### 2016 ROUTINE BRIDGE INSPECTION REPORT



### BRIDGE # 62588 CSAH 44 NB over CP RAIL

DISTRICT: Metro COUNTY: Ramsey

CITY/TOWNSHIP: St Anthony

STATE: Minnesota

Date of Inspection: 10/07/2016 Equipment Used:

**Owner: County Highway Agency** 

Inspected By: Bodelson, Dan

STATISTICS STATES

Report Written By: Dan Bodelson Report Reviewed By: Nicklaus Fischer Final Report Date: 10/25/2016

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# Minnesota Structure Inventory Report

| Bridge ID: 62588 CSAH 44 NE               | over CP RAIL                                 | Date: 10/25/2016                                 |
|---|--|--|
| GENERAL                                   | ROADWAY                                      | INSPECTION                                       |
| Agency Br. No.                            | Bridge Match ID (TIS) 0                      | Userkey 102                                      |
| District Metro                            | Roadway O/U Key Route On Structure           | Unofficial Structurally Deficient N              |
| Maint. Area Crew                          | Route Sys 04 - CSAH Number 44                | Unofficial Functionally Obsolete N               |
| County 062 - Ramsey                       | Roadway Name or Description                  | Unofficial Sufficiency Rating 92.7               |
| City St Anthony                           | CSAH 44                                      | Routine Inspection Date 10/07/2016               |
| Township                                  | Level of Service 1 - MAINI INF               | Routine Inspection Frequency 24                  |
| Desc. Loc. 0.1 MI N OF JCT CSAH 19        | Roadway Type 2 - 2-way traffic               | Inspector Name CO Bridge                         |
| Sect., Twp., Range 31 - 030N - 23W        | Control Section (TH Only)                    | Status A - Open                                  |
| Latitude Deg 45 Min 2 Sec 12.80           | Reference Roint 000,00,001                   |  |
| Longitude Deg 93 Min 13 Sec 6.07          |  | Dock 6 Satisfactory Condition                    |
| Custodian 02 - County Highway Agency      | Lenge On 4 Under 0                           | Unsound Deck %                                   |
| Owner 02 - County Highway Agency          |  | Superstructure 6 - Satisfactory Condition        |
| BMU Agreement                             |  | Substructure 8 - Very Good Condition             |
| Year Built 2001                           |  | Channel N - Not Applicable                       |
| MN Year Reconstructed                     |  | Culvert N - Not Applicable                       |
| FHWA Year Reconstructed                   |  |  |
| MN Temporary Status                       | If Divided NB-EB SB-WB                       | Structure Evaluation 6                           |
| Bridge Plan Location 3 - COUNTY           | Roadway Width 38.10 ft. 27.60 ft.            | Deck Geometry 7                                  |
| Date Opened to Traffic                    | Vertical Clearance ft. ft.                   | Underclearances 4                                |
| On-Off System 1 - ON                      | Max. Vert. Clear. ft. ft.                    | Water Adequacy N - Not Applicable                |
| Legislative District 50A                  | Horizontal Clear. 69.7 ft. ft.               | Approach Alignment 7 - Better than present minir |
| ABC Suitable                              | Lateral Clearance ft. ft.                    |  |
| STRUCTURE                                 | Appr. Surface Width66.0ft.                   | SAFETY FEATURES                                  |
| Service On 1 - Highway                    | Bridge Roadway Width 65.7 ft.                | CP Transition 0 SUBSTANDARDS                     |
| Service Under 2 - Railroad                | Median Width On Bridge 3.90 ft.              | Appr Guardrail & SUBSTANDARD                     |
| Main Span Type                            | MISC. BRIDGE DATA                            | <b>GP Termini</b> 0 - SUBSTANDARD                |
| 2 - Concrete Continuous 09 - Slab Span    | Structure Flared 0 - No flare                |  |
| Main Span Detail                          | Parallel Structure N - No parallel structure | IN DEPTH INSP.                                   |
| Appr. Span Type                           | Field Conn. ID                               | Y/N Freq Date                                    |
|   | Abutment Foundation 1 - CONC                 | Frac. Critical N                                 |
| Appr. Span Detail                         | (Material/Type) 3 - FTG PILE                 |  |
| <b>Skew</b> 16 L                          | Pier Foundation 1 - CONC                     | Shec Feat  |
| Culvert Type                              | (Material/Type) 3 - ETG PILE                 |  |
| Barrel Length ft.                         | Historic Status 5 Not oligible               | Drainago Aroa (sg. mi.)                          |
| Cantilever ID                             |  | Waterway Opening                                 |
| NUMBER OF SPANS                           | PAINT  | Navigation Control N - Not applicable no waterw  |
| MAIN: 3 APPR: 0 TOTAL: 3                  | Year Painted                                 | Pier Protection                                  |
| Main Span Length 55.8 ft.                 | Unsound Paint %                              | Nav. Clr. (ft.) Vert. ft. Horiz. ft.             |
| Structure Length 139.6 ft.                | Painted Area sq. ft.                         | Nav. Vert. Lift Bridge Clear. (ft.)              |
| Deck Width (Out-to-Out) 84.6 ft.          | Primer Type                                  | MN Scour Code A - NON WATER' Year 2001           |
| Deck Material 1 - Concrete Cast-in-Place  | Finish Type                                  | CAPACITY RATINGS                                 |
| Wear Surf Type 4 - Low Slump Concrete     |  | Design Load 9 - HS 25 (OR GREATER)               |
| Wear Surf Install Year 2001               | BRIDGE SIGNS                                 |  |
| Wear Course/Fill Depth 0.25 ft.           | Posted Load 0 - Not Required                 | Inventory Bating $1 \downarrow E (LE)$ HS 25.0   |
| Deck Membrane 0 - None                    | Traffic 0 - Not Required                     |  |
| Deck Rebars 1 - Epoxy Coated Reinforcing  | Horizontal 0 - Not Required                  | Pating Data 2/11/2000                            |
| Deck Rebars Install Year 2001             | Vertical N - Not Applicable                  | Minnesota Pormit Codes                           |
| Structure Area (Out-to-Out) 11981 sq. ft. |  |  |
| Roadway Area (Curb-to-Curb) 9870 sq. ft.  |  |  |
| Sidewalk with Lt 0.00 ft. Rt 0.00 ft.     |  |  |
| Curb Height Lt 0.00 ft. Rt 0.00 ft.       |  |  |
|   |  |  |

