



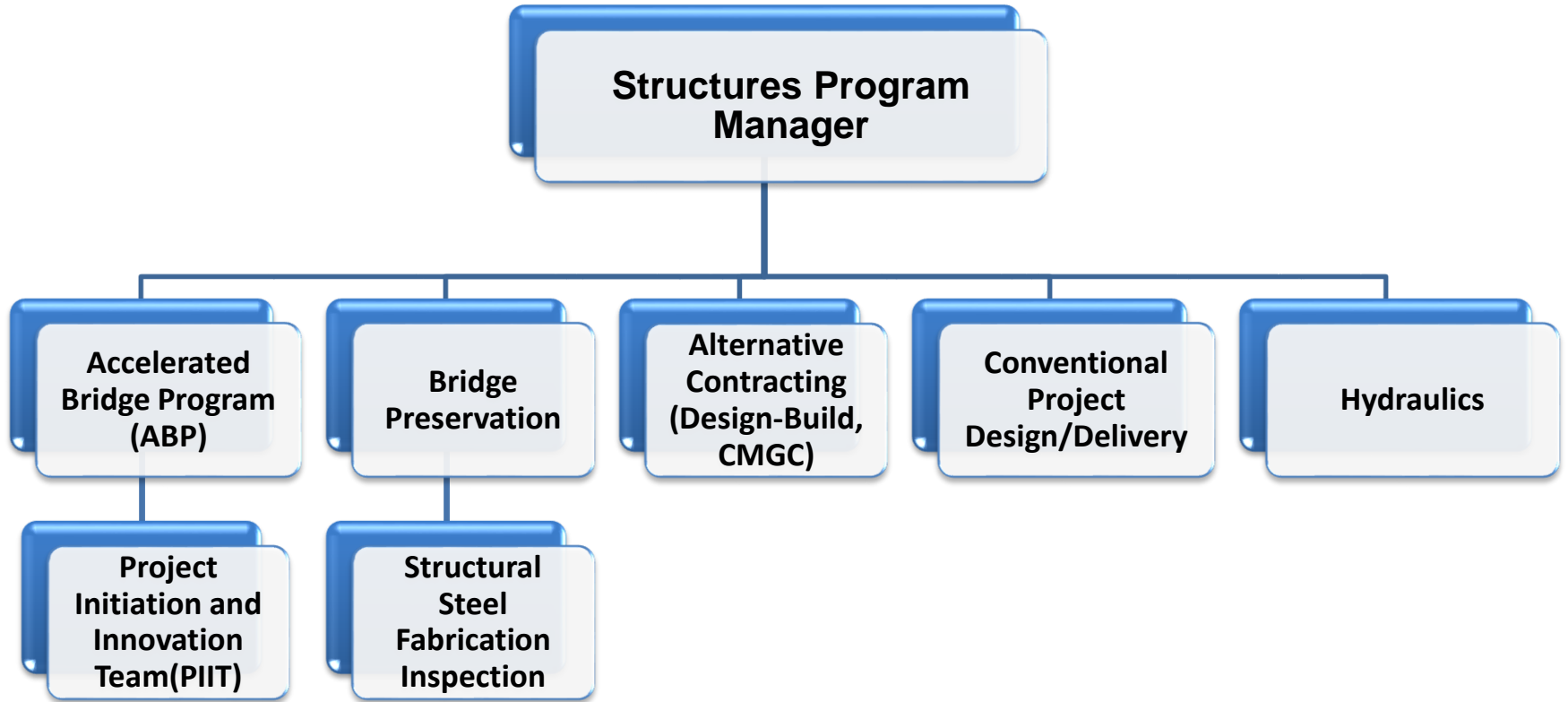
Legislative FY18 Budget Presentation VTrans Structures Section

January 26, 2017

**Wayne Symonds, PE
Structures Program Manager**

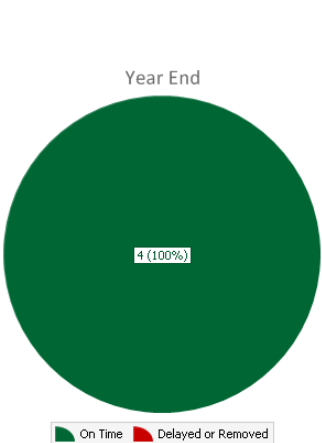
**Pam Thurber, PE
Bridge Management Engineer**

