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# Metropolitan Transportation Plan Introduction and Background

"(1) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;

(2) Increase the safety of the transportation system for motorized and non-motorized users;

(3) the security of the transportation system for motorized and non-motorized users;

(4) Increase accessibility and mobility of people and freight;

(5) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;

(6) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;

(7) Promote efficient system management and operation;

(8) Emphasize the preservation of the existing transportation system;

(9) Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and

(10) Enhance travel and tourism."

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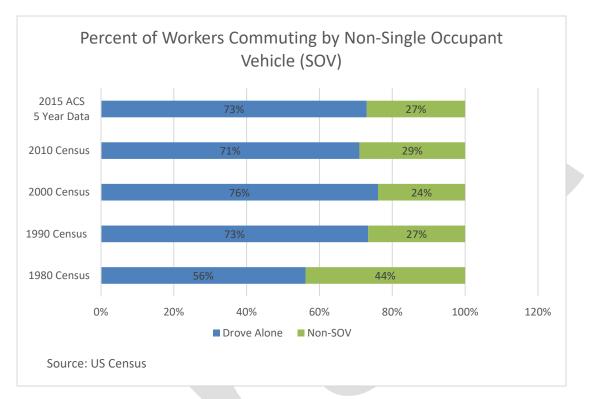
# **Transportation Goal, Issues, and Performance Measures**

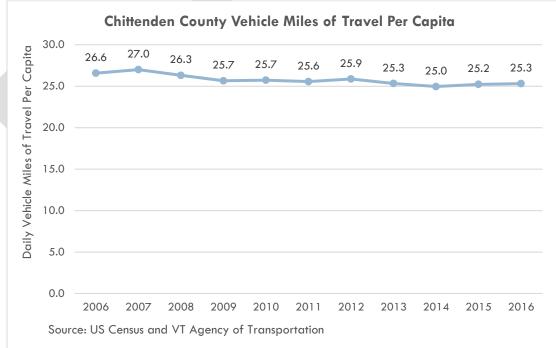
**ISSUES, TRENDS, OBSERVATIONS** 

Future Funding Estimates (Federal, State and Local Funds)	Cost in Millions (2016\$)

### **KEY INDICATORS**

Percent of workers commuting by non-Single Occupant Vehicle (SOV) mode (walk, bike, transit, carpool, telecommute).

