

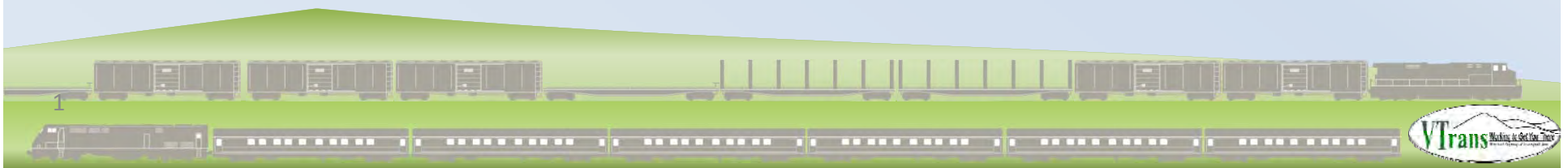


Vermont State Rail Plan Status Update

May 27, 2015 – 1:00 PM

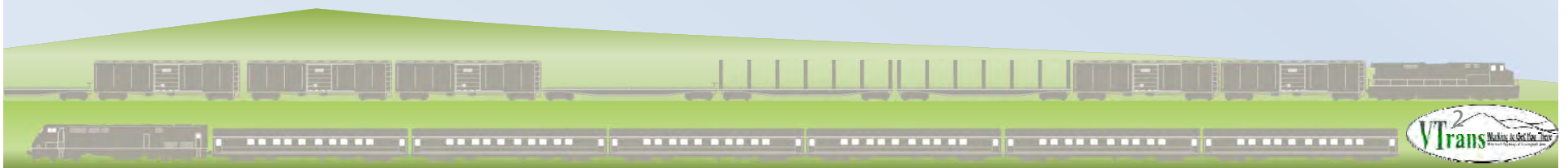
Vermont Rail Advisory Council

VTrans Headquarters, Montpelier

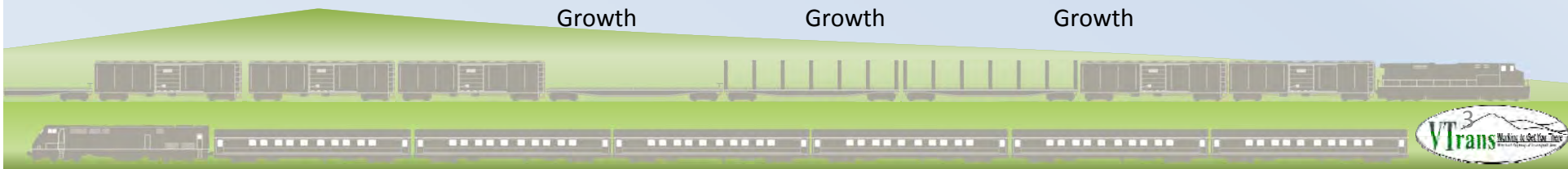
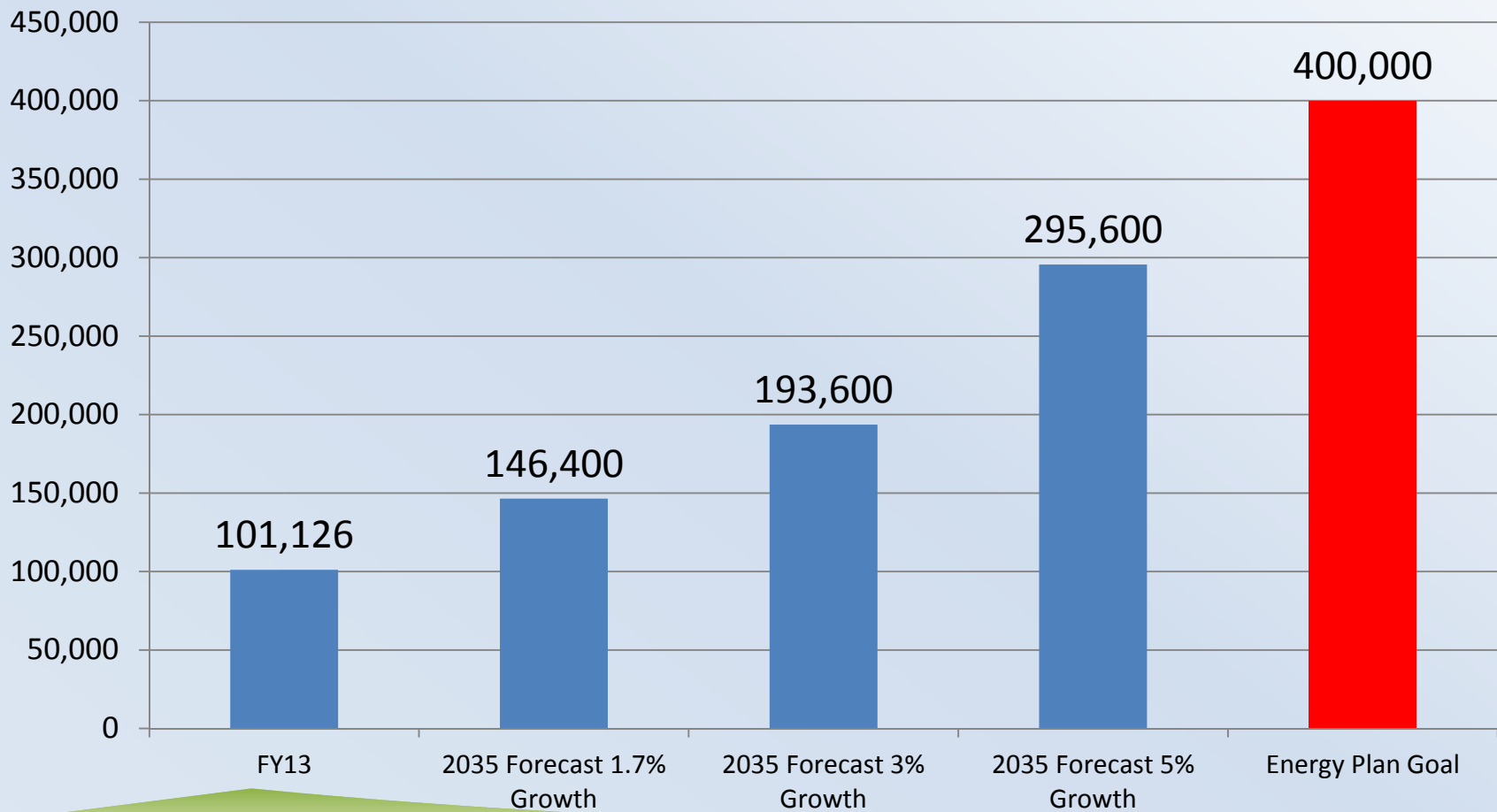