### Minnesota Structure Inventory Report

Bridge ID: 62588 CSAH 44 NB over CP RAIL

Date: 10/05/2016

| -                    | + G E N E R A L +                | + R O A D W A Y +                            | + INSPECTION+                                      |  |  |  |  |
|----------------------|----------------------------------|--|--|--|--|--|--|
| Agency Br. No.       | Crew                             | Bridge Match ID (TIS) 0                      | Userkey 102  |  |  |  |  |
| District             | 05 Maint. Area                   | Roadway O/U Key Route On Structure           | Structurally Deficient N                           |  |  |  |  |
| County               | 062 - Ramsey                     | Route Svs 04 - CSAH Number 44                | Functionally Obsolete N                            |  |  |  |  |
| City                 | St Anthony                       | Roadway Name or Description                  | Sufficiency Rating 92.7                            |  |  |  |  |
| Township             |                                  | CSAH 44                                      | Routine Inspection Date 10/07/2016                 |  |  |  |  |
| Desc. Loc.           | 0.1 MI N OF JCT CSAH 19          | Level of Service 1 - MAINLINE                | Routine Inspection Frequency 24                    |  |  |  |  |
| Sect., Twp., Range   | 31 - 030N - 23W                  | Roadway Type 2 - 2-way traffic               | Inspector Name Bodelson, Dan                       |  |  |  |  |
| Latitude             | 45 ° 2 ' 12.80 ''                | Control Section (TH Only)                    | Status A - Open                                    |  |  |  |  |
| Longitude            | 93 ° 13 ' 6.07 ''                | Reference Point 000+00.091                   | +NBL CONDITION RATINGS+                            |  |  |  |  |
| Custodian            | 02 - County Highway Agency       | Detour Length 2.0 mi.                        |  |  |  |  |  |
| Owner                | 02 - County Highway Agency       | Lanes ON 4 UNDER 0                           | Deck 6 Unsound                                     |  |  |  |  |
| BMU Agreement        |                                  | <b>ADT</b> 22609 <b>YEAR</b> 2008            | Superstructure 6                                   |  |  |  |  |
| Year Built           | 2001                             | HCADT ADTT %                                 | Substructure 8                                     |  |  |  |  |
| MN Year Reconstru    | cted                             | Functional Class 16 - Urban - Minor Arterial | Channel N  |  |  |  |  |
| FHWA Year Recons     | structed                         |  | Culvert N  |  |  |  |  |
| MN Temporary Stat    | us                               | +RDWY DIMENSIONS+                            | +NBI APPRAISAL RATINGS+                            |  |  |  |  |
| Bridge Plan Locatio  | on 3 - COUNTY                    |  | Structure Fuckation                                |  |  |  |  |
| Date Opened to Tra   | ffic                             | If Divided NB-EB SB-WB                       | Structure Evaluation 6                             |  |  |  |  |
| On - Off Syster      | <b>n</b> 1 - ON                  | <b>Roadway Width</b> 38.10 ft. 27.60 ft.     |  |  |  |  |  |
| Legislative District | 50A                              | Vertical Clearance ft. ft.                   | Underclearances 4                                  |  |  |  |  |
| Potential ABC        | 2 - N/A                          | Max. Vert. Clear. ft. ft.                    | Waterway Adequacy N                                |  |  |  |  |
| + 9                  |                                  | Horizontal Clear. 69.7 ft. ft.               | Approach Alignment /                               |  |  |  |  |
| Comico On            | 4 Uishway                        | Lateral Clearance ft. ft.                    | +SAFETY FEATURES+                                  |  |  |  |  |
| Service Under        | I - Highway                      | Appr. Surface Width 66.0 ft.                 | Deides Deiling 1 MEETS STANDARDS                   |  |  |  |  |
| Service Under        | 2 - Railroad                     | Bridge Roadway Width 05.7 ft.                | CR Transition 0 SURSTANDARDS                       |  |  |  |  |
| Main Span Type       |                                  | Median width On Bridge 5.90 It.              |  |  |  |  |  |
| Main Span Design     | 09 - Siab Span                   | +MISC. BRIDGE DATA+                          | CP Termini 0 - SUBSTANDARD                         |  |  |  |  |
| Appr. Span Type      |                                  | Structure Flared 0 - No flare                |  |  |  |  |  |
| Appr. Span Design    |                                  | Parallel Structure N - No parallel structure | +IN DEPTH INSP.+                                   |  |  |  |  |
| Appr. Span Detail    |                                  | Field Conn ID                                | Y/N Freq Date                                      |  |  |  |  |
| Skew                 | 16 LEET                          | Abutment 1 - CONC                            | Frac Critical N                                    |  |  |  |  |
| Culvert Type         |                                  | Foundation 3 - FTG PILE                      | Linderwater N                                      |  |  |  |  |
| Barrel Length        |                                  | (Material/Type)                              | Pinned Asbly. N                                    |  |  |  |  |
| Cantilever ID        |                                  | Pier Foundation 1 - CONC                     | Spec. Feat.  |  |  |  |  |
|                      |                                  | 3 - FTG PILE                                 |  |  |  |  |  |
| Nu                   | mber of Spans                    | Historic Status 5 - Not eligible             | + W A T E R W A Y +                                |  |  |  |  |
| MAIN: 3 AP           | PR: 0 TOTAL:                     |  | Drainage Area (sg. mi.)                            |  |  |  |  |
| Main Span Length     | 55.8 <b>ft.</b>                  | + P A I N T +                                | Waterway Opening (sf.)                             |  |  |  |  |
| Structure Length     | 139.6 <b>ft.</b>                 |  | Navigation Control N - Not applicable, no          |  |  |  |  |
| Deck Width (Out-to-  | -Out) 84.6 ft.                   | Year Painted                                 | Pier Protection                                    |  |  |  |  |
| Deck Material        | 1 - Concrete Cast-in-Place       | Unsound Paint %                              | Nav. Clr. (ft.) Vert. 0.0 Horiz. 0.0               |  |  |  |  |
| Wear Surf Type       | 4 - Low Slump Concrete           | Painted Area sq. ft.                         | Nav. Vert. Lift Bridge Clear. (ft.)                |  |  |  |  |
| Wear Surf Install Ye | ear 2001                         | Primer Type                                  | MN Scour Code A - NON Year 2001                    |  |  |  |  |
| Wear Course/Fill De  | epth 0.25 ft.                    | Finish Type                                  |  |  |  |  |  |
| Deck Membrane        | 0 - None                         |  | +CAPACITY RATINGS+                                 |  |  |  |  |
| Deck Rebars          | 1 - Epoxy Coated Reinforcing     | +BRIDGE SIGNS+                               | Design Load9 - HS 25 (OR GREATER)                  |  |  |  |  |
| Deck Rebars Install  | <b>Year</b> 2001                 |  | Operating Rating 2 - HS TRUCK 53.9                 |  |  |  |  |
| Structure Area (Out  | t-to-Out) 11981 sq. ft.          | Posted Load 0 - Not Required                 | Inventory Rating 2 - HS TRUCK 25.0                 |  |  |  |  |
| Roadway Area (Cur    | b-to-Curb) 9870 sq. ft.          | Traffic 0 - Not Required                     | Posting VEH: SEMI: DBL:                            |  |  |  |  |
| Sidewalk Width 5     | 0A. Lt 0.00 ft. 50B. Rt 0.00 ft. | Horizontal 0 - Not Required                  | Rating Date 2/11/2000                              |  |  |  |  |
| Curb Height          | Lt 0.00 ft. Rt 0.00 ft.          | Vertical N - Not Applicable                  | Overweight Permit Codes                            |  |  |  |  |
| Rail Type            | Lt 28 Rt 28                      |  | <b>A</b> N - N/A <b>B</b> N - N/A <b>C</b> N - N/A |  |  |  |  |