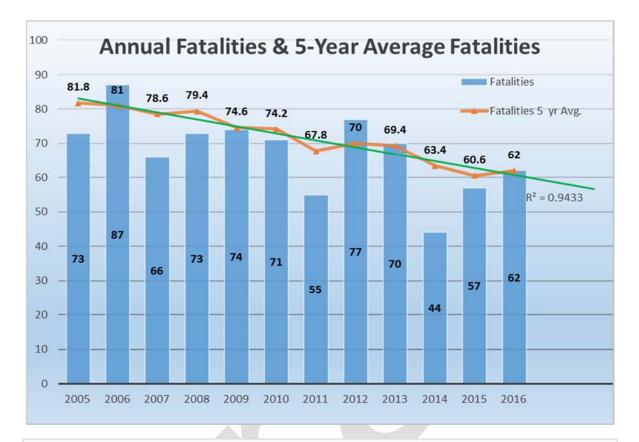


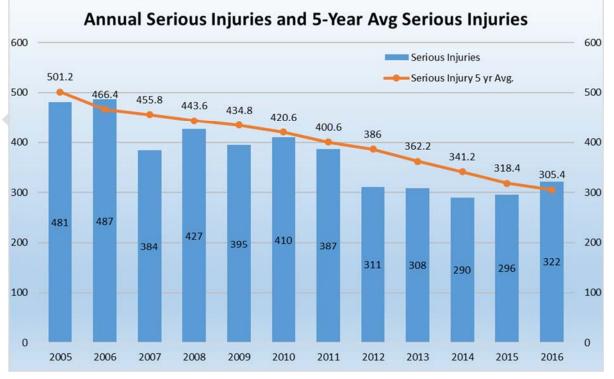


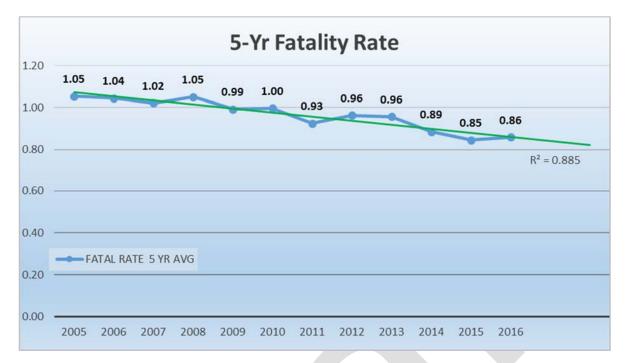
# PERFORMANCE MANAGEMENT

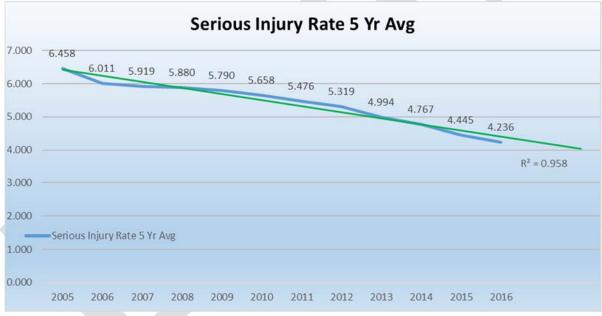
NOTE NOTE

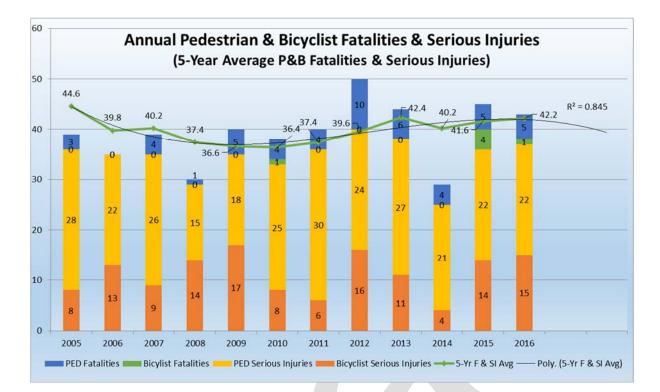
# Safety Performance Management











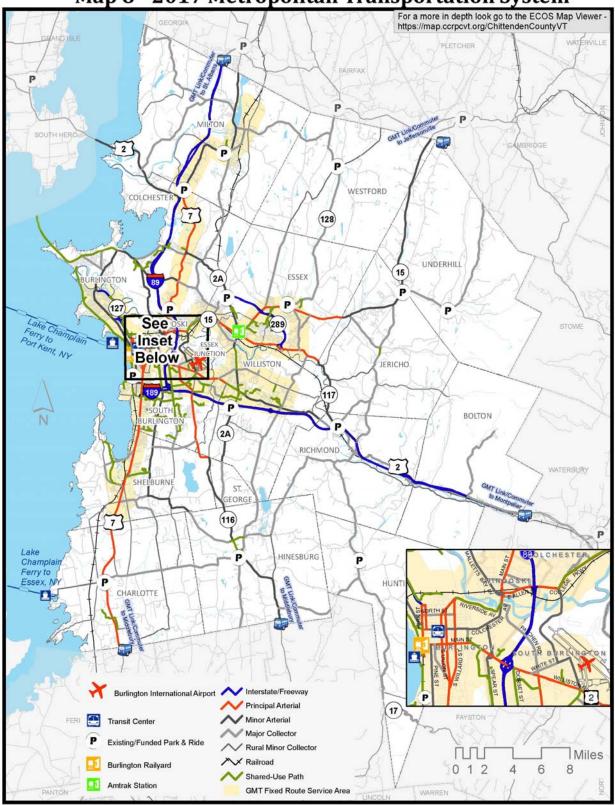
**Other Performance Measures** 

# **Existing Metropolitan Transportation System**

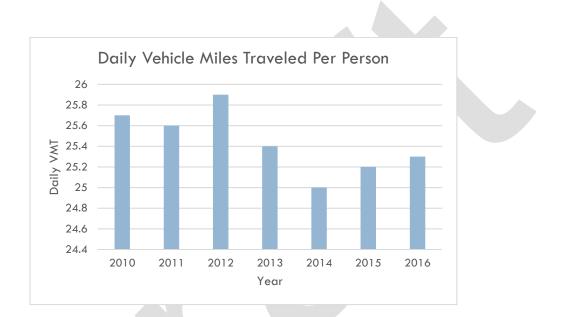
Map 8

# **CURRENT TRANSPORTATION CONDITIONS**

Arterial Roadways, VMT, and Congestion



Map 8 - 2017 Metropolitan Transportation System

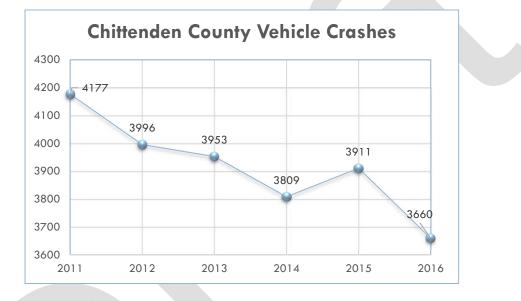


NOTE: Table of 2015 V/C or delay problem areas will be prepared and inserted here following updates to the Chittenden County Transportation Demand Model and analysis of subsequent model runs.

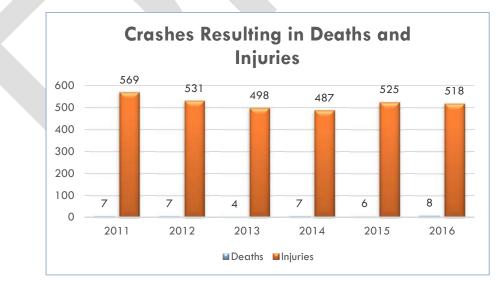
**High Crash Locations** 

Figure 2

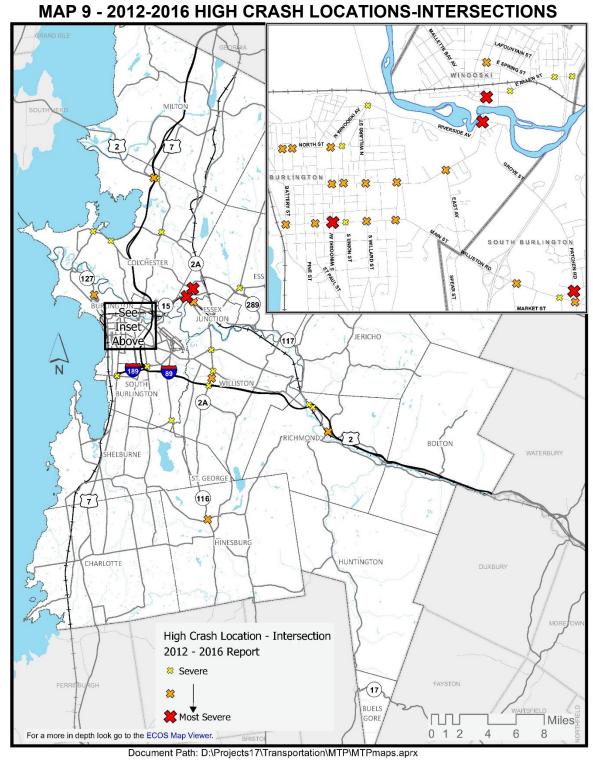
# FIGURE 1 - 2011-2016 CHITTENDEN COUNTY VEHICLE CRASHES

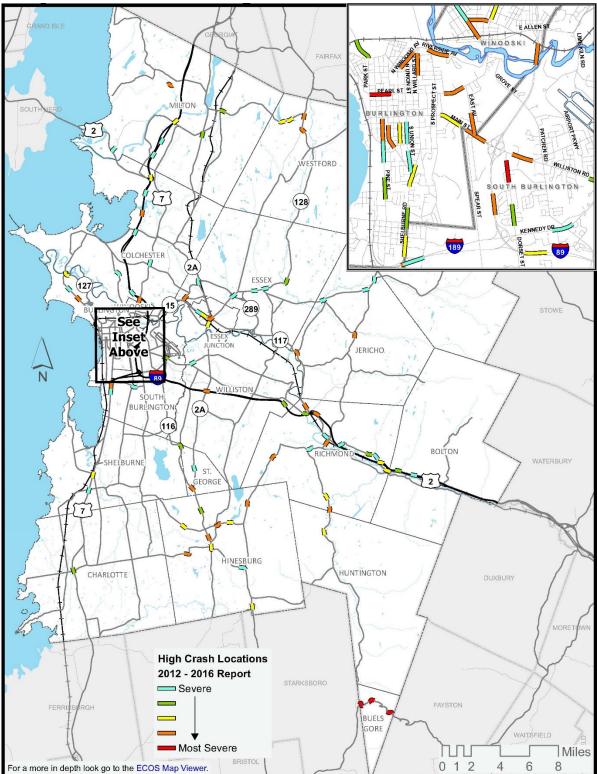


# FIGURE 2 - 2011-2016 CRASHES WITH FATALITIES AND INJURIES



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MAP 10 - 2012-2016 CRASH LOCATIONS-SEGMENTS

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# **Public Transit**

Figure 3

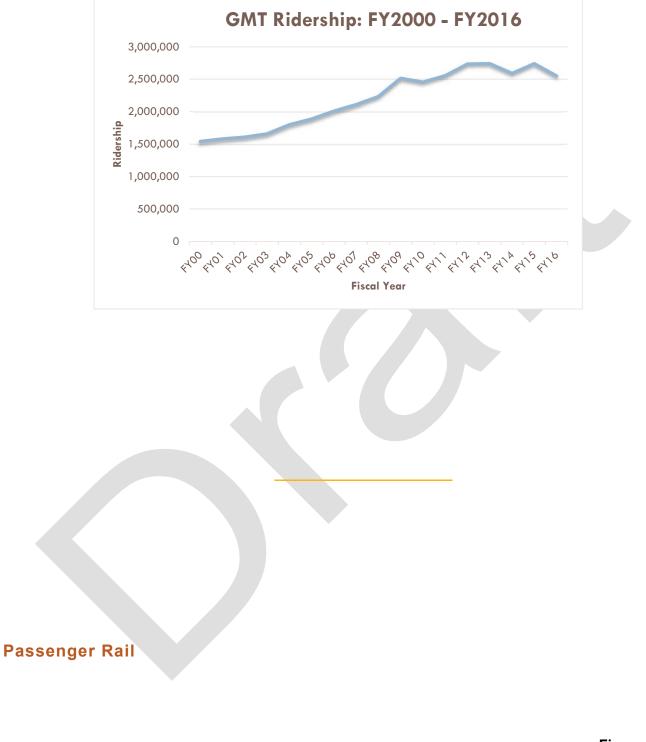


FIGURE 3 - GMT RIDERSHIP, FY2000 - FY2016

Figure 4

# FIGURE 4 - AMTRAK VERMONTER RIDERSHIP, FY2008 – 2016

YEAR					
RIDERS					

**Commuter Rail** 

**Intercity Bus** 

# Freight: Rail and Truck Facilities

Regional Freight Study and Plan

Regional Freight Study

Regional Freight Study

# **Active Transportation Facilities**

## **Intermodal Facilities**

# Air Service Facilities

# **Bridges**

# Other Transportation Demand Management Programs

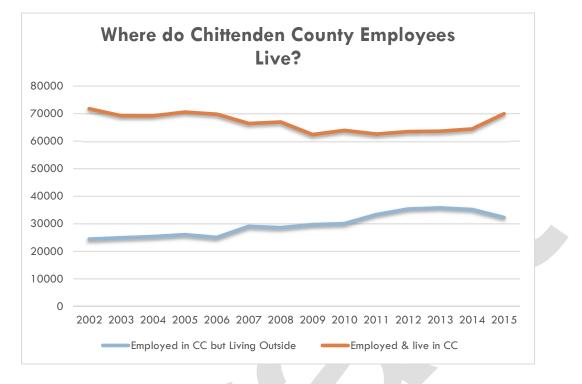
# **Transportation and Climate Change**

# **Transportation and Public Health**

#### **Travel Patterns**

NOTE: When the Chittenden County Transportation Demand Model update is complete, this travel pattern will be revisited and reexamined and the section updated as needed.