Agenda

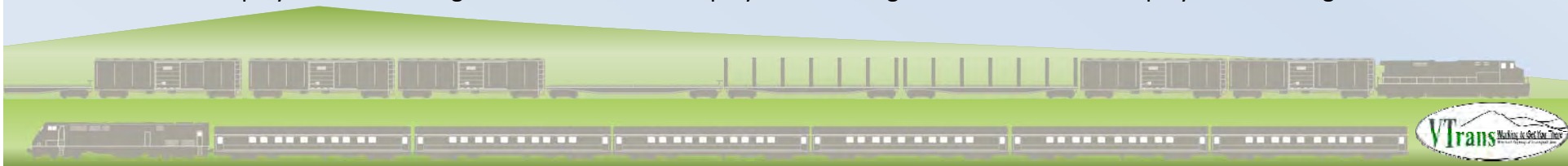
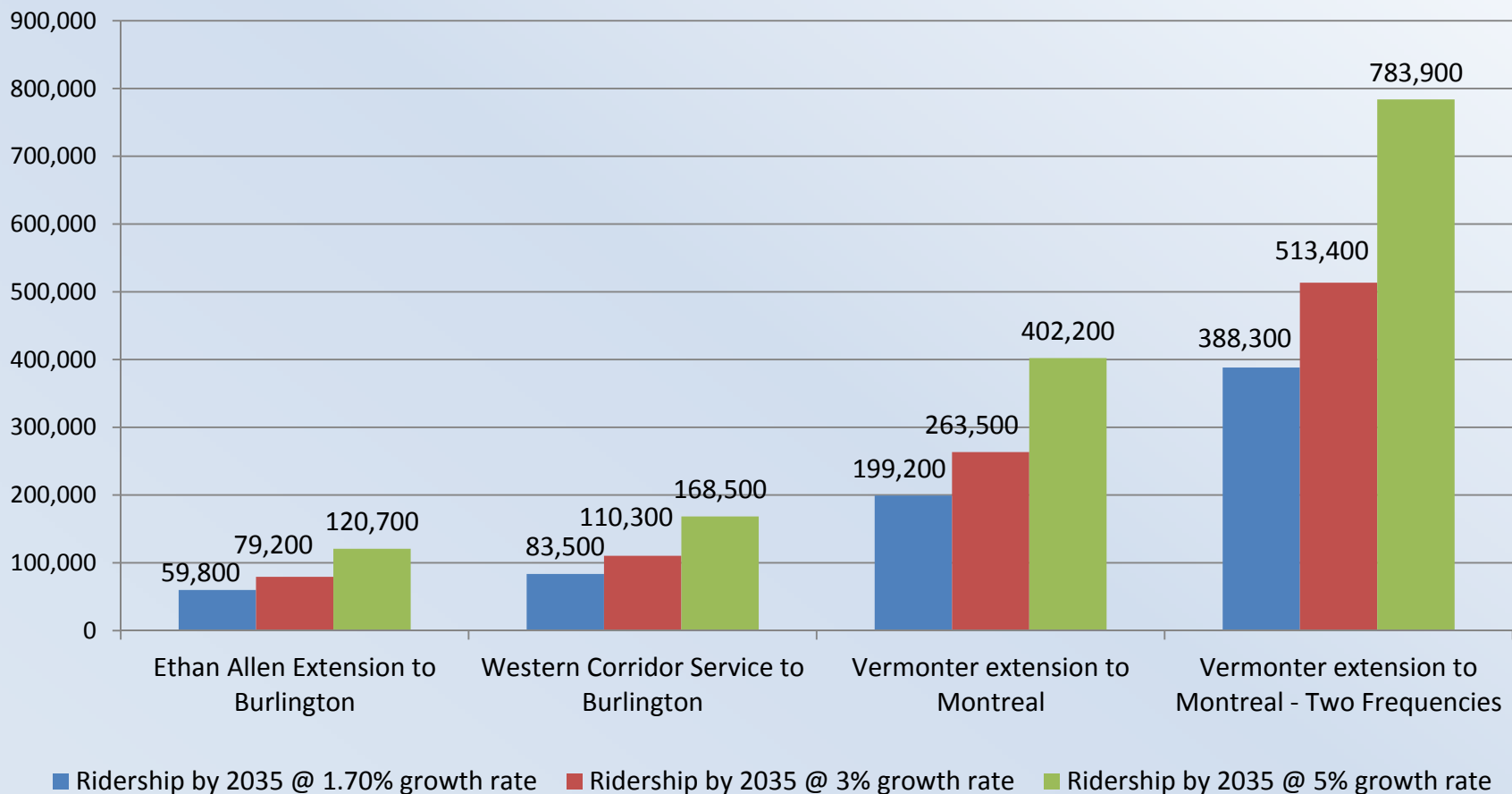
- Passenger rail needs
- Crossing/safety needs
- Freight needs
- Capital plan
- Performance measures



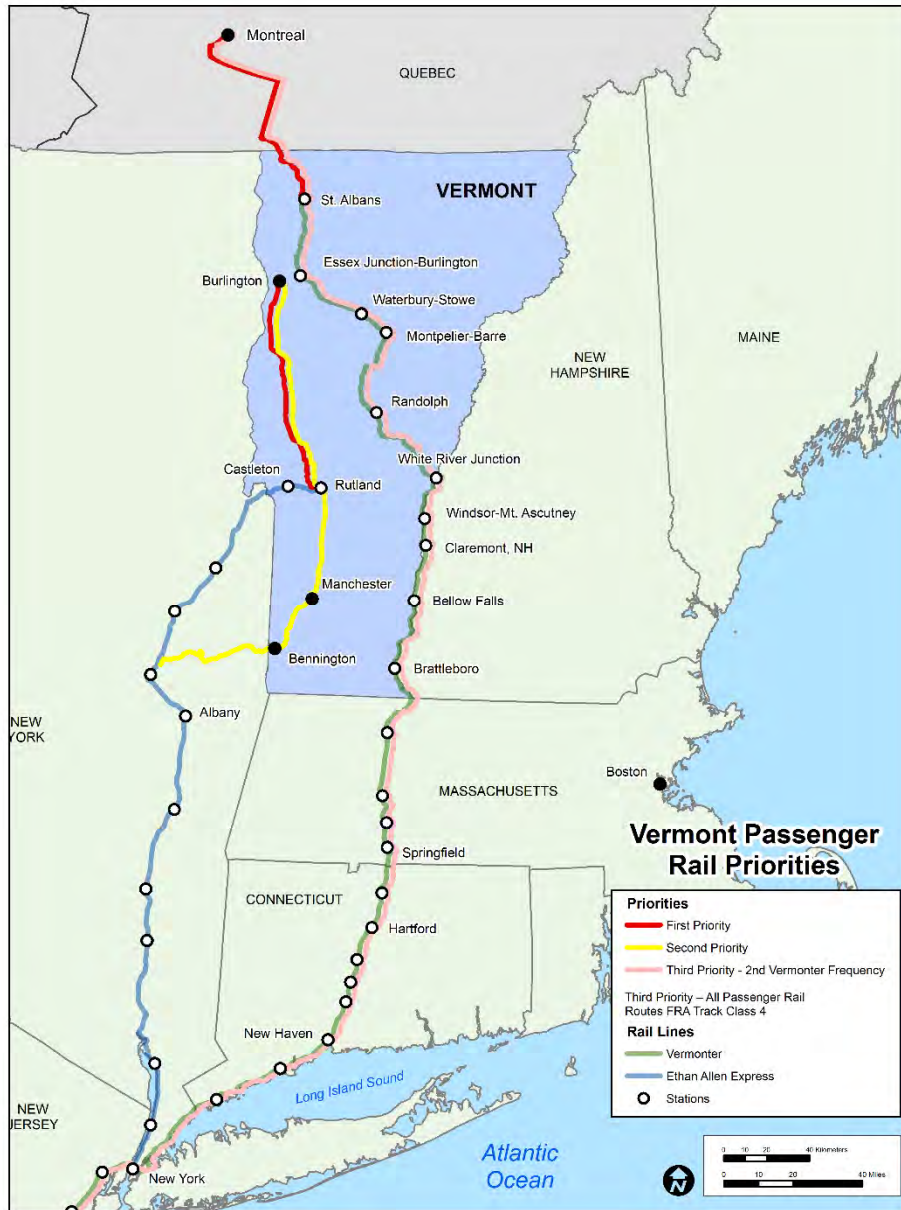
Intercity Passenger Rail No-Build Scenarios - On and Offs at Vermont Stations



Summary of Proposed Service Build out Options On and Offs at Vermont Stations in Year 2035



