



Programmatic Implementation of ABC: Module 6

Project Highlights – Contractor Perspective



VERMONT
AGENCY OF TRANSPORTATION



**Accelerated
Bridge
Program**
VTRANS



Robert Young, P.E.
Accelerated Bridge
Program Manager
Vermont Agency of
Transportation
Office: 802-595-2358
Email:
rob.young@vermont.gov

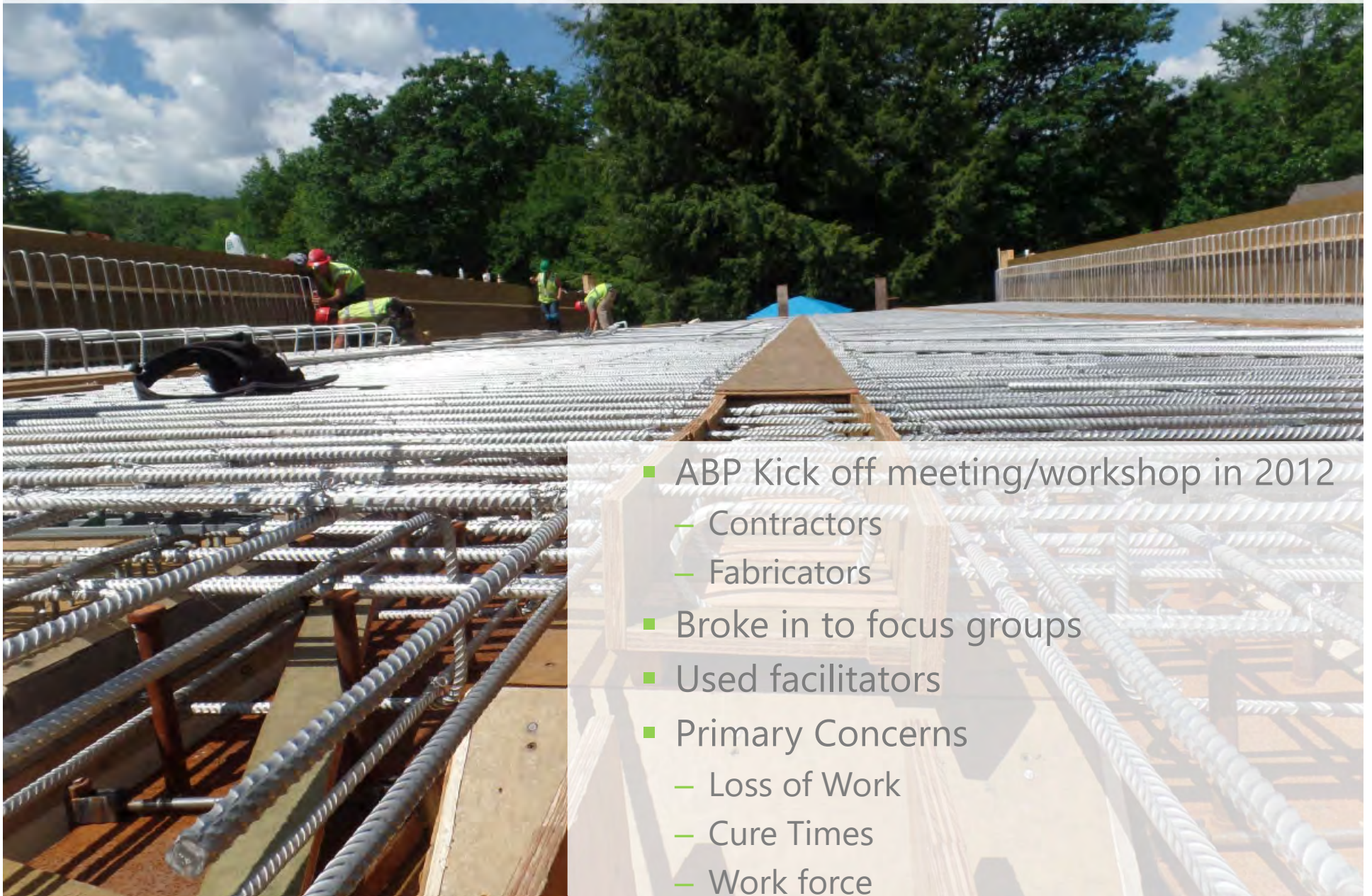


Chad Contaldi
Project Manager
Cold River Bridges
Walpole, New Hampshire
Email:
chad@coldriverbridges.com