The Larger Northwest Vermont Region



### **FIGURE 5 - CHITTENDEN COUNTY EMPLOYEE COMMUTING**

## 2016 Statewide Transportation Public Opinion Survey

# **Financial Plan**

#### INTRODUCTION

23 CFR 450.324(g)(11)1

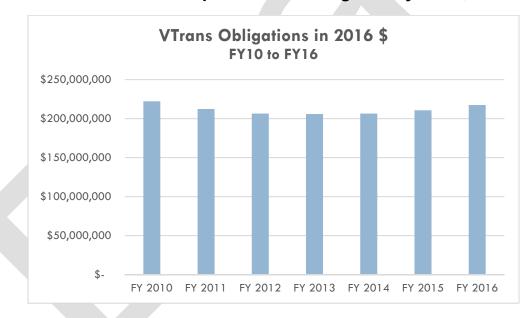
- (11) A financial plan that demonstrates how the adopted transportation plan can be implemented. Key components of this plan to include:
  - *(i)* System-level estimates of costs and revenues to adequately operate and maintain Federal-aid highways and public transportation.
  - (ii) Agreed upon estimates of funds that will be available to support plan implementation.
  - (iii) Recommendations on any additional financing strategies with strategies for ensuring their continued availability.
  - (iv) Funding to include all federally funded projects, both highway and transit. Projected funds to reflect "Year of Expenditure dollars." (YoE)

#### FINANCIAL PLAN PART 1: OVERALL CONSTRAINT

https://www.ecfr.gov/cgi-bin/text-

idx?c=ecfr; sid=e2662fc63c225d496d1fa6ce22ea6cb8; rgn=div5; view=text; node=23%3A1.0.1.5.11; idno=23; cc=ecfr#sp23.1.450.cc=23%3A1.0.1.5.11; idno=23%3A1.0.1.5.11; idno=23%3A1.0.1.5.11; idno=23%3A1.0.1.5.11; idno=23%3A1.0.1.5.11; idno=23%3A1.0.1.5.11; idno=23%3A1.0.1.5.11; idno=23%3A1.0.1.5.11; idno=23%3A1.0.1.5.11; idno=23%3A1.0.1.5.11; idno=23%3A1.0.15.11; idno=23%3A1.0.15; idno=23%3A

For more details on federal regulations regarding MPO long range planning, see



Vermont Federal Transportation Funding History FY2010 - 2016

# VTRANS OBLIGATIONS BY YEAR

		r of Constant ure (YOE)	2016 \$
		AVG \$211,	609,103
Federal Fiscal Year	FHWA and FTA Formula Funds	Chittenden County Obligations	CC as Percentage of State
AVERAGE			19.4%

#### PROJECTED ANNUAL AND CUMULATIVE FUNDING AVAILABLE FOR CHITTENDEN COUNTY PROJECTS (MILLIONS) AT 3% ANNUAL INFLATION

Fede	eral Fiscal Year	2016	2020	2025	2030	2035	2040	2045	2050
Annual									
Cumulative									

# Potential Adjustments to Projected Funding

<sup>&</sup>lt;sup>2</sup> This percentage is intended to represent a best estimate of available funding, and is in no way intended to be construed as a CCRPC "entitlement" or "rightful share" of statewide funds.

<sup>&</sup>lt;sup>3</sup> 3% is the most recent 10-year average inflation construction cost increase from the Engineering News Record (ENR)

# **Overall Funding Constraint Conclusion**

# FINANCIAL PLAN PART 2: SYSTEM OPERATIONS & MAINTENANCE ELEMENT

Use Category	FY2000 - FY2016 No Earmarks	% of Total	FY2010 - FY2016 No Earmarks	% of Total
Preservation Total	<mark>\$264,811,586</mark>	<mark>55.1%</mark>	\$138,625,196	73.6%
Other Total	\$215,627,876	44.9%	\$49,617,884	26.4%
Grand Total	\$480,439,462	100.0%	\$188,243,080	100.0%

## COMPARISON OF CHITTENDEN COUNTY OBLIGATION HISTORY BY PROJECT USE CATEGORIES

### PROJECTED ANNUAL FUNDING FOR NEW OR COMMITTED CHITTENDEN COUNTY PROJECTS (MILLIONS)

F	ederal Fiscal Year	2016	2020	2025	2030	2035	2040	2045	2050
Annual									
Cumulative									

## **CONCLUSION AND PROPOSED FUTURE ALLOCATIONS**

federal only

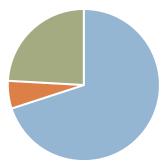
NOTE: All of the calculations above only included funds from the federal government. As stated earlier however, these represent only 80% of total costs. The non-federal match of 20% is added into the table below and all subsequent financial plan content. The total committed to TIP projects is calculated at \$102.75 million in 2016 constant dollars.

# ESTIMATED FEDERAL FUNDING FOR CHITTENDEN COUNTY: 2016 - 2050

# **COMPARISON OF MAINTENANCE FUNDING OPTIONS**

Δ.

Future Funding Estimates (Includes State and Local Match)	70 Percent to System Preservation* Millions (2016\$)	55 Percent to System Preservation* Millions (2016\$)
	\$420.67	\$682.38