Structures Functional Organizational Chart

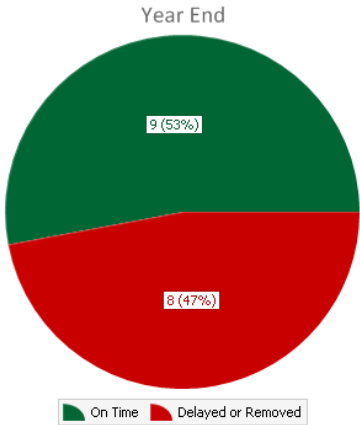


42 Positions – Engineers, Project Managers and Technicians
3 Summer Interns (2 – UVM and 1 – VTC)

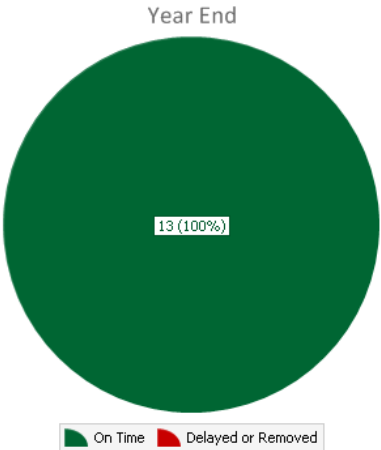
2016 Bid Advertisement Performance



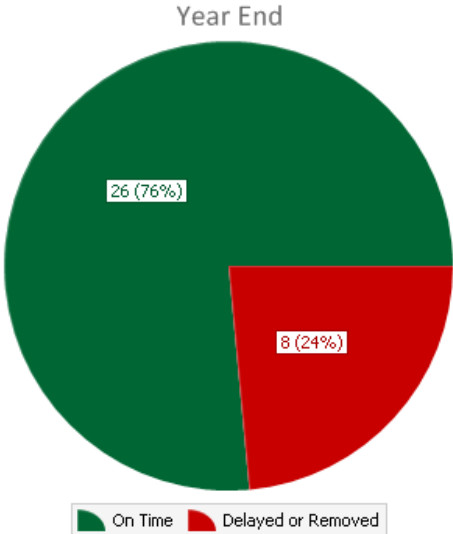
Interstate Bridge Program



State Bridge Program



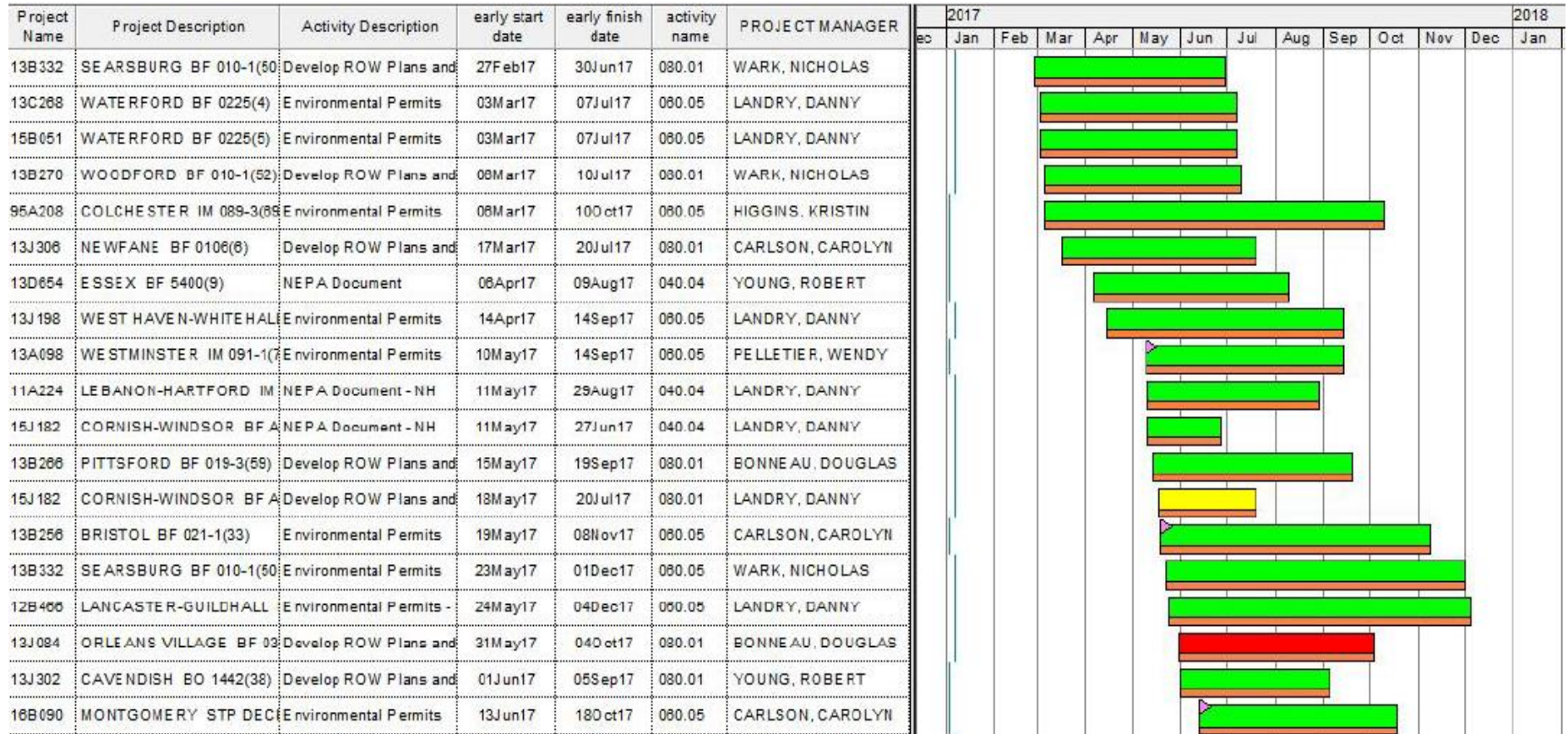
Town Highway Bridge Program



All Structures

Project Delivery Performance Measures

- Measure Project Manager success in delivering information to resources to obtain critical clearance documents and meet project schedule for advertising:
 - Environmental Permits
 - Right of Way



2012 Legacy Project Delivery Goal

- In 2012 when ABP was Created
 - 128 Projects had construction funding in capital Program
 - Structures Program Goal advance all to bid ad by 2017