Presentation Outline

- Collaboration with Industry
- Evolution of Contractor Involvement in ABC Projects
 - Case Studies
 - Rapid set Concrete
 - Contractor Fabricated Precast Structures
- VTrans Continuous Improvement
- Questions

Collaboration with Industry



- ABP Kick off meeting/workshop in 2012
 - Contractors
 - Fabricators
- Broke in to focus groups
- Used facilitators
- Primary Concerns
 - Loss of Work
 - Cure Times
 - Work force
 - Permitting (Time of Year restrictions)

2017: Guilford BF 0113(68)

Contractor Involvement – First ABC Project

Why bid ABC?



2011 – Chester BRF 025-1(28)

- Contractor: Cold River Bridges
- Features:
 - 56' long NEXT 28 D Beam bridge
 - Semi integral abutment
 - Turch Applied Membrane
 - **Precast at plant**

2011: Chester Bridge 8 Construction



**Extended Grout
vs. New concrete
mix design**



2011: Chester Bridge 8 Completed



ABC Self Performance = Contractor Fabricated Elements



2013 – Plymouth ER BRS 0149(5)

- Contractor: Cold River Bridges
- Features:
 - 63' long NEXT 32 D Beam bridge supported on piles
 - Existing emergency temporary bridge off alignment
 - Closure Pour/High Performance Concrete
 - Spray Applied Membrane
 - **First Self performed Precast**

2013: Plymouth ER BRS 0149(5) - Contractor Fabricated Elements

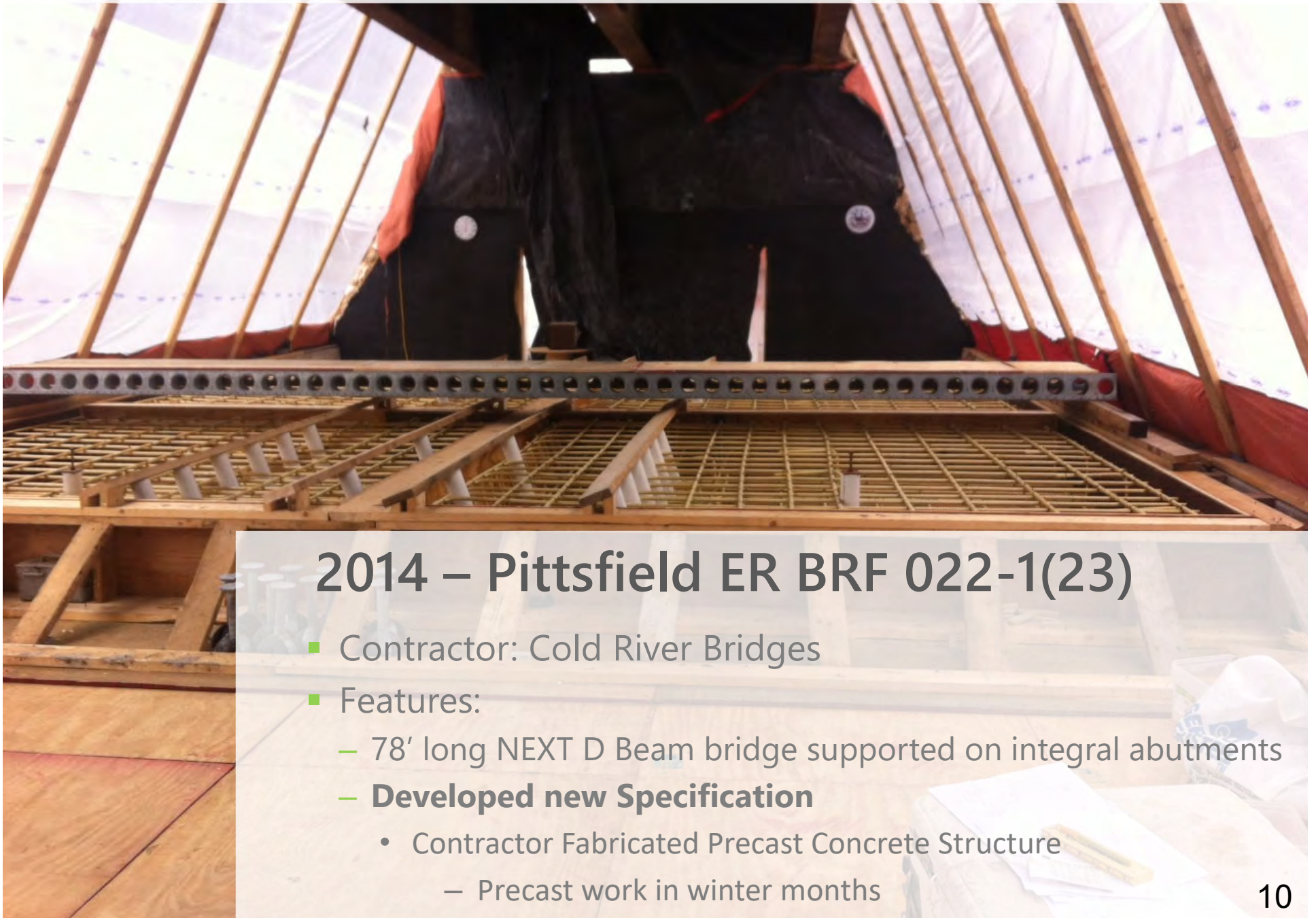
Added Value by self performing precast concrete

