

APPENDIX C

ASSESSED CHANNEL CROSSINGS IN THE MIDDLE EXETER RIVER BASIN

**Middle Exeter River
Brentwood, NH**

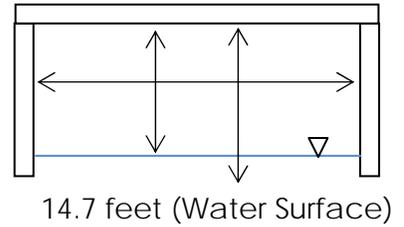
Location: Haigh Road

Phase 2 Segment ID: ME03-A

Bridge Length (Rd Width): 34.0 feet

Bridge Clearance: 16.5 feet (Stream Bottom)

Bridge Span: 40.0 feet



Bridge Inlet



Bridge Outlet

Geomorphic Compatibility – Mostly Compatible

Percent Bankfull Width –Undersized (59%)

Approach Angle – Mild bend

Erosion and Armoring – No bank erosion up or downstream; armoring is intact both above and below the structure

Sediment Type in Structure - Sediment within the structure is mostly gravel and cobble

Additional notes - Structure has bedrock grade controls downstream and within. The Haigh Road crossing is where the USGS gage site is located; the pressure transducer is located downstream of the structure where the bedrock grade control is found.

Aquatic Organism Passage – NA Structure is a bridge

Flood Capacity – Adequate

Flood capacity for flood events

- 25 year – 269%
- 50 year – 229%

Priority for Replacement - Low

**Middle Exeter River
Brentwood, NH**

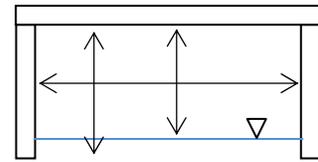
Location: Crawley Falls Road

Phase 2 Segment ID: ME05

Bridge Length (Rd Width): 35.0 feet

Bridge Clearance: 13.5 feet (Stream Bottom)

Bridge Span: 31.0 feet



12.0 feet (Water Surface)



Bridge Inlet



Bridge Outlet; Crawley Falls

Geomorphic Compatibility – Mostly Compatible

Percent Bankfull Width – Significantly Undersized (46%)

Approach Angle – Naturally Straight

Erosion and Armoring – No bank erosion up or downstream; armoring is intact both above and below the structure

Sediment Type in Structure - Sediment within the structure is mostly bedrock with loose, coarser material on top

Additional notes - Structure has bedrock grade controls within and the Crawley Falls are located downstream. Upstream of the structure the channel is narrowly confined by the valley, the increase in stream power caused by the valley setting may be responsible for some of the deterioration of the wing-walls/abutments.

Aquatic Organism Passage – NA Structure is a bridge

Flood Capacity – Adequate

Flood capacity for flood events

- 25 year – 532%
- 50 year – 452%

Priority for Replacement - Moderate

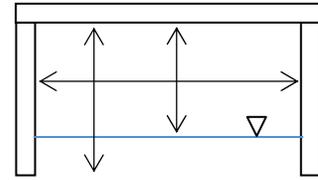
**Middle Exeter River
Brentwood, NH**

Location: Route 125 Crossing
Phase 2 Segment ID: ME05

Bridge Length (Rd Width): 55.0 feet

Bridge Clearance: 18.4 feet (Stream Bottom)

Bridge Span: 32.0 feet



16.7 feet (Water Surface)



Bridge Inlet; Beaver Dam



Bridge Outlet; Concrete Deterioration

Geomorphic Compatibility – Mostly Compatible

Percent Bankfull Width – Significantly Undersized (47%)

Approach Angle – Naturally Straight

Erosion and Armoring – No bank erosion up or downstream; armoring is intact both above and below the structure

Sediment Type in Structure - Sediment within the structure is mostly gravel and cobble

Additional notes - Structure appears to be new, but is still undersized. Water upslope of the structure has been impounded recently by a beaver dam that is built on coarser boulder materials piled near the inlet.