# **PROPOSED 2050 PROGRAM ALLOCATIONS**

**Program Category** 

MTP Allocations

Percent

FY00-16 TIP Obligation Percentages

# Scenario Planning Review and Future Conditions

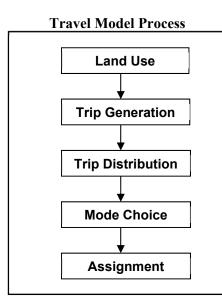
# INTRODUCTION

Figure 6



		A		
Demographics	2015	2050	2015 to 2050 % increase	
			14%	
			35%	
			25%	

Figure 7



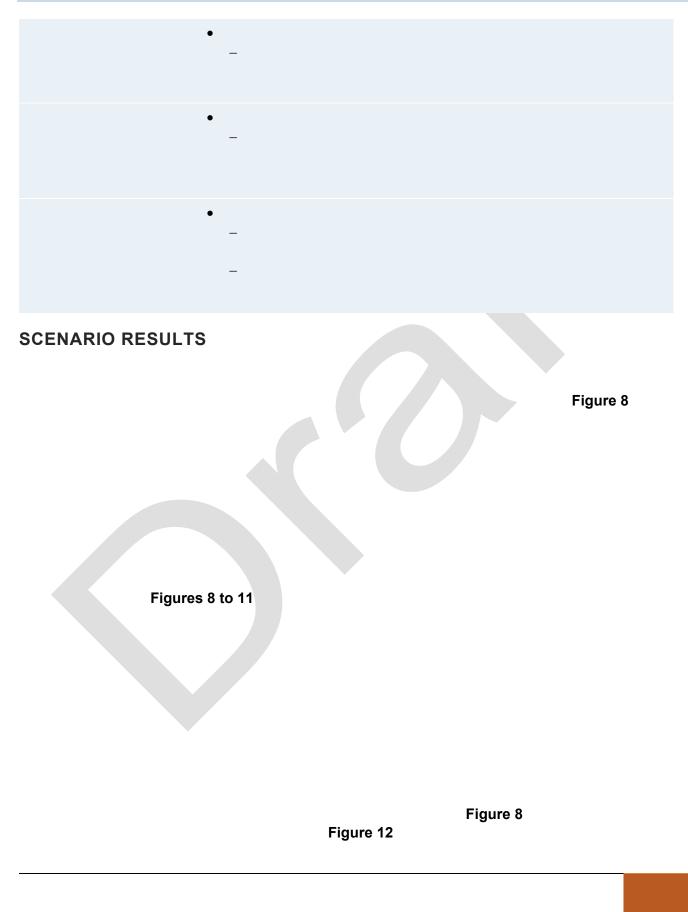
# FUTURE TRANSPORTATION SCENARIOS

### Figure 7

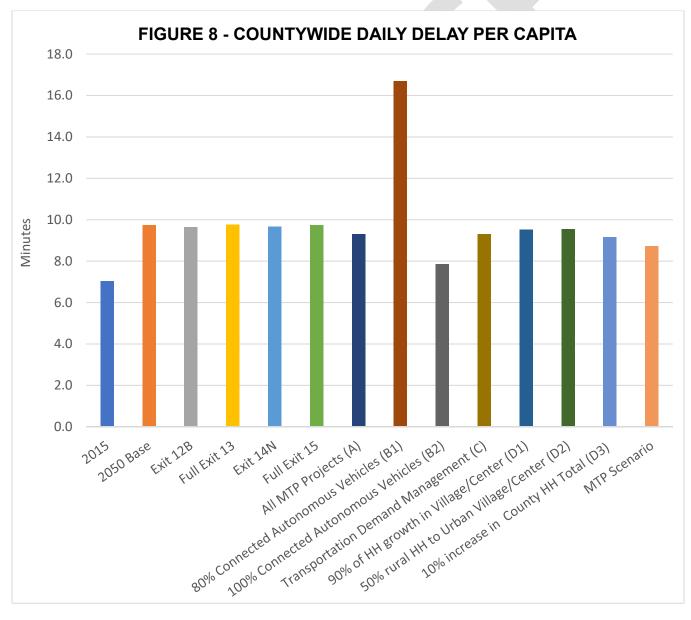
# **FIGURE 7 - SCENARIOS FOR TRANSPORTATION**

Scenario Name	Scenario Elements/Assumptions /Description
•	_
•	_
•	_

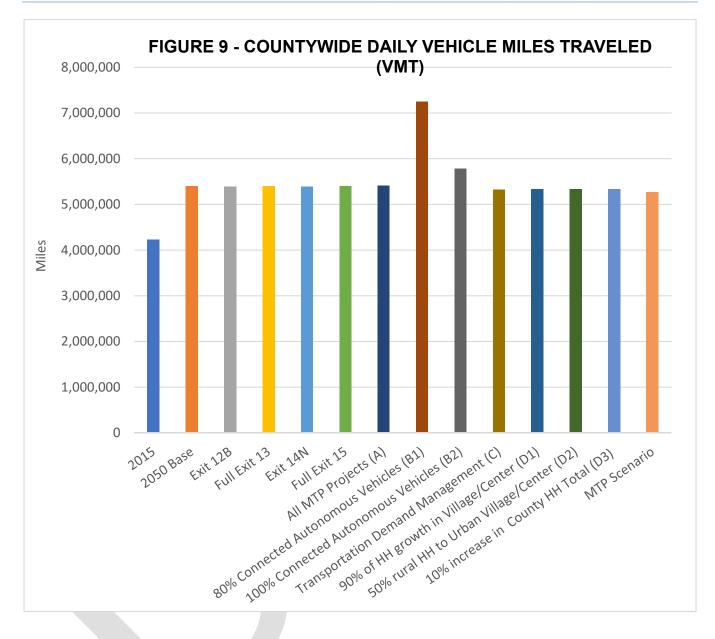
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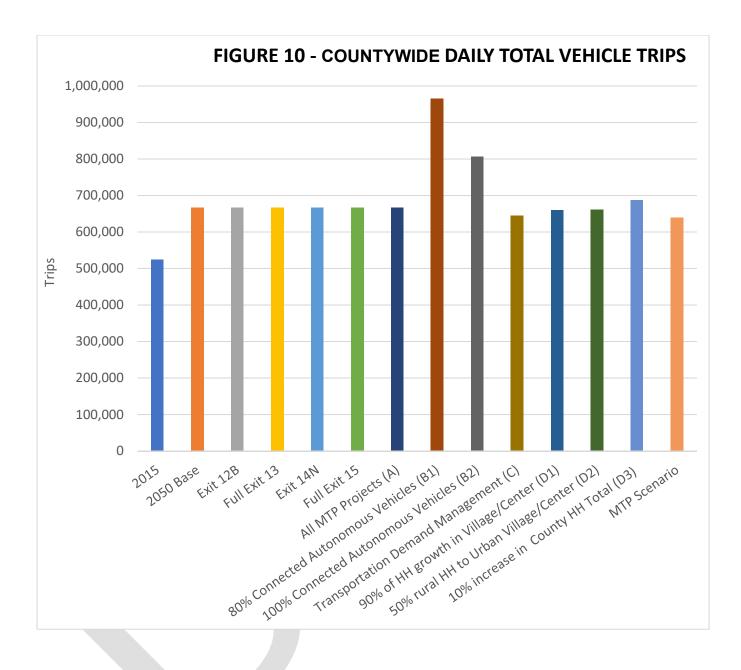


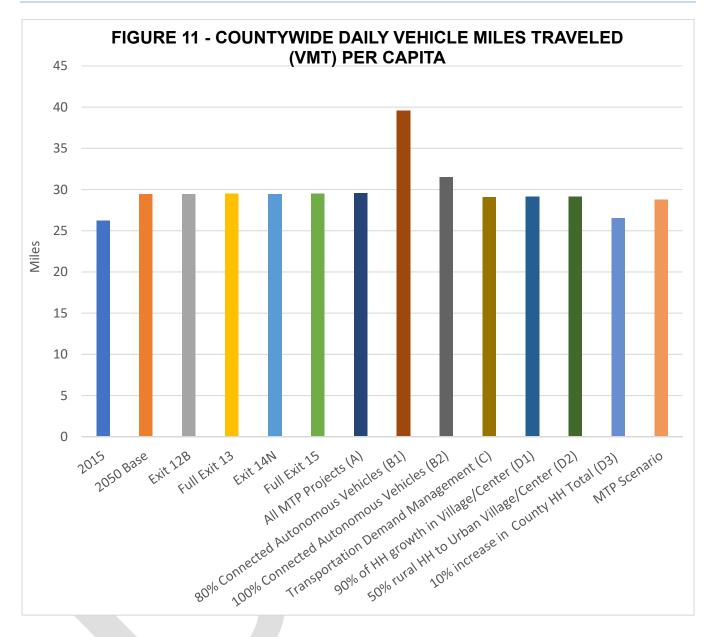
Figures 8 and 9



Figures 8 and 9







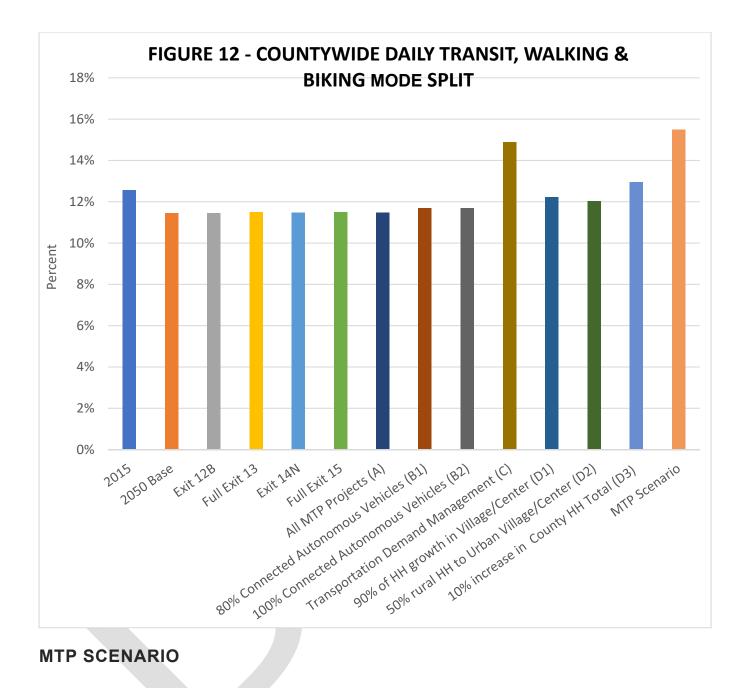


Figure 13



# FIGURE 13 - MTP SCENARIO DESCRIPTION

**MTP SCENARIO RESULTS** 

# **MTP Corridors**

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*maintaining our existing transportation infrastructure is critically important and should remain the County's top priority.* 

Map 11

Regional Core:

Northern Corridor:

Northeast Corridor:

**Route 15 West Corridor:** 

Southeastern Corridor:

Route 116 Corridor:

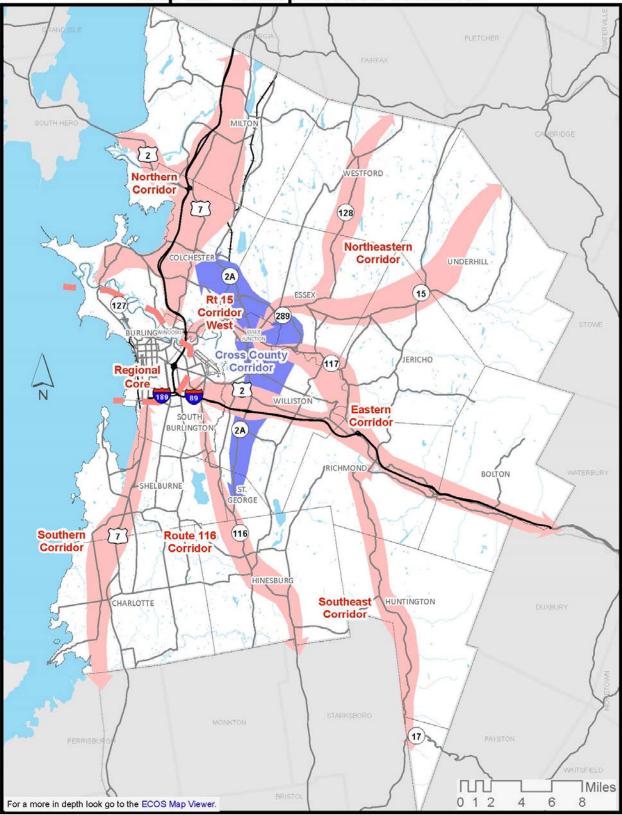
Eastern Corridor:

Southern Corridor:

**Cross County Corridor:** 

**MTP CORRIDORS** 

**Regional Core** 



**Map 11 - Transportation Corridors** 

Project	Туре
TIP Project	
	·
	TIP Project TIP Project TIP Project TIP Project TIP Project TIP Project TIP Project

## **Northern Corridor**

Recommended Corridor Strategies/Projects

Municipality	Project	Туре
	TIP	
	Project	
	TIP Project	

TIP Project	
TIP Project	
TIP Project	
TIP Project	
TIP Project	
TIP Project	
	×

# Northeastern Corridor

Municipality	Project	MTP Category
	TIP Project	
	TIP Project	

project also listed under Cross County Corridor and Eastern Corridor	
TIP Project	

**Route 15 West Corridor** 

Muni	cipality	Project	Туре
			·

TIP Project	
TIP Project	
TIP Project	

# Southeastern Corridor

Corridor Strategies/Projects

Municipality	Project	Туре

Vermont Route 116 Corridor

Municipality	Project	Туре
	TIP Project	
	TIP Project	
	TIP Project	
		Ţ.
		2

**Eastern Corridor** 

Municipality	Project	Туре
	TIP Project	
	TIP Project	
	TIP Project	
	project also listed under Cross County Corridor	
	TIP Project	

TIP Project	
	~
project also listed under Cross County corridor	

Southern Corridor

Municipality		Project	Туре
		TIP Project	
	Project	TIP	
	FIOJECI		
		TIP Project	

**Cross County Corridor** 

Municipality	Project	Туре
	TIP Project	

<b>TIP Project</b> project also listed under Eastern Corridor and Northeastern Corridor	
also listed under Eastern Corridor	
TIP Project	
project also listed under Eastern corridor	
TIP Project	*
TIP Project	

Municipality	Project	Туре

# **Corridor Summary**

Transportation Plan

1997 Long Range Transportation Plan,2005 Metropolitan

# Metropolitan Transportation Plan Investments and Project List

**MTP MAJOR INVESTMENTS** 

# **MTP PROJECT LIST**

# Draft MTP Project List By Municipality & VTrans Capital Program Status 2017 - 2050 December 18, 2017

	Municipality	Project Type	Project	Estimated Project Cost Seeking Federal Participation (includes required state+local match. Excludes funds spent prior to 10/1/16)	Time Frame (Short - 2025, Medium 2025- 2035, Long 2035-2050)
	Bolton				
	Need Identified in	a Scoping or Planning Study, N	Not in Capital Program or on TIP		
1	Bolton	Park and Ride	US2/Bolton Access Road Park & Ride	\$50,000	Medium
	Burlington				
	Capital Program -	Front of the Book and On CCI Multimodal Roadway	RPC TIP		
2	Burlington	Improvements	Shelburne Street Roundabout	\$2,460,000	Short
3	Burlington	Multimodal Roadway Improvements	Champlain Parkway	\$25,000,000	Short
4	Burlington	Bike & Pedestrian	Champlain Elementary Pedestrian Crossing Improvements	\$405,000	Short
5	Burlington	Bike & Pedestrian	Colchester Avenue Sidepath	\$281,437	Short
6	Burlington	Bike & Pedestrian	North Avenue Crosswalks	\$246,750	Short
	Capital Program -	Development & Evaluation an	d On CCRPC TIP		
7	Burlington	Multimodal Roadway Improvements	Railyard Enterprise Project	\$6,285,000	Short
	Need Identified in	a Scoping or Planning Study, N	Not in Capital Program or on TIP		
8	Burlington	Bike & Pedestrian	Burlington Bike Path Rehabilitation - Oakledge to Maple Street (\$10m project funded at 50% federal)	\$5,000,000	Short
9	Burlington	Bike & Pedestrian	Depot Street Improvements (Bike/Ped) (\$1.1m project funded at 50% federal)	\$550,000	Short
10	Burlington	Bike & Pedestrian	Sherman Street Connection to Depot Street - Stairway Street (0.775m project funded at 50% federal)	\$387,850	Short
11	Burlington / Winooski	Bike & Pedestrian	Bike/Ped Bridge Crossing of the Winooski River in the vicinity of the "Blue Bridge"	Further planning needed	Long
12	Winooski / Burlington	Bike & Pedestrian	Winooski River Bicycle/Pedestrian Bridge (dependent on outcome of Winooski Main Street Bridge scoping)	\$1,680,500	Medium
13	Burlington	Bike & Pedestrian	Intervale Road Access Improvements	Further planning needed	Short
14	Burlington	Multimodal Roadway Improvements	Main Street Great Street (\$10.3m project funded at 50% federal)	\$5,150,000	Short
15	Burlington	Multimodal Roadway Improvements	Main Street Complete Street - US2 Section	\$400,000	Medium
16	Burlington	Multimodal Roadway Improvements	Cherry Street Complete Street	\$500,000	Short
17	Burlington	Multimodal Roadway Improvements	Pearl Street Complete Street (\$3.3m project funded at 50% federal)	\$1,650,000	Short
18	Burlington	Multimodal Roadway Improvements	Winooski Avenue Improvements (\$12.9m project funded at 50% federal)	\$6,450,000	Short
19	Burlington	Multimodal Roadway Improvements	Battery Street Improvements (\$3.5m project funded at 50% federal)	\$1,750,000	Medium
20	Burlington	Multimodal Roadway Improvements	Shelburne Street Improvements - Complete Streets	\$12,900,000	Medium

