BRIDGE ADVISORY COMMITTEE MEETING
MINUTES
06/14/17

IN ATTENDANCE:

Bridge Advisory Committee (BAC) Members:
Jim Schatz (Facilitator), Deborah Brewster, John Chapman, Lynne Clark, Bill Cousins, Stephen Rappaport, Lori Sitzabee, Karen Wyatt

Department of Transportation (MDOT): Andrew Lathe

Federal Highway Administration (FHWA): Cassie Chase

HNTB: Kevin Brayley, Tim Cote

Public: Christopher Audet, Henrietta Clews, Sean & Cheri Guinness, Dick & Mindy Marshuetz, Thom McLaughlin, Scott Miller, Anne Nevin, Liza Nevin, Dee Seymour

Blue Hill Town Office: Deb Boyd

Old Business

New Business

- Presentation: Sea Kayaking by Chris Audet
  Chris is an entrepreneur who teaching safety and kayaking skills. He claims the Reversing Falls is a great hot spot for kayakers and is concerned that potential alterations to the bridge will change the flow and surf on the waves. Chris would like safer parking so that kayakers can load/unload their boats and stage their gear. Karen asked if alternative parking (perhaps ¼ or ½ mile away) would be a problem, and Chris said the current is manageable there. Jim inquired to the volume of people using The Falls. Chris responded, "15 years ago it was rare, but today it's rare not to see someone." He explained that when kayakers are seen in the water, people stop to take pictures of the kayakers. On a summer day there may be 7 or 8 kayakers and 30 – 60 people milling around. Jim asked if Chris would be willing to contribute any dollars and, without any hesitation, Chris replied, "For white water access - $60 – he'd pay even more." To Chris, kayaking at The Falls is like a gym – a place where he can de-stress.

- Presentation: Existing Conditions by Tim Cote, HNTB
    1. Subsurface Soil Conditions
        - Information is used to assess new and existing foundations.
        - Data was collected through field drilling operations in 2010 & 2017: Mostly sand & gravel; variable thickness of 0 to 15 feet over bedrock. North abutment is sitting on bedrock, but south abutment is not.

    2. Hydrology, Hydraulics & Scour
        - Salt Pond Tidal Basin
            Falls Bridge is the only major inlet
        - Existing Bridge Opening
            Minimum Freeboard – 6 Feet
            Width – 100 Feet
            Minimum Depth - 6 Feet at low tide
            Small Opening
        - Hydraulics
            Maximum Currents of 15 Feet per Second
            Quite fast through the Bridge opening
            Erodes materials away from the stream

    3. Right-of-Way
        - Public Right-of-Way
            66 Feet Wide
            Roadway is not perfectly centered in right-of-way
            Many projects require additional property rights
            Established right-of-way process
                Follows State & Fed laws
                Federally-funded projects follow FHWA "Uniform Act"
        - Activities that require right-of-way process:
            Fee Interest Acquisition
            Easements (drainage or slope easements)
            Temporary construction or temporary bridge
            Follows state and federal laws

    4. Utilities
        - Aerial Utilities
            Bangor Hydro Electric Company
            FairPoint Communications
            Time Warner Cable
        - Close proximity to Bridge (need 10 ft offset)
        - Utility adjustments required on many projects
        - Utility coordination process considers: Safe working clearances from electrical conductors; where do new utility poles go?

5. Bridge Geometrics
   Main Span ±100 Feet
   North Approach ±100 Feet
   South Approach ±30 Feet
   Max. Vehicle Height: 14'-1"
   Curb-to-Curb Width: 20'-4"

6. Roadway Geometrics
   - Horizontal Alignment
     Roadway and bridge width is substandard
     Roadway paved is 20 ft.
     MDOT recommends 24 ft. width (lane and shoulders)
   - Vertical Alignment
     Stopping & headlight sight distance
     Posted Speed Limit: 20mph
     Recommended Stopping Sight Distance: 115 Feet
     Bridge is located in valley of 2 hills

7. Traffic & Accident Data
   - Traffic Data (2014 count)
     Average Annual Daily Traffic = 1730 vehicles/day
     Peak Hour = 268
   - Accident Data (2014-2016)
     2-mile segment, Rte 175 between Parker Point Road and Wharf Road: 8 motor vehicle crashes recorded
     One vehicle crash near Falls Bridge (icy roads)
     (John Chapman disagreed with above information)