Passenger Rail Priorities

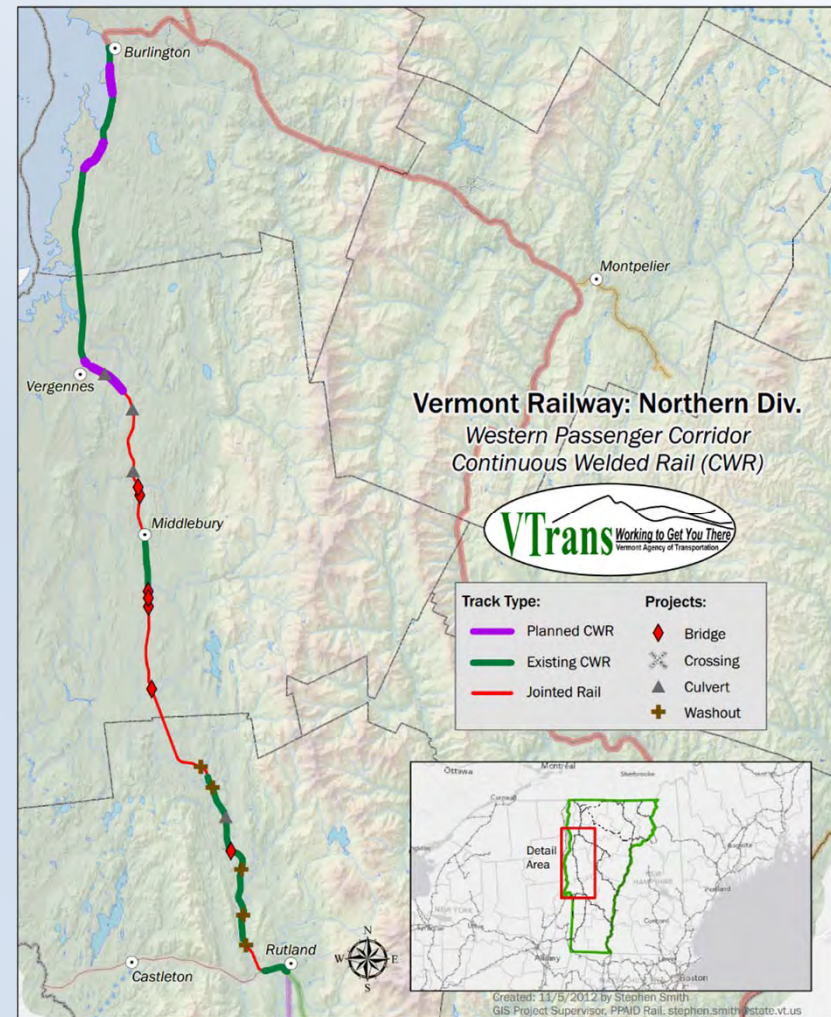


- Ethan Allen Express extension to Burlington.
- Vermonter extension to Montreal
- New western corridor service through Bennington
- Additional frequency along the Vermonter



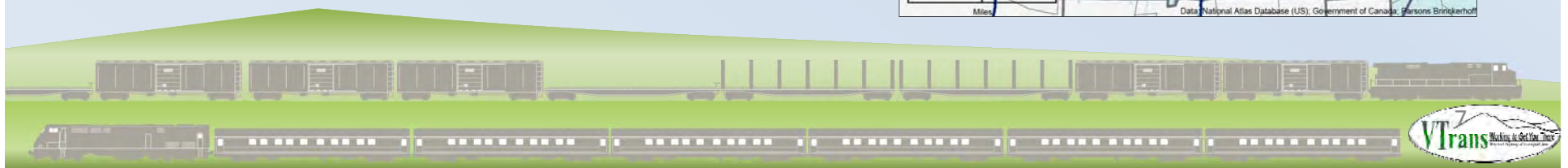
Ethan Allen Extension to Burlington

- Work to upgrade VTR to FRA Track Class 3 (60 mph maximum) performed in stages
- VTrans estimates remaining cost to be \$26.4 million
 - Install CWR, tie and surfacing
 - Passing sidings
 - Crossing upgrades
 - Yard improvements (new wye, wye rehabilitation)
 - Station platforms
- VTrans estimates incremental annual subsidy @ \$1 million/year



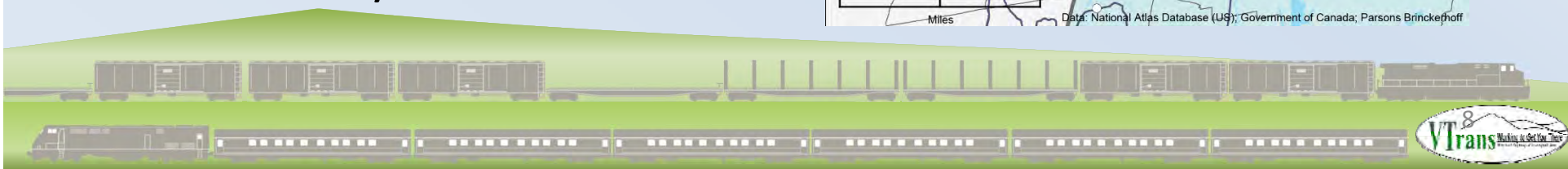
Vermont Extension to Montreal

- No capital costs to begin operating service (Class 3, 59 MPH track ready).
- High-Speed Rail & TIGER grants + railroad invested over \$90 million along corridor.
- VTrans estimates the incremental annual subsidy @ \$2 million for existing single round trip per day.



New Train between Albany and Burlington through N. Bennington and Manchester

- \$88 million for the Vermont portion of the route (Bi-State Rail Study)
- Improvements to track, crossings, bridges, new station platforms
- Requires parallel investments in New York
- Operating subsidy would be \$4.1 million based on Bi-State study calculations



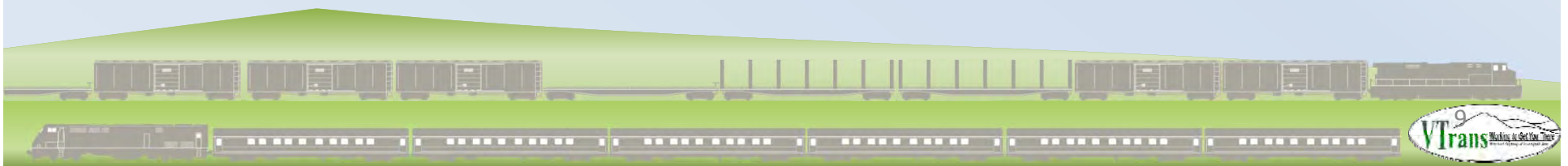
Long-Term Objective – FRA Track Class 4 (up to 79 mph)

Vermont

- Estimated capital cost of \$177 million for Vermont portion (Northern New England Intercity Rail Study) for CTC, crossing upgrades, track extensions, and bridges.
- Capital cost does not include cost of changing spirals and adding super elevation.

VTR Northern, BTR Subdivisions

- Estimated cost of adding CTC to the VTR Northern Sub, CLP would be about \$42 million, while the cost of upgrading all crossings to constant warning time would be about \$36M for CLP, VTR Northern, B&R Subs.



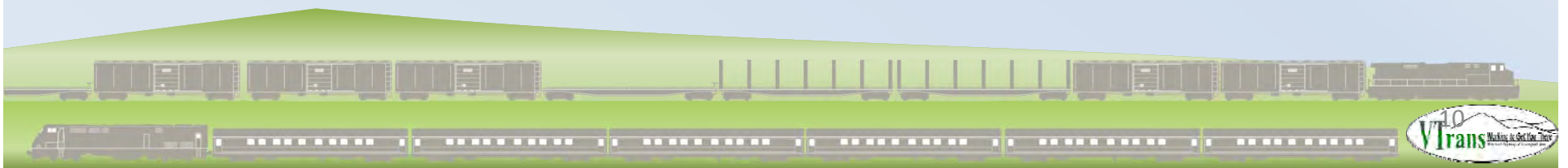
Long-Term Objective – FRA Track Class 4 (up to 79 mph)

