

Presentation Outline:

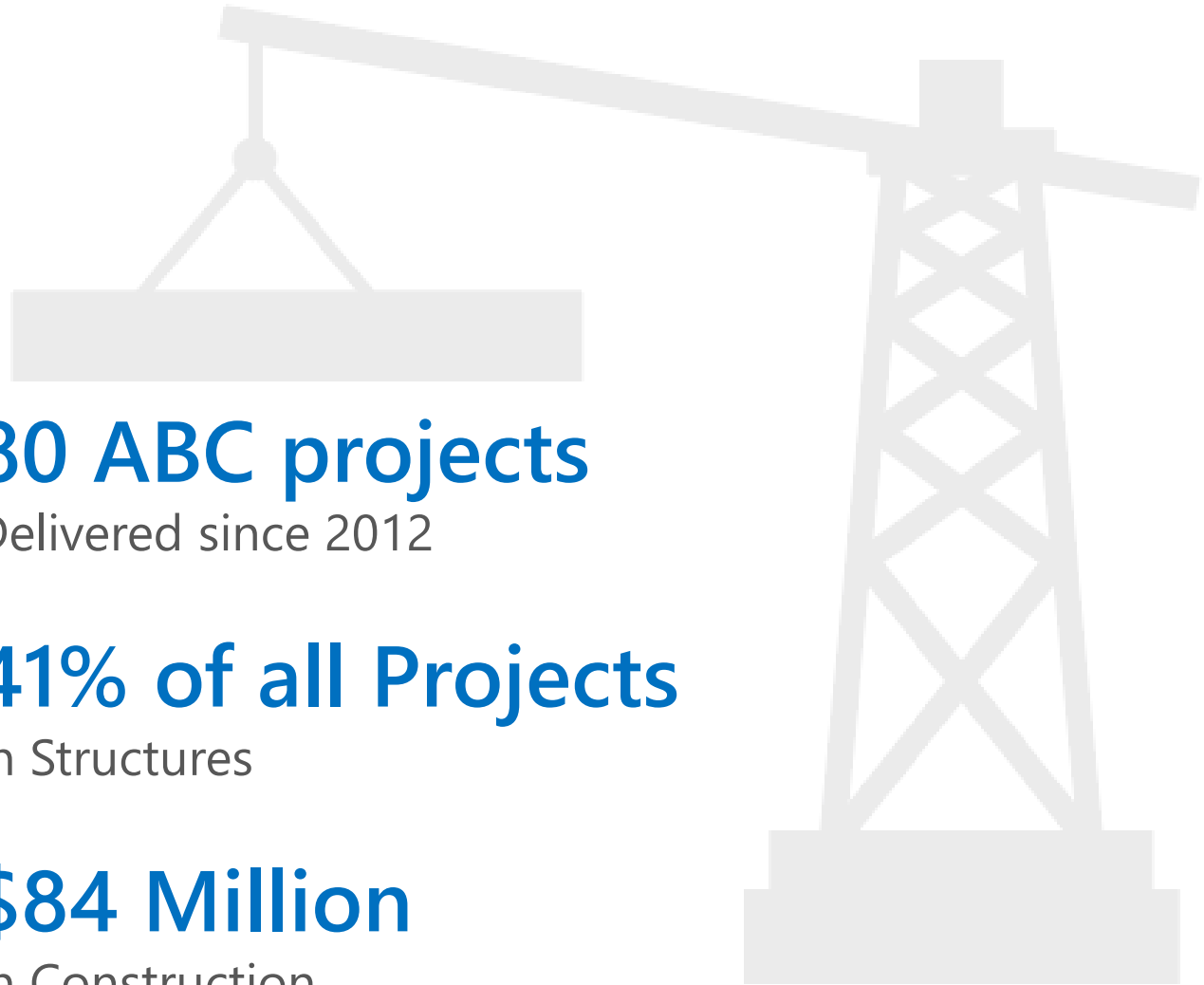
- Accelerated Bridge Program Overview
- Expedited Project Delivery with ABC
 - Expedited Scoping Process
 - Expedited Project Development Process
- Programmatic Implementation of ABC
 - Outreach
 - Standardization
 - Lessons Learned
- **ABC Results – Cost, schedule and customer satisfaction data**
- Round Table Discussion on Programmatic Implementation of ABC



