VT Transportation Project Selection and Project Prioritization

- The way it was
- The way it is now
- Where we are heading – VPSP2 Overview
Before there was Prioritization

- The Project Delivery funnel was overflowing!
- Inconsistency in the way new projects were selected
- Unreliable project delivery times.
PROJECTS IN

BLACK BOX

PROJECTS OUT
## Current System - Highways

### 2007 - 2019

<table>
<thead>
<tr>
<th>Pavement Programs</th>
<th>Bridge Programs</th>
<th>Roadway Program</th>
<th>Traffic and Safety Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Priority 20</td>
<td>Regional Priority 15</td>
<td>Regional Priority 20</td>
<td>Regional Priority 20</td>
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<tr>
<td>Pavement Condition Index 20</td>
<td>Bridge Condition 30</td>
<td>Hwy Sufficiency Rating 40</td>
<td>Intersection Capacity (LOS)40</td>
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<td>Benefit-Cost 60</td>
<td>Remaining Life 10</td>
<td>Cost per Vehicle Mile 20</td>
<td>Crash Rate 20</td>
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<tr>
<td>Functionality 5</td>
<td>Project Momentum 20</td>
<td>Cost per Intersection Traffic Volume (AADT) 20</td>
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<tr>
<td>Load Capacity and Use 15</td>
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<td>Project Momentum 10</td>
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<td>Waterway Adequacy &amp; Scour Susceptibility 10</td>
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<tr>
<td>Project Momentum 5</td>
<td></td>
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<tr>
<td>Asset-Benefit Cost 10</td>
<td></td>
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</tr>
<tr>
<td>Total 100</td>
<td>100</td>
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Programs included identified in 19 V.S.A. § 10g(l)
<table>
<thead>
<tr>
<th>TRCOC Rank</th>
<th>Town</th>
<th>Location</th>
<th>Project #</th>
<th>VTrans Project Division</th>
<th>Description</th>
<th>Status as of 2020</th>
<th>Pres</th>
<th>Saf</th>
<th>Multi</th>
<th>Ecol</th>
<th>Soc</th>
<th>Cul</th>
<th>Misc</th>
<th>Flood</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Hartford</td>
<td>US5/Sylves, Sylves/Ralph Lehman</td>
<td>STP 0113,91(2)</td>
<td>Traffic &amp; Safety</td>
<td>install roundabouts</td>
<td>POB =&gt; Spring 2020</td>
<td>20</td>
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<tr>
<td>2</td>
<td>Hartford</td>
<td>SR11/Viguehee, Gorge bridge</td>
<td>NH 020-145</td>
<td>State Highway Bridges</td>
<td>bridge rehabilitation (brackets and gussets)</td>
<td>POB =&gt; Spring 2021</td>
<td>30</td>
<td>30</td>
<td>5</td>
<td>5</td>
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<tr>
<td>3</td>
<td>Killington-Brockbridge</td>
<td>VT101 (US 4 to VT 10)</td>
<td>ER TR 021-12(8)</td>
<td>Paving</td>
<td>Irene roadway design</td>
<td>POB =&gt; Summer 2021</td>
<td>30</td>
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<tr>
<td>4</td>
<td>Newbury</td>
<td>SR11/Boltonville Rd over Wells River</td>
<td>BO 1447,92(2)</td>
<td>Town Highway Bridges</td>
<td>bridge rehab, including replace existing deck steel beams and minor concrete substructure repair and ‘</td>
<td>POB =&gt; 2021</td>
<td>30</td>
<td>30</td>
<td>5</td>
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<tr>
<td>5</td>
<td>Greenfield-Newbury</td>
<td>US22/Skene</td>
<td>STP 0319(2)</td>
<td>Paving</td>
<td>resurfacing</td>
<td>POB =&gt; 2021</td>
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<tr>
<td>6</td>
<td>Chelsea-Vestbure</td>
<td>VT113 (from VT10 to 7 miles east)</td>
<td>STP 2155(1)</td>
<td>Paving</td>
<td>resurfacing</td>
<td>POB =&gt; 2021</td>
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<td>7</td>
<td>Norwich-Hanover</td>
<td>VT10A bridge to Hanover, NH over Connecticut River</td>
<td>BF A034,800</td>
<td>State Highway Bridges</td>
<td>Rehabilitated joint</td>
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<tr>
<td>8</td>
<td>Hartford</td>
<td>SR7/VA Cutoff Rd over White River</td>
<td>BO 1446,60(4)</td>
<td>State Highway Bridges</td>
<td>bridge rep</td>
<td>POB =&gt; 2022</td>
<td>20</td>
<td>20</td>
<td>5</td>
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<tr>
<td>9</td>
<td>Brookfield</td>