Short-Term Passenger Needs

- \$114.4 million
- Extension to Burlington
- New Bennington Route

Long-Term Passenger Needs

- \$370.3 million
- All Passenger Rail Routes
Class 4, 79 MPH speeds

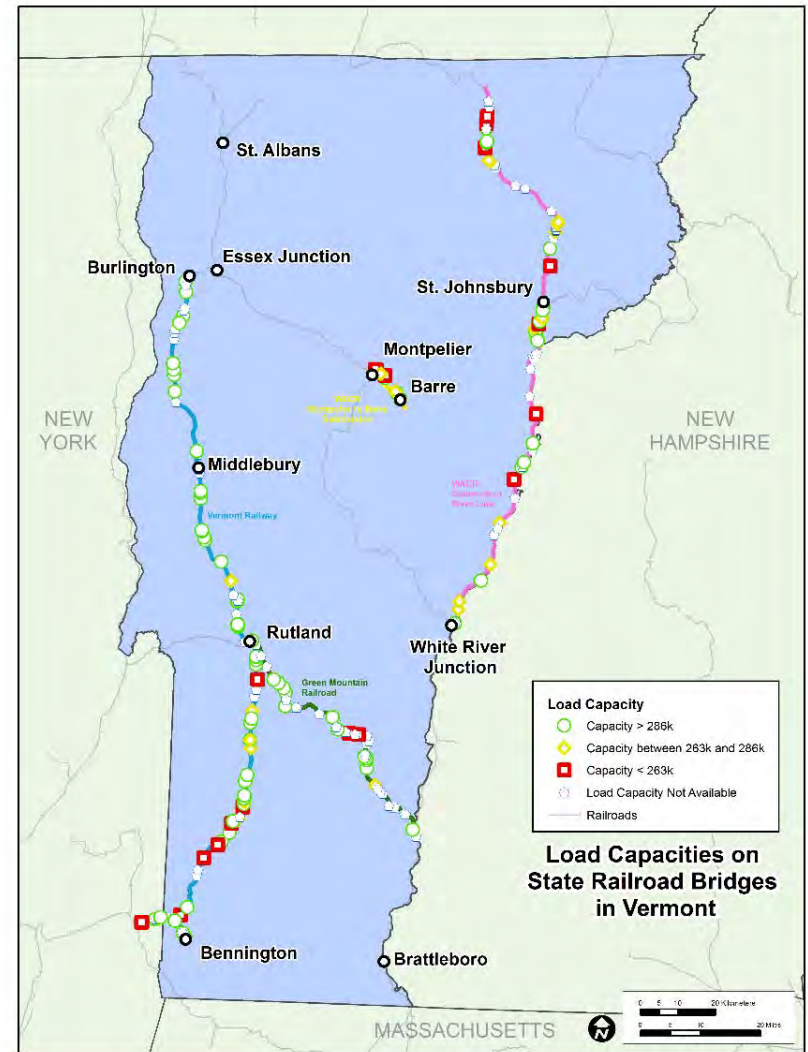
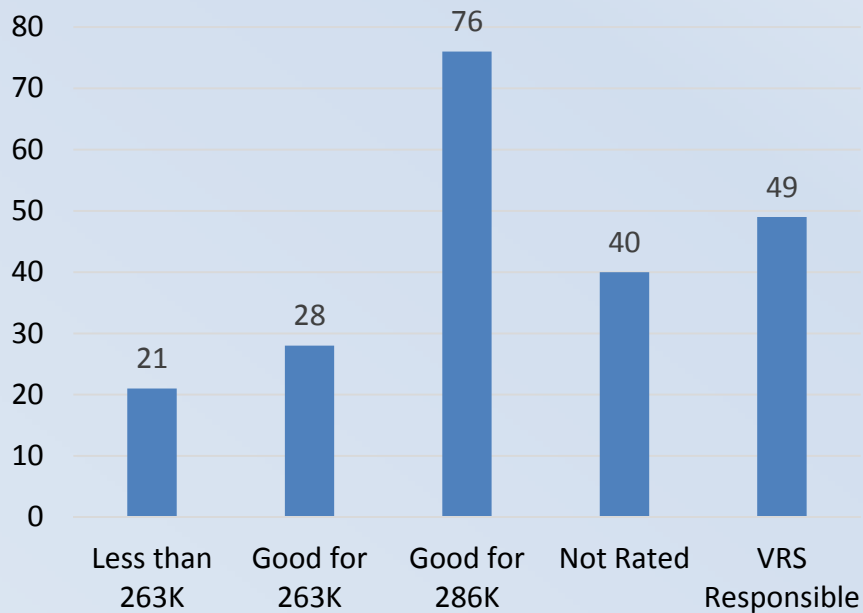


286K Track Capacity Priorities



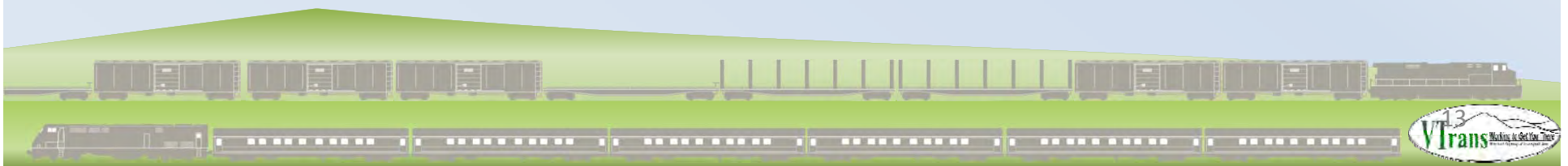
Freight Rail Needs/Priorities - Bridges

**Load Rating of 214 State-Owned
Bridges at April 2015**



VTrans Bridge Estimates for State-Owned Lines

Line	Long Term Cost Estimate
Cost of Bringing Bridge Superstructures to 286K	
VTR Northern	\$18,473,725
VTR B&R	\$28,958,565
VTR Hoosick	\$5,618,000
GMRC	\$46,211,420
WACR CRL	\$60,112,270
WACR M&B	\$4,310,000
Total	\$163,683,980
Repairs to Substructures	\$40,000,000
Total Superstructures and Substructures	Approx. \$203,683,980

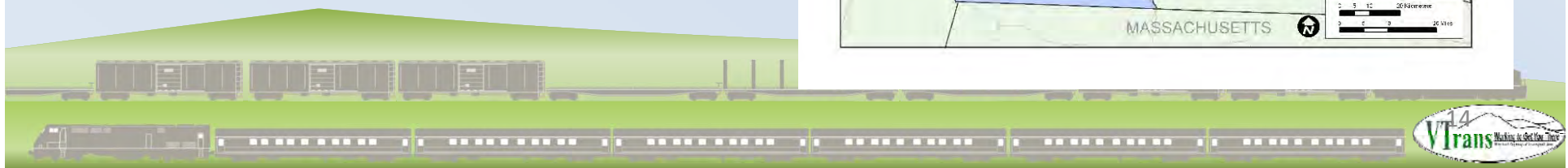
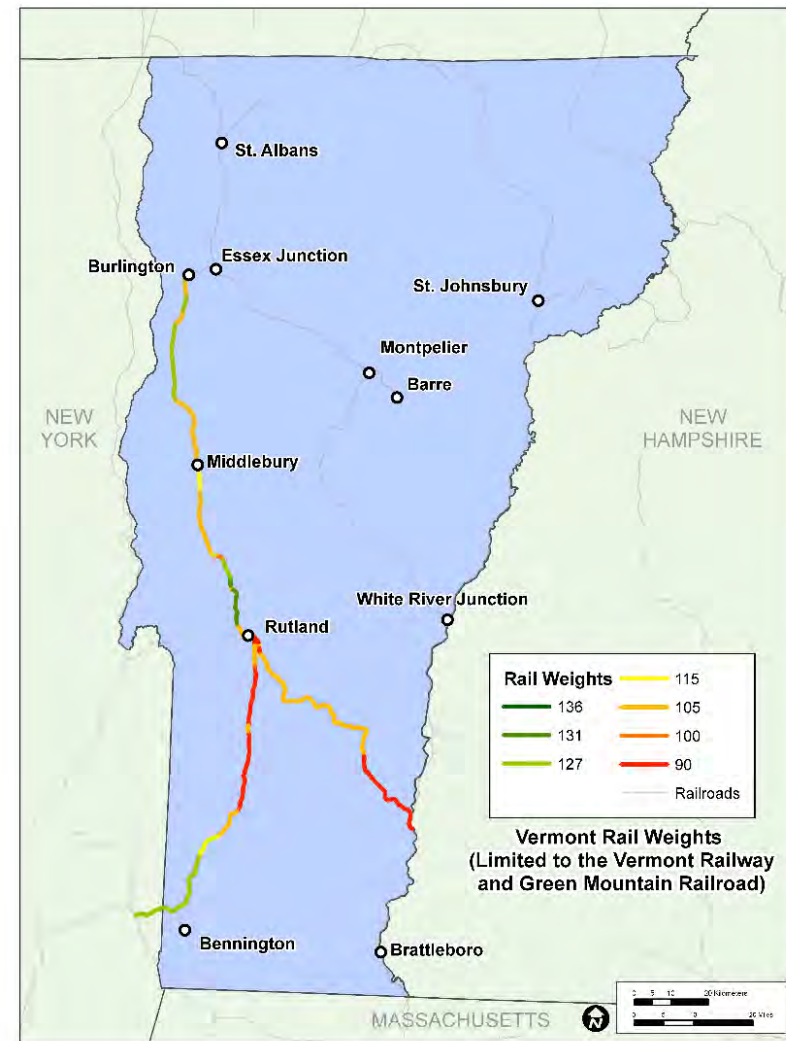


286K Railcars and Rail Weight

Rail Size	<1 MGT	1- 10 MGT
10 MPH – 25 MPH		
100+	OK	OK
90 – 99	OK	Marginal
>25 MPH		
≥ 115	OK	OK
100 - 114	OK	Marginal
90 – 99	Replace	Replace