Accelerated Bridge Program Results

Five Years of Proven Performance





80 ABC projects

Delivered since 2012

41% of all Projects

In Structures

\$84 Million

In Construction

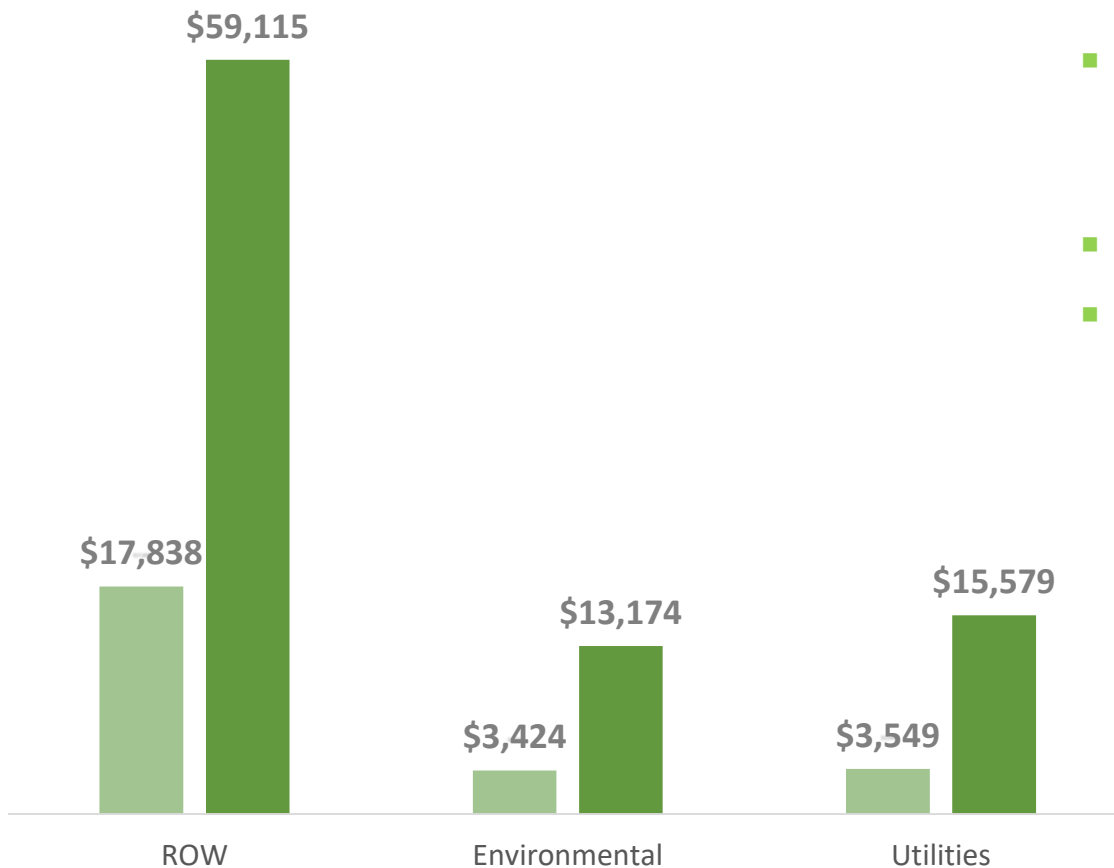
98% on time

Bridge openings

Positive Effect on Resource Demands

BRIDGE PROJECT AVERAGES

■ Accelerated ■ Conventional



70-75% savings in resource demands

- ABC = Less impact to resources & Less ROW impacts
- Minor Alterations and "Block Out Approach" to minimize ROW impacts
- Environmentally responsible
- Team Co-organization and Co-location efficiencies