#### **MINNESOTA BRIDGE INSPECTION REPORT**

| 10/25/2016 |  |
|------------|--|
|------------|--|

#### **BRIDGE 62588 CSAH 44 NB OVER CP RAIL ROUTINE INSP. DATE: 10/07/2016** 0.1 MI N OF JCT CSAH 19 County: Ramsey Location: Length: 139.6 ft. St Anthony City: Route: 04 - CSAH 44 Ref. Pt.: 000+00.091 Deck Width: 84.6 ft. Township: Control Section: Rdwy. Area/ Pct. Unsnd: 9870 sq. ft. / % Paint Area/ Pct. Unsnd: sq. ft. / % Section: 31 Township: 030N Range: 23W Maint. Area: Span Type: 2 - Concrete Continuous 1 - Slab Local Agency Bridge Nbr.: Culvert: N/A List: Postings: NBI Deck: 6 Super: 6 Sub: 8 Chan: Ν Culv: N Open, Posted, Closed: A - Open MN Scour Code: A - NON WATERWAY Appraisal Ratings - Approach: 7 Waterway: Ν **Unofficial Structurally Deficient** Ν Required Bridge Signs - Load Posting: 0 - Not Required Traffic: 0 - Not Required Unofficial Functionally Obsolete Ν Horizntal: 0 - Not Required Vertical: N - Not Applicable **Unofficial Sufficiency Rating** 92.7 QTY ELEM QTY QTY QTY QTY NBR ELEMENT NAME ENV REPORT TYPE INSP. DATE QUANTITY CS 1 CS 2 CS 3 CS 4 CS 5 Reinforced Concrete Column 14 EA 0 14 0 0 N/A 205 1 Routine 10/07/2016 14 EA 0 14 0 0 N/A Routine 10/10/2014 Notes: [2008-2014] Minor spalls are present. [2003-2014] There is graffiti on the columns. [2006] Graffiti has been painted over. Reinforced Concrete 171 LF 161 10 0 0 N/A 1 215 Routine 10/07/2016 Abutment 0 Routine 10/10/2014 171 LF 161 10 0 N/A Notes: [2014] The south abutment has 5 minor vertical cracks. The north abutment has 7 minor vertical cracks. [2006-2012] The south abutment has 5 minor vertical cracks. The north abutment has 5 minor vertical cracks. [2008] The south abutment has a moderate crack @ construction joint. [2003-2006] Vertical crack through each abutment @ centerline + 2 other vertical cracks in each abutment. [2003-2012] Graffiti on north abutment. Strip Seal Deck Joint 180 LF 0 180 0 N/A 300 1 Routine 10/07/2016 N/A 180 LF 0 180 0 N/A N/A Routine 10/10/2014 Notes: [2010-2014] Evidence of minor leakage. Expansion joint may need to be cleaned & flushed for further inspection. [2008] Debris in the joint may be causing problems, but no sign of leakage. [2002-2006] Expansion joint has no deterioration but needs to be cleaned & flushed for further inspection. Poured Deck Joint 180 LF 0 180 0 N/A N/A 301 1 Routine 10/07/2016 180 LF 0 180 0 N/A N/A Routine 10/10/2014 Notes: [2008-2014] Moderate adhesion & cohesion failure of joint seal. [2002-2006] Minor adhesion & cohesion failure of joint seal. 0 Elastomeric (Expansion) 14 EA 0 N/A N/A 310 1 Routine 10/07/2016 14 Bearing 0 14 EA 14 0 N/A N/A Routine 10/10/2014 Notes: [2012-2014] Minor deterioration is present. Bearing seat is in good condition. [2001-2010] No deterioration.

