500
	Estimated Users	42783
Calculation	Benefit-Cost Score	2019.41
	Benefit-Cost Rating	High

Readiness Calculation	NEPA Screening	1
	Right of Way Acquisition	1
	Ongoing Project	0
	Readiness Score	2
	Readiness Rating	Medium



Project	Number	68	Category	Access Managen	nent and Safety	Proje	ct List	Vision
Jurisdiction	Route	Name	Route Number	Fro	m	Т	o	Length (mi)
Campbell County	Ward	ds Rd	29	English Taveri	n Rd (Rt 738)	Termi	nal Dr	1.6
Proposed Im	Proposed Improvement Access Management					Est. Cost	\$16,00	00,000
Capacity/ Traffic Ops	Improves traffic ops	Safety Priority	Primary	Modes Served	Auto		Streetscaping	None
Project Benefit Score 82.7 Project Benefit-Cost Rating High Project Readiness Rating					Medium			

#### **Benefit Score Calculation**

Vision Theme: Mobility and Accessibility

Category	Result	Rating	Points	Weight	Score
Congestion	2040 V/C: 0.81	Medium	66.7	37%	24.7
Traffic Volume	2040 Weighted Traffic Flow: 480 vph		100	23%	23.0
Freight	Truck Volume: 6.24%	High	100	20%	20.0
Alternative Transportation	None included	Low	33.3	20%	6.7
Total Mobility and Accessibility Score				74.3	

#### Vision Theme: Safety

Category	Result	Rating	Points	Weight	Score
Accident Rate	2011-2013: 58.1 accidents per mile	High	100	61%	61.0
Safety Features	Primary: Access Management	High	100	39%	39.0
			To	otal Safety Score	100.0

#### Vision Theme: Economy

Category	Result	Rating	Points	Weight	Score
Economic Development Plans	Corridor of Statewide Significance	Medium	66.7	25%	16.7
Commuter Travel	Primary commuter corridor with congestion	High	100	44%	44.0
Employment Density	oyment Density Less than 1 job per acre		33.3	31%	10.3
Total Economy Score				71.0	

#### Vision Theme: Community and Nature

Category	Result	Rating	Points	Weight	Score
Cultural and Env. Resources	Resource Score: 12	High	100	30%	30.0
Corridor Beautification	No streetscaping features	Low	33.3	30%	10.0
Right of Way Sufficiency No additional ROW needed		High	100	40%	40.0
Total Community and Nature Score					80.0

#### **Vision Theme: Operational Efficiency**

Category	Result	Rating	Points	Weight	Score
Functional Classification	Urban Other Principle Arterial	High	100	20%	20.0
Plan Coordination	VTRANS 2035 Surface Transportation Plan		66.7	38%	25.3
Distribution of Benefits Regional Corridor		High	100	42%	42.0
Total Operational Efficiency Score				87.3	

Vision Theme	Points	Weight	Score
Mobility and Accessibility	74.3	20%	14.9
Safety	100.0	25%	25.0
Economy	71.0	25%	17.7
Community and Nature	80.0	15%	12.0
Operational Efficiency	87.3	15%	13.1
	Total Proje	82.7	

	Benefit Score	82.7
Benefit-Cost Calculation	Estimated Cost	\$16,000,000
	Estimated Users	35638
	Benefit-Cost Score	184.24
	Benefit-Cost Rating	High

	NEPA Screening	1
Readiness	Right of Way Acquisition	1
	Ongoing Project	0
	Readiness Score	2
	Readiness Rating	Medium



Project	Number	91	Category	Roadway Capa	city Expansion	Project List		Vision
Jurisdiction Route Name		Route Number	From		То		Length (mi)	
City of Lynchburg	Candlers M	Iountain Rd	501	Richmond Highway (US Lyn 460)		Lynchburg Expressway (US 29)		0.99
Proposed Imp	provement		Widen t	o 6 lanes		Est. Cost	\$23,06	58,000
Capacity/ Traffic Ops	Increases capacity	Safety Priority	Primary	Modes Served	Auto	, Ped	Streetscaping	Secondary
Project Benefit Score 89.4 Project Benefit-Cost Rating High Project Readiness Rating			ess Rating	Low				

#### **Benefit Score Calculation**

Vision Theme: Mobility and Accessibility

Category	Result	Rating	Points	Weight	Score
Congestion	2040 V/C: 1.00	Medium	66.7	37%	24.7
Traffic Volume	2040 Weighted Traffic Flow: 526 vph	High	100	23%	23.0
Freight	Truck Volume: 2.40%	Medium	66.7	20%	13.3
Alternative Transportation	Adds sidewalks	Medium 66.7 20%		13.3	
Total Mobility and Accessibility Score				74.4	

#### Vision Theme: Safety

Category	Result	Rating	Points	Weight	Score
Accident Rate	2011-2013: 121 accidents per mile	High	100	61%	61.0
Safety Features	Primary: Separates travel modes High 100 39%		39.0		
			To	otal Safety Score	100.0

#### Vision Theme: Economy

Category	Result	Rating	Points	Weight	Score
Economic Development Plans	Region 2000 CEDS	High	100	25%	25.0
Commuter Travel	Primary commuter corridor with congestion High 100		44%	44.0	
Employment Density	More than 4 jobs per acre	High	100 31%		31.0
Total Economy Score					100.0

#### Vision Theme: Community and Nature

Category	Result	Rating	Points	Weight	Score
Cultural and Env. Resources	Resource Score: 13	High	100	30%	30.0
Corridor Beautification	Includes sidewalk area	Medium	66.7	30%	20.0
Right of Way Sufficiency	Significant additional right of way needed	Low	33.3	40%	13.3
Total Community and Nature Score					63.3

#### **Vision Theme: Operational Efficiency**

Category	Result	Rating	Points	Weight	Score
Functional Classification	Urban Other Principle Arterial High 100		20%	20.0	
Plan Coordination	Region 2000 CEDS, VTRANS 2035 Surface Transportation Plan  High 100 38'		38%	38.0	
Distribution of Benefits	Regional corridor	High	100	42%	42.0
Total Operational Efficiency Score				100.0	

Vision Theme	Points	Weight	Score
Mobility and Accessibility	74.4	20%	14.9
Safety	100.0	25%	25.0
Economy	100.0	25%	25.0
Community and Nature	63.3	15%	9.5
Operational Efficiency	100.0	15%	15.0
	ect Benefit Score	89.4	

	Benefit Score	89.4
Benefit-Cost Calculation	Estimated Cost	\$23,068,000
	Estimated Users	50522
	Benefit-Cost Score	195.74
	Benefit-Cost Rating	High