	Municipality	Project Type	Project	Estimated Project Cost Seeking Federal Participation (includes required state+local match. Excludes funds spent prior to 10/1/16)	Time Frame (Short - 2025, Medium 2025- 2035, Long 2035-2050)
21	Burlington	Multimodal Roadway Improvements	Colchester Avenue/Riverside Avenue Intersection Improvements	\$3,400,000	Medium
22	Burlington	Multimodal Roadway Improvements	Colchester Avenue/Prospect Street Intersection Improvements (\$1m project funded at 50% federal)	\$500,000	Short
23	Burlington	Multimodal Roadway Improvements	Colchester Avenue/East Avenue Intersection Improvements (\$0.78m project funded at 50% federal)	\$390,000	Medium
24	Burlington	Multimodal Roadway Improvements	North Avenue Improvements (\$16.35m project funded at 50% federal)	\$8,175,000	Short
25	Burlington	Park and Ride	I-89 Exit 14 Intercept Park & Ride Facility	Further planning needed	Long
26	Burlington	Bike & Pedestrian	Champlain Elementary Safe Routes to School - Phase II (\$425,000 project funded at 20% federal)	\$85,000	Short
	Charlotte				
	Capital Program -	Front of the Book and On CCF	RPC TIP		
27	Charlotte	Multimodal Roadway Improvements	US7 Reconstruction	\$2,500,000	Short
28	Charlotte	Multimodal Roadway Improvements	US7/Ferry Road Intersection Improvements	\$535,000	Short
	Need Identified in a	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
29	Charlotte	Park and Ride	Charlotte Village Parking	\$215,000	Medium
30	Charlotte	Bike & Pedestrian	Town Link Trail	Further planning required	Long
	Colchester				
Capital Program - Front of the Book and On CCRPC TIP					
31	Colchester	Multimodal Roadway Improvements	VT2A/US7/Creek Road/Bay Road Intersection	\$5,754,281	Short
32	Colchester	Multimodal Roadway Improvements	Exit 16 Improvements - CIRC ALT PHASE I	\$8,050,000	Short
33	Colchester	Multimodal Roadway Improvements	Severance Corners Improvements - CIRC ALT PHASE II	\$3,848,257	Short
34	Colchester	Multimodal Roadway Improvements	W Lakeshore Drive / Prim Road Intersection Improvements - CIRC ALT PHASE III	\$1,900,000	Short
35	Colchester	Multimodal Roadway Improvements	Blakely Road / Laker Lane Intersection Improvements - CIRC ALT PHASE III	\$425,000	Short
36	Colchester	Park and Ride	US7/I-89 Exit 16 Park & Ride	\$500,000	Short
37	Colchester / Essex / Essex Junction	Bike & Pedestrian	VT15 Multi-use Path - Phase 1 Lime Kiln Road to Susie Wilson Road - CIRC ALT PHASE II	\$1,430,066	Short
38	Colchester	Bike & Pedestrian	Ft Ethan Allan Sidewalks - FINISHED	Earmark	Finished
39	Colchester	Bike & Pedestrian	Mountain View Drive Sidewalk - FINISHED	\$370,000	Finished
40	Colchester	Bike & Pedestrian	West Lakeshore Drive Path - Phase I	\$1,800,000	Short
	Capital Program -	Development & Evaluation and	I On CCRPC TIP		
41	Colchester	Multimodal Roadway Improvements	VT2A Colchester Village and Mill Pond Road/East Road Intersection and Multimodal Improvements - CIRC ALT PHASE III	\$3,900,000	Medium

	Municipality	Project Type	Project	Estimated Project Cost Seeking Federal Participation (includes required state+local match. Excludes funds spent prior to 10/1/16)	Time Frame (Short - 2025, Medium 2025- 2035, Long 2035-2050)
	Capital Program -	Candidate List			
42	Colchester	Multimodal Roadway Improvements	I-89 Exit 17/US2/US7 Interchange Improvements	\$17,238,000	Medium
43	Colchester / Essex / Essex Junction	Bike & Pedestrian	VT15 Multi-use Path - Phase 2, I-89 Exit 15 to Lime Kiln Road	\$305,700	Long
44	Colchester / Essex / Essex Junction	Bike & Pedestrian	VT15 Multi-use Path - Phase 3, Susie Wilson Road to West Street Extension	\$537,500	Long
	Need Identified in a	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
45	Colchester	Bike & Pedestrian	Severance Road Shared Use Path - CIRC ALT PHASE III	\$2,086,500	Long
46	Colchester	Bike & Pedestrian	West Lakeshore Drive Path Phase II - Harbor View Plaza to Public Boat Launch	\$900,000	Medium
47	Colchester	Bike & Pedestrian	West Lakeshore Pedestrian Tunnel at Bayside Park	\$2,000,000	Long
48	Colchester	Multimodal Roadway Improvements	VT15/Lime Kiln Road Intersection Improvements	\$1,030,000	Medium
49	Colchester	Multimodal Roadway Improvements	VT127 Roadway and Intersection Improvements	\$24,000,000	Long
50	Colchester	Multimodal Roadway Improvements	Roundabout at Bayside Park Intersection	\$3,310,000	Medium
51	Colchester	Multimodal Roadway Improvements	Mill Pond Road/Severance Road Intersection Improvements	\$277,000	Long
52	Colchester	Multimodal Roadway Improvements	Heineberg-Blakely Bypass and Shared Use Path	\$18,952,000	Long
53	Winooski, Colchester	Multimodal Roadway Improvements	Intelligent Transportation System Improvements - Signal and Communications - US7	\$600,000	Medium
	Essex				
	Capital Program -	Front of the Book and On CCF			
54	Essex	Multimodal Roadway Improvements	VT2A/VT289 Interchange Improvements - CIRC ALT PHASE II	\$1,467,400	Short
55	Essex	Multimodal Roadway Improvements	VT15/Sand Hill Road Signal - CIRC ALT PHASE II	\$1,140,453	Short
56	Essex, Williston	Multimodal Roadway Improvements	Signal Upgrades on VT2A and VT15	\$3,100,000	Short
57	Colchester / Essex / Essex Junction	Bike & Pedestrian	VT15 Multi-use Path - Phase 1 Lime Kiln Road to Susie Wilson Road - CIRC ALT PHASE II	See Line 37	Short
58	Essex	Bike & Pedestrian	Pinecrest Drive Sidewalk	\$242,770	Short
59	Essex	Bike & Pedestrian	Towers Road Sidewalk	\$169,050	Short
	Capital Program -	Development & Evaluation and	I On CCRPC TIP		
60	Essex	Multimodal Roadway Improvements	Susie Wilson Road Improvements and Intersections including VT15 and Kellogg - CIRC ALT PHASE III	\$8,500,000	Medium
61	Essex	Multimodal Roadway Improvements	VT117/North Williston Road Intersection Improvements - CIRC ALT PHASE III	\$3,175,000	Long

	Municipality	Project Type	Project	Estimated Project Cost Seeking Federal Participation (includes required state+local match. Excludes funds spent prior to 10/1/16)	Time Frame (Short - 2025, Medium 2025- 2035, Long 2035-2050)
	Capital Program -	Candidate List			
62	Essex	Multimodal Roadway Improvements	North Williston Road Flood Plain Notification Improvements - CIRC ALT PHASE III	\$405,000	Medium
63	Colchester / Essex / Essex Junction	Bike & Pedestrian	VT15 Multi-use Path - Phase 2, I-89 Exit 15 to Lime Kiln Road	See Line 43	Long
64	Colchester / Essex / Essex Junction	Bike & Pedestrian	VT15 Multi-use Path - Phase 3, Susie Wilson Road to West Street Extension	See Line 44	Medium
65	Essex	Bike & Pedestrian	VT15 Sidewalk - Old Stage Road to Essex Way - CIRC ALT PHASE III	\$160,000	Medium
	Need Identified in	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
66	Essex	Park and Ride	Essex Center, VT15/VT289 Park & Ride	\$186,000	Long
	Essex Junction				
	Capital Program -	Front of the Book and On CCF			
67	Essex Junction	Multimodal Roadway Improvements	VT15 Improvements - Post Office Square to Five Corners Improvements - FINISHED - CIRC ALT PHASE II	\$2,750,000	Finished
68	Essex Junction	Multimodal Roadway Improvements	Crescent Connector Road - VT2A to VT15 - CIRC ALT PHASE I	\$6,000,000	Short
	Capital Program -	Candidate List			
69	Colchester / Essex / Essex Junction	Bike & Pedestrian	VT15 Multi-use Path - Phase 2, I-89 Exit 15 to Lime Kiln Road	See Line 43	Long
70	Colchester / Essex / Essex Junction	Bike & Pedestrian	VT15 Multi-use Path - Phase 3, Susie Wilson Road to West Street Extension	See Line 44	Long
	Needs Identified in		Not in Capital Program or on TIP		
71	Essex Junction	Multimodal Roadway Improvements	VT15/West Street Extension Intersection - Additional NB lane on West Street Ext.	\$206,000	Long
	Hinesburg				
	Capital Program -	Front of the Book and On CCF			
72	Hinesburg	Multimodal Roadway Improvements	VT116/CVU Road Improvements	\$2,872,760	Short
73	Hinesburg	Bike & Pedestrian	Village North Sidewalk	\$170,000	Short
74	Hinesburg	Bike & Pedestrian	Village South Sidewalk	\$165,000	Short
	Need Identified in	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
75	Hinesburg	Bike & Pedestrian	Richmond Road Sidewalk, CVU Road to North Street	\$2,485,000	Long
76	Hinesburg	Multimodal Roadway Improvements	VT116/Charlotte Road Improvements to facilitate Concurrent Signal Phasing	\$150,000	Short
77	Hinesburg	Park and Ride	Hinesburg Village Park & Ride	\$90,000	Long
78	Hinesburg	Bike & Pedestrian	Route 116 East Sidewalk - Commerce Street to Mechanicsville Road	\$365,500	Medium
79	Hinesburg	Bike & Pedestrian	Mechanicsville Road Sidewalk	\$142,000	Medium