Aquatic Organism Passage – NA Structure is a bridge

Flood Capacity – Adequate

Flood capacity for flood events

- 25 year – 802%
- 50 year – 682%

Priority for Replacement - Low

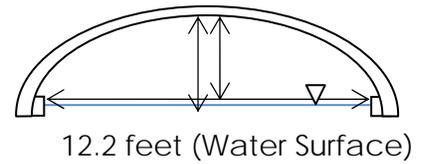
**Middle Exeter River
Brentwood, NH**

Location: Mill Road Crossing
Phase 2 Segment ID: ME06-B

Arch Length (Rd Width): 85.0 feet

Arch Clearance: 14.0 feet (Stream Bottom)

Arch Span: 32.0 feet



Arch Inlet



Arch Outlet; Dam Upstream

Geomorphic Compatibility – Mostly Compatible

Percent Bankfull Width – Significantly Undersized (48%)

Approach Angle – Mild Bend

Erosion and Armoring – No bank erosion up or downstream; armoring is intact both above and below the structure

Sediment Type in Structure - Sediment within the structure is mostly bedrock with large-sized particles and some fining

Additional notes - Large arch structure with limited problems. The mill withdrawal and dam is located about 75 feet upstream of the inlet. The new penstock is located on the right bank and the old is located on the left bank, both outflows come into the channel immediately upslope of the arch. The extent of modifications to the channel flow and discharge at this site is not known.

Aquatic Organism Passage – NA Structure is an arch

Flood Capacity – Adequate

Flood capacity for flood events

- 25 year – 168%
- 50 year – 143%

Priority for Replacement - Low

**Middle Exeter River
Brentwood, NH**

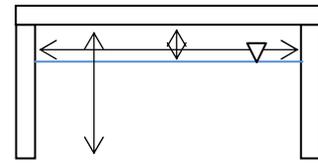
Location: Route 107 Crossing (Raymond-Plaistow Road)

Phase 2 Segment ID: ME07

Bridge Length (Rd Width): 48.0 feet

Bridge Clearance: 10.5 feet (Stream Bottom)

Bridge Span: 42.0 feet



3.5 feet (Water Surface)



Bridge Inlet



Bridge Outlet

Geomorphic Compatibility – Not Applicable (Impounded by Dam)

Percent Bankfull Width – Undersized (63%)

Approach Angle – Naturally Straight

Erosion and Armoring – No bank erosion up or downstream; armoring is intact both above and below the structure

Sediment Type in Structure - Sediment within the structure is mostly sand and silt

Additional notes - Structure has very low clearance from the height of the water surface to the bottom support beam (3.5 ft). However, the channel is impounded from the dam downstream so flows through the structure and flood capacity is controlled by the dam, making the flood capacity data for flood events an approximation under normal hydrologic conditions.

Aquatic Organism Passage – NA Structure is a bridge

Flood Capacity – Adequate

Flood capacity for flood events

- 25 year – 128%
- 50 year – 109%

Priority for Replacement - Low

**Middle Exeter River
Fremont, NH**

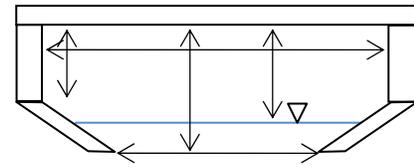
Location: Route 111A (Danville Road)
Phase 2 Segment ID: ME11-A

Bridge Length (Rd Width): 32 feet

Bridge Clearance: 17 feet (Stream Bottom)

Bridge Span: 75 feet (Top Span)

Abutment Height: 5.5 feet



12.4 feet (Water Surface)
53 feet (Bottom Span)



Bridge Inlet



Bridge Outlet

Geomorphic Compatibility – Mostly Compatible

Percent Bankfull Width – Adequate (118%)

Approach Angle – Mild Bend

Erosion and Armoring – No bank erosion upstream and low bank erosion downstream; armoring is intact both above and below the structure

Sediment Type in Structure - Sediment within the structure is mostly sand

Additional notes - Structure has some alignment issues, but is new, robust and stable.