#### ROUTINE INSP. DATE: 10/07/2016

| ELEM<br>NBR | 1<br>ELEMENT NAME                  |  | ENV  | REPORT TYPE   | INSP. DATE   | QUANTITY   | QTY<br>CS 1   | QTY<br>CS 2                                       | QTY<br>CS 3                 | QTY<br>CS 4                  | QTY<br>CS 5      |
|-------------|------------------------------------|--|--|---|--|--|---|---|-----------------------------|------------------------------|------------------|
| 321         | Concrete Approa<br>Slab-Concrete V | ach<br>Vearing   | 1  | Routine   | 10/07/2016   | 2 EA   | 0   | 2   | 0                           | 0                            | N/A              |
|             | ounace                             |  |  | Routine   | 10/10/2014   | 2 EA   | 0   | 2   | 0                           | 0                            | N/A              |
|             |                                    | Notes: [2012-3<br>South Approac<br>[2006-2014] Th<br>has 39 LF of lc<br>[2002-2014] Lc<br>North Approac<br>[2008-2014] Th<br>[2002-2006] M | 2014] Ther<br>ch Slab.<br>ne east 1/2<br>ongitudinal<br>ongitudinal<br>h Slab<br>ne west 1/2<br>inor crack | e is some settlemen<br>of the south approa<br>cracks + 24 LF of tra<br>crack in south approa<br>of the north approa<br>in NW approach slat          | t of the bituminou<br>ich slab has 27 L<br>ansverse cracks.<br>bach slab on wes<br>ich slab has 65 L<br>b. Minor spalling    | us approach roa<br>F of transverse<br>t side at the sto<br>F of longitudina<br>in NE approach        | dway rest<br>cracks. Th<br>rm sewer<br>I & transve<br>slab. | ulting on im<br>ne west 1/2<br>MH.<br>erse cracks | pact on the<br>of the sou   | e approach<br>th approac     | slabs.<br>h slab |
| 333         | Masonry, Other<br>Combination Ma   | or<br>terial Railing   | 1  | Routine   | 10/07/2016   | 479 LF   | 0   | 479   | 0                           | N/A                          | N/A              |
|             |                                    |  |  | Routine   | 10/10/2014   | 479 LF   | 0   | 479   | 0                           | N/A                          | N/A              |
|             |                                    | [2003-2012] Th<br>[2001-2014] Th<br>due to mix des<br>[2008-2014] Th<br>The railing con  | nere are 2<br>nere is mod<br>ign.<br>ne orname<br>isists of a c  | areas of delaminatio<br>derate vertical & hori<br>ntal metal railing has<br>combination concrete  | n on the west rai<br>zontal cracking v<br>some chalking.<br>parapet & ornar  | ling near the NV<br>vith w/moderate<br>mental metal rai  | V corner.<br>spalling &<br>ling.                            | k effloresce                                      | nce @ bot                   | h sides. Sp                  | alling is        |
| 358         | Concrete Deck (<br>Smart Flag      | Cracking   | 1  | Routine   | 10/07/2016   | 1 EA   | 0   | 1   | 0                           | 0                            | N/A              |
|             | Ū                                  |  |  | Routine   | 10/10/2014   | 1 EA   | 0   | 1   | 0                           | 0                            | N/A              |
|             |                                    | Notes: [2008-2<br>[2002-2006] M  | 2014] Minc<br>inor longitu   | r to moderate longitu<br>udinal and transverse  | udinal and transv<br>e deck cracking v   | erse deck crack<br>vith no spalls.   | king. Mino  | r spalls are                                      | present.                    |                              |                  |
| 359         | Underside of Co<br>Smart Flag      | ncrete Deck  | 1  | Routine   | 10/07/2016   | 1 EA   | 0   | 1   | 0                           | 0                            | 0                |
|             |                                    |  |  | Routine   | 10/10/2014   | 1 EA   | 0   | 1   | 0                           | 0                            | 0                |
|             |                                    | Notes: SPAN<br>[2010-2014] Th<br>transverse crat<br>There is a long<br>SPAN #2<br>[2008-2014] Th<br>[2008-2014] Sp<br>SPAN14] Ther         | #1<br>cks with ef<br>gitudinal cra<br>here is 35<br>pan #2 also<br>e is 12' lor                            | gitudinal cracking wit<br>florescence and a 10<br>ack with efflorescence<br>-F of longitudinal cra<br>b has 35 LF transver<br>gitudinal cracking wi | h efflorescence a<br>)' longitudinal cra<br>ce entire length a<br>acking near colun<br>se cracking with<br>ith efflorescence | at the centerline<br>ck at bearing #3<br>t bearing #2.<br>nn #3.<br>efflorescence n<br>@ bearing #6. | joint. Also<br>5.<br>ear centei<br>There are                | o near cente<br>line.<br>4' & 6' trans            | erline conta<br>sverse crae | ains two 10<br>cks at colur  | '<br>mn #4       |
| 362         | Traffic Impact Sr                  | mart Flag  | 1  | Routine   | 10/07/2016   | 1 EA   | 0   | 1   | 0                           | N/A                          | N/A              |
|             |                                    |  |  | Routine   | 10/10/2014   | 1 EA   | 0   | 1   | 0                           | N/A                          | N/A              |
|             |                                    | Notes: [2002-2<br>[2002] Traffic in<br>replaced in 200   | 2014] Minc<br>mpact has<br>02.   | r surface damage. N<br>occurred to bridge ra  | lo structural dam<br>ail 1/4 north of S  | age to the conc<br>E corner of brid  | rete railing<br>ge. 10' se                                  | g. Could use<br>ction of the                      | e paint @ t<br>ornamenta    | traffic impa<br>al metal rai | ct.<br>ling was  |
| 378         | Low Slump O/L<br>Slab with Epoxy   | (Concrete<br>Rebar)  | 1  | Routine   | 10/07/2016   | 11980 SF   | 0   | 11980   | 0                           | 0                            | 0                |
|             |                                    |  |  | Routine   | 10/10/2014   | 11980 SF   | 0   | 11980   | 0                           | 0                            | 0                |
|             |                                    | Notes: [2010-2<br>[2008] There is<br>[2010-2014] Ea<br>[2006] The eas<br>cracks.   | 2014] Ther<br>s moderate<br>ach side ha<br>st 1/2 has 2  | e are moderate spal<br>spalling on the west<br>as over 100 LF of lor<br>24 LF of longitudinal   | ls throughout the<br>t side and minor<br>ngitudinal & trans<br>& transverse cra  | deck. Distress<br>spalling on the<br>verse cracking.<br>cks @ median.                                | is around<br>east side.<br>The west                         | 2%- still in<br>1/2 has 40                        | condition s<br>LF of longi  | state #2.<br>tudinal & tr    | ansverse         |

#### ROUTINE INSP. DATE: 10/07/2016

| ELEM<br>NBR | ELEMEN                             | ΓΝΑΜΕ   | ENV  | REPORT TYPE  | INSP. DATE  | QUANTITY  | QTY<br>CS 1  | QTY<br>CS 2                                 | QTY<br>CS 3                            | QTY<br>CS 4              | QTY<br>CS 5 |