<td>VT12, mm 2.87</td>
<td>STP 0341,6(9)</td>
<td>Roadway</td>
<td>Rock slope</td>
<td>POB =&gt; 2022</td>
<td>30</td>
<td>30</td>
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<tr>
<td>10</td>
<td>Stowe</td>
<td>SR47/VT12</td>
<td>STP 0121,2(3)</td>
<td>Paving</td>
<td>partial superstructure replacement</td>
<td>POB =&gt; 2022</td>
<td>30</td>
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<td>5</td>
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<tr>
<td>11</td>
<td>Thetford</td>
<td>CLVIRT/14592 on I-91</td>
<td>STP 0126,2(12)</td>
<td>Roadway</td>
<td>Rehab of culvert #14592 on I-91 ETE MM 62.2</td>
<td>POB =&gt; 2022</td>
<td>20</td>
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<tr>
<td>12</td>
<td>Thetford</td>
<td>SR24/VT118</td>
<td>STP 0126,4(18)</td>
<td>Roadway</td>
<td>replace 65 CGMP</td>
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<td>20</td>
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<tr>
<td>13</td>
<td>Plymouth</td>
<td>SR107/VT100</td>
<td>STP 0126,4(18)</td>
<td>State Highway Bridges</td>
<td>Deck replacement</td>
<td>POB =&gt; 2022</td>
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<tr>
<td>14</td>
<td>Woodstock</td>
<td>US4, MM 7.724</td>
<td>STP 0126,4(18)</td>
<td>Highway</td>
<td>Culvert rehabilitation</td>
<td>POB =&gt; 2022</td>
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<tr>
<td>15</td>
<td>Hartford</td>
<td>US5 in Hartford from MM 75.15 to ETE 75.3</td>
<td>NHCORR(16)</td>
<td>Highway</td>
<td>Traffic &amp; Safety</td>
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<tr>
<td>16</td>
<td>Woodstock</td>
<td>SR2/32/Creamery Rd over Wells River</td>
<td>BO 1446,6(6)</td>
<td>State Highway Bridges</td>
<td>Deck replacement</td>
<td>POB =&gt; 2022</td>
<td>30</td>
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<td>17</td>
<td>Bemfield</td>
<td>SR2/32/Creamery Rd over Wells River</td>
<td>BO 1446,6(6)</td>
<td>State Highway Bridges</td>
<td>Deck replacement</td>
<td>POB =&gt; 2022</td>
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<tr>
<td>18</td>
<td>Pelham</td>
<td>retaining wall VT107 mm 2.83 and 1.38</td>
<td>STP 0126,4(18)</td>
<td>Roadway</td>
<td>Evaluation, remediation and acquisition of ROW</td>
<td>POB =&gt; 2022</td>
<td>30</td>
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<tr>
<td>19</td>
<td>Woodstock</td>
<td>SR1/Amherst Rd over Gulf Stream</td>
<td>BO 0126,4(18)</td>
<td>State Highway Bridges</td>
<td>Scoping alternatives</td>
<td>POB =&gt; 2022</td>
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<tr>
<td>20</td>
<td>Woodstock</td>
<td>SR41/Turpin Rd over Boody Brook</td>
<td>BO 1441,6(6)</td>
<td>State Highway Bridges</td>
<td>Scoping alternatives</td>
<td>POB =&gt; 2022</td>
<td>30</td>
<td>30</td>
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<tr>
<td>21</td>
<td>Tappan</td>
<td>SR2/32/VT100 over White River</td>
<td>BO 1441,6(6)</td>
<td>Paving</td>
<td>Paving</td>
<td>POB =&gt; 2022</td>
<td>30</td>
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<td>5</td>
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<td>22</td>
<td>Torrington</td>
<td>SR2/32/Boltonville Rd</td>
<td>BO 1441,6(6)</td>
<td>State Highway Bridges</td>
<td>Paving</td>
<td>POB =&gt; 2022</td>
<td>30</td>
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<td>5</td>
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<tr>
<td>NR Wnhse</td>
<td>US5/91/Boltonville Rd</td>
<td>BO 1441,6(6)</td>
<td>Highway</td>
<td>Scoping alternatives</td>
<td>DLE =&gt; 2023</td>
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<td>NR Plymouth</td>
<td>SR107/VT100</td>
<td>STP 0126,4(18)</td>
<td>Highway</td>
<td>Highway</td>
<td>Bridge rehabilitation</td>
<td>POB =&gt; 2022</td>
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<tr>
<td>NR Thetford-Lime</td>
<td>SR23/VT113 over Conn River</td>
<td>STP 0126,4(18)</td>
<td>State Highway Bridges</td>
<td>NH lead agency</td>
<td>POB =&gt; 2022</td>
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<td>NR Newbury</td>
<td>SR23/VT113 over Conn River</td>
<td>STP 0126,4(18)</td>
<td>State Highway Bridges</td>
<td>NH lead agency</td>
<td>POB =&gt; 2022</td>
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<td>5</td>
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</tr>
</tbody>
</table>