Aquatic Organism Passage – NA Structure is a bridge

Flood Capacity – Adequate

Flood capacity for flood events

- 25 year – 412%
- 50 year – 350%

Priority for Replacement - Low

**Middle Exeter River
Fremont, NH**

Location: Former B&M Railroad
(Rockingham Recreational Trail)

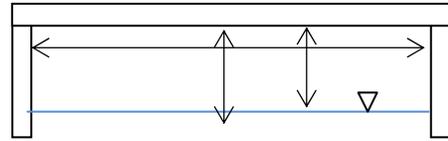
Phase 2 Segment ID: ME11-B

Bridge Length (Rd Width): 17 feet

Bridge Clearance: 14.1 feet (Stream Bottom)

11.2 feet (Water Surface)

Bridge Span: 78 feet



Bridge Inlet



Bridge Outlet

Geomorphic Compatibility – Fully Compatible

Percent Bankfull Width – Adequate (124%)

Approach Angle – Naturally Straight

Erosion and Armoring – Bank erosion is high upstream and low downstream of the structure; armoring is intact both above and below the structure

Sediment Type in Structure - Sediment within the structure is mostly silt and muck

Additional notes - Old structure, but very robust and stable; some erosion upstream

Aquatic Organism Passage – NA Structure is a bridge

Flood Capacity – Adequate

Flood capacity for flood events

- 25 year – 626%
- 50 year – 532%

Priority for Replacement - Low

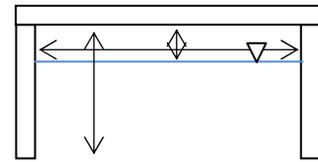
**Middle Exeter River
Fremont, NH**

Location: Scribner Road Bridge Upstream of Cavil Mill Dam
Phase 2 Segment ID: ME12

Bridge Length (Rd Width): 24 feet

Bridge Clearance: 11.0 feet (Stream Bottom)

Bridge Span: 42 feet



7.5 feet (Water Surface)



Bridge Inlet



Bridge Outlet

Geomorphic Compatibility - Not Applicable (Impounded by Dam)

Percent Bankfull Width - Undersized (67%)

Approach Angle - Channelized Straight

Erosion and Armoring - No bank erosion noted in vicinity of structure; no hard bank armoring above and armoring is intact below the structure

Sediment Type in Structure - Sediment within the structure is mostly gravel

Additional notes - Old structure (built in 1941) with some structural issues. Dam owner reports water spilling over road during floods of 2005 and 2006

Aquatic Organism Passage - NA Structure is a bridge

Flood Capacity - Adequate

Flood capacity for flood events

- 25 year - 217%
- 50 year - 185%

Priority for Replacement - Low

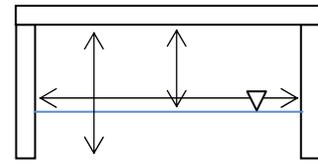
**Middle Exeter River
Fremont, NH**

Location: Sandown Road Bridge
Phase 2 Segment ID: ME14

Bridge Length (Rd Width): 36 feet

Bridge Clearance: 15.0 feet (Stream Bottom)

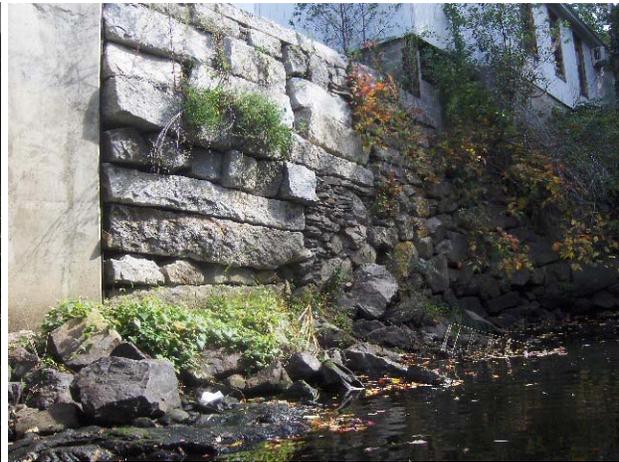
Bridge Span: 43.5 feet



11.4 feet (Water Surface)



Bridge Inlet



Stone Wall and House on Bank below Bridge

Geomorphic Compatibility – Partially Compatible

Percent Bankfull Width – Undersized (71%)

Approach Angle – Mild Bend

Erosion and Armoring – High bank erosion upstream and none in immediate vicinity downstream; hard bank armoring above and below intact

Sediment Type in Structure - Sediment within the structure is mostly sand

Additional note - Large amounts of hard bank armoring and riprap could be impacting downstream channel; structure largely stable

Aquatic Organism Passage – NA Structure is a bridge

Flood Capacity – Adequate

Flood capacity for flood events

- 25 year – 327%
- 50 year – 278%

Priority for Replacement - Moderate