	Municipality	Project Type	Project	Estimated Project Cost Seeking Federal Participation (includes required state+local match. Excludes funds spent prior to 10/1/16)	Time Frame (Short - 2025, Medium 2025- 2035, Long 2035-2050)
	Huntington				
80	Need Identified in a	a Scoping or Planning Study, N Bike & Pedestrian	tot in Capital Program or on TIP Huntington Lower Village Traffic Calming and Bike/Ped Improvements	\$894,100	Medium
	Jericho				
	Capital Program -	Front of the Book and On CCF	RPC TIP		
81	Jericho	Multimodal Roadway Improvements	VT15/Browns Trace Intersection	\$2,004,190	Short
82	Jericho	Bike & Pedestrian	Browns Trace Multimodal Connection Pratt Road to Lee River Road	\$410,000	Short
83	Jericho	Bike & Pedestrian	Browns River Middle School and Union ID School Crossing Improvements	\$193,200	Short
84	Jericho	Bike & Pedestrian	Lee River Road Sidewalk	\$350,000	Short
	Need Identified in	a Scoping or Planning Study, N	tot in Capital Program or on TIP		
85	Jericho	Bike & Pedestrian	Browns Trace Multimodal Connection - MMU to Lee River Road	\$471,300	Medium
86	Jericho	Multimodal Roadway Improvements	VT15/Dickinson Street Modifications	Further planning needed	Long
87	Jericho	Park and Ride	VT15 Park and Ride	\$120,000	Long
	Milton	Energy of the Deale and On CCI			
	Capital Program -	Front of the Book and On CCF Multimodal Roadway	US7/Middle Road/Railroad Street Safety		
88	Milton	Improvements	Improvements	\$3,650,000	Short
89	Milton	Bike & Pedestrian	Cherry Street	\$65,500	Short
90	Milton	Bike & Pedestrian	US7 Sidewalk - Nancy Drive to Haydenberry Drive	\$1,078,000	Short
	Need Identified in	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
91	Milton	Multimodal Roadway Improvements	US7/Main Street Intersection Improvements	\$1,030,000	Long
92	Milton	Multimodal Roadway Improvements	US7/Racine/Legion/Bartlett/West Milton Road Improvements	\$515,000	Medium
93	Milton	Multimodal Roadway Improvements	I-89/West Milton Road New Interchange	\$30,000,000	Long
94	Milton	Park and Ride	Milton Town Office Park & Ride	\$870,000	Medium
	Richmond				
	Need Identified in	a Scoping or Planning Study, N	lot in Capital Program or on TIP		
95	Richmond	Bike & Pedestrian	US2 Path - Park and Ride to Richmond Village	\$3,388,000	Long
	Shelburne				
	Capital Program -	Front of the Book and On CCF			
96	Shelburne	Bike & Pedestrian	Village Sidewalks and Crosswalks	\$137,971	Short

	Municipality	Project Type	Project	Estimated Project Cost Seeking Federal Participation (includes required state+local match. Excludes funds spent prior to 10/1/16)	Time Frame (Short - 2025, Medium 2025- 2035, Long 2035-2050)
	Need Identified in a	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
97	Shelburne	Bike & Pedestrian	Falls Road Bike/Ped Bridge	\$838,800	Medium
98	Shelburne	Bike & Pedestrian	Bay Road Pedestrian Bike Safety Improvements	\$20,000	Medium
99	Shelburne	Multimodal Roadway Improvements	US7/Harbor Road Improvements	\$1,420,000	Medium
100	Shelburne	Bike & Pedestrian	Shelburne Southern Gateway (south of Bostwick/Marsett)	\$2,500,000	Medium
101	Shelburne	Park and Ride	Shelburne Village Park & Ride	\$15,000	Medium
	South Burlingto	n			
	Capital Program -	Front of the Book and On CCI			
102	South Burlington	Multimodal Roadway Improvements	Market Street (\$5m project to be funded with earmark funds)	Earmark	Short
103	South Burlington	Bike & Pedestrian	VT116 Sidewalk to Tilley Drive	\$173,000	Finished
	Capital Program -				
104	South Burlington	Multimodal Roadway Improvements	Airport Drive Extension to Airport Parkway	\$12,167,000	Medium
105	South Burlington	Multimodal Roadway Improvements	I-89 Interstate Access Improvements (12B, 13, 14 or 14N)	\$37,302,000	Long
	Need Identified in a	a Scoping or Planning Study, N	lot in Capital Program or on TIP		
106	South Burlington	Bike & Pedestrian	Bike/Ped Bridge over I-89 in the vicinity of Exit 14 (\$14m project to be funded at 50% federal (excludes possible future grants))	\$7,000,000	Short
107	South Burlington	Bike & Pedestrian	Airport Parkway Bike/Ped Facility, Kirby Road to Winooski River Bridge	\$1,647,400	Short
108	South Burlington	Bike & Pedestrian	Spear Street Shared Use Path, South of US2	\$452,400	Short
109	South Burlington	Bike & Pedestrian	Lindenwood Drive Path and Crossing Improvements	\$360,000	Short
110	South Burlington	Bike & Pedestrian	Spear Street Bike/Ped Improvements - Allen Road to US Forest Service/ I-89	\$4,000,000	Medium
111	South Burlington	Bike & Pedestrian	Dorset Street Shared Use Path, Nowland Farm Road South 3.500 feet	\$610,000	Short
112	South Burlington	Bike & Pedestrian	Allen Road Shared Use Path West of Spear Street - 800 foot gap	\$283,600	Short
113	South Burlington	Bike & Pedestrian	Allen Road Shared Use Path - US7 to Existing Facility	\$200,000	Short
114	South Burlington / Williston	Bike & Pedestrian	Shared Use Path Connection over Muddy Brook	\$3,639,200	Short
115	South Burlington	Bike & Pedestrian	VT116 Bike Path - US2 to Kennedy Drive	\$500,000	Long
116	South Burlington	Multimodal Roadway Improvements	Williston Road Intersection and Roadway Improvements - Garden Street to VT116 (\$3.3m project to be funded with local funds)	Locally funded	Short
117	South Burlington	Multimodal Roadway Improvements	Williston Road Intersection and Roadway Improvements - Dorset Street to Garden Street (\$10m project to be funded with 50% federal funds)	\$5,000,000	Short