 - Included many “Legacy” projects
 - Intended Result by 2017 oldest projects are 5 years
- To date 126 of 128 projects have been Advertised (98%)
- Remaining 2 on schedule for bid ad in 2017
- Success!

Strategies for Effective Public Engagement

- Use a standardized but customizable approach for all communities
- Identify key stakeholders and customers
- Seek valuable input early during the project development process
- Use tools to engage the public during meetings
- Create and maintain community partnerships
- Outreach regularly during construction
- Seek feedback



Public Outreach and Customer Service

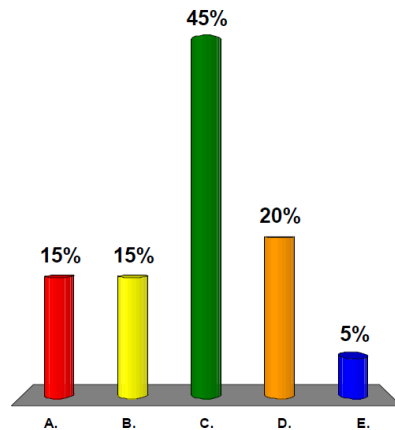


“Clickers” Game Changer

- Audience response system incorporated into all project definition public meetings

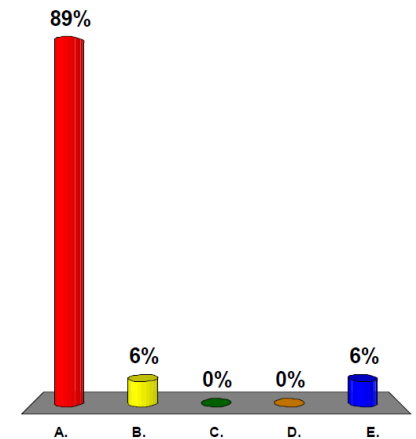
What would be the maximum acceptable length of closure for Bridge #33?