|-------------|------------------------------------|---|--|--|---|---|--|---|--|--------------------------|-------------|
| 387         | Reinforced Cond                    | crete Wingwall  | 1  | Routine  | 10/07/2016  | 4 EA  | 0  | 4   | 0                                      | 0                        | N/A         |
|             |                                    |   |  | Routine  | 10/10/2014  | 4 EA  | 0  | 4   | 0                                      | 0                        | N/A         |
|             |                                    | Notes: [2014]<br>[2006-2012] SV<br>efflorescence.<br>[2008-2012] Th<br>[2003-2012] NI             | SE wingw<br>V wingwa<br>ie SE wing<br>E abutmer  | all has a 2' and a 3' o<br>Il has minor horizonta<br>gwall has minor spall<br>nt wing has 2 minor h                                  | crack w/effloresce<br>al & vertical crack<br>s present.<br>lorizontal cracks                                      | ence. SW wingv<br>king. NW wingw<br>and 2 minor ver   | vall has a 2<br>all has hor<br>tical crack                         | 2' crack w/e<br>izontal & v<br>s w/efflores | efflorescen<br>ertical crac<br>scence. | ce.<br>king with         |             |
| 964         | Critical Finding                   | Smart Flag  | 2  | Routine  | 10/07/2016  | 1 EA  | 1  | 0   | N/A                                    | N/A                      | N/A         |
| 001         | g -                                | g   | -  | Routine  | 10/10/2014  | 1 EA  | 1  | 0   | N/A                                    | N/A                      | N/A         |
|             |                                    | Notes: DO NC  |  | E THIS CRITICAL FI   | NDING SMART   | FLAG  |  |   |  |                          |             |
|             |                                    |   |  |  |   | 1270.   |  |   |  |                          |             |
| 983         | Plowstraps                         |   | 1  | Routine  | 10/07/2016  | 1 EA  | 0  | 1   | 0                                      | N/A                      | N/A         |
|             |                                    |   |  | Routine  | 10/10/2014  | 1 EA  | 0  | 1   | 0                                      | N/A                      | N/A         |
|             |                                    | Notes: [2012-2<br>[2002-2010] PI  | 2014] The<br>owstraps  | re is a plowstrap miss<br>are in place & show r  | sing at the NW quino sign of deterio  | uadrant.<br>ration.   |  |   |  |                          |             |
| 984         | Deck & Approac                     | h Drainage  | 1  | Routine  | 10/07/2016  | 1 EA  | 1  | 0   | 0                                      | N/A                      | N/A         |
|             |                                    | -   |  | Routine  | 10/10/2014  | 1 EA  | 1  | 0   | 0                                      | N/A                      | N/A         |
|             |                                    | Notes: [2002-2  | 2014] Drai   | nage system is opera   | ating properly.   |   |  |   |  |                          |             |
| 985         | Slopes & Slope                     | Protection  | 1  | Routine  | 10/07/2016  | 1 EA  | 0  | 1   | 0                                      | N/A                      | N/A         |
|             |                                    |   |  | Routine  | 10/10/2014  | 1 EA  | 0  | 1   | 0                                      | N/A                      | N/A         |
|             |                                    | Notes: [2002-2<br>There is some<br>Slope protectio  | 2014] Som<br>minor sett<br>n is aspha  | ne aggregate was du<br>tlement on the south<br>altic coated crushed a  | g out near top on<br>side.<br>aggregate.  | the right at the  | south end  | . Some ag                                   | gregate is                             | loose. [200              | 6-2014]     |
| 986         | Curb & Sidewalk                    | (   | 1  | Routine  | 10/07/2016  | 1 EA  | 0  | 1   | 0                                      | N/A                      | N/A         |
|             |                                    |   |  | Routine  | 10/10/2014  | 1 EA  | 0  | 1   | 0                                      | N/A                      | N/A         |
|             |                                    | Notes: [2008-2<br>[2006-2014] Th<br>corner is beat u<br>[2001-2014] M<br>[2001-2014] Th           | 2014] The<br>liere are n<br>up by snow<br>nor - mod<br>liere is mir                    | re are numerous min<br>umerous moderate c<br>wplow @ approach p<br>lerate spalling on side<br>nor settlement @ SW                    | or transverse cra<br>racks on the east<br>anel.<br>ewalk both sides.<br>' corner of the bri                       | cking on the we<br>t side almost the<br>[2003-2006] S<br>dge.   | est side.<br>e entire ler<br>palling cau                           | ngth of the s                               | sidewalk. (<br>t aggregate             | Curb at the<br>e in mix. | NW          |
|             | General Notes:                     | [2016] Bridge<br>[2014] Bridge<br>[2010] Bridge<br>[2008] Bridge<br>Bridge safety<br>Bridge #6258 | e safety in:<br>e safety in:<br>e safety in:<br>e safety in:<br>inspectio<br>8 is 12m, | spection was conduc<br>spection was conduc<br>spection was conduc<br>spection was conduc<br>n was conducted by<br>17m & 12m continuc | ted by Dan Bode<br>ted by D. Bodels<br>ted by B. Wiema<br>ted by B. Wiema<br>Bret Wieman & E<br>bus concrete slab | Ison & Brian Es<br>on & B. Essler 1<br>n on 10/27/2010<br>n & B. Essler 10<br>Brian Essler. 11/<br>o spans built in 2 | sler 10/07,<br>10/10/2014<br>0.<br>0/30/2008.<br>17/2006.<br>2000. | /2016.<br>I.                                |  |                          |             |
|             | 58. Deck NBI:                      | Concrete dec  | k has mo   | derate cracking, leac  | hing & scaling wi   | th minor spalls.  |  |   |  |                          |             |
| 36A. E      | Brdg Railings NBI:                 | Vehicular rail  | ing meets  | current standards  |   |   |  |   |  |                          |             |
| 36E         | B. Transitions NBI:                | No guardrail  |  |  |   |   |  |   |  |                          |             |
| 36C. Ap     | opr Guardrail NBI:                 | No guardrail  |  |  |   |   |  |   |  |                          |             |
| 36          | D. Appr Guardrail<br>Terminal NBI: | No guardrail  |  |  |   |   |  |   |  |                          |             |
| 59. Si      | uperstructure NBI:                 | Concrete has  | moderate   | e scaling & cracking   | with minor spallin  | g & delaminatio   | on.  |   |  |                          |             |
| 60.         | Substructure NBI:                  | Concrete has  | minor cra  | acking & scaling.  |   |   |  |   |  |                          |             |
|             | 61. Channel NBI:                   | CSAH # 44 o   | ver CP Ra  | ail - no water   |   |   |  |   |  |                          |             |