ABC Construction Savings



18% Savings

ABC vs Conventional Projects

Construction Duration

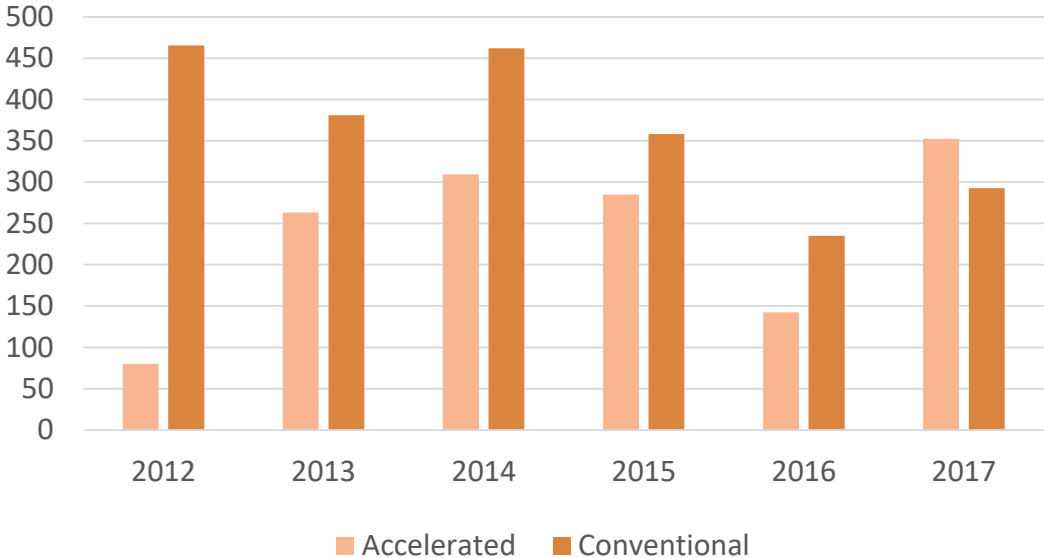
Construction duration reduced for Accelerated Bridge Projects

- Prefabricated Elements, Detour versus Temporary Bridge, Reduced Environmental Impacts

Average Construction Duration (days) based on Traffic Control

	Off Site Detour	Phased Construction	Temporary Bridge
2012 – 2017	211	280	388

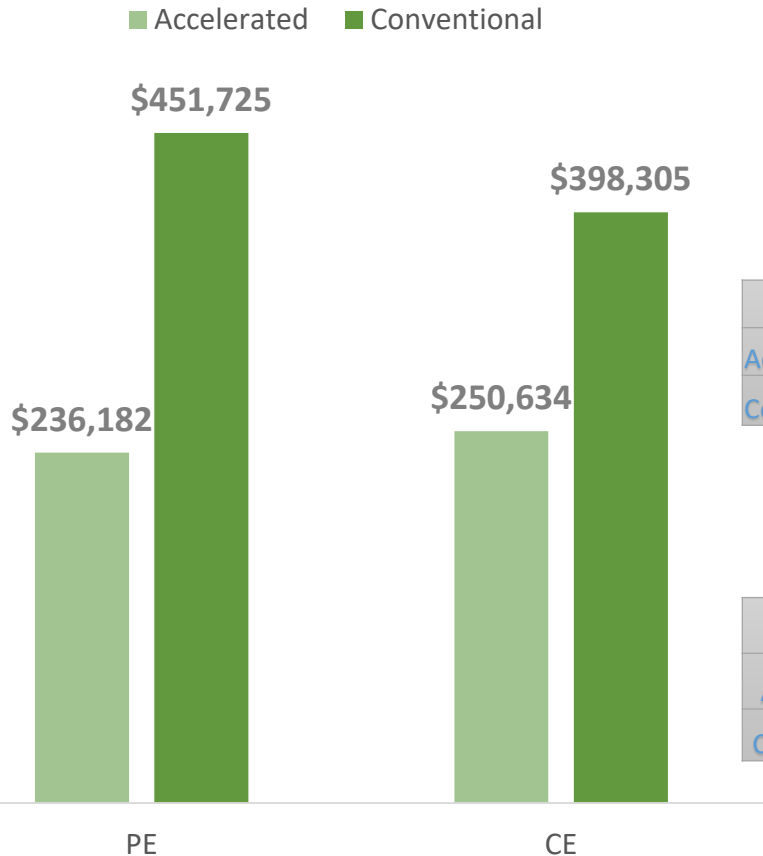
Average Construction Duration (Days) for Conventional versus Accelerated Bridge Projects



ABP – Reduced Engineering Costs

BRIDGE PROJECT AVERAGES

AVERAGE PE AND CE COSTS FOR CONVENTIONAL VERSUS ACCELERATED BRIDGE PROJECTS (2012 – 2017)



40% savings in Engineering costs

- ABC Standardized approach
- Shorter duration design process = Preliminary Engineering (PE) Savings
- ABC = Shorter Construction Durations and Construction Engineering (CE) Savings