- A. 5 days
- B. 1 week
- C. 10 days
- D. 2 weeks
- E. 4 weeks



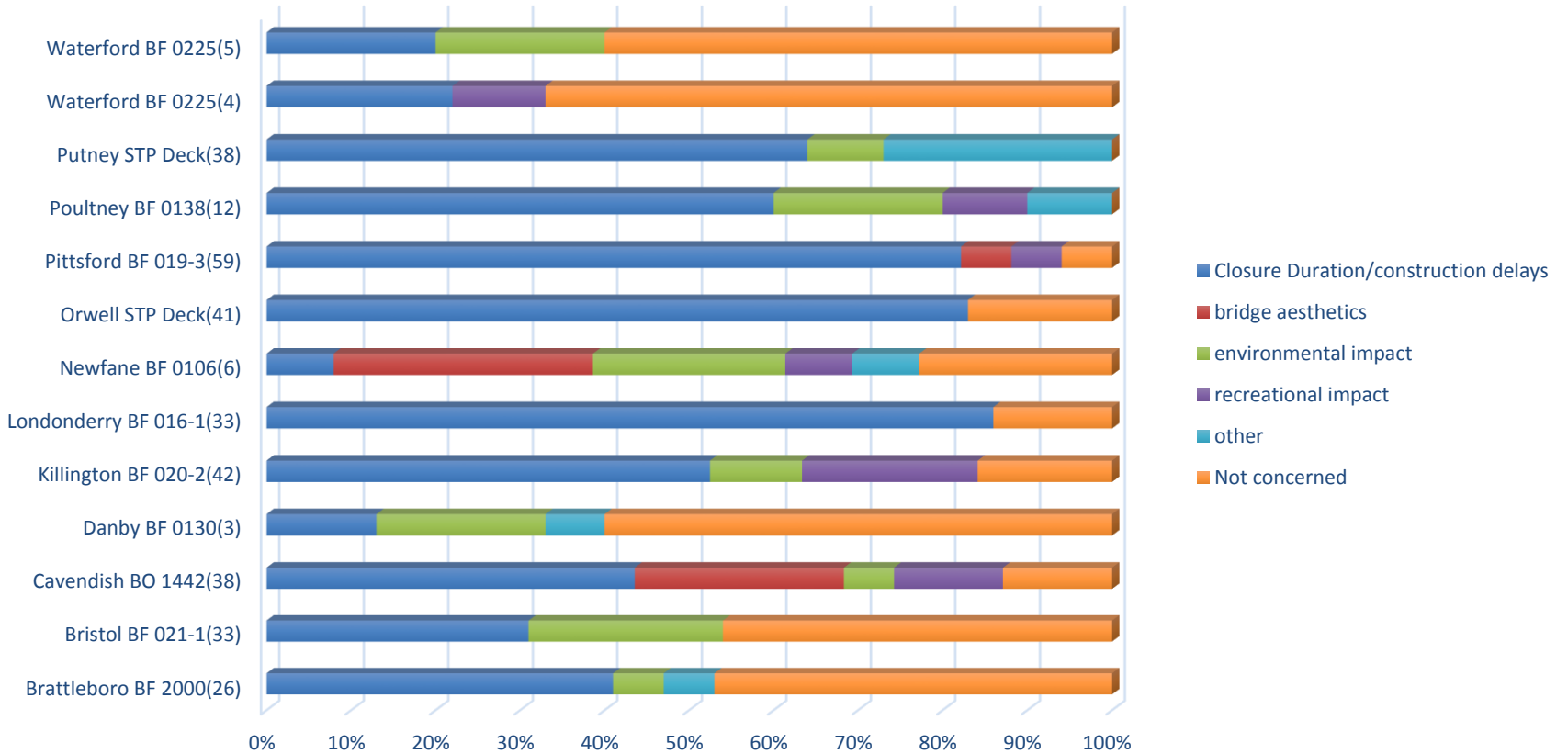
Which time of year would be most acceptable for Bridge #33 to be closed?