	NEPA Screening	0
Readiness	Right of Way Acquisition	0
	Ongoing Project	0
	Readiness Score	0
	Readiness Rating	Low



Project	Number	83	Category	Roadway Red	construction	Proje	ct List	Vision
Jurisdiction Route Name		Route Number	From		То		Length (mi)	
City of Lynchburg	Lynchburg	Expressway	29	Odd Fellows Rd				0.25
Proposed Im	provement		Improve i	nterchange		Est. Cost	\$7,32	0,000
Capacity/ Traffic Ops	Improves traffic ops	Safety Priority	Primary	Modes Served	Auto		Streetscaping	None
Project Benefit Score 83.7			Project Benefit	t-Cost Rating	High	Project Readin	ess Rating	Low

#### **Benefit Score Calculation**

Vision Theme: Mobility and Accessibility

Category	Result Rating Points Weight		Score		
Congestion	2040 V/C: 0.90	Medium	66.7	37%	24.7
Traffic Volume	2040 Weighted Traffic Flow: 282 vph	Medium	66.7	23%	15.3
Freight	Truck Volume: 13.79%	Truck Volume: 13.79% High 100 20%		20.0	
Alternative Transportation	ernative Transportation None included Low 33.3 20%				6.7
Total Mobility and Accessibility Score					66.7

#### Vision Theme: Safety

Category	Result	Rating	ing Points Weight		Score
Accident Rate	2011-2013: 68 accidents per mile	High	100	61%	61.0
Safety Features	Primary: Improved interchange design	High	100	39%	39.0
			To	otal Safety Score	100.0

#### Vision Theme: Economy

Category	Result	Rating	ting Points Weight		Score
Economic Development Plans	Corridor of Statewide Significance	Medium	66.7	25%	16.7
Commuter Travel	Primary commuter corridor with congestion	High	100 44%		44.0
Employment Density	1-4 jobs per acre	Medium	66.7 31%		20.7
Total Economy Score					81.4

#### Vision Theme: Community and Nature

Category	Result	Rating	Points	Weight	Score
Cultural and Env. Resources	Resource Score: 12	High	100	30%	30.0
Corridor Beautification	No streetscaping features	Low	33.3	30%	10.0
Right of Way Sufficiency	Minor additional ROW needed	Minor additional ROW needed Medium 66.7 40%		26.7	
		Total Community and Nature Score			

#### **Vision Theme: Operational Efficiency**

Category	Result Rating		Points	Weight	Score
Functional Classification	Urban Freeway and Expressway Hi		100	20%	20.0
Plan Coordination	VDOT STARS, City of Lynchburg Comp Plan	High	100	38%	38.0
Distribution of Benefits	Regional Corridor	High	100	42%	42.0
		Total Operational Efficiency Score			

Vision Theme	Points	Weight	Score		
Mobility and Accessibility	66.7	20%	13.3		
Safety	100.0	25%	25.0		
Economy	81.4	25%	20.3		
Community and Nature	66.7	15%	10.0		
Operational Efficiency	100.0	15%	15.0		
	Total Project Benefit Score				

	Benefit Score	83.7
	Estimated Cost	\$7,320,000
	Estimated Users	20402
Calculation	Benefit-Cost Score	233.21
	Benefit-Cost Rating	High

	NEPA Screening	0
Readiness Calculation	Right of Way Acquisition	0
	Ongoing Project	0
	Readiness Score	0
	Readiness Rating	Low



Project	Number	84	Category	Roadway Red	construction	Proje	ct List	Vision	
Jurisdiction	Route	Route Name Route From To		Length (mi)					
City of Lynchburg	Lynchburg	Expressway	29/501		Candlers Mountain Rd (Rt 501)		-	0.25	
Proposed Im	provement		Improve i	nterchange		Est. Cost	\$16,22	,220,000	
Capacity/ Traffic Ops	Improves Traffic Ops	Safety Priority	Primary	Modes Served	Auto	, Ped	Streetscaping	None	
Project Benefi	t Score	92.7	Project Benefi	t-Cost Rating	High	Project Readin	ess Rating	Low	

#### **Benefit Score Calculation**

Vision Theme: Mobility and Accessibility

Category	Result	Rating	Points	Weight	Score
Congestion	2040 V/C: 1.00	Medium	66.7	37%	24.7
Traffic Volume	2040 Weighted Traffic Flow: 324	High	100	23%	23.0
Freight	Truck Volume: 6.54%	High	High 100 20%		20.0
Alternative Transportation	Adds sidewalks on Candlers Mountain Rd Medium 66.7 20%		13.3		
Total Mobility and Accessibility Score					81.0

#### **Vision Theme: Safety**

Category	Result	Rating	Points	Weight	Score
Accident Rate	2011-2013: 512 accidents per mile	High	100	61%	61.0
Safety Features	Safety enhanced interchange design	High	100	39%	39.0
			To	otal Safety Score	100.0

#### Vision Theme: Economy

Category	Result	Rating	Points Weight		Score
Economic Development Plans	Included in Region 2000 CEDS Plan (Rt 501)	High	100	25%	25.0
Commuter Travel	Primary commuter corridor with congestion	High	100	44%	44.0
Employment Density	More than 4 jobs per acre	High	100	31%	31.0
		Total Economy Score			100.0

#### Vision Theme: Community and Nature

Category	Result	Rating	Points	Weight	Score
Cultural and Env. Resources	Resource Score: 14	High	100	30%	30.0
Corridor Beautification	Secondary: Includes sidewalk features	Medium	66.7	30%	20.0
Right of Way Sufficiency	Minor additional ROW needed	Medium	66.7	40%	26.7
Total Community and Nature Score				76.7	

#### **Vision Theme: Operational Efficiency**

Category	Result	Rating	Points	Weight	Score
Functional Classification	Urban Freeway and Expressway	High	100	20%	20.0
Plan Coordination	VDOT Lynchburg Expressway STARS plan, City of Lynchburg Comp Plan	High	100	38%	38.0
Distribution of Benefits	Regional benefits	High	100	42%	42.0
Total Operational Efficiency Score					100.0

Vision Theme	Points	Weight	Score
Mobility and Accessibility	81.0	20%	16.2
Safety	100.0	25%	25.0
Economy	100.0	25%	25.0
Community and Nature	76.7	15%	11.5
Operational Efficiency	100.0	15%	15.0
	92.7		