Average Preliminary Engineering Cost per Year

	2012	2013	2014	2015	2016	2017
Accelerated	71,764	151,400	247,241	365,591	214,989	264,383
Conventional	411,188	421,027	416,853	380,885	332,410	499,243

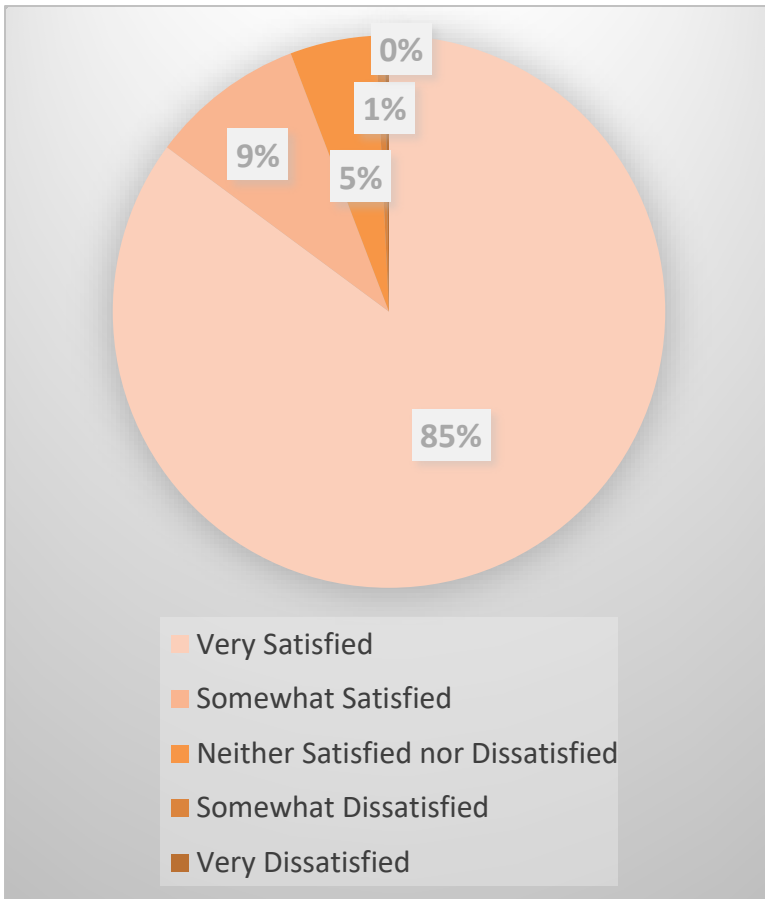
Average Construction Engineering Cost per Year

	2012	2013	2014	2015	2016	2017
Accelerated	79,719	153,910	190,787	395,810	276,133	112,426
Conventional	251,375	290,717	773,651	402,353	324,213	149,420

Customer Survey Results

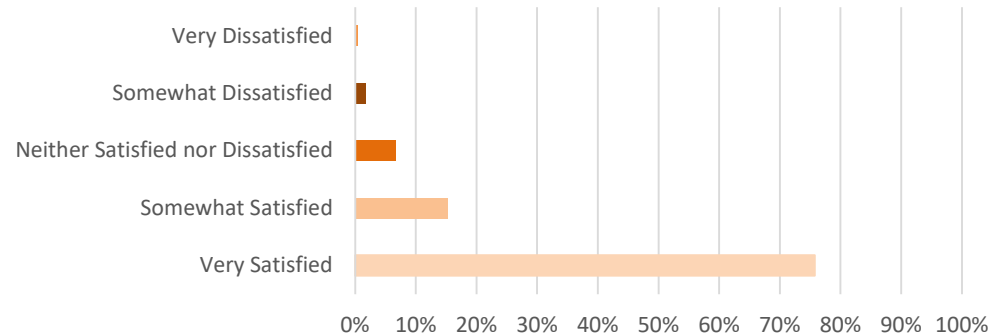
■ How satisfied were you with ABC?