- A. June
- B. July
- C. August
- D. September
- E. Other



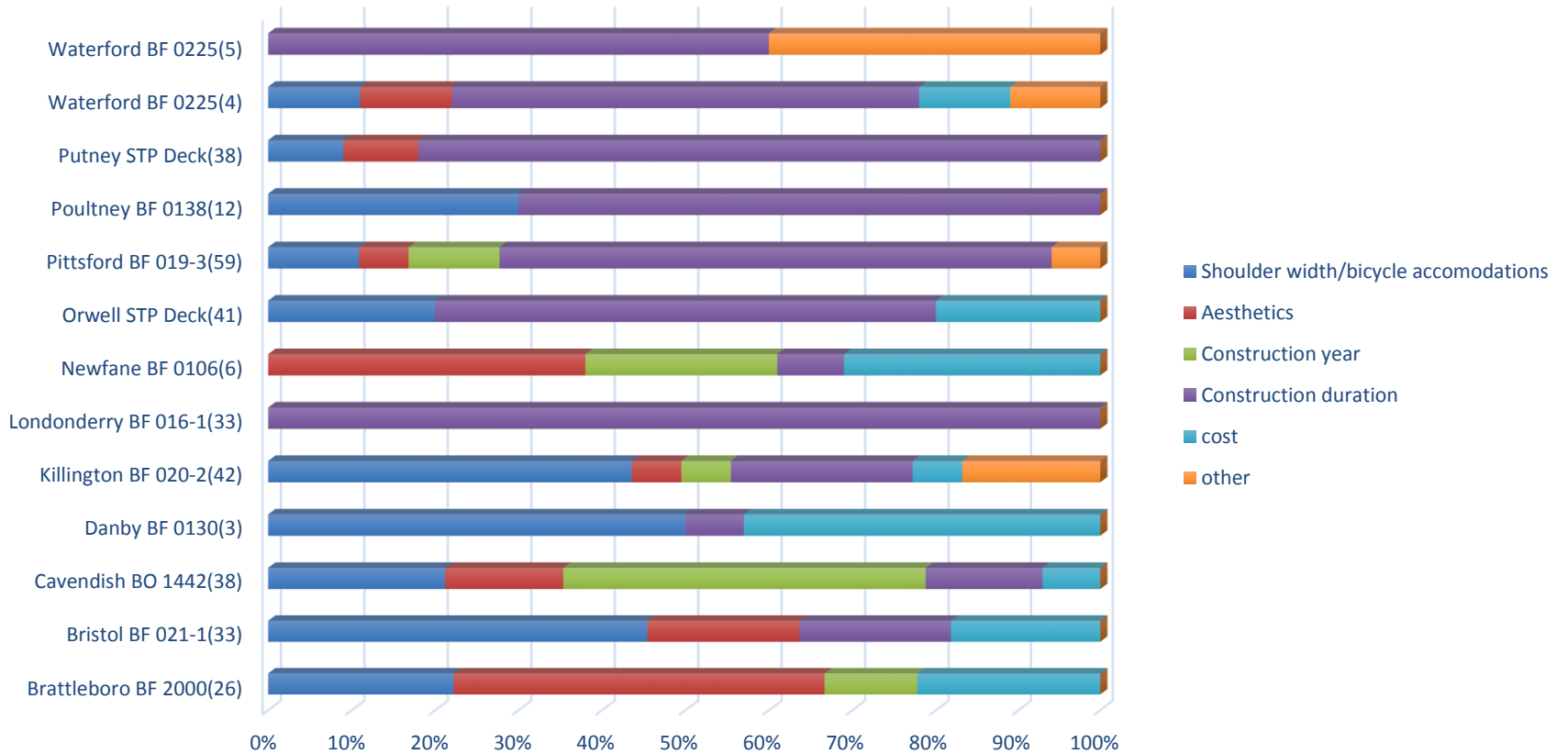
Audience Response

What Are You Most Concerned About?



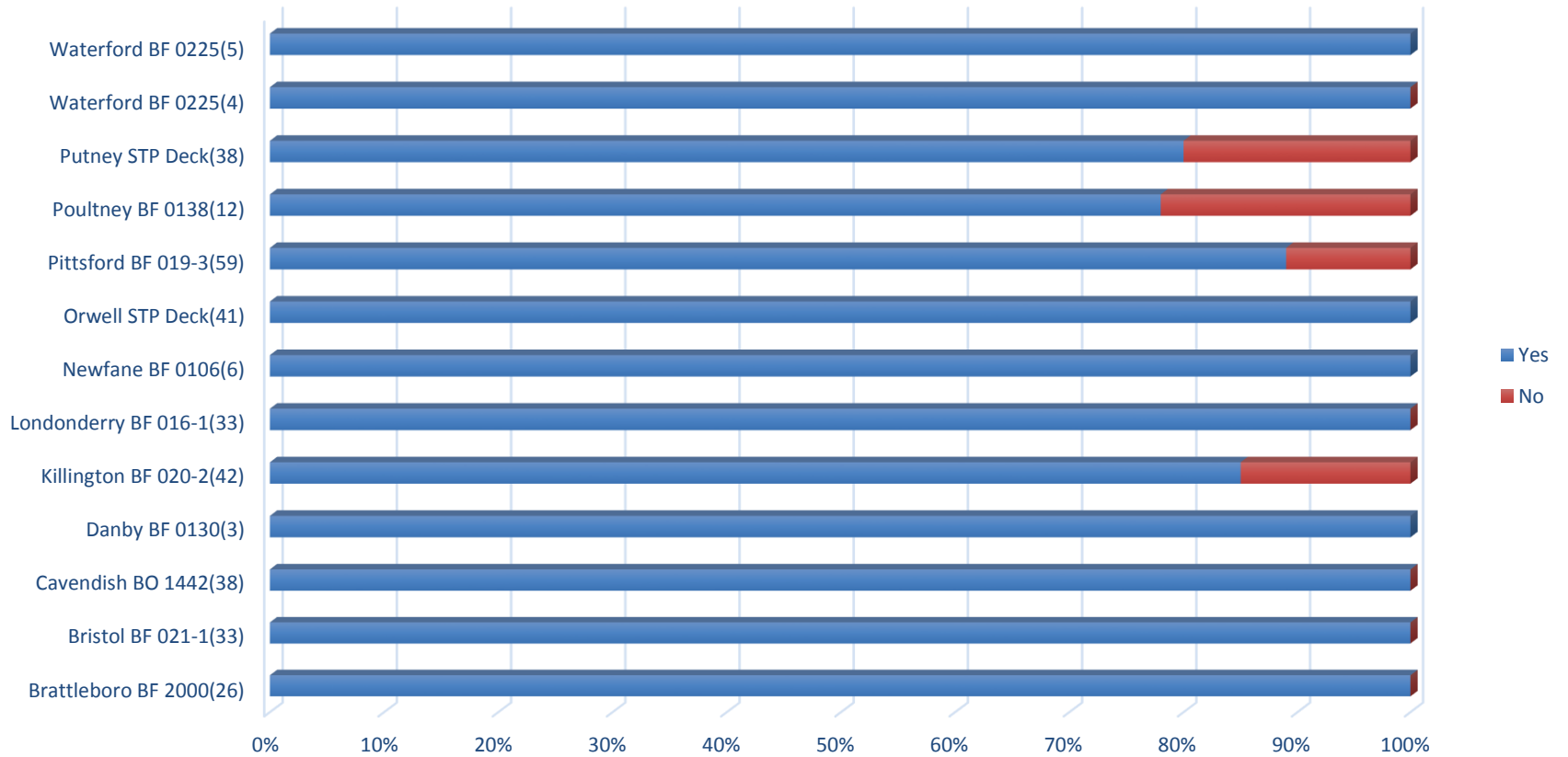
Audience Response

What Design Aspect is the Most Important to You?