**CRITERIA**

- Pres: 30
- Saf: 25
- Multi: 20
- Ecol: 15
- Soc: 10
- Cul: 10
- Misc: 5
- Flood: 5
- Total: 5

**TOTAL SCORE**

- Hartford: 75
- Newbury: 70
- Greenfield-Newbury: 68
- Chelsea-Vestbure: 68
- Norwich-Hanover: 65
- Hartford: 65
- Brookfield: 60
- Stowe: 60
- Thetford: 60
- Plymouth: 50
- Woodstock: 50
- Bemfield: 50
- Pelham: 50
- Woodstock: 50
- Tappan: 50
- Torrington: 50
- Thetford-Lime: 50
- Newbury: 50

**SCHEDULED PROJECT TIMELINE**

- POB: Planned on Budget
- DLE: Dropped for lack of Engineering
- FOB: Financed on Budget
- POB: Planned on Budget
- TBD: To Be Determined

**TOTAL SCORE**

- Hartford: 75
- Newbury: 70
- Greenfield-Newbury: 68
- Chelsea-Vestbure: 68
- Norwich-Hanover: 65
- Hartford: 65
- Brookfield: 60
- Stowe: 60
- Thetford: 60
- Plymouth: 50
- Woodstock: 50
- Bemfield: 50
- Pelham: 50
- Woodstock: 50
- Tappan: 50
- Torrington: 50
- Thetford-Lime: 50
- Newbury: 50
Current System – Grant Programs
2007 - 2019

- Bike and Pedestrian Facilities
- Transportation Alternatives Program
- Better Roads
- Municipal Mitigation Grants
- Town Highway Structures
- Class 2 Town Highways
- TH Federal Disasters
- TH Non-Fed Disasters
Vision

Develop a performance-based, data driven project selection & prioritization framework that maximizes the “transportation value” delivered to Vermont taxpayers.
VPSP2 Goals

Identify and define how regional ideas for transportation improvements can become transportation projects.

Develop a fair, consistent, reliable, and standardized project selection and prioritization framework for use by all RPCs.

Revise current processes to increase transparency, provide “best value” while communicating the “transportation” value to our customers.

Develop processes and tools that guide the Agency towards holistic corridor management and planning.

Identify a process that allows VTrans to remove candidate projects without legislative approval.

Incorporate health and resiliency into VTrans’ project prioritization processes.
Customer Engagement

- Held 4 Stakeholder Workshops to assess current process and develop evaluation criteria.

**Cross Section of Workshop Participants**

- Regional Planning Commissions (RPCs)
- Sister Agencies: VDH, ANR, ACCD, VEM
- Special Interests: VLCT, VCIL, AARP, AAA,
- Modal Interests: Rail Councils, Rail Operators, Bike / Ped Interest Groups, Transit Providers, VT Truck and Bus Association
- VTrans
FIVE MODES

HIGHWAY

RAIL

WALKS, TRAILS & PATHS

TRANSIT

AVIATION

VPSP2 CRITERIA

SAFETY
Max points = 20

MOBILITY / CONNECTIVITY
Max points = 15

ECONOMIC ACCESS
Max points = 10

RESILIENCY
Max points = 10

ASSET CONDITION
Max points = 20

COMMUNITY
Max points = 10

ENVIRONMENT
Max points = 10

HEALTH ACCESS
Max points = 5
VPSP2 - 8 Evaluation Criteria

• **Safety:** reducing the risk of crashes of any type and user.
  • Roadway and Intersection crashes, curve reduction factors

• **Asset Condition:** maintaining multimodal infrastructure to preserve its current condition, by rehabilitating it to improve the condition and extend service life, and/or replacing it to improve its condition and service.
  • Customer service level, new asset/capacity, optimal treatment time

• **Mobility & Connectivity:** increasing the reliable connectivity to jobs and other destinations and/or increasing the number of mode choices available for people and goods.
  • Connectivity to bicyclists, pedestrians, public transit and multi-modal facilities
VPSP2 - 8 Evaluation Criteria

• **Economic Access**: increasing the ability of a region to attract and retain businesses and the workforce by providing better access to jobs.
  
  • *Project Impact Map depicts the number of employed individuals potentially impacted by upcoming projects within ½, 1, and 2 mile vicinities.*

• **Resiliency**: minimizing the impacts of planned and unplanned events (e.g., work zones, floods and extreme weather).
  