#### ROUTINE INSP. DATE: 10/07/2016

| NBR ELEMENT NAME ENV REPORT TYPE INSP. DATE QUANTITY CS 1 CS 2 CS 3 CS 4 |
|--|
|--|

62. Culvert NBI: CSAH # 44 over CP Rail - no water

71. Waterway Adeq NBI: CSAH # 44 over CP Rail - no water

72. Appr Roadway Minor sight distance problem with vertical curve over bridge, no speed reduction required. Alignment NBI:

Inventory Notes:

Dan Bodelson

Inspector's Signature

Nicklaus Fischer

Reviewer's Signature

#### MINNESOTA BRIDGE INSPECTION REPORT

10/25/2016

Inspector: CO Bridge

#### BRIDGE 62588 CSAH 44 NB OVER CP RAIL

| County:     | Ramsey  | Location: 0.1 MI N  | OF JCT CSAH   | 19  | Length:            | 1                       | 39.6 ft.     |             |       |  |  |
|-------------|---|---|---|---|--------------------|-------------------------|--------------|-------------|-------|--|--|
| City:       | St Anthony  | Route: 04 - CSAH 4  | 44 Ref. Pt.: 0  | 000+00.091  | Deck Wid           | th:                     | 84.6 ft.     |             |       |  |  |
| Townsh      | nip:  | Control Section:  |   |   | Rdwy. Are          | ea/ Pct. Ur             | ısnd: 9870   | sq. ft. / % | 6     |  |  |
| Section     | : 31 Township: 030N Range:  | 23W Maint. Area:  |   |   | Paint Area         | a/ Pct. Uns             | snd: sq. f   | t./%        |       |  |  |
| Span T      | ype: 2 - Concrete Continuous 1 - Slab   | Local Agency Brid   | ge Nbr.:  |   | Culvert:           | N/A                     |              |             |       |  |  |
| List:       |   |   |   |   | Postings:          |                         |              |             |       |  |  |
| NBI De      | ck: 6   Super: 6   Sub: 8   (   | Chan: N Culv: N   |   |   |                    |                         |              |             |       |  |  |
|             |   | Open, Pos   | ted, Closed: A  | - Open  |                    |                         |              |             |       |  |  |
|             |   | MN Scour  | Code: A - NON   | WATERWAY  |                    |                         |              |             |       |  |  |
| Apprais     | al Ratings - Approach: 7 Waterw   | ay: N   | - 111 0   |   | Un                 | official Stru           | acturally De | eficient    | Ν     |  |  |
| Require     | ed Bridge Signs - Load Posting: U - Not   | Required I  | raffic: 0-1   | Not Required  | Un                 | official Fur            | ictionally C | bsolete     | Ν     |  |  |
|             | Horizhtal: U - Not  | Required V  | enicai: N -   | Not Applicable  | Un                 | official Suf            | ficiency Ra  | ting        | 92.7  |  |  |
| ELEM<br>NBR | ELEMENT NAME  | REPORT TYPE   | INSP. DATE  | QUANTITY  | QTY<br>CS 1        | QTY<br>CS 2             | QTY<br>CS 3  | QTY<br>CS 4 |       |  |  |
| 38          | Reinforced Concrete Slab  | Routine   | 10/07/2016  | 11981 SF  | 11741              | 0                       | 240          | 0           |       |  |  |
|             |   | Migrated Values   |   | 11981 SF  | 11741              | 0                       | 240          | 0           |       |  |  |
|             | There is a longitudinal crack with efflorescence entire length at bearing #2.<br>SPAN #2<br>[2008-2016] There is 35 LF of longitudinal cracking near column #3.<br>[2008-2016] Span #2 also has 35 LF transverse cracking with efflorescence near centerline.<br>[2014-2016] There is 12' longitudinal cracking with efflorescence @ bearing #6. There are 4' & 6' transverse cracks at column #4.  |   |   |   |                    |                         |              |             |       |  |  |
|             | 510 - Wearing Surfaces  | Routine   | Routine 10/07/2016 9870 SF  |   |                    | 0                       | 197          | 0           |       |  |  |
|             |   | Migrated Values   |   | 9870 SF   | 9673               | 0                       | 197          | 0           |       |  |  |
|             | Notes: Concrete Slab with Cathodic<br>[2010-2014] There are moderate sp<br>[2016] Numerous cracks on west fa<br>[2008] There is moderate spalling o<br>[2010-2016] Each side has over 10<br>[2006] The east 1/2 has 24 LF of lo   | Protection System Notes<br>alls throughout the deck.<br>cia.<br>n the west side and mode<br>0 LF of longitudinal & tran<br>ngitudinal & transverse cr | s:<br>Distress is arou<br>erate spalling on<br>sverse cracking<br>racks @ median. | nd 2%- still in c<br>the east side.<br>. The west 1/2 h | condition standard | ate #2.<br>of longitudi | nal & trans  | verse cra   | acks. |  |  |
| 205         | Reinforced Concrete Column  | Routine   | 10/07/2016  | 14 EA   | 0                  | 14                      | 0            | 0           |       |  |  |
|             |   | Migrated Values   |   | 14 EA   | 0                  | 14                      | 0            | 0           |       |  |  |
|             | Notes: [2016] Minor paint failure.<br>[2008-2016] Minor spalls are preser<br>[2003-2016] There is graffiti on the   | nt.<br>columns. [2006] Graffiti h   | as been painted   | over.   |                    |                         |              |             |       |  |  |
| 215         | Reinforced Concrete Abutment  | Routine   | 10/07/2016  | 290 LF  | 240                | 50                      | 0            | 0           |       |  |  |
|             |   | Migrated Values   |   | 290 LF  | 240                | 50                      | 0            | 0           |       |  |  |
|             | <ul> <li>Notes: [2016] Minor paint failure.</li> <li>[2016] Migrator added 40 LF to abutment quantity to account for wingwalls (CS1:0 CS2:40 CS3:0 CS4:0).</li> <li>[2016] Wingwalls are 21' each x 4 = 84' + 101' south abut. + 105' north abut. = 290 LF (measurements taken from plans)</li> <li>[2014-2016] The south abutment has 5 minor vertical cracks. The north abutment has 7 minor vertical cracks.</li> <li>[2006-2016] The south abutment has 5 minor vertical cracks. The north abutment has 5 minor vertical cracks.</li> <li>[2008-2016] The south abutment has a moderate crack @ construction joint.</li> <li>[2003-2016] Vertical crack through each abutment @ centerline + 2 other vertical cracks in each abutment.</li> <li>[2003-2016] Graffiti on north abutment.</li> <li>Wingwall notes: [2014-2016] SE wingwall has a 2' and a 3' crack w/efflorescence. SW wingwall has a 2' crack w/efflorescence.</li> <li>[2006-2016] SW wingwall has minor horizontal &amp; vertical cracking. NW wingwall has horizontal &amp; vertical cracking with efflorescence.</li> <li>[2008-2016] The SE wingwall has minor spalls present.</li> </ul> |   |   |   |                    |                         |              |             |       |  |  |

[2003-2016] NE abutment wing has 2 minor horizontal cracks and 4 minor vertical cracks w/efflorescence.

| ELEM<br>NBR | ELEMENT NAME   | REPORT TYPE   | INSP. DATE   | QUANTITY   | QTY<br>CS 1   | QTY<br>CS 2  | QTY<br>CS 3                                 | QTY<br>CS 4                                   |  |  |  |  |
|-------------|--|---|--|--|---|--|---|---|--|--|--|--|
| 300         | Strip Seal Expansion Joint   | Routine<br>Migrated Values  | 10/07/2016   | 180 LF<br>180 LF   | 0<br>0  | 180<br>180   | 0<br>0                                      | 0<br>0  |  |  |  |  |
|             | Notes: [2010-2016] Evidence of minor leakage. Expansion joint may need to be cleaned & flushed for further inspection.<br>[2008] Debris in the joint may be causing problems, but no sign of leakage.<br>[2002-2006] Expansion joint has no deterioration but needs to be cleaned & flushed for further inspection.  |   |  |  |   |  |   |   |  |  |  |  |
| 301         | Pourable Joint Seal  | Routine   | 10/07/2016   | 180 LF   | 0   | 180  | 0   | 0   |  |  |  |  |
|             |  | Migrated Values   |  | 180 LF   | 0   | 180  | 0   | 0   |  |  |  |  |
|             | Notes: [2008-2016] Moderate adhesion & cohesion failure of joint seal.<br>[2002-2006] Minor adhesion & cohesion failure of joint seal.   |   |  |  |   |  |   |   |  |  |  |  |
| 310         | Elastomeric Bearing  | Routine   | 10/07/2016   | 14 EA  | 14  | 0  | 0   | 0   |  |  |  |  |
|             |  | Migrated Values   |  | 14 EA  | 14  | 0  | 0   | 0   |  |  |  |  |
|             | Notes: [2012-2016] Minor deterioration   | is present. Bearing   | seat is in good co   | ondition. [2001-2  | 2010] No c  | leterioratio   | า.  |   |  |  |  |  |
| 321         | Reinforced Concrete Approach Slab  | Routine   | 10/07/2016   | 5984 SF  | 0   | 5919   | 65  | 0   |  |  |  |  |
|             |  | Migrated Values   |  | 5984 SF  | 0   | 5919   | 65  | 0   |  |  |  |  |
|             | <ul> <li>[2016] Migrator assumed an approach is</li> <li>[2012-2016] There is moderate settlem South Approach Slab.</li> <li>[2006-2016] The east 1/2 of the south a longitudinal cracks + 24 LF of transvers</li> <li>[2002-2016] 40' of longitudinal crack in North Approach Slab</li> <li>[2008-2016] The west 1/2 of the north a [2002-2006] Minor crack in NW approach</li> </ul>   | slab length of 20F1 a<br>ent of the bituminous<br>approach slab has 27<br>se cracks.<br>south approach slab<br>approach slab has 65<br>ch slab. Minor spallin | Ind used the invest<br>on the north app<br>LF of transverse<br>on west side at t<br>LF of moderate<br>g in NE approacl | entory quantity oproach roadway<br>e cracks. The we<br>the storm sewer<br>longitudinal & tr<br>h slab. | if 66FT for<br>resulting<br>est 1/2 of t<br>MH.<br>ansverse | the width.<br>on impact o<br>he south a<br>cracks. (65 | on the appr<br>oproach sla<br>' in conditio | oach slabs.<br>ab has 39 LF of<br>on state 3) |  |  |  |  |
| 330         | Metal Bridge Railing   | Routine   | 10/07/2016   | 479 LF   | 0   | 479  | 0   | 0   |  |  |  |  |
|             |  | Migrated Values   |  | 479 LF   | 0   | 479  | 0   | 0   |  |  |  |  |
|             | Notes: [2016] Migrator assumed concrete/metal combination type rail.<br>[2006-2016] There is moderate vertical cracking with efflorescence extending through the deck at the west fascia.<br>[2003-2012] There are 2 areas of delamination on the west railing near the NW corner.<br>[2001-2016] There is moderate vertical & horizontal cracking with w/moderate spalling & efflorescence @ both sides. Spalling is due to mix<br>design.<br>[2008-2016] The ornamental metal railing has some chalking.<br>The railing consists of a combination concrete parapet & ornamental metal railing. |   |  |  |   |  |   |   |  |  |  |  |
|             | 515 - Steel Protective Coating   | Routine   | 10/07/2016   | 797 SF   | 0   | 797  | 0   | 0   |  |  |  |  |
|             |  | Migrated Values   |  | 797 SF   | 0   | 797  | 0   | 0   |  |  |  |  |
|             | Notes: [2016] Migrator assumed CS1 a<br>[2016] Metal railing is 374' long x 2.13'<br>[2016] There is moderate rust on caps<br>[2008-2016] The ornamental metal raili   | nd a quantity of 999 s<br>high = 797 SF<br>& bolts of all posts.<br>ng has some chalking  | SF.<br>g.  |  | -   |  | -   | -   |  |  |  |  |
| 331         | Reinforced Concrete Bridge Railing   | Routine   | 10/07/2016   | 479 LF   | 0   | 479  | 0   | 0   |  |  |  |  |
|             |  | Migrated Values   |  | 479 LF   | 0   | 479  | 0   | 0   |  |  |  |  |
|             | Notes: [2016] Migrator assumed concr<br>[2016] 1' x1' major spall on east side of<br>[2016] Moderate paint failure on both ra<br>[2006-2016] There is moderate vertical<br>[2003-2016] There are 2 areas of delan<br>[2001-2016] There is moderate vertical<br>design.   | ete/metal combinatio<br>east rail - 20' from no<br>ailings.<br>cracking with efflores<br>nination on the west r<br>& horizontal cracking                      | n type rail.<br>orth end.<br>scence extending<br>railing near the N<br>g with w/moderat                                | g through the de<br>W corner.<br>e spalling & effle  | eck at the vorescence                                       | vest fascia<br>@ both sid                              | des. Spallir                                | ig is due to mix                              |  |  |  |  |
|             | The railing consists of a combination co   | oncrete parapet & orn   | namental metal ra  | ailing.  |   |  |   |   |  |  |  |  |
| 800         | Critical Deficiencies or Safety Hazards  | Routine   | 10/07/2016   | 1 EA   | 1   | 0  | 0   | 0   |  |  |  |  |
|             |  | Migrated Values   |  | 1 EA   | 1   | 0  | 0   | 0   |  |  |  |  |
|             | Notes: NO CRITICAL FINDINGS OBS  | ERVED DURING TH   | E LAST INSPEC  | TION.  |   |  |   |   |  |  |  |  |