Audience Response

Are You Satisfied With the Proposed Scope of Work



Traffic Management Plans Risk Registers

Public Involvement Plans

Traffic Management Plan Project #

STATE OF VERMONT
AGENCY OF TRANSPORTATION


Traffic Management Plan


FOR

Putney STP DECK (38)

US Route 5, Bridge 15 over Sacketts Brook

December 7, 2016





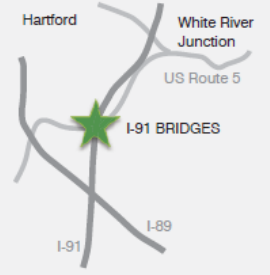
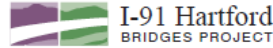
Vermont Agency of Transportation

| BSK REGISTER | | Project Name: Putney STP DECK (38) | | | | Superstructure Replacement | | Project Manager: Jonathan Griffin | | | | |
|--------------|------|------------------------------------|--------------|---|--|---|-----------------|-----------------------------------|----------|--|------------|---------|
| Status | ID # | Type | Category | Title | Risk Statement | Current status/assumptions | Priority Rating | Rationale for Rating | Strategy | Response Actions | Risk Owner | Updated |
| Active | 1 | Threat | Design | Removal of the spill through curbs | If removing these catch basins will cause the bridge which will change the drainage patterns in the STPDS. | | Low | | Mitigate | Risk is mitigated by adding drainage structures off the bridge. | | |
| Active | 2 | Threat | Design | Drainage through existing southern abutment | If the 18" pipe is placed through the existing abutment it will require removing a portion of the reinforced concrete abutment near the bearing seat. Additional waterproofing may be required which would increase the removal area and concrete volume. | To be evaluated during final design | Low | | Accept | To ensure the abutment functions properly the additional work may need to be completed. | | |
| Active | 3 | Threat | Design | Drainage through the NE stone wingwall | Placing the pipe through the stone portion of the wing will require significant removal and reconstruction of the wing which may require additional construction time and cost. | Mitigated by design | Low | | Avoid | Placement of a second catch basin beyond the limit of the wingwall allows for the outlet of the pipe outside of the limits of the wingwall. | | |
| Active | 4 | Threat | Design | Placement of the catch basin in the NE quadrant | This basin is to be located directly behind the stone wingwall and abutment, and the configuration of the existing stone abutments is unknown. This basin can be reduced to 4' deep due to the placement of the second CB, but may still conflict with the back batter of the stone masonry. | Further evaluation once abutment configuration is known | Medium | | Mitigate | This risk can be mitigated by design once the configuration of the wingwall is known. | | |
| Active | 5 | Threat | Construction | Short duration closure | If the bridge opening is delayed traffic will need to detour using the long detour route causing inconvenience to traffic. | Contractors means | Medium | | Avoid | Incentivize/penalize will be included in the project. | | |
| Active | 6 | Threat | Construction | Construction schedule | The use of an accelerated construction schedule could limit the number of contractors bidding or result in higher bid values. | | Medium | | Accept | This is a known risk. | | |
| Active | 7 | Threat | ROW | Right-of-way process | If the ROW process is lengthy, then project development time could be affected. | | Low | | Accept | Minimal ROW is expected for this project. | | |
| Active | 8 | Threat | Construction | Truck turning movements | Placement of barriers for traffic control may impact the truck turning movements into Water Street if not placed properly. | Mitigated by design | Medium | | Mitigate | Placement of barrier will need to be per the contract plans. | | |
| Active | 9 | Threat | Construction | Substructure repairs | If work is required to repair the bridge seats additional closure time will be needed and projects costs could increase. | | Medium | | Accept | This is a known risk. | | |
| Active | 10 | Threat | Design | Evaluation of existing abutments | If the bearing capacity of the existing abutments is not sufficient then the scope of the project will have to be evaluated. The abutment configuration is currently unknown. | Further evaluation once abutment configuration is known | Low | | Mitigate | Probes to determine the shape of the abutments will be completed. The abutments are founded on ledge and it is anticipated that the bearing capacity will be sufficient. | | |
| Active | 11 | Threat | Design | Bridge geometry | Constructing a curved bridge rail on the west fascia will be difficult to fit to the existing sidewalk and for proper placement on the straight precast beam. | Mitigated by design | Medium | | Avoid | The geometry has been simplified by eliminating the rail and placing a curb that will be cast with a tapered front face to match the beam geometry and a curved back face to match the sidewalk. | | |
| Active | 12 | Threat | Design | Western bridge rail | Providing a bridge rail on the western fascia requires a short end off the ends of the bridge which is a safety hazard. | Mitigated by design | Low | | Avoid | This risk will be avoided by eliminating the rail on the western fascia. | | |
| Active | 13 | Threat | Construction | Beam post-tensioning | Due to the proximity of the proposed precast beam to the existing sidewalk and sewer pipes access for post-tensioning operations will be very limited. | Contractors means | Low | | Accept | This is a known risk. | | |