397 Responses from 9 projects



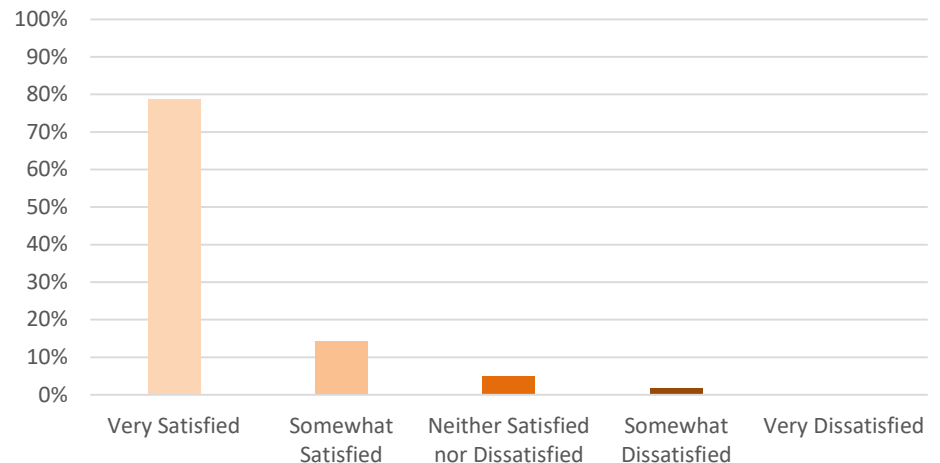
■ How satisfied are you with the information you received about the bridge project?

223 Responses from 9 projects



■ Overall, how satisfied were you with how VTrans delivered this project?

382 Responses from 9 projects



Building a Library of Successes

New Bridge Program Cuts Construction Time

🕒 Created on Wednesday, 27 September 2017 19:56 👤 Written by Andrew Whalen



ST. JOHNSBURY- Thanks to a new Advanced Bridge program, bridge construction in St. Johnsbury finished five days earlier than expected. The new bridge, located on Route 2B, reopened this summer after being closed for 45 days.

"(The bridge) incorporates a lot of different visions, as well as trying to protect the rail trail and Route 2B, and doing so in a manner that was expedited by this advanced bridge program," said Governor Scott, who was on hand yesterday to cut the ceremonial ribbon to officially open the bridge. "It kept the rail trail and route 2 in use for longer periods of time during the year."

Governor Scott attributes the rapid completion of the bridge to new techniques that use pre-fabricated designs. The advantage of this is that instead of waiting for concrete to set, pre-cast structures are shipped to the construction site. It cuts down curing time, costs less, and is also safer. Workers don't take as long to complete the project, which keeps delays to a minimum.

V-Trans Secretary Joe Flynn also expressed his pleasure with the accelerated bridge program.

"We are promoting this accelerated bridge program, but we're having conversations with communities so say 'If you allow us to entirely close a road for a shortened period of time, we can get in and out much more quickly than we can if we have to put in a temporary bridge and then have one lane traffic and traffic control. That adds to the cost of projects and to the length of time to deliver projects.



Waitsfield Before



Waitsfield After



Woodstock Before



Woodstock After



Chelsea Before



Chelsea After



Clarendon Before



Clarendon After



Guilford Before



Guilford After



New Haven Before



New Haven After

Delivering Bridge Deck Projects



Brattleboro Before



Brattleboro After



Orwell Before



Orwell After

Delivering Innovation



Middlebury Before



Middlebury After



More Innovation



St. Johnsbury Before



St. Johnsbury After



Important Links

Accelerated Bridge Program Web Page:

<http://vtrans.vermont.gov/highway/structures-hydraulics/accelerated-bridge-program>

Accelerated Bridge Construction Videos:

<https://www.youtube.com/user/VTransTV>

Planned Bridge Closures

<http://vtrans.maps.arcgis.com/apps/webappviewer/index.html?appid=369106d8ddc34c1085760884c1fd7031>

Public SharePoint Site (Project External Website)

<https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/12J160>

Summary

- Important to approach ABC as program as opposed to a one-off occurrence
- Need consistent details and project specifications
- Don't be afraid of alternative contracting – helps with innovation
- Good project scopes are essential to the success of ABC
- Project outreach is critical to the success of ABC
- Good project outreach helps with widespread adoption

For More Information:

<http://vtrans.vermont.gov/sites/aot/files/portal/documents/other/SHRP2%20C19%20Final%20Report%20-%20Expediting%20Project%20Delivery.pdf>



The Accelerated Bridge Program

Accelerating Project Delivery through
Innovation and Community Partnerships

DECEMBER 2016



PREPARED FOR
VTrans

PREPARED BY
VHB

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