Source: FRA, ASLRRRA, AAR

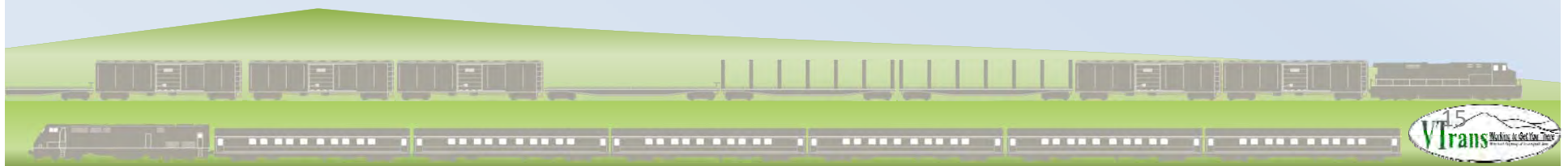
Also depends on the condition of ties and ballast



Estimated Cost of Track Work for Freight Operations

Line	Long Term Cost Estimate
VTR Northern	\$12,000,000
VTR B&R	\$16,500,000
VTR Hoosick	\$4,800,000
GMRC	\$18,500,000
WACR CRL	\$22,500,000
WACR M&B	\$6,500,000
NECR Winooski	\$4,000,000
SLA Track and Bridge	\$3,300,000
CMQ Ties and Bridge	\$1,300,000
Total	\$89,400,000

Projects typically entail replacement of light, jointed rail with 115 lb CWR, tie replacement, ballast and surfacing, replacing turnouts



Freight Rail Needs/Priorities

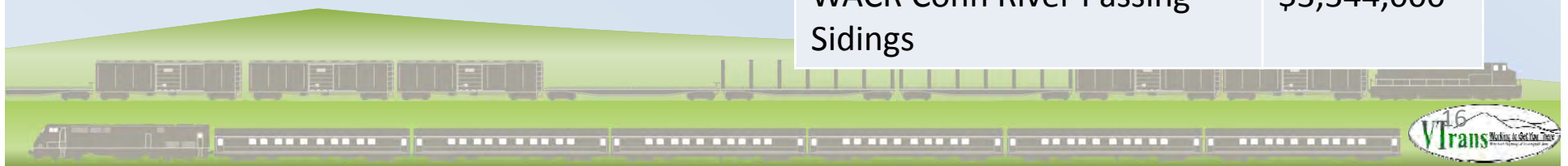
Yards and Industrial Access

Yard Projects

Project	Cost
CMQ Newport	\$184,000
NECR White River Jct, St. Albans	\$4,339,000
NECR/GMRC Interchange	\$4,003,000
NECR St. Albans Roundhouse	\$300,000
GMRC Yard Projects	\$800,000
VTR Yard Projects	\$800,000
WACR Conn River Yard Projects	\$700,000

Industrial Access Projects

Project	Cost
Access to Franklin Industrial Park, former Goodyear Power Plant in Windsor	\$260,000
GMRC Sidings	\$478,000
WACR Montpelier Sidings	\$1,584,000
VTR Sidings and Structures	\$1,675,000
WACR Conn River Sidings	\$1,927,000
GMRC Passing Sidings	\$1,155,000
VTR Passing Sidings	\$2,002,000
WACR Conn River Passing Sidings	\$3,344,000



20' 8" Clearance Priorities

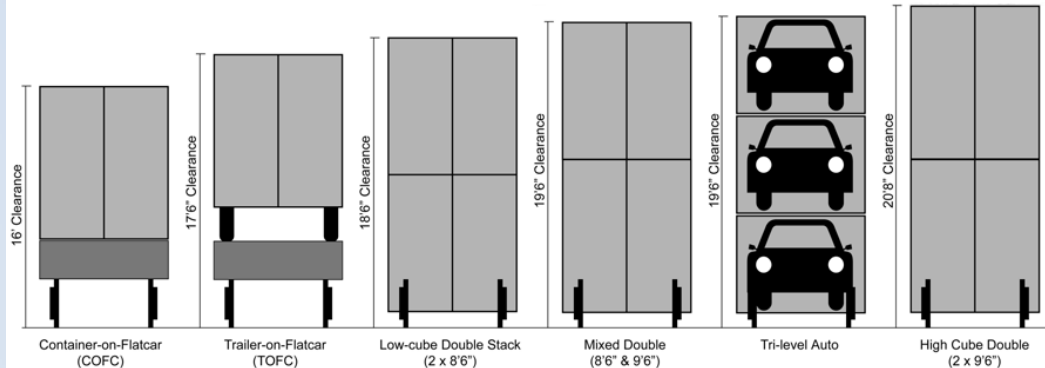


Freight Rail Needs/Priorities

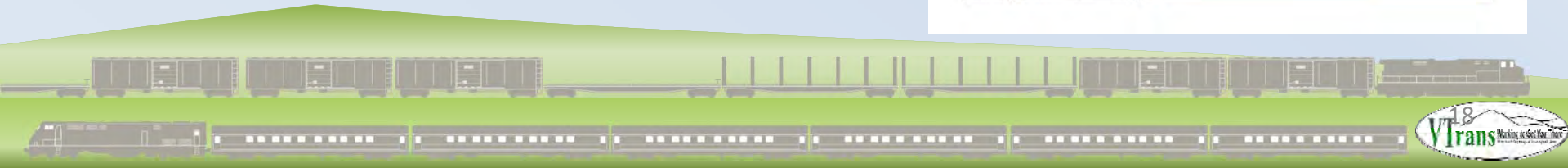
Vertical Clearance

Clearance Requirements for Double Stack and Autoracks

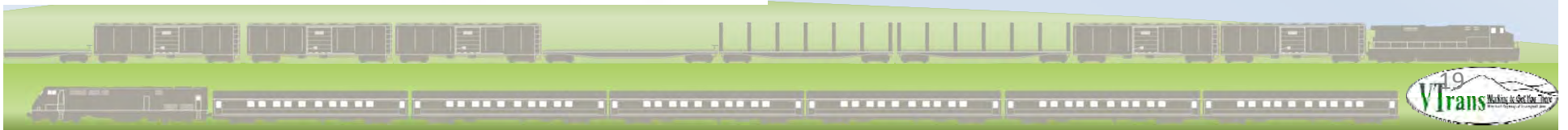
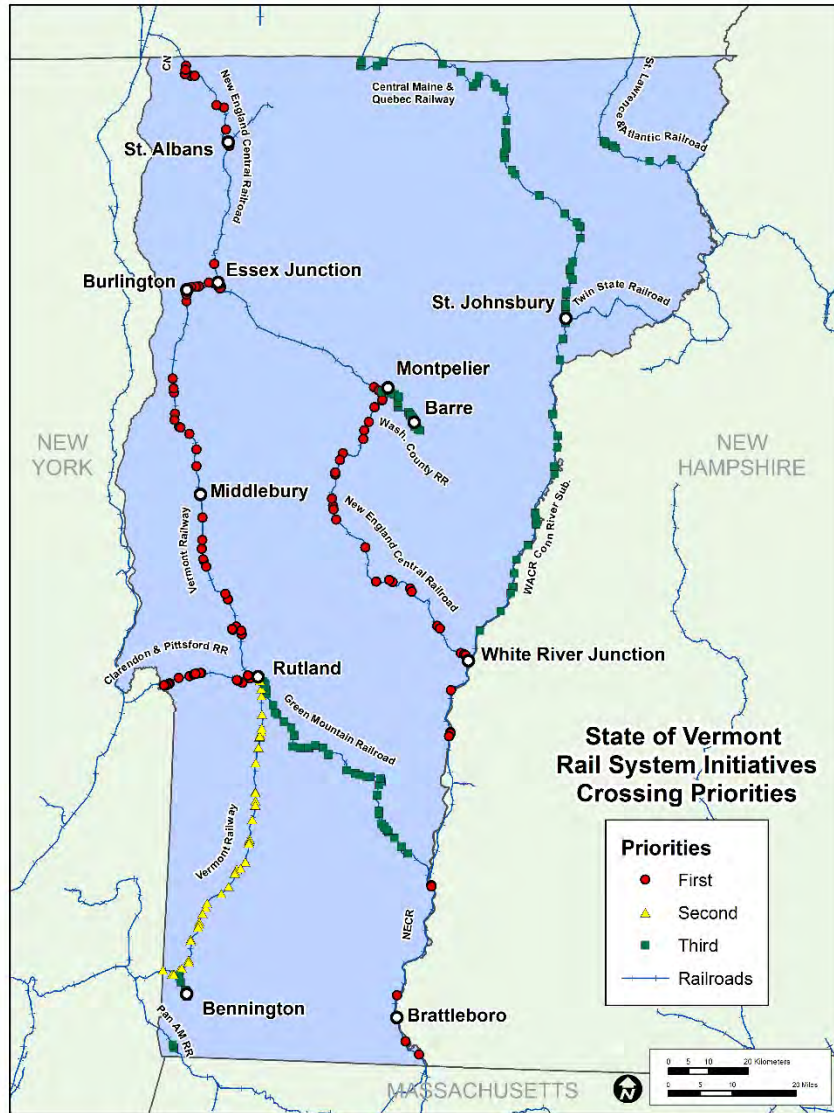
22'6" National double stack standard