  • *Uses the Transportation Resilience Planning Tool (TRPT) to determine a project’s resilience score (combo of vulnerability and criticality scores)*

• **Community**: conforming to the goals and objectives defined in local and regional plans, and supporting the outcomes of a robust public process.
  
  • *Identified in any local or regional planning document, town/Selectboard support, impacts to surround community facilities (schools, library, town offices, churches)*
VPSP2 - 8 Evaluation Criteria

• **Environment**: reducing the negative impacts of travel (e.g., reducing greenhouse gas [GHG] emissions, improving air quality, enhancing safe wildlife passage, and/or improving water quality).
  
  • *Impacts to wildlife, air quality, water quality, cultural resources (look at required vs. voluntary mitigation in project scope).*

• **Health Access**: increasing the opportunity for physical activity and increases access to destinations that improve health (i.e., healthcare, education, and healthy food).
  
  • *Access to health care/physical activity facilities (senior centers, parks, community gyms), healthy food destinations (grocery store, food shelf, school lunch programs), improved opportunity for physical activity (connect to existing sidewalk networks or links to facilities)*
How Projects Get on the Capital Program

• Asset Driven – Remains the same
• Safety Driven – Remains the same
• Grant Opportunities – Remains the same
• Regionally Identified -- New
• Harmonization – New, formalized
Qualifications Worksheet

To address regionally identified ideas and needs, a Qualifications Worksheet was developed to assess the scope and evaluate its potential Transportation Value.

See Qualifications Worksheet
Harmonization

“incorporation of need(s) that would not have otherwise been included in the project.”

(e.g. a paving project is coming through and drainage culverts are in need of replacement. Like Howe Hill Rd in Pomfret-Sharon)

Or when VT107 was getting resurfaced after T.S. Irene, the VT100/VT107 intersection was improved along with the creation of a park and ride).

Consideration to be included in project scope is key...how much scope creep, financial addition, ROW impacts, natural project inclusion needs to be balanced.
What to Expect for February 2021?

1. VTrans will send a list of projects derived from Asset and Safety Management system for TACs to review, evaluate and prioritize.

2. 2021 will review only Paving, Roadway and Traffic & Safety projects. 2022 will review State and TH Bridge projects.

3. RPCs will work with TAC to generate a “Transportation Value” for each project.

4. TAC and TRORC Board approve of list to submit to VTrans by Spring 2021.
Questions?
## VPSP2 Process

<table>
<thead>
<tr>
<th>VTrans Asset Driven Projects</th>
<th>Modernization &amp; Expansion Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTrans Budget Committee determines spending levels for the various transportation programs</td>
<td>Ideas will be generated primarily from plans and studies but also from public input and TACs</td>
</tr>
<tr>
<td>VTrans asset management systems perform data-driven analysis to assist in developing potential projects to meet state and federal goals.</td>
<td>Ideas will be submitted to RPCs and RPCs will determine which ideas may provide the most transportation benefit to the region. CCRPC will rank projects using the VPSP2 Qualification Sheet</td>
</tr>
<tr>
<td>VTrans will provide lists of projects totaling 150% of available funding for each program to the RPCs</td>
<td>A feasibility analysis and initial cost estimate will be developed by the RPC or the project sponsor</td>
</tr>
<tr>
<td>RPCs will rank the projects. The RPC rank will make up 20% of the total project score</td>
<td>RPCs will use the VPSP2 Qualification Sheet to calculate the initial transportation value of each potential project</td>
</tr>
<tr>
<td>Projects will be ranked with 80% VTrans score and 20% RPC score</td>
<td>Potential projects will be geolocated and submitted to VTrans. Geolocated projects may be considered for harmonization with other projects being developed</td>
</tr>
<tr>
<td>Transportation Value will be calculated but will not be used to select projects</td>
<td>VTrans will aggregate the lists from each RPC into a statewide list. This list will be prioritized according to Transportation Value RPC</td>
</tr>
<tr>
<td></td>
<td>High value projects will be added to the Capital Program as funding becomes available</td>
</tr>
</tbody>
</table>

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A feasibility analysis and initial cost estimate will be developed by the RPC or the project sponsor.

RPCs will rank the projects. The RPC rank will make up 20% of the total project score.

RPCs will use the VPSP2 Qualification Sheet to calculate the initial transportation value of each potential project.

Projects will be ranked with 80% VTrans score and 20% RPC score.

Potential projects will be geolocated and submitted to VTrans. Geolocated projects may be considered for harmonization with other projects being developed.

Transportation Value will be calculated but will not be used to select projects.

VTrans will aggregate the lists from each RPC into a statewide list. This list will be prioritized according to Transportation Value RPC.

High value projects will be added to the Capital Program as funding becomes available.