Bridge Location and Description

<table>
<thead>
<tr>
<th>Hwy. No.</th>
<th>MUN 1030</th>
<th>Over X</th>
<th>Midtown Greenway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Conc. Conts. Deck Girder</td>
<td>County</td>
<td>Hennepin</td>
</tr>
<tr>
<td>Year Built</td>
<td>1913</td>
<td>Year Remodeled</td>
<td>NA</td>
</tr>
<tr>
<td>Year Remodeled</td>
<td>NA</td>
<td>Replaces Br.</td>
<td>NA</td>
</tr>
<tr>
<td>Description</td>
<td>30'-31.5'-30' continuous spans of cast in place concrete deck girder, 30.0' road width, approx. 5&quot; bit. w.c., 8.0' sidewalks each side with concrete parapet railing edge of deck, concrete substructures</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data for Basis of Report (Check all that apply)

- [X] Bridge Inventory File
- [X] Previous Bridge Rating and Load Posting Report
- [ ] Bridge Plans
  - [ ] New
  - [ ] Overlay
  - [ ] Repair/Reconstruction
  - [X] Other Dead Load Modifications
    - w.c. different than original
- [X] Bridge Inspected by Ronald Benson
  - Date 4-29-2016
- [X] Damaged Component
  - broken deck rebar center span
- [X] Deteriorated Component
  - superstructure extensive deterioration

Types of Analysis:
- [ ] Manual
- [X] Computer*
- [ ] BARS
- [ ] Virtis, V.____
- [X] Other*

* The load rating is determined by Form PIR

Method of Rating (Check appropriate box)

- [ ] Load Factor (LF)
- [ ] Assigned Load Ratings
- [X] Design Load
  - Unknown
- [ ] Allowable Stress (AS)
- [ ] Load Testing
- [X] Design Method
  - Unknown
- [X] Field Eval./Doc. Engineering Judgment

Summary of Rating and Load Posting Analysis

<table>
<thead>
<tr>
<th>Load Posting</th>
<th>Required</th>
<th>Not Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sign</td>
<td></td>
<td>TONS</td>
</tr>
<tr>
<td>R12-1a</td>
<td>X</td>
<td>6</td>
</tr>
<tr>
<td>R12-5A</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>R12-5</td>
<td>□</td>
<td>M3</td>
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<tr>
<td></td>
<td></td>
<td>M3S2</td>
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<tr>
<td></td>
<td></td>
<td>M3S3</td>
</tr>
<tr>
<td>R12-X11</td>
<td>□</td>
<td>45</td>
</tr>
<tr>
<td>R11-2a</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>BRIDGE CLOSED</td>
</tr>
</tbody>
</table>

Bridge Rating

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Operating</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS +</td>
<td>2.0</td>
</tr>
<tr>
<td>HS</td>
<td>3.5</td>
</tr>
</tbody>
</table>

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: Ronald Benson

(Typed or Printed) Name: Ronald Benson

License No. 22737

(Typed or Printed) Employed by (Agency/Firm): Stonebrooke Engineering, Inc.

My signature below indicates that I have read and fully agreed with the load rating report.

Program Administrator’s Signature: ____________________________

Date: ____________________________
Bridge No. L8901  Rated By RB  Checked By APM

Problem leading to this physical inspection rating: Severe rust of the main deck reinforcing with major section loss.

Describe bridge: Spans, lengths, widths, depths, deck, wearing course, etc.
30'-31.5'-30' continuous spans of concrete deck girder (girder depths are variable)
30.0' road width
Concrete deck thickness approximately 8" and bituminous w.c. thickness approximately 5"

Describe Bridge Condition: The bridge is in very poor condition due to widespread advanced concrete and rebar deterioration, especially significant on the superstructure. The deterioration and loss of girder concrete is a concern, as well as section loss from the girder rebar, but the girders do not govern the bridge rating. The bridge load rating is governed by main deck reinforcing that is broken, several bars over a 3.5' length of deck.

Other Remarks: The deck rebar in the center span is the most critical. At least one location has bars with major section loss. The governing location is on the west side of the first girder west of bridge (road) centerline. Six rebar were confirmed to be ineffective (rebar at 6 inch spacing) and other rebar appeared to have severe section loss with minimal remaining capacity, all over a 3.5' length of the deck. This area should be closely monitored until repairs or bridge replacement can be accomplished.