Risk Register

Project Factsheets

Project Factsheet May 2014



HARTFORD (WHITE RIVER JUNCTION) I-91 BRIDGES (Hartford IM 091-2(79) project)

Project Location: Town of Hartford in Windsor County on Interstate 91 over Route 5 in White River Junction approximately one half mile north of the junction of I-91 and I-89.

Project Purpose: The purpose of this project is to replace the existing bridges that carry Interstate 91 north and southbound over US Route 5 in Hartford, safely, efficiently and with the least possible impact to road users and the surrounding community. The structures were built in 1966. Age, weather and use have taken a toll on the concrete deck, beams and abutments of the two bridges. Two new bridges will be built during the 2015 construction season.

Accelerated Bridge Program (ABP): The Hartford I-91 Bridges Project has been assigned to the Vermont Agency of Transportation (VTrans) Accelerated Bridge Program, an approach that delivers projects faster, often using innovative techniques and always in collaboration with local communities. Typically, fast track bridge projects are completed in approximately half the time that it would take by conventional construction, often in just one construction season.

By reducing the time it takes to construct a new bridge, VTrans has been able to save money spent on design, utility and ROW impacts, and road closures as well as minimize disruption to travelers and commerce. The ABP encourages streamlining, standardizing design and plan preparation while exploring innovative contracting and construction techniques.

Partnership is a hallmark of the ABP program – with contractors, innovators from other states and local communities. To date, 12 bridges have been rebuilt using the ABP since the program was established in 2012, with 13 planned in 2014.

PROJECT MILESTONES

- Preliminary Plans
April 2014
- Permitting
August 2014
- Right-of-Way Complete
August 2014
- Final Design
October 2014
- Contract Award
March 2015
- Target Construction Schedule
2015



- Fact sheets for all projects
 - Public Facing to provide transparency
 - Project delivery schedule
 - Project Contact Information
 - Targeted Construction Date
 - Road Closure Information
- Project External Website for all projects
 - Public Facing website
 - All milestone submittals uploaded for public viewing
 - Letter with link sent to stakeholders

Interstate Bridge Program

BRATTLEBORO IM 091-1(65)

BR 8 N&S AND 9 N&S ON I-91 IN BRATTLEBORO, OVER VT30 AND THE WEST RIVER.



MIDDLESEX IM 089-2(41)

BR 44 IN MIDDLESEX, US2 OVER I-89 AND THE NEW ENGLAND CENTRAL RAILROAD



WATERBURY IM 089-2(43)

BR 46 N&S AND BRIDGE NO. 46A ON I-89 IN WATERBURY, OVER STOWE ST.
(TH2) AND THATCHER BROOK



Budget Development

Interstate Bridge Program - Funding Leveling

| | | |
|---------------|-----------------|-------------------------------------|
| BERLIN | HIGGINS,KRISTIN | |
| IM DECK(42) | | Delayed one Year FY 2019 to FY 2020 |
| I-89 | | Advanced Development Project |
| BERLIN | HIGGINS,KRISTIN | |
| IM DECK(43) | | Delayed one Year FY 2019 to FY 2020 |
| I-89 | | Advanced Development Project |
| BERLIN | HIGGINS,KRISTIN | |
| IM DECK(44) | | Delayed one Year FY 2019 to FY 2020 |
| I-89 | | Advanced Development Project |
| BERLIN | HIGGINS,KRISTIN | |
| IM DECK(45) | | Delayed one Year FY 2019 to FY 2020 |
| I-89 | | Advanced Development Project |
| MIDDLESEX | FITCH,JENNIFER | |
| IM 089-2(50) | | Delayed one Year FY 2019 to FY 2020 |
| I-89 | | Advanced Development Project |
| ROYALTON | FITCH,JENNIFER | |
| IM 089-1(63) | | Delayed one Year FY 2020 to FY 2021 |
| I-89 | | Advanced Development Project |
| WEATHERSFIELD | PELLETIER,WENDY | |
| IM 091-1(69) | | Delayed one Year FY 2020 to FY 2021 |
| I-91 | | Advanced Development Project |
| WESTMINSTER | PELLETIER,WENDY | |
| IM 091-1(70) | | Delayed one Year FY 2019 to FY 2020 |
| | | Advanced Development Project |