| ELEM<br>NBR | ELEN  | IENT NAME  | REPORT TYPE  | INSP. DATE  | QUANTITY   | QTY<br>CS 1  | QTY<br>CS 2               | QTY<br>CS 3 | QTY<br>CS 4 |        |  |  |  |
|-------------|---|--|--|---|--|--|---------------------------|-------------|-------------|--------|--|--|--|
| 810         | Concrete Decks  | - Cracking & Sealing   | Routine  | 10/07/2016  | 475 LF   | 0  | 475                       | 0           | 0           |        |  |  |  |
|             |   |  | Migrated Values  |   | 475 LF   | 0  | 475                       | 0           | 0           |        |  |  |  |
|             | Notes: [2016] 265' minor cracking on southbound & 210' minor cracking northbound. = 475' total.<br>[2008-2016] Minor to moderate longitudinal and transverse deck cracking with effluence. Minor spalls are present.<br>[2002-2006] Minor longitudinal and transverse deck cracking with no spalls. |  |  |   |  |  |                           |             |             |        |  |  |  |
| 815         | Plow Fingers  |  | Routine  | 10/07/2016  | 1 EA   | 0  | 1                         | 0           | 0           |        |  |  |  |
|             |   |  | Migrated Values  |   | 1 EA   | 0  | 1                         | 0           | 0           |        |  |  |  |
|             | Notes: [2012-2<br>[2002-2010] Pl  | Notes: [2012-2016] There is a plowstrap missing at the NW quadrant.<br>[2002-2010] Plowstraps are in place & show no sign of deterioration.                      |  |   |  |  |                           |             |             |        |  |  |  |
| 880         | Impact Damage   |  | Routine  | 10/07/2016  | 1 EA   | 0  | 1                         | 0           | 0           |        |  |  |  |
|             |   |  | Migrated Values  |   | 1 EA   | 0  | 1                         | 0           | 0           |        |  |  |  |
|             | Notes: [2002-2016] Minor surface damage. No structural damage to the concrete railing. Could use paint @ traffic impact.<br>[2002] Traffic impact has occurred to bridge rail 1/4 north of SE corner of bridge. 10' section of the ornamental metal railing wa<br>2002.                             |  |  |   |  |  |                           |             | was replace | əd in  |  |  |  |
| 892         | Slopes & Slope F  | Protection   | Routine  | 10/07/2016  | 1 EA   | 0  | 1                         | 0           | 0           |        |  |  |  |
|             |   |  | Migrated Values  |   | 1 EA   | 0  | 1                         | 0           | 0           |        |  |  |  |
|             | Notes: [2002-2016] Some aggregate was dug out near top on the right at the south end. Some aggregate is loose. [2006-2014] There is son minor settlement on the south side. Slope protection is asphaltic coated crushed aggregate.   |  |  |   |  |  |                           |             |             | s some |  |  |  |
| 894         | Deck & Approach   | n Drainage   | Routine  | 10/07/2016  | 1 EA   | 1  | 0                         | 0           | 0           |        |  |  |  |
|             |   |  | Migrated Values  |   | 1 EA   | 1  | 0                         | 0           | 0           |        |  |  |  |
|             | Notes: [2002-2  | 2016] Drainage system is   | s operating properly.  |   |  |  |                           |             |             |        |  |  |  |
| 895         | Sidewalk, Curb, &   | & Median   | Routine  | 10/07/2016  | 1 EA   | 0  | 1                         | 0           | 0           |        |  |  |  |
|             |   |  | Migrated Values  |   | 1 EA   | 0  | 1                         | 0           | 0           |        |  |  |  |
|             | [2006-2016] Th<br>by snowplow (<br>[2001-2016] M<br>[2001-2016] Th  | approach panel.<br>approach panel.<br>inor - moderate spalling<br>here is minor settlement   | on sidewalk both side<br>@ SW corner of the b  | ast side almost the wast side almost the side almost the set. [2003-2006] Spridge.                                | pe entire length   | of the side<br>by soft ag  | ewalk. Curb<br>gregate in | at the NW   | corner is b | eat up |  |  |  |
| 900         | Protected Specie  | S  | Routine  | 10/07/2016  | 1 EA   | 1  | 0                         | 0           | 0           |        |  |  |  |
|             |   |  | Migrated Values  |   | 1 EA   | 1  | 0                         | 0           | 0           |        |  |  |  |
|             | Notes: Use thi<br>[2016] No prote   | is element to track the pr<br>ective species found.  | esence of protected  | species living on   | this structure.  |  |                           |             |             |        |  |  |  |
|             | General Notes:  | [2016] Bridge safety ins<br>[2014] Bridge safety ins<br>[2010] Bridge safety ins<br>[2008] Bridge safety ins<br>Bridge safety inspectio<br>Bridge #62588 is 12m, | spection was conduct<br>spection was conduct<br>spection was conduct<br>spection was conduct<br>n was conducted by 1<br>17m & 12m continue | ted by Dan Bode<br>ted by D. Bodels<br>ted by B. Wiema<br>ted by B. Wiema<br>Bret Wieman & E<br>bus concrete slab | Ison & Brian Es<br>on & B. Essler<br>n on 10/27/201<br>n & B. Essler 10<br>Brian Essler. 11,<br>o spans built in 2 | ssler 10/07,<br>10/10/2014<br>0.<br>0/30/2008.<br>/17/2006.<br>2000. | /2016.<br>4.              |             |             |        |  |  |  |
|             | 58. Deck NBI:   | Concrete deck has mo   | derate cracking, leac  | hing & scaling wi   | th minor spalls.   |  |                           |             |             |        |  |  |  |
| 36A. E      | Brdg Railings NBI:  | Vehicular railing meets  | current standards  |   |  |  |                           |             |             |        |  |  |  |
| 36B         | 8. Transitions NBI:   | No guardrail   |  |   |  |  |                           |             |             |        |  |  |  |
| 36C. Ap     | opr Guardrail NBI:  | No guardrail   |  |   |  |  |                           |             |             |        |  |  |  |
| 36          | D. Appr Guardrail<br>Terminal NBI:  | No guardrail   |  |   |  |  |                           |             |             |        |  |  |  |
| 59. Sı      | perstructure NBI:   | Concrete has moderate  | e scaling & cracking v   | with minor spallin  | ig & delaminatio   | on.  |                           |             |             |        |  |  |  |
| 60.         | Substructure NBI:   | Concrete has minor cra   | acking & scaling.  |   |  |  |                           |             |             |        |  |  |  |
|             | 61. Channel NBI:  | CSAH # 44 over CP Ra   | ail - no water   |   |  |  |                           |             |             |        |  |  |  |