	Benefit Score	92.7
Benefit-Cost Calculation	Estimated Cost	\$16,220,000
	Estimated Users	26753
	Benefit-Cost Score	152.91
	Benefit-Cost Rating	High

	NEPA Screening	0
Readiness	Right of Way Acquisition	0
	Ongoing Project	0
Calculation	Readiness Score	0
	Readiness Rating	Low



Project	Number	80	Category	Roadway Reconstruction	Proje	Project List	
Jurisdiction	Route	Name	Route Number	From	1	·o	Length (mi)
City of Lynchburg	Lynchburg	Expressway	29	Miller St/Robbin Rd			0.25
Proposed Imp	Proposed Improvement Improve interchange Est. Cost \$200,000						0,000

Proposed Improvement			Improve interchange Est. Cost			\$200,000	
Capacity/ Traffic Ops	Improve traffic ops	Safety Priority	Primary	Modes Served	Auto	Streetscaping	None

#### **Benefit Score Calculation**

Vision Theme: Mobility and Accessibility

Category	Result	Rating	Points	Weight	Score
Congestion	2040 V/C: 0.78	Low	33.3	37%	12.3
Traffic Volume	2040 Weighted Traffic Flow: 312 vph	High	100	23%	23.0
Freight	Truck Volume: 2.23%	Medium	66.7	20%	13.3
Alternative Transportation	None included	Low	33.3	20%	6.7
Total Mobility and Accessibility Score				55.3	

#### Vision Theme: Safety

Category	Result	Rating	Points	Weight	Score
Accident Rate	2011-2013: 24 accidents per mile	Medium	66.7	61%	40.7
Safety Features	Primary: Improved interchange design	High	100	39%	39.0
			To	otal Safety Score	79.7

#### Vision Theme: Economy

Category	Result	Rating	Points	Weight	Score
Economic Development Plans	Corridor of Statewide Significance	Medium	66.7	25%	16.7
Commuter Travel	Primary commuter corridor without congestion	Medium	66.7	44%	29.3
Employment Density	1-4 jobs per acre	Medium	66.7	31%	20.7
Total Economy Score				66.7	

#### Vision Theme: Community and Nature

Category	Result	Rating	Points	Weight	Score
Cultural and Env. Resources	Resource Score: 13	High	100	30%	30.0
Corridor Beautification	No streetscaping features	Low	33.3	30%	10.0
Right of Way Sufficiency	No additional ROW needed	High	100	40%	40.0
Total Community and Nature Score					80.0

#### **Vision Theme: Operational Efficiency**

Category	Result	Rating	Points	Weight	Score
Functional Classification	Urban Freeway and Expressway	High	100	20%	20.0
Plan Coordination	VDOT STARS, City of Lynchburg Comp Plan	High	100	38%	38.0
Distribution of Benefits	Regional Corridor	High	100	42%	42.0
Total Operational Efficiency Score			100.0		

Vision Theme	Points	Weight	Score
Mobility and Accessibility	55.3	20%	11.1
Safety	79.7	25%	19.9
Economy	66.7	25%	16.7
Community and Nature	80.0	15%	12.0
Operational Efficiency	100.0	15%	15.0
	Total Proje	74.7	

	Benefit Score	74.7
Benefit-Cost Calculation	Estimated Cost	\$200,000
	Estimated Users	26888
	Benefit-Cost Score	10037.22
	Benefit-Cost Rating	High

Readiness	NEPA Screening	1
	Right of Way Acquisition	1
	Ongoing Project	0
Calculation	Readiness Score	2
	Readiness Rating	Medium



Project	Number	67	Category	Access Managen	nent and Safety	Proje	ct List	Vision
Jurisdiction	Route	Name	Route Number	Fro	т		·o	Length (mi)
Campbell County	Ward	ds Rd	29	S of Calohan	Rd (Rt 685)		chburg Corp nits	4.7
Proposed Im	provement	Access m	igmt, traffic or	os, safety impro	vements	Est. Cost	\$10,00	00,000
Capacity/ Traffic Ops	Improves traffic ops	Safety Priority	Primary	Modes Served	Auto		Streetscaping	None
Project Benefi	t Score	73.2	Project Benefit	t-Cost Rating	High	Project Readin	ess Rating	Medium
Benefit Score Calculation								

#### **Benefit Score Calculation**

Vision Theme: Mobility and Accessibility

Category	Result	Rating	Points	Weight	Score
Congestion	2040 V/C: 0.61	Low	33.3	37%	12.3
Traffic Volume	2040 Weighted Traffic Flow: 396 vph	High	100	23%	23.0
Freight	Truck Volume: 6.24%	High	100	20%	20.0
Alternative Transportation	None included	Low	33.3	20%	6.7
Total Mobility and Accessibility Score			62.0		

#### Vision Theme: Safety

Category	Result	Rating	Points	Weight	Score
Accident Rate	2011-2013: 36.6 accidents per mile	High	100	61%	61.0
Safety Features	Primary: Access management and safety	High	100	39%	39.0
Total Safety Score			100.0		

#### Vision Theme: Economy

Category	Result	Rating	Points	Weight	Score
Economic Development Plans	Corridor of Statewide Significance		66.7	25%	16.7
Commuter Travel	Primary commuter corridor without congestion	Medium	66.7	44%	29.3
Employment Density	Less than 1 job per acre	Low	33.3	31%	10.3
Total Economy Score			56.3		

#### Vision Theme: Community and Nature

Category	Result	Rating	Points	Weight	Score
Cultural and Env. Resources	Resource Score: 11	Medium	66.7	30%	20.0
Corridor Beautification	No streetscaping features	Low	33.3	30%	10.0
Right of Way Sufficiency	No additional ROW needed	High	100	40%	40.0
Total Community and Nature Score			70.0		

#### **Vision Theme: Operational Efficiency**

Category	Result	Rating	Points	Weight	Score
Functional Classification	Urban Other Principle Arterial	High	100	20%	20.0
Plan Coordination	Not recommended in other plans	Low	33.3	38%	12.7
Distribution of Benefits	Regional Corridor	High	100	42%	42.0
Total Operational Efficiency Score			74.7		

Vision Theme	Points	Weight	Score
Mobility and Accessibility	62.0	20%	12.4
Safety	100.0	25%	25.0
Economy	56.3	25%	14.1
Community and Nature	70.0	15%	10.5
Operational Efficiency	74.7	15%	11.2
	73.2		

	Benefit Score	73.2
Benefit-Cost Calculation	Estimated Cost	\$10,000,000
	Estimated Users	35638
	Benefit-Cost Score	260.80
	Benefit-Cost Rating	High

Readiness	NEPA Screening	1	
	Right of Way Acquisition	1	
	Ongoing Project	0	
Calculation	Readiness Score	2	
	Readiness Rating	Medium	



### **Economic Connections**

As described in Chapter 2, one of the primary goals of the CVLRTP 2040 Update was to establish clear and viable connections between the transportation improvements recommended by the plan and the economic development efforts currently pursued in the region and the state. Figure 7.4, below, summarizes the economic significance of the ten future priority projects.