Potential Clearance Projects	Cost
CN Montreal – Boston Intermodal Unrestricted in VT	\$5,700,000
CN Montreal – Boston Intermodal Unrestricted outside VT	\$20,100,000
Unrestricted Clearance – CLP and GMRC	\$10,300,000



Grade Crossing Upgrade Priorities



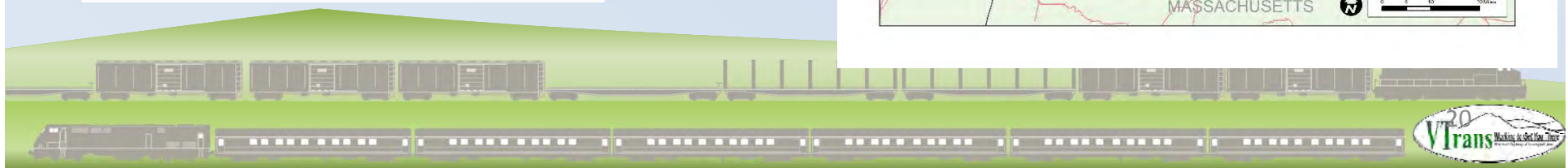
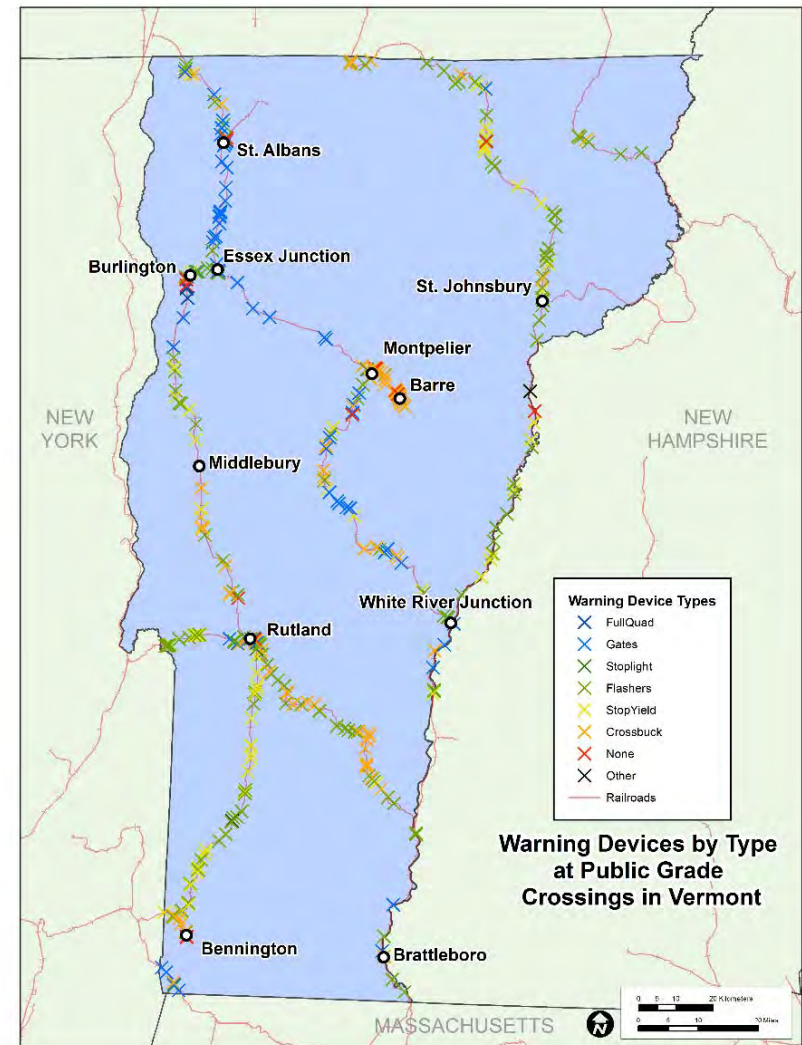
Safety Needs - Crossings

2004 – 2013 Public Crossing Accident Statistics

Year	Fatalities	Injuries	Property Only	Total
Freight Total	0	11	12	23
Passenger Total	2	2	6	10
10 Year Total	2	13	18	33

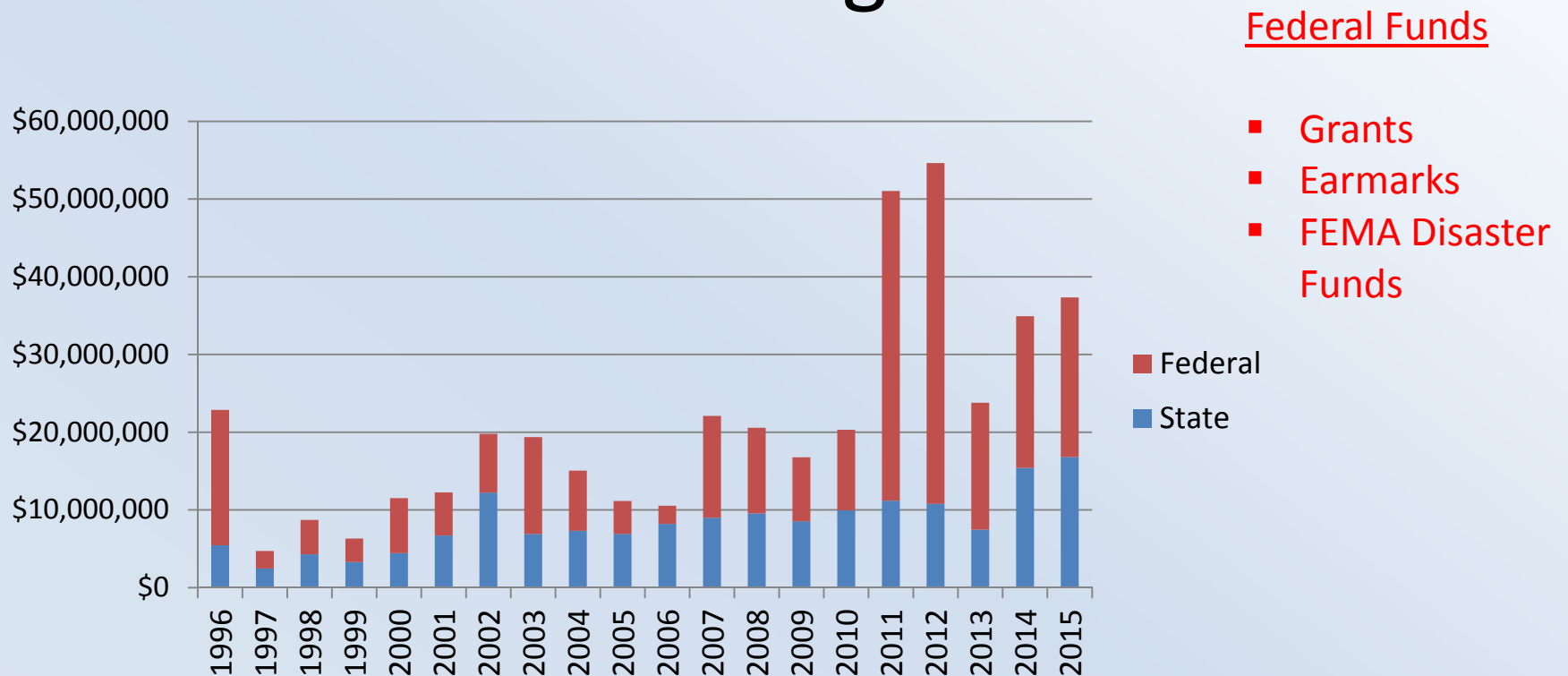
Public Crossings by Warning Device

Protection Type	Count
Gates	71
Lights	151
Crossbuck/Sign	146
Other	1
None	12
Total	381