8. Other Site Features
   - Wide gravel shoulders for parking
   - Informal footpath to water
   - Granite steps
   - Informal hand-carry boat launch

9. Bridge Terminology Reviewed

10. Bridge Condition

    - Routine Bridge Inspection (bi-annually, FHWA guidelines)
    - 0 to 9 rating (9 = excellent)
    - Falls Bridge is considered Structurally Deficient (needs maintenance, repair, rehabilitation or replacement; it does not mean it is unsafe but may need to restrict vehicle weights)

11. Bridge Condition – Deck Rating = 4 Poor Condition
    - Underneath - Concrete cracking
    - Underneath - Exposed reinforcing
    - Top Side – Heavy cracking throughout
    - Top Side – Areas of previous repair throughout
    - Tim's suggestion: Replace Bridge Deck at minimum

12. Bridge Condition – Substructure Rating = 4 Poor Condition
    - South Abutment, southeast corner – major cracking
    - Rubble from drilled cores
    - Shifting granite stones
    - Top of abutments heavily cracked & deteriorated

13. Bridge Condition – Superstructure Rating = 5 Fair Condition
    - Deteriorating concrete at Northwest Knuckle ¼" wide
    - Deteriorating concrete at Northeast Knuckle
    - Reinforced steel is corroding and splitting concrete
    - West tie girder cracked with areas of concrete spalling

14. Previous Bridge Investigations (in 2009-2011)
    - Concrete Cores collected
        Compressive strength test (how strong is concrete?)
        Chloride test (how far in concrete has it progressed?)
        Carbonation testing
        Petro graphic testing (microscopic testing)
    - Data will be used to support the development of a comprehensive rehabilitation strategy

15. Bridge Capacity Evaluations
    - Load capacity evaluation to be completed by July, 2017
    - Assessing all components of tied arch system
    - Compares bridge capacity to demand created by vehicles

16. Modern vs. Historic Design Standards
    - Differences in design philosophy and requirements
    - Example: Railings
        Don't meet standards
        Don't offer protection to hangers on bridge
    - Example: Guardrails
        Need to be higher

Questions/Comments

Are results of bridge inspections available on website? (S. Rappaport)
Yes, they are public documents (A. Lathe)

Will there be Postings because of the condition of the bridge? At the end of the process, will pulp trucks need to use alternate routes? (S. Miller)

All legal load vehicles should be able to use the bridge. (A. Lathe)

Condition and capacity ratings (T. Cote)

In the 50's & 60's they built using lighter beams. Vehicle weights increased over the years, making the lighter beams fail. It has to do with the design of the bridge at the time it was built. (A. Lathe)

In 1973 there was a posted weight limit at the Falls Bridge versus the East Blue Hill Road, Rte 176 Bridge. (J. Chapman)

Maine is wrapping up the ratings for 2800 bridges. (T. Cote)

- MDOT – Local Cost-Sharing Policy

1. Bridge – MDOT will pay 100% of the costs
2. Sidewalks, curbing, lighting, park benches – shared

Handouts

Minutes dated 05/22/17

Disturbance Effects from Bridge Renovation/Replacement from Zachary Holderby, Downeast Audubon

Public Comments from Blue Hill Site Link 06/08 – 06/14

Next Scheduled Meetings: 07/10/17 and 07/18/17, both from 6-8pm

Public Comment – None

Adjourned at 7:55pm

Falls Bridge Advisory Committee

June 14th, 2017

Meeting #5 – Existing Conditions

6:00 – 6:15 Introductions – *Facilitator*
- Attendance
- Old Business
- New Business

6:15– 6:30 Presentation: Sea Kayaking
By Chris Audet

6:30 – 7:00 Presentation: Existing Conditions
by Tim Cote, HNTB
- Bridge Terminology
- Subsurface Soil Conditions
- Hydrology, Hydraulics & Scour
- Right-of-Way & Utilities
- Road Geometrics
- Traffic & Accident Data
- Miscellaneous Site Features
- Bridge Condition
- Bridge Load Capacity

7:00 – 7:15 MDOT Policies
by Andrew Lathe, MDOT

7:15 – 7:30 Problem & Need Statement
by Andrew Lathe, MDOT

7:30 - 7:50 Group Discussion

7:50 - 8:00 Closing
- Public Comment
  - Downeast Audubon
  - Web link comments

MaineDOT