Figure 7.4: Economic Significance of Priority Projects

D #	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated Cost	Final Rank	
9	Bedford County	221	Forest Rd	Gristmill Dr (Rt 1426)	Graves Mill Rd (Rt 126)	Access Management and Intersection Improvements	\$3,140,000	1	
	Economic Linkage		Forest Road in Bedford County is an important connector between Bedford and the City of Lynchburg. The Forest activity center has seen some of the highest growth in the region and workers who commute to the area, or to other destinations along Forest Road from regional destinations would benefit from improvements in safety and travel time reliability along the corridor.						
	Relationship to CEDS Plan  Transportation Issues			Relates to CEDS GOAL 1: Develop and maintain a knowledge based workforce to meet the needs and opportunities of a 21st century innovation economy; and CEDS GOAL 3: Ensure the region has well-planned, state-of-the-art infrastructure to facilitate the growth of highwage industry clusters  The project area is a 0.2 mile primarily commercial strip along Forest Road from Graves Mill Road to Gristmill Drive that has numerous safety and operational issues. Improvements to the busy Forest Road/Graves Mill Road area would improve safety and travel time reliability by reducing congestion.					
D #	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated Cost	Fina Rank	
70	Campbell County	460	Timberlake Rd	Waterlick Rd (Rt 622)		Median & turn lane improvements, add lanes	\$2,344,000	2	
		Economic Linkage		The intersection of Timberlake Road and Waterlick Road in Campbell County is in a primarily commercial area that serves several surrounding neighborhoods as well as the City of Lynchburg as a whole.					
	Rela	ationship t	o CEDS Plan		Relates to CEDS GOAL 3: Ensure the region has well-planned, state-of-the-art infrastructure to facilitate the growth of high-wage industry clusters; and CEDS GOAL 4: Promote and enhance inter-regional transportation systems.				
	Tı	Transportation Issues		The intersection of Timberlake Road and Waterlick intersection has safety and operational issues, whose improvement could bring benefits to adjacent neighborhoods and improve the efficiency of Rt. 460 carrying considerable traffic volumes in this area.					
D	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated	Final Rank	
Ŧ		Noute #	House Hume				Cost	Itaiii	
	City of Lynchburg	501	Lynchburg Expressway	S of Rt 221	Northwest Expressway (Rt 501)	New 4 lane road (One way pairs)	\$37,383,000	3	
	Lynchburg	501	Lynchburg Expressway	The Lynchburg Expressway is a facilitate regional network con Relates to CEDS GOAL 3: Ensur	501) In important arterial circling the inectivity and support numerouse the region has well-planned,	e City of Lynchburg. Improvements to travel time and r is local businesses and centers of employment around state-of-the-art infrastructure to facilitate the growth	\$37,383,000 eliability will gr Lynchburg.	3 eatly	
90	Lynchburg Rela	501	Lynchburg Expressway Linkage	The Lynchburg Expressway is a facilitate regional network con Relates to CEDS GOAL 3: Ensur clusters; and CEDS Primary Hig This project will add four lane	501) In important arterial circling the specific transfer of the region has well-planned, when the region has well along the Lynchburg Expression of the Lynchburg Expression has been specific to the cravel along the Lynchburg Expression has been specific to the cravel along the Lynchburg Expression has been specific to the cravel along the Lynchburg Expression has been specific to the cravel along the Lynchburg Expression has been specificated as the control of the control of the cravel and the control of the cont	e City of Lynchburg. Improvements to travel time and r is local businesses and centers of employment around state-of-the-art infrastructure to facilitate the growth	\$37,383,000 eliability will gr Lynchburg. of high-wage in	aeatly dustry	
)O	Lynchburg Rela	501 Economic	Lynchburg Expressway Linkage	The Lynchburg Expressway is a facilitate regional network con Relates to CEDS GOAL 3: Ensur clusters; and CEDS Primary Hig This project will add four lane roadway allowing for quicker to	501) In important arterial circling the specific transfer of the region has well-planned, when the region has well along the Lynchburg Expression of the Lynchburg Expression has been specific to the cravel along the Lynchburg Expression has been specific to the cravel along the Lynchburg Expression has been specific to the cravel along the Lynchburg Expression has been specific to the cravel along the Lynchburg Expression has been specificated as the control of the control of the cravel and the control of the cont	e City of Lynchburg. Improvements to travel time and r is local businesses and centers of employment around state-of-the-art infrastructure to facilitate the growth rridor Improvements Lynchburg Expressway extending it across Rt. 221. The	\$37,383,000 eliability will gr Lynchburg. of high-wage in a addition of a n at the existing	a atly dustry ew	
D #	Lynchburg  Rela  To  Jurisdiction  Amherst	501  Economic ationship t	Lynchburg Expressway  Linkage  o CEDS Plan  don Issues  Route Name  South Amherst	The Lynchburg Expressway is a facilitate regional network con Relates to CEDS GOAL 3: Ensur clusters; and CEDS Primary Hig This project will add four lane roadway allowing for quicker t intersection of the Lynchburg	501) an important arterial circling the inectivity and support numerouse the region has well-planned, shways PROJECT 4: U.S. 501 Coils for northbound traffic to the cravel along the Lynchburg Expressway and Rt. 221.	e City of Lynchburg. Improvements to travel time and r is local businesses and centers of employment around state-of-the-art infrastructure to facilitate the growth ridor Improvements Lynchburg Expressway extending it across Rt. 221. The essway will also increase safety and reduce congestion	\$37,383,000 eliability will gr Lynchburg. of high-wage in e addition of a n at the existing	a atly dustry ew	
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90         	Lynchburg  Rela  To  Jurisdiction  Amherst County	Economic  ationship t  ransportat  Route #  29  Economic	Lynchburg Expressway  Linkage  o CEDS Plan  ion Issues  Route Name  South Amherst Highway	The Lynchburg Expressway is a facilitate regional network con Relates to CEDS GOAL 3: Ensur clusters; and CEDS Primary Hig This project will add four lane roadway allowing for quicker tintersection of the Lynchburg  From  Amherst St (Rt 163)  This portion of Rt. 29 is a key owith the centers of Madison Highest CEDS GOAL 3: Ensur	so 1)  an important arterial circling the inectivity and support numerouse the region has well-planned, shways PROJECT 4: U.S. 501 Cois for northbound traffic to the cravel along the Lynchburg Expressway and Rt. 221.  To  S Coolwell Rd (Rt 604)  connector between local activitie eights, Elon Road and the town	e City of Lynchburg. Improvements to travel time and r is local businesses and centers of employment around state-of-the-art infrastructure to facilitate the growth rridor Improvements Lynchburg Expressway extending it across Rt. 221. The essway will also increase safety and reduce congestion  Project Description  Traffic Operations/ Signal Coordination y centers in Amherst County, connecting commercial u of Amherst state-of-the-art infrastructure to facilitate the growth	\$37,383,000 eliability will gr Lynchburg. of high-wage in a addition of a n at the existing  Estimated Cost  \$1,625,500 ses along old Rt	a eatly dustry ew Final Rank 4	
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# 30 #	Jurisdiction Amherst County  Jurisdiction Campbell County	Foute #  29  Economic ationship t  ransportat  Route #  29  Economic ationship t  ransportat  Route #  29  Economic	Lynchburg Expressway  Linkage  o CEDS Plan  ion Issues  Route Name  South Amherst Highway  Linkage  o CEDS Plan  ion Issues  Route Name  Wards Rd	The Lynchburg Expressway is a facilitate regional network con Relates to CEDS GOAL 3: Ensur clusters; and CEDS Primary Hig This project will add four lane roadway allowing for quicker tintersection of the Lynchburg  From  Amherst St (Rt 163)  This portion of Rt. 29 is a key owith the centers of Madison H Relates to CEDS GOAL 4: Prince Frequent curb cuts and long withing and other operational in From  English Tavern Rd (Rt 738)  This rural segment of Wards R University, Rt. 29, and the City Relates to CEDS GOAL 1: Deve	an important arterial circling the inectivity and support numerouse the region has well-planned, thways PROJECT 4: U.S. 501 Cols for northbound traffic to the ravel along the Lynchburg Expressway and Rt. 221.  To  S Coolwell Rd (Rt 604)  Connector between local activitieghts, Elon Road and the town are the region has well-planned, comote and enhance inter-regio aits at signals contribute to intemprovements will enhance training the complex of Lynchburg. Preserving relial top and maintain a knowledge is all CEDS emphasis on the important and control of the control of the control of the control of Lynchburg. Preserving relial top and maintain a knowledge is all CEDS emphasis on the important control of the control of t	Project Description  Traffic Operations/ Signal Coordination y centers in Amherst County, connecting commercial use of Amherst state-of-the-art infrastructure to facilitate the growth or the content of the corridor of the	\$37,383,000 eliability will gr Lynchburg. of high-wage in e addition of a n at the existing  Estimated Cost \$1,625,500 ses along old Rt of high-wage in Improving sign dor.  Estimated Cost \$4,000,000  Airport, Liberty obility of a 21st centur	a a a a a a a a a a a a a a a a a a a	