| ELEM<br>NBR | ELEMENT NAME | REPORT TYPE | INSP. DATE | QUANTITY | QTY<br>CS 1 | QTY<br>CS 2 | QTY<br>CS 3 | QTY<br>CS 4 |  |
|-------------|--------------|-------------|------------|----------|-------------|-------------|-------------|-------------|--|
|             |              |             |            |          |             |             |             |             |  |

62. Culvert NBI: CSAH # 44 over CP Rail - no water

71. Waterway Adeq NBI: CSAH # 44 over CP Rail - no water

72. Appr Roadway Minor sight distance problem with vertical curve over bridge, no speed reduction required. Alignment NBI:

Inventory Notes:

Dan Bodelson

Inspector's Signature

Nicklaus Fischer

Reviewer's Signature

### **Pictures**



Photo 1 -



Photo 2 -

### **Pictures**



Photo 3 -



Photo 4 -

### Maintenance

| Element | Source Code | Work Code | Description | P/R | Priority | Work Order # | Year Due | Last Viewed | Entered | Start Date | Completed |
|---------|-------------|-----------|-------------|-----|----------|--------------|----------|-------------|---------|------------|-----------|
|---------|-------------|-----------|-------------|-----|----------|--------------|----------|-------------|---------|------------|-----------|

### BRIDGE STRUCTURAL ASSESSMENT REPORT

#### **PURPOSE:**

This report is a structural assessment of the structure and its ability to carry loads based on conditions identified in the attached bridge inspection report. The assessment is only a cursory review intended to provide guidance as to the relative hazards for structural conditions and deficiencies identified. This report is mandatory for all fracture critical bridges and is completed by the Minnesota Bridge Office upon receipt of the 7 Day FC Report; however, it is an OPTIONAL tool for agencies to utilize at their discretion for all other inspection types.

| BRIDGE NO.: 62588   | BRIDGE OWNER: Count  | y Highway Agency   |  |  |  |
|---|--|--|--|--|--|
| DATE INSPECTED: 10/07/2016  | STRUCTURE TYPE: Con  | crete Continuous   |  |  |  |
| FACILITY CARRIED: CSAH 44 NB  | lab<br>FEATURES INTERSECT  | ED: CP RAIL  |  |  |  |
| TYPE OF INSPECTION:       ✓       ROUTINE         □       FRACTURE       □         □       PINNED ASS       □         □       SPECIAL:       □         □       DAMAGE:       □         Check all that apply:       □       COMPLEX: | CRITICAL<br>SEMBLY:  |  |  |  |  |
| Redundancy: Load Path           Image: Structural           Image: Image: Image: Structural   | ConnectionRiveteType:BoltedWeldeOther:   | d<br>d   |  |  |  |
| 1. Was a critical finding identified during this inspection or upon<br>Structural review?   |  |  |  |  |  |
| a) If selected " <b>Yes</b> " above, state briefly the finding(s):  |  |  |  |  |  |
| 2. If a critical finding was identified, what is th   | e current status?  | <ul> <li>Pending</li> <li>Resolved</li> <li>N/A</li> </ul> |  |  |  |
| a) Briefly state actions taken:   |  |  |  |  |  |
| 3. Does the condition of any bridge component<br>function? Examples of bridge components w<br>include elements that are: frozen or immove<br>misaligned, distorted or structurally deforme  | t indicate impaired<br>with impaired function<br>eable, out-of-plumb or<br>ed, excessively | ☐ Yes ☐ No   |  |  |  |

deteriorated, cracked, broken, eroded or scoured.

a) If selected "**Yes**" above, state briefly the component(s) and condition(s):

| 4. | Does the overall condition of the bridge, or any of its components | Yes | 🗌 No |
|----|--|-----|------|
|    | mentioned in Question 3, suggest the need for detailed structural  |     |      |
|    | analysis and/or a revised load rating?                             |     |      |

- a) If selected "**Yes**", state the reason for this recommendation and indicate a proposed timeframe in accordance with State of Minnesota Rule 8810.9500 (Subpart 2):
- 5. Based on the structural assessment of these findings, recommendations include:

| Repair/Maintenance | Monitoring Plan                |
|--------------------|--------------------------------|
| Complex            | Increased Inspection Frequency |

Explain recommended actions:

6. Other comments:

#### **Bridge Office Reviewer**