- Reduced dependence on subcontractors
 - Gives prime more control over schedule
- Allows for innovation
- Greater availability to prefabricate/reduced costs
- Keeps heavy loads off state highways, no permits
- Need for new Specification
 - Change of design proposed for self performance



Benefits of Self Performance
Takes heavy loads off road
Reduced wear and tear
Eliminates time restrictions

ABC Self Performance = Contractor Fabricated Elements



2014 – Pittsfield ER BRF 022-1(23)

- Contractor: Cold River Bridges
- Features:
 - 78' long NEXT D Beam bridge supported on integral abutments
 - **Developed new Specification**
 - Contractor Fabricated Precast Concrete Structure
 - Precast work in winter months



2014 – Cavendish ER BRF 0146(13)

- Contractor: Cold River Bridges
- Features:
 - 122' long Precast bridge units supported on integral precast abutments
 - Allowable Bridge Closure Period 5 weeks
 - Incentive/Disincentive Compensation
 - Critical Path Method Schedule
 - **Slid into place to avoid heavy equipment**
 - **Prefabricated Bridge Unit Superstructure**

07/05/2014


Innovation Leads to More Innovation - Cavendish



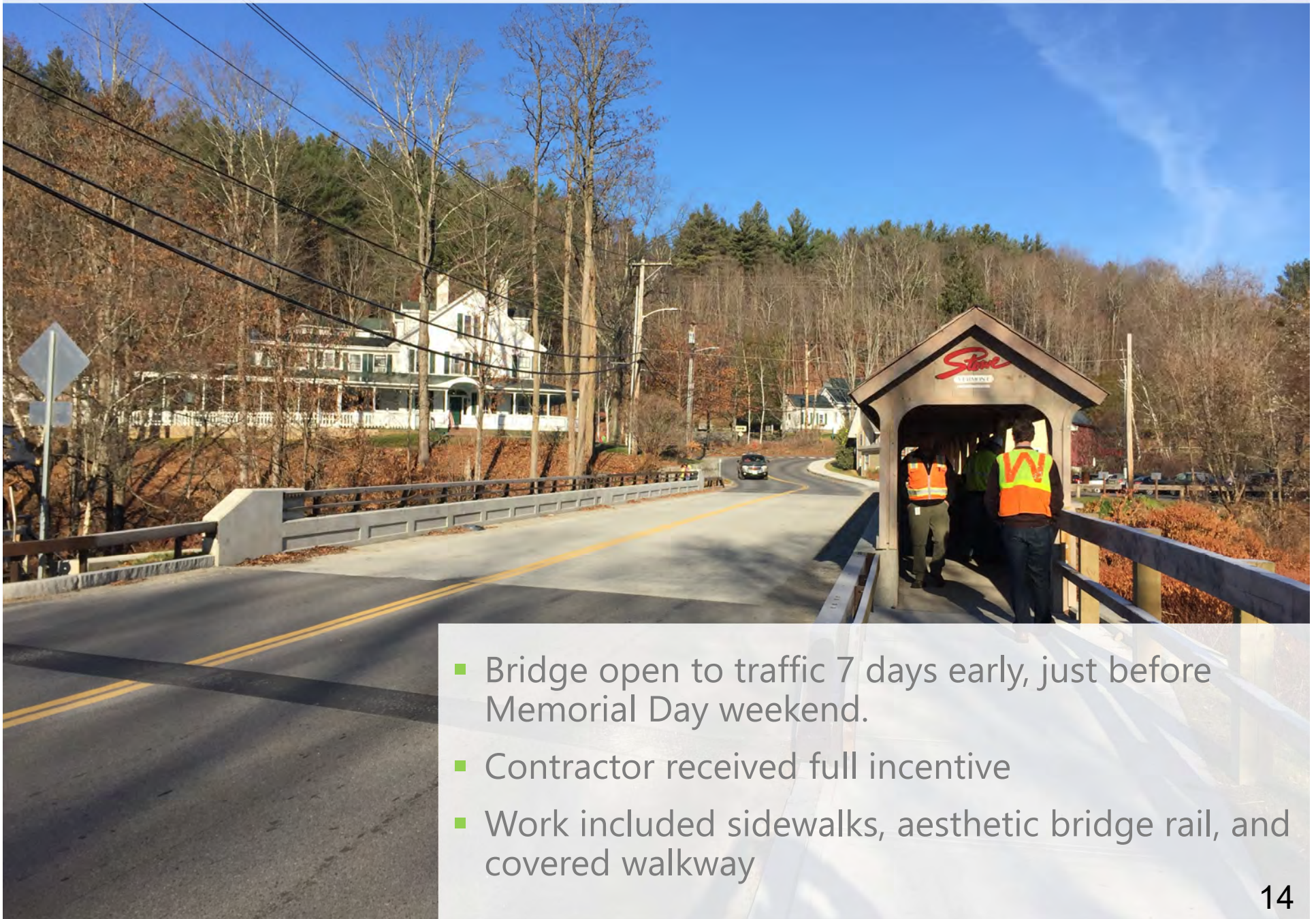
<https://www.youtube.com/watch?v=nP-cbGFgPQw>