# Figure 7.4 (continued): Economic Significance of Priority Projects

ID #	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated Cost	Final Rank		
91	City of Lynchburg	501	Candlers Mountain Rd	Richmond Highway (US 460)	Lynchburg Expressway (US 29)	Widen to 6 lanes	\$23,068,000	6		
	Economic Linkage		Candlers Mountain Road connects the Lynchburg Expressway to Rt. 29. The area along Candlers Mountain Road is an employment hub with primarily industrial and commercial zoning, Many businesses in the Candlers Mountain Road area rely on extensive freight shipments.							
	Rela	tionship to	CEDS Plan	Relates to CEDS GOAL 3: Ensure the region has well-planned, state-of-the-art infrastructure to facilitate the growth of high-wage industry clusters; and CEDS GOAL 2/ OBJECTIVE 2.2 Retain and expand existing technology based businesses in the region.						
	Transportation Issues			The widening of the road could increase the possibility of business expansion and reduce delays. Additionally, increasing the roadway to six lanes could reduce congestion, increasing travel time reliability for workers commuting from areas of the City of Lynchburg and surrounding counties						
ID #	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated Cost	Final Rank		
83	City of Lynchburg	29	Lynchburg Expressway	Odd Fellows Rd		Improve interchange	\$7,320,000	7		
	Economic Linkage		Odd Fellows Road serves industrial traffic as an entrance to the City of Lynchburg's Industrial Park, as well as other commercial properties in the immediate area. Presently, Odd Fellows Road dead ends south of Mayflower Drive but its extension with a new interchange will greatly facilitate business access in the area.							
	Rela	tionship to	CEDS Plan	Relates to CEDS GOAL 3: Ensure the region has well-planned, state-of-the-art infrastructure to facilitate the growth of high-wage industry clusters; and CEDS Primary Highways PROJECT 2: U.S. 29/460 Interchange with Odd Fellows Road						
	Tr	ansportati	on Issues	Currently, this stretch of the Lynchburg Expressway is congested and experiencing a higher accident rate than other segments of US 29 and US 460 within region. Interchange improvements will greatly facilitate both intra- and inter-regional travel.						
ID #	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated Cost	Final Rank		
84	City of Lynchburg	29/501	Lynchburg Expressway	Candlers Mountain Rd (Rt 501)		Improve interchange	\$16,220,000	8		
	Economic Linkage		The US 501 improvements will allow for safe and efficient movement of people and freight from the North Carolina border to US Interstate 81. The improvements help ensures access to markets and opportunities north and south of Central Virginia.							
	Relationship to CEDS Plan			Relates to CEDS GOAL 3: Ensure the region has well-planned, state-of-the-art infrastructure to facilitate the growth of high-wage industry clusters; and CEDS Primary Highways PROJECT 1: U.S. 29/460 Access Management Improvements						
	Transportation Issues		Currently, this stretch of the Lynchburg Expressway is congested and experiencing a higher accident rate than other segments of US 29 and US 460 within region. Interchange improvements will greatly facilitate both intra- and inter-regional travel.							
ID #	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated Cost	Final Rank		
80	City of Lynchburg	29	Lynchburg Expressway	Miller St/Robbin Rd		Improve interchange	\$200,000	9		
	Economic Linkage		Rt.29/460 connectivity is imperative to ensure that regional businesses have ready access to external markets and opportunities needed to succeed. Proposed improvements to the US 29 and US 460 corridors will help ensure access to markets and opportunities north and south of Central Virginia							
	Relationship to CEDS Plan		Relates to CEDS GOAL 3: Ensure the region has well-planned, state-of-the-art infrastructure to facilitate the growth of high-wage industry clusters; and CEDS Primary Highways PROJECT 1: U.S. 29/460 Access Management Improvements							
	Transportation Issues		Currently, this stretch of the Lynchburg Expressway is congested and experiencing a higher accident rate than other segments of US 29 and US 460 within region. Interchange improvements will greatly facilitate both intra- and inter-regional travel.							
ID #	Jurisdiction	Route #	Route Name	From	То	Project Description	Estimated Cost	Final Rank		
67	Campbell County	29	Wards Rd	S of Calohan Rd (Rt 685)	City of Lynchburg Corp Limits	Access mgmt, traffic ops, safety improvements	\$10,000,000	10		
	Economic Linkage		Wards Road is a primary connector between Campbell County and areas to the south, and the City of Lynchburg which is a major regional employment hub., as well as Liberty University and the growing education/technology sector in the region. Protecting access and improving reliability on Wards Road is vital to serving both the local and regional economy in the area.							
	Relationship to CEDS Plan		Relates to CEDS GOAL 1: Develop and maintain a knowledge based workforce to meet the needs and opportunities of a 21st century innovation economy; and CEDS OBJECTIVE 2.1: Recruit businesses and industries in high-wage, targeted industry clusters; through improving critical access to these existing sectors via Wards Road.							
	Tr	Transportation Issues		This project will improve safety along the corridor through traffic operations and access management. A safer and more efficient Wards Road will facilitate both local travel markets to retail and services and regional travel markets to employment hubs such as Liberty and Lynchburg.						