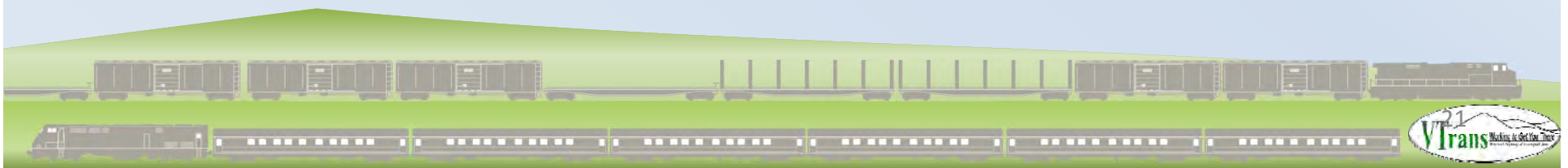


Capital Plan

Past Funding Levels

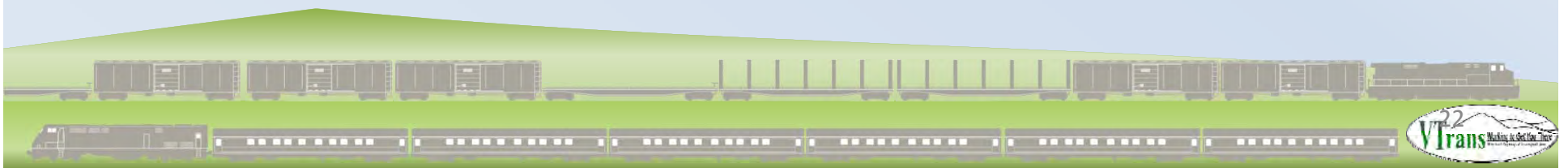
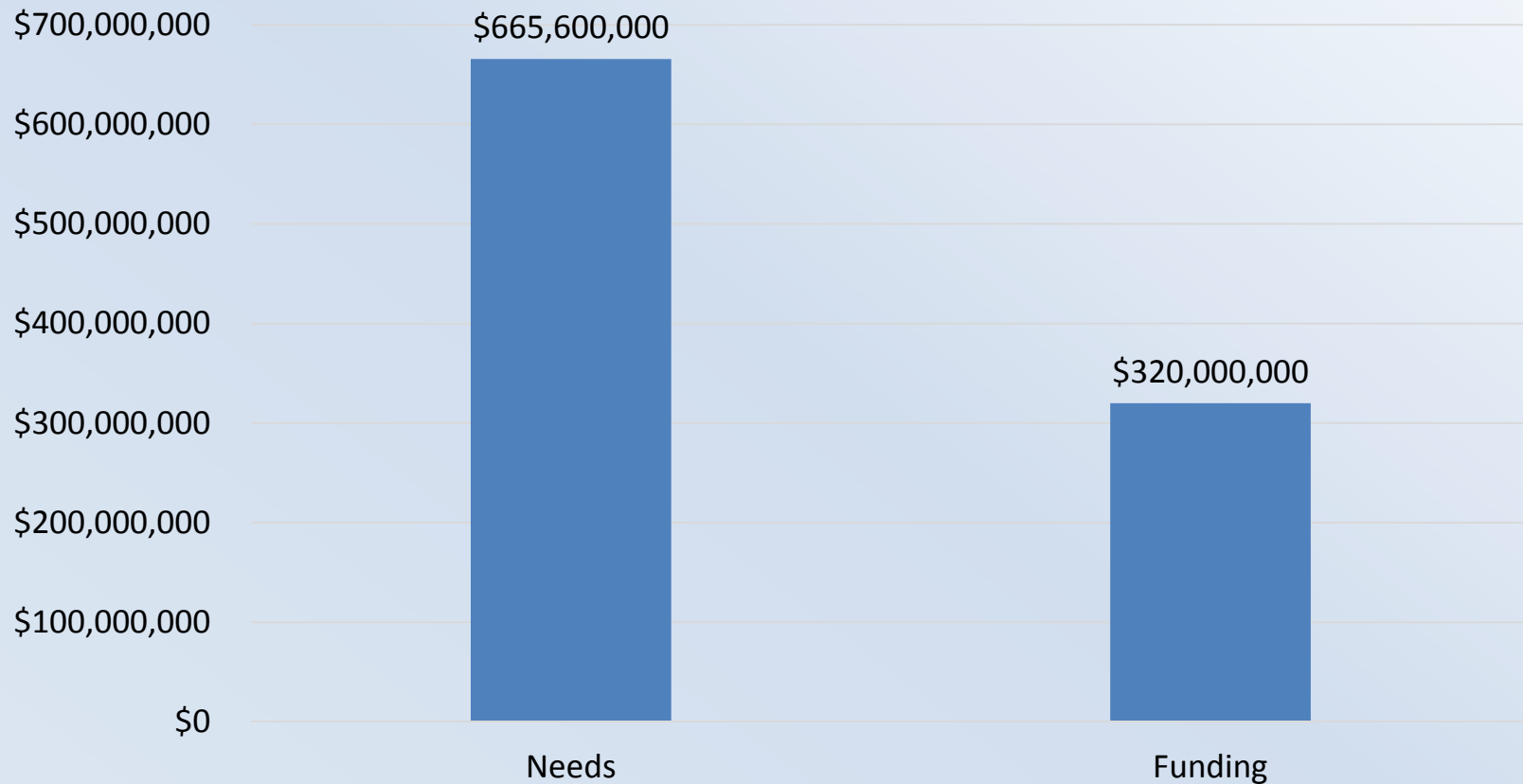


Since 2002, Averaged \$15M in Federal Funding
 Most State Funding Applied to Operating & Administration Budget, around \$4M Capital Budget



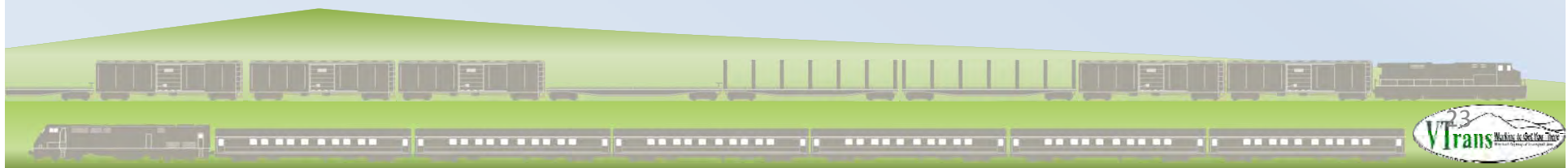
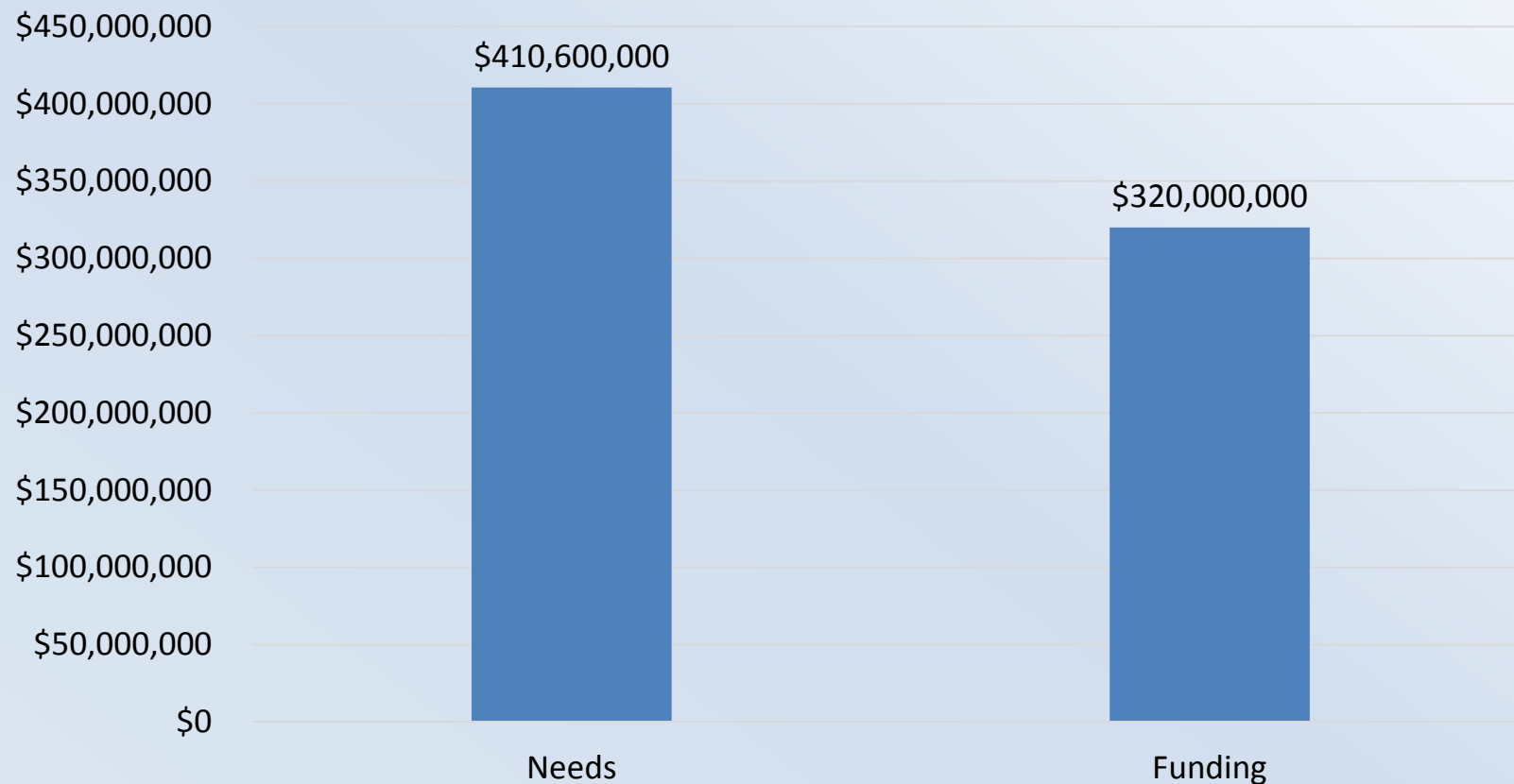
Comparison of All Needs and Available Funding over 20 Years Assuming \$16M Available per Year Based on Past Funding Levels