State Bridge Program

EAST MONTPELIER BRF 037-1(7)

BR 68 ON VT14 IN EAST MONTPELIER, OVER THE WINOOSKI RIVER



NORTH HERO-GRAND ISLE BHF 028-1(26)

BR 8 ON US2 BETWEEN NORTH HERO AND GRAND ISLE, OVER LAKE CHAMPLAIN



RICHFORD-SUTTON, PQ BHF 0814(1)

**BR 3 ON VT105A, OVER THE MISSISQUOI RIVER BETWEEN RICHFORD, VT
AND SUTTON, QUEBEC**



RUTLAND CITY BRF 3000(16)

BR 2 ON RIVER ST/ DORR Dr. IN RUTLAND CITY, OVER OTTER CREEK



RYEGATE STP CULV(10)

**BR 116 ON US5, AND BR27-E ON THE WASHINGTON CO RR OVER
MANCHESTER BROOK IN RYEGATE**



RUTLAND TOWN NH WALL(3)

US-4 in the town of Rutland near the Rockwell Museum



WEYBRIDGE-NEW HAVEN BF 032-1(19)

BR 8 ON VT17 BETWEEN WEYBRIDGE AND NEW HAVEN, OVER OTTER CREEK



Budget Development

State Bridge Program - Funding Leveling

| | | |
|---------------|-----------------|--|
| ADDISON | FITCH,JENNIFER | |
| BF 0172(9) | | Delayed one Year FY 2020 to FY 2021 |
| VT-125 | | Advanced Development Project |
| BERLIN | FITCH,JENNIFER | |
| BF 026-1(43) | | Delayed one Year FY 2020 to FY 2021 |
| US-302 | | Advanced Development Project |
| BRISTOL | CARLSON,CAROLYN | |
| BF 021-1(33) | | Delayed one Year FY 2018 to FY 2019 |
| VT-116 | | Advanced Development Project |
| CALAIS | SARGENT,MARK | |
| BHF 037-2(10) | | Delayed three Years FY 2017 to FY 2019 |
| VT-14 | | Advanced Development Project |
| CALAIS | SARGENT,MARK | |
| BHF 037-2(11) | | Delayed three Years FY 2017 to FY 2019 |
| VT-14 | | Advanced Development Project |
| CALAIS | SARGENT,MARK | |
| BHF 037-2(12) | | Delayed three Years FY 2017 to FY 2019 |
| VT-14 | | Advanced Development Project |
| ESSEX | YOUNG,ROBERT | |
| BF 5400(9) | | Delayed one Year FY 2021 to FY 2022 |
| VT-117 | | Advanced Development Project |
| HINESBURG | FITCH,JENNIFER | |
| BF 021-1(35) | | Delayed one Year FY2019 to FY 2020 |
| VT-116 | | Advanced Development Project |

State Bridge Program - Funding Leveling

| | | |
|--------------|-----------------|-------------------------------------|
| JOHNSON | PELLETIER,WENDY | |
| BF 0248(4) | | Delayed one Year FY 2017 to FY 2018 |
| VT-100C | | |
| JOHNSON | PELLETIER,WENDY | |
| BF 0248(7) | | Delayed one Year FY 2017 to FY 2018 |
| VT-100C | | |
| KILLINGTON | FITCH,JENNIFER | |
| BF 020-2(42) | | Delayed one Year FY 2018 to FY 2019 |
| US-4 | | Advanced Development Project |
| MONTGOMERY | CARLSON,CAROLYN | |
| STP DECK(40) | | Delayed one Year FY 2018 to FY 2019 |
| VT-118 | | Advanced Development Project |
| MONTGOMERY | CARLSON,CAROLYN | |
| STP DECK(47) | | Delayed one Year FY 2018 to FY 2019 |
| VT-118 | | Advanced Development Project |
| MT. HOLLY | FITCH,JENNIFER | |
| BF 0133(12) | | Delayed one Year FY 2020 to FY 2021 |
| VT-155 | | Advanced Development Project |
| PITTSFORD | BONNEAU,DOUGLAS | |
| BF 019-3(59) | | Delayed one Year FY 2020 to FY 2021 |
| US-7 | | Advanced Development Project |
| PLYMOUTH | FITCH,JENNIFER | |
| BF 013-3(13) | | Delayed one Year FY 2020 to FY 2021 |
| VT-100 | | Advanced Development Project |

Town Highway Bridge Program

CHARLOTTE BO 1445(36)

Seguin covered bridge



Budget Development

TH Bridge Program - Funding Leveling

| | | |
|------------|-----------------|-------------------------------------|
| NEWFANE | CARLSON,CAROLYN | |
| BF 0106(6) | | Delayed one Year FY 2020 to FY 2021 |
| Maj-0106 | | Advanced Development Project |

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>