2015: Stowe VT Route 108 Bridge #2

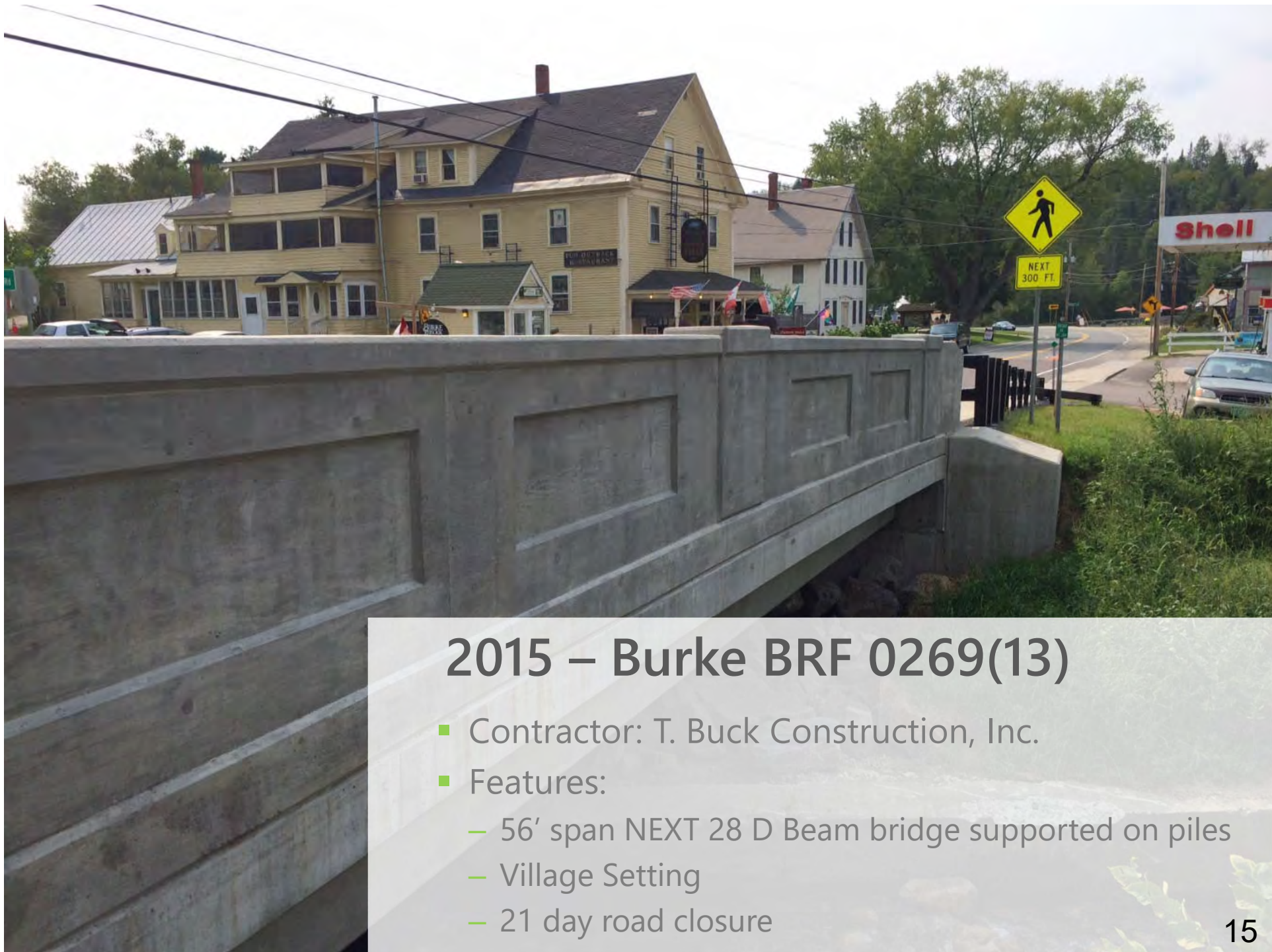
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- Worked closely with Town of Stowe to determine optimal time of year
 - Alternates offered:
 - Phased Two-Way – 7 Month Duration
 - 2 Month closure w/ One Way after
 - Town selected closure option with closure to occur during Vermont's unofficial 5th season "Mud Season"
 - 54 day closure selected

2015: Stowe VT Route 108 Bridge #2 – Completed Bridge



- Bridge open to traffic 7 days early, just before Memorial Day weekend.
- Contractor received full incentive
- Work included sidewalks, aesthetic bridge rail, and covered walkway



2015 – Burke BRF 0269(13)

- Contractor: T. Buck Construction, Inc.
- Features:
 - 56' span NEXT 28 D Beam bridge supported on piles
 - Village Setting
 - 21 day road closure

<https://www.youtube.com/watch?v=8DmhABochmw>



2015 – Burke BRF 0269(13)

- Road Closure Timing: After Memorial Day and Before annual NEMBAfest Bike Race

Post Construction Survey

Meeting to Discuss and Document Lessons Learned

- Closure durations – compare with Constructability Review
- Fit up/camber differences with precast pieces
- Plan details that could be improved
- Site constraints –
 - Utilities out of the way
 - Adequate ROW
- Submittal process – VTrans uses DocExpress



For More Information

- ABP Promotional Videos

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

- Cavendish Project SharePoint Site

<https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/11C318>

- Stowe Project SharePoint Site

<https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/87E052>

- Burke Project SharePoint Site

<https://outside.vermont.gov/agency/vtrans/external/Projects/Structures/10C412>



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Questions?

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