All Passenger & Freight Needs



Comparison of All Needs and Available Funding over 20 Years Assuming \$16M Available per Year Based on Past Funding Levels

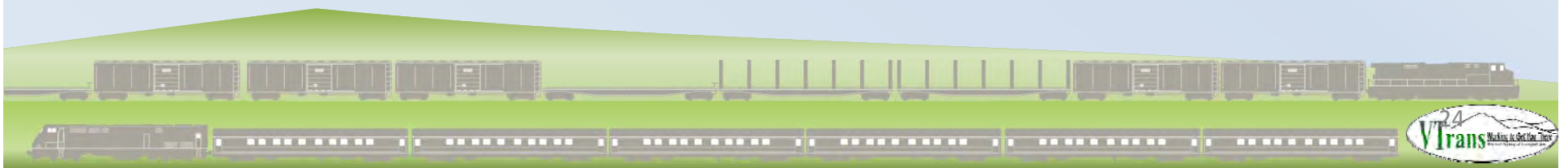
All Passenger & Freight Needs Except Upgrade to Class 4



Unconstrained Passenger Rail 20 Year Capital Plan

2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
Ethan Allen to Burlington \$26.4M																				
										Vermonter to Montreal and Upgrades \$177.3M										
				Bennington-Manchester Route \$88M																
										Western Corridor Class 4 Upgrades \$78.6M										

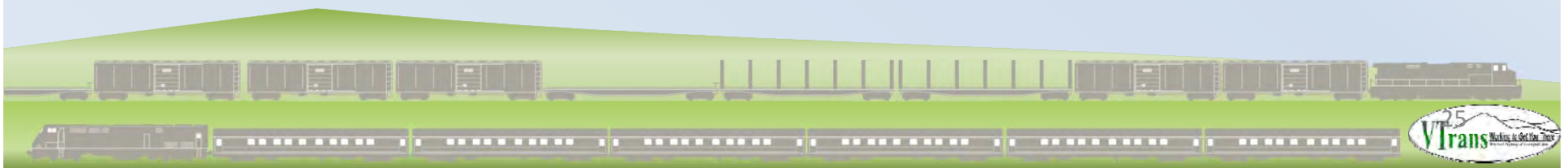
Total: \$370.3 million



Unconstrained Freight Rail 20 Year Capital Plan

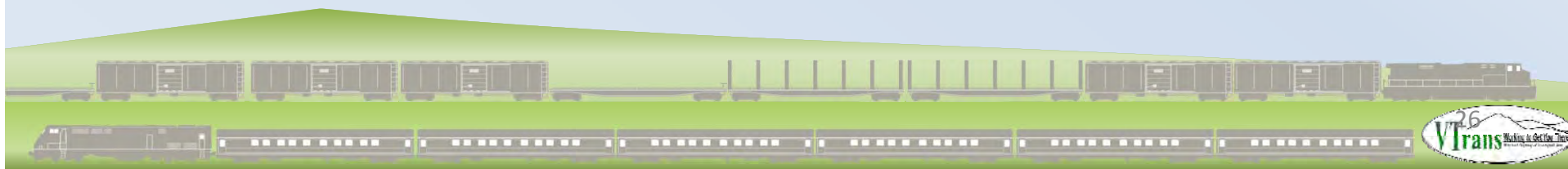
2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Bridge Upgrades on VTR and GMRC \$123.5M																			
										Bridge Upgrades on WACR \$80.2M									
Non Passenger Track Upgrades on GMRC, NECR Winooski, SLR, CMQ \$27.1M																			
										Non Passenger Track Upgrades on WACR \$29M									
Yard Improvements, Economic Dev. Passing Sidings, \$19.5M																			
NECR Unrestricted Double Stack Clearance \$5.7M																			
					GMRC/CLP Double Stack \$10.3M														

Total: \$295.3 million



Options if Funding Levels Do Not Cover Needs

- Reduce the scope of projects
- Extend the timeline
- Look for less expensive options to achieve goals



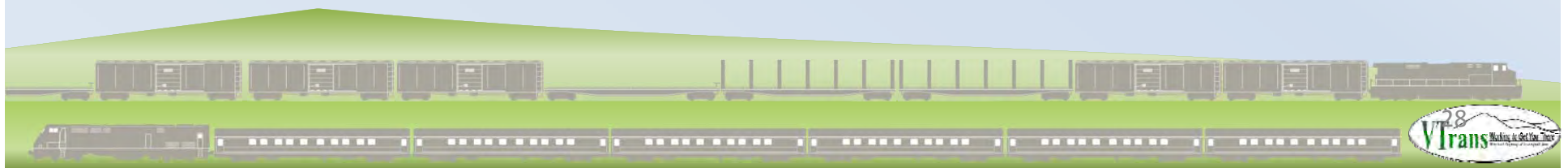
Performance Measures and Targets: System Effectiveness

Performance Categories	Performance Measure	Associated Rail System Goal	Existing Conditions	Target (annual)
System Effectiveness	Freight rail volumes originating or destined for Vermont	Expand rail system use; Provide a rail system that is financially sustainable; Support economic development	2 million tons	3 million tons
	Recruitment of new rail businesses in Vermont	Expand the rail system's use; Support economic development	1	2 businesses per railroad annually
	Passenger rail trips in Vermont	Expand the rail system's use	100,829	5% increase
	FRA IPR Performance and Service Quality Indicators	Expand the rail system's use	variable	Above national average in half or more reporting categories



Performance Measures and Targets: System Condition

Performance Categories	Performance Measure	Associated Rail System Goal	Existing Conditions	Target (annual)
System Condition	Bridges meeting 263,000 lbs. standard	State of good repair		All bridges to be 263K
	Bridges meeting 286,000 lbs. standard	Expand rail system capacity	85 of 106 rated	Improve 3 or more annually
	Rehabilitate and upgrade grade crossings	State of good repair; Safety	Unknown	Improve 3 or more annually
	115lbs rail	State of good repair	266 mi <115 lb	5 miles annually



Performance Measures and Targets: System Initiatives

Performance Categories	Performance Measure	Associated Rail System Goal	Existing Conditions	Target (annual)
System Initiatives	Eliminate permanent slow orders along passenger routes	State of good repair; Expand rail system use	Unknown	3 per year
	Continuously-welded rail along all passenger routes	State of good repair; Expand rail system use	82 mi jointed rail	CWR along all current and planned passenger routes
	Vertical clearances	State of good repair; Expand rail system capacity	63	Eliminate all 20' 8" clearances
	Minimum Class 4 track for passenger routes	Expand rail system capacity	307 mi < Class 4	Class 4 operating speeds along all current and planned passenger routes