# CENTRAL VIRGINIA LONG RANGE TRANSPORTATION PLAN 2040 UPDATE CHAPTER 7



#### **Environmental Justice**

According to federal legislation, all federally funded transportation projects must be analyzed in regards to environmental justice. Environmental Justice is an effort to ensure that disadvantaged communities or populations do not bear an undue burden of adverse impacts created by publicly funded projects, as well as ensuring that they also share in the benefits provided by the projects.

The two primary populations considered in this analysis are racial minorities and low-income residents. The maps provided in Figures 7.5 and 7.6 compare the location of the MPO's future priority projects to census block groups that contain a large population of residents of both groups. Following these maps, a brief individual analysis of each project is provided.



Figure 7.5: Environmental Justice-Impoverished Populations

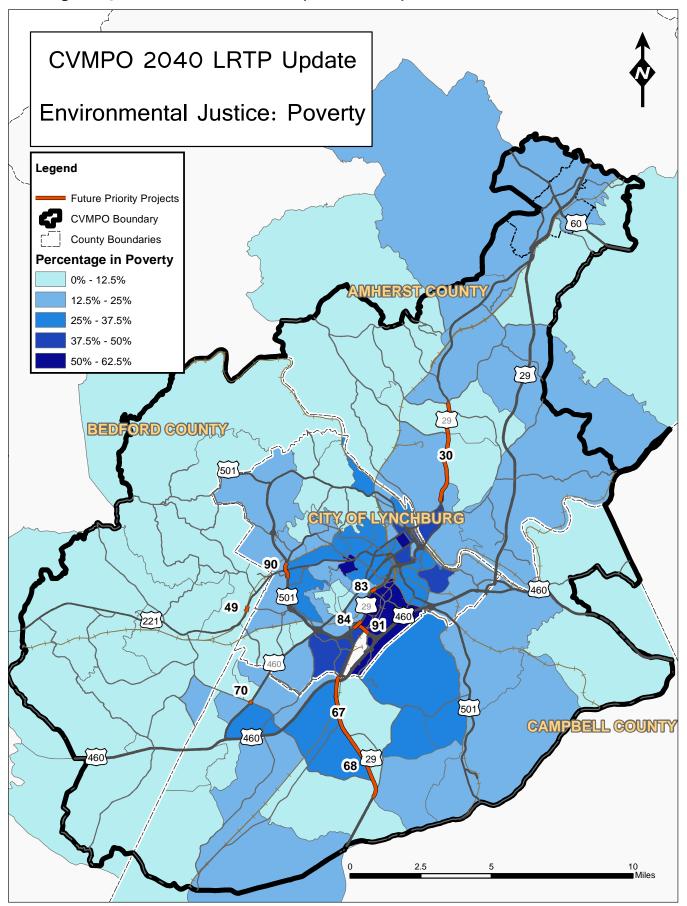
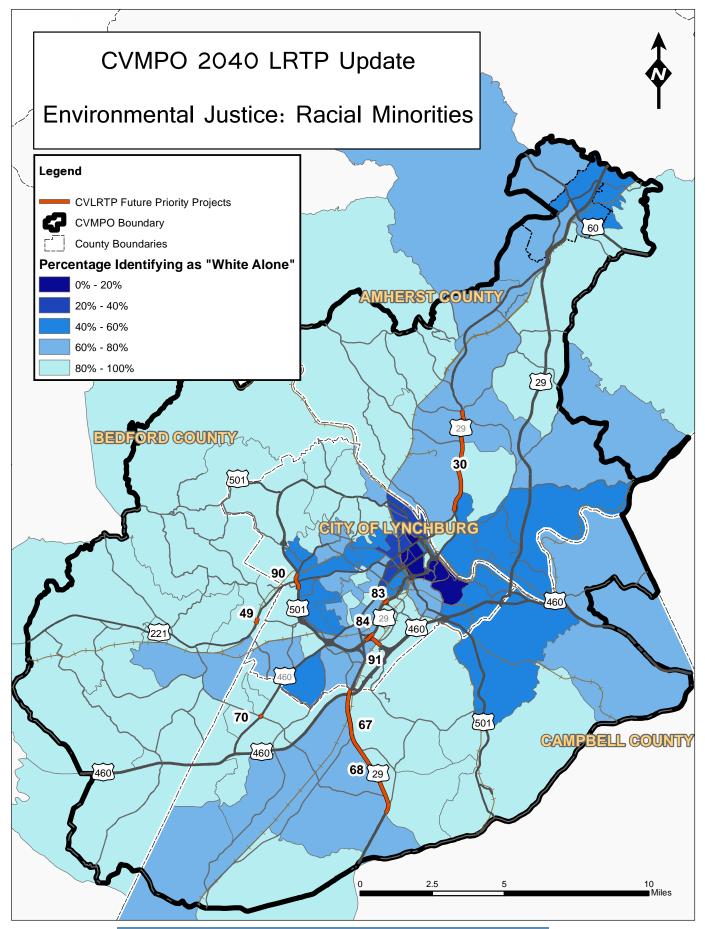




Figure 7.6: Environmental Justice- Racial Minority Populations





# Project 1 (Map ID 49): Access Management and Intersection Improvements on Forest Road from Graves Mill Road to Gristmill Drive

Impact on Areas with a High Population of Racial Minorities

#### Potential Negative Impacts:

Forest Road in Bedford County is an important connector between Bedford and the City of Lynchburg. The project area is a .2 mile primarily commercial strip along Forest Road from Graves Mill Road to Gristmill Drive. The census block groups surrounding the project area have populations in which between 80% and 100% of residents identify as "White Alone", thus there is no anticipated impact on areas with a high population of racial minorities.