	Municipality	Project Type	Project	Estimated Project Cost Seeking Federal Participation (includes required state+local match. Excludes funds spent prior to 10/1/16)	Time Frame (Short - 2025, Medium 2025- 2035, Long 2035-2050)
118	South Burlington	Multimodal Roadway Improvements	Implement Signal Control and Pedestrian Upgrades, Shelburne Road between IDX Drive and I-189 (\$1.236 m project to be funded with AID grant)	AID Grant	Short
119	South Burlington	Multimodal Roadway Improvements	Shelburne Road Streetscape and Bike/Ped Improvements - IDX Drive to Queen City Park Road	\$5,000,000	Medium
120	South Burlington	Multimodal Roadway Improvements	Exit 14 Area Signal Upgrades	Earmark	Medium
121	South Burlington	Multimodal Roadway Improvements	Swift Street/Spear Street Intersection Improvements (\$572,000 project to be funded with local funds)	Locally funded	Medium
122	South Burlington	Multimodal Roadway Improvements	I-89 Widening, Exit 14, South Burlington to Exit 15, Colchester (3 lanes in each direction)	\$37,000,000	Long
123	South Burlington	Park and Ride	US7/I-189 Intercept Park & Ride	\$5,000	Long
	St. George		• •		
	Need Identified in	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
124	St. George	Park and Ride	VT116/VT2A Intersection Park & Ride	\$248,000	Medium
125	St. George	Multimodal Roadway Improvements	VT116/VT2A Intersection Improvements	Further planning needed	Long
	Underhill				
	Capital Program -	Front of the Book and On CCI	RPC TIP		
126	Underhill	Bike & Pedestrian	Underhill Flats Sidewalk	\$360,000	Short
	Williston				
	Capital Program -	Front of the Book and On CCI	RPC TIP		
127	Williston	Multimodal Roadway Improvements	US2/Trader Lane Signal - CIRC ALT PHASE II	No Federal	Short
128	Williston	Multimodal Roadway Improvements	US2/Industrial Avenue Intersection	\$5,760,000	Short
129	Williston	Multimodal Roadway Improvements	VT2A/James Brown Drive - CIRC ALT PHASE I	\$1,889,189	Short
130	Williston	Multimodal Roadway Improvements	VT2A/Industrial Avenue Improvements and Improvements to VT2A to James Brown Drive - CIRC ALT PHASE III	\$4,550,000	Short
131	Essex, Williston	Multimodal Roadway Improvements	Signal Upgrades on VT2A and VT15	See Line 56	Short
132	Williston	Park and Ride	Park and Ride South of I-89	\$1,400,000	Short
133	Williston	Bike & Pedestrian	VT2A Infill Sidewalks	\$86,083	Short
	Capital Program -	Development & Evaluation and	I On CCRPC TIP		
134	Williston	Multimodal Roadway Improvements	Exit 12 Stage 1 - Shared Use Path and VT2A lane, Marshall to I-89 - CIRC ALT PHASE III	\$2,000,000	Medium
135	Williston	Multimodal Roadway Improvements	Exit 12 Stage 2 - New Grid Streets and VT2A Intersection - CIRC ALT PHASE III	\$9,300,000	Medium
136	Williston	Multimodal Roadway Improvements	Exit 12 Stage 3 - Diverging Diamond Interchange - CIRC ALT PHASE III	\$22,900,000	Medium
127	Williston	Multimodal Roadway Improvements	Exit 12 Stage 4 - VT2A Boulevard - CIRC ALT PHASE III	\$11,400,000	Long

	Municipality	Project Type	Project	Estimated Project Cost Seeking Federal Participation (includes required state+local match. Excludes funds spent prior to 10/1/16)	Time Frame (Short - 2025, Medium 2025- 2035, Long 2035-2050)
	Capital Program -	Candidate List			
138	Williston	Multimodal Roadway Improvements	Mountain View Road Multimodal Improvements: Old Stage Road to VT2A - CIRC ALT PHASE III	\$3,853,000	Long
139	Williston	Bike & Pedestrian	US2 - Taft Corners to Williston Village - Shared Use Path - CIRC ALT PHASE III	\$2,900,000	Medium
140	Williston	Park and Ride	Taft Corners Park & Ride	\$255,000	Long
	Need Identified in a	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
141	South Burlington / Williston	Bike & Pedestrian	Shared Use Path Connection over Muddy Brook	See Line 114	Medium
142	Williston	Multimodal Roadway Improvements	US2/North Williston Road/Oak Hill Road Intersection	\$989,000	Long
143	Williston	Bike & Pedestrian	Industrial Avenue Sidewalks	\$421,600	Long
	Winooski				
	Capital Program -	Front of the Book and On CCH	RPC TIP		
144	Winooski	Bike & Pedestrian	Gateways Crosswalk Enhancements	\$360,580	Short
	Need Identified in a	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
145	Winooski	Bike & Pedestrian	Riverwalk East- Access to Casavant Park	\$1,800,000	Long
146	Burlington / Winooski	Bike & Pedestrian	Bike/Ped Bridge Crossing of the Winooski River in the vicinity of the "Blue Bridge"	See Line 11	Long
147	Winooski / Burlington	Bike & Pedestrian	Winooski River Bicycle/Pedestrian Bridge	See Line 12	Medium
148	Winooski	Multimodal Roadway Improvements	Main Street (US7) Revitalization - Transportation, Utility, Stormwater	Further planning needed	Medium
149	Winooski, Colchester	Multimodal Roadway Improvements	Intelligent Transportation System Improvements - Signal and Communications - US7	See Line 53	Medium
	<b>Regional Storm</b>				
	Need Identified in a	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
150	Regional	Stormwater	Regional Stormwater Projects	\$16,000,000	Ongoing
	<b>Regional Sidewa</b>				
	Need Identified in a	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
151	Regional	Bike & Pedestrian	Sidewalks/Paths In Areas Planned for Growth	\$2,000,000	Ongoing
	Regional Transi	It			
	On CCRPC TIP				
152	Regional	Transit	Burlington-Montpelier Inter-Regional Bus Service	\$152,166	
153	Regional	Transit	Burlington-Waterbury Inter-Regional Bus Service	\$341,031	
154	Regional	Transit	Essex Evening	\$186,869	
155	Regional	Transit	Hinesburg Route	\$348,646	
156	Regional	Transit	Jeffersonville Commuter (CMAQ funding ending in FY18)	\$172,000	

	Municipality	Project Type	Project	Estimated Project Cost Seeking Federal Participation (includes required state+local match. Excludes funds spent prior to 10/1/16)	Time Frame (Short - 2025, Medium 2025- 2035, Long 2035-2050)
157	Regional	Transit	Milton Route	\$880,958	
158	Regional	Transit	Milton/Colchester to Burlington (CMAQ funding ends in FY18)	\$59,676	
159	Regional	Transit	North Avenue Increased Peak Frequencies (CMAQ funding begins in FY20)	\$690,000	
160	Regional	Transit	US2 Corridor	\$3,834,722	
161	Regional	Transit	Williston Mid-Day (CMAQ funding ends in FY18)	\$30,670	
	Need Identified in a	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
162	Regional	Transit	Transit Capital	\$40,000,000	
	<b>Regional Rail</b>				
	Need Identified in a	a Scoping or Planning Study, N	ot in Capital Program or on TIP		
163	Regional Rail	Rail	Burlington Rail Platform Upgrades - \$750,000	TIGER Funding	
164	Regional Rail	Rail	Essex Junction Train Station Upgrades - \$3,000,000	\$3,000,000	
165	Regional Rail	Rail	Bring all Tracks in Chittenden County to Class 4 standard - \$67,000,000	FTA or FRA	
166	Regional Rail	Rail	Freight Improvements to bridges, sidings, railyards, crossings and clearance - \$10,000,000	FTA or FRA	
167	Regional Rail	Rail	Essex Junction to Burlington 286 Rail Upgrade - \$15,000,000	FTA or FRA	
			<b>Total Cost of All Projects</b>	\$523,582,625	
		TIP	Capital Program Front of the Book Projects	\$102,747,675	
	Costs Excluding TIP Projects			\$420,834,950	
			Estimated Funds Available	\$420,669,379	
			Excess Project Cost	-\$165,571	

# **Environmental Consultation and Mitigation**

# INTRODUCTION



#### CAUSES AND EFFECTS OF TRANSPORTATION ACTIVITIES

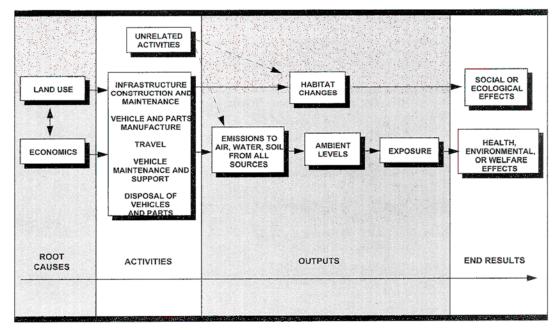


FIGURE 1 - INDICATORS OF THE ENVIRONMENTAL IMPACTS OF TRANSPORTATION, 1996

### **CONSULTATION BACKGROUND**

# THE ECOS IMPACT IN DEVELOPING TRANSPORTATION STRATEGY

Make

public and private investments in the built environment to minimize environmental impact, maximize financial efficiency, optimize social equity and benefits, and improve public health.

# **ENVIRONMENTAL MITIGATION**

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# Possible Mitigation Strategies

Resource	Regulatory and Information Contacts	Mitigation Activities	Mitigation Areas