#### Potential Positive Impacts:

Improvements to the efficiency and safety of Forest Road would benefit all those who commute along the corridor or visit the businesses within the project area.

Impact on Areas with a High Rate of Poverty

#### Potential Negative Impacts:

The census block groups adjacent to the project area do not have a high rate of poverty. On average there is between 0% and 12.5% of the population living in poverty in the immediate area. The project area is primarily commercial, and thus construction in the area could limit low-income worker's access to the area. However because the work is limited in scope there should be no lasting impact on accessibility to businesses in the area. Additionally, most shops in the project area can also be accessed from Graves Mill Road.

#### Potential Positive Impacts:

Improvements to the busy Forest Road/Graves Mill Road area would improve safety and travel time reliability by reducing congestion. Workers who commute to the project area, or to other destinations along Forest Road from higher poverty areas would benefit from these improvements.



# Project 2 (Map ID 70): Median and Turn Lane Improvements at intersection of Timberlake Road and Waterlick Road

Impact on Areas with a High Population of Racial Minorities

#### Potential Negative Impacts:

Project 4 is not located in an area with a high population of racial minorities. The intersection of Timberlake Road and Waterlick Road in Campbell County is in a primarily commercial area, the surrounding census block groups have a population in which 80-100% of residents identify as "White Alone".

#### Potential Positive Impacts:

While there is not a significant population of racial minorities in the project area, intersection improvements could increase the level of access to commercial services in the area to larger populations of racial minorities living in the City of Lynchburg.

Impact on Areas with a High Rate of Poverty

#### Potential Negative Impacts:

There are several high poverty areas adjacent to the intersection of Timberlake Road and Waterlick Road. Construction of an additional turn lane and other construction related delays could limit access to a low-income trailer park on Waterlick lane. However, there are other access points to these low income neighborhoods and no significant impacts are anticipated after the completion of the project.

#### Potential Positive Impacts:

Improvements made to the intersection of Timberlake Road and Waterlick could bring benefits to adjacent high poverty areas by increasing the efficiency of the intersection which links the area both to the City of Lynchburg and to US-460.



# Project 3 (Map ID 90): Reconstruction of Lynchburg Expressway from South of Rt. 221 to Northwest Expressway (One way pairs)

Impact on Areas with a High Population of Racial Minorities

#### Potential Negative Impacts:

The Lynchburg Expressway is an important arterial circling the City of Lynchburg. This project will add four lanes for northbound traffic to the Lynchburg Expressway extending it across Rt. 221. The project area is adjacent to several census block groups with a population where between 40% and 60% of residents identify as "White Alone". The new right of way for the project as already been acquired and the new lanes will not require the relocation of any residences of businesses, or parks. Because the project will not directly impact any areas with high population of racial minorities, no negative impacts are anticipated.

#### Potential Positive Impacts:

The addition of a new roadway allowing for quicker travel along the Lynchburg Expressway will also increase safety and reduce congestion at the existing intersection of the Lynchburg Expressway and Rt. 221. This is a major intersection and its improvement will benefit all those who use the road.

#### Impact on Areas with a High Rate of Poverty

#### Potential Negative Impacts:

The census block groups surrounding the project area have a poverty rate of between 25% and 37.5%. While there may be some construction related impacts to those in the immediate area, the completed project will not require the displacement of any low-income communities, and any existing neighborhoods should be adequately buffered from the new roadway. No significant negative impacts are anticipated on areas with a high rate of poverty.

#### Potential Positive Impacts:

The addition of new northbound lanes to the Lynchburg Expressway should reduce congestion at the existing intersection and allow for the application of a more simple and safe design. Residents of low-income areas in Downtown Lynchburg and the surrounding area would benefit from improved travel time reliability while moving around the city.



# Project 4 (Map ID 30): Traffic operations and Signal Coordination on South Amherst Highway, Rt. 29, from Rt. 165 to Rt. 604

Impact on Areas with a High Population of Racial Minorities

#### Potential Negative Impacts:

South Amherst Highway, from Rt. 165 to Rt. 604 runs through an area where the population primarily identifies as "White Alone", there is a census tract at the south end of the project area with a higher percentage of racial minorities, but as the project itself deals only with traffic operations and signal coordination along Rt. 29, the population will not be negatively impacted.

#### Potential Positive Impacts:

South Amherst Highway is an important arterial connecting the City of Lynchburg with US 29 and the Town of Amherst. Improved signal coordination along Rt. 29 could provide increased travel time reliability to high racial minority populations from within the City of Lynchburg who use the corridor for commuting and other travel needs.

#### Impact on Areas with a High Rate of Poverty

#### Potential Negative Impacts:

There is a high poverty area to the south of the project location with a poverty rate between 37.5% and 50%. Due to the fact that this project involves signal coordination and traffic operations, there are no anticipated negative impacts on this community.

#### Potential Positive Impacts:

Improvements to traffic operations and signal coordination along South Amherst Highway could result in greater access to the City of Lynchburg, and through Amherst County for areas with a high rate of poverty.



# Project 5 (Map ID 68): Access Management on Wards Road from English Tavern Road to Terminal Drive

Impact on Areas with a High Population of Racial Minorities

#### Potential Negative Impacts:

The project location is a rural segment of Wards Road from English Tavern Road to Terminal Drive with a mix of residential and commercial uses adjacent to the road. The census block groups surrounding the project area have a population with between 60% and 80% of residents identifying as "White Alone". The project itself involves mostly access management and should not have a negative impact of accessibility throughout the area. As there is not a major minority population in the project area, and due to the nature of the project itself, there is no anticipated negative impact on areas with a high population of racial minorities.

#### Potential Positive Impacts:

Wards Road connects Campbell County with the City of Lynchburg and is an important route for commuters. Improving access along the project area would be beneficial to all who use the roadway.

#### Impact on Areas with a High Rate of Poverty

#### Potential Negative Impacts:

The census block groups along the project area have poverty rates of between 25% and 37.5% on the west side of the road, and between 0% and 12.5% on the east side. These low-income areas should not be negatively impacted by the project, as it involves no major construction, only safety and access management measures.

#### Potential Positive Impacts:

Improving access management along Wards Road will improve safety and efficiency along a major commuting route connecting Campbell County to the Lynchburg Airport, Liberty University, Rt. 29, and the City of Lynchburg. Low-income communities throughout the region will benefit from increased travel time reliability along the corridor.



# Project 6 (Map ID 91): Road Widening on Candlers Mountain Road from Rt. 460 to Lynchburg Expressway

Impact on Areas with a High Population of Racial Minorities

#### Potential Negative Impacts:

Candlers Mountain Road connects the Lynchburg Expressway to Rt. 29. The area along Candlers Mountain Road is an employment hub with primarily industrial and commercial zoning, there are no major residential areas within the project area. There is not a high population of racial minorities in the census block groups adjacent to the project area, and because residential neighborhoods will not be impacted, there is no anticipated negative impact for areas with a high population of racial minorities.

#### Potential Positive Impacts:

Widening Candlers Mountain Road will allow for a higher capacity and less congestion for commuters going to and from the City of Lynchburg, this project could benefit commuters from areas with a high population of racial minorities.

Impact on Areas with a High Rate of Poverty

#### Potential Negative Impacts:

The census block groups surrounding Candlers Mountain Road have a poverty rate of between 50 and 62.5%. This rating for high level of poverty could be inaccurate to the fact that there are no large residential areas near the project area, as the development is primarily industrial and commercial. The widening of the road could impact businesses fronting onto Candlers Mountain Road, but will not have an impact of high poverty areas due to the lack of residential development in the project area.

#### Potential Positive Impacts:

Many businesses in the Candlers Mountain Road area rely on extensive freight shipments. The widening of the road could increase the possibility of expansion and reduce delays. Additionally, increasing the roadway to six lanes could reduce congestion, increasing travel time reliability for workers commuting from high poverty areas of the City of Lynchburg and surrounding counties.



# Project 7 (Map ID 83): Interchange Improvement at Lynchburg Expressway and Odd Fellows Road

Impact on Areas with a High Population of Racial Minorities

#### Potential Negative Impacts:

The intersection of the Lynchburg Expressway and Odd Fellows Road connects a major arterial and the industrial and commercial centers of Montview. The area surrounding this project does not have a high density of residential uses, and no neighborhoods will be directly impacted by the construction as the neighborhoods to the north of the project area are buffered by the railway. There are no areas with a high population of racial minorities that would be negatively impacted by this project.

#### Potential Positive Impacts:

The improvement of the intersection of the Lynchburg Expressway and Odd Fellows Road could lead to less congestion on the expressway, creating a higher degree of mobility, and better access to a major employment center for racial minorities within the City of Lynchburg.

#### Impact on Areas with a High Rate of Poverty

#### Potential Negative Impacts:

The census block groups surrounding the project area have a high poverty rate, ranging from between 25% to over 50%. However, this statistic can be misleading as there are no major residential areas within the project area. Work on the intersection of the Lynchburg Expressway and Odd Fellows Road would only directly impact businesses in the area surrounding Odd Fellows Road, and thus there are no anticipated negative impacts for area with a high rate of poverty.

#### Potential Positive Impacts:

A more efficient intersection between the Lynchburg Expressway and Odd Fellows Road would improve the movement of freight to and from businesses in the area and would improve travel time reliability for workers who commute to the area from high poverty areas in the region.



# Project 8 (Map ID 84): Interchange Improvement at Lynchburg Expressway and Candlers Mountain Road

Impact on Areas with a High Population of Racial Minorities

#### Potential Negative Impacts:

The intersection of the Lynchburg Expressway and Candlers Mountain Road in the City of Lynchburg is a primarily commercial area. The area surrounding the intersection is zoned for commercial and office uses, and thus improvements to the interchange will not directly impact residential neighborhoods. Additionally the census block groups adjacent to the interchange have populations where between 60 to 80% of residents identify as "White Alone". This project presents no anticipated negative impacts for areas with a high population of minority areas.

#### Potential Positive Impacts:

The interchange between the Lynchburg Expressway and Candlers Mountain Road is important in that it is a primary connector between US-29 and the City of Lynchburg. Improvements to the interchange could positively impact the level of accessibility of areas with high populations of racial minorities within the City of Lynchburg.

#### Impact on Areas with a High Rate of Poverty

#### Potential Negative Impacts:

There are several census block groups with high rates of poverty adjacent to the project location. However the total number of residents in the area is low, as the surrounding area is zoned for commercial and office uses. Due to the limited scope of construction and the lack of a dense population around the project location, no negative impacts are anticipated for areas with a high rate of poverty.

#### Potential Positive Impacts:

Improvement to the interchange between the Lynchburg Expressway and Candlers Mountain Road could reduce congestion in the area and provide low-income residents with easier access to regional arterials.



# Project 10 (Map ID 67): Access Management and Safety Improvements on Wards Road from Rt. 685 to Lynchburg City Limits

Impact on Areas with a High Population of Racial Minorities

#### Potential Negative Impacts:

Wards Road runs from Rt. 29 in Campbell County into the City of Lynchburg. The 4.7 mile long project area is entirely in Campbell County. The census block groups surrounding the project area have a population in which between 60% and 100% of residents identified as "White Alone". The recommended improvements will not fundamentally alter the existing right of way, or heavily impact adjacent residences or businesses, thus there is no anticipated negative impact on areas with a high population of racial minorities.

#### Potential Positive Impacts:

This project could result in a positive impact for all commuters, as Wards Road is a primary connector between Campbell County and areas to the south, and the City of Lynchburg which is a major regional employment hub.

#### Impact on Areas with a High Rate of Poverty

#### Potential Negative Impacts:

The census block group to the southwest of the project area has a poverty rate of between 25% and 37.5%. However, because this project will not limit access or require an expansion of the existing right of way, there should not be any negative burden on areas with a high rate of poverty.

#### Potential Positive Impacts:

This project will work to improve safety along the corridor through traffic operations and access management. A safer and more efficient Wards Road will offer users of all income levels, and could positively serve the low-income community adjacent to the project area.