

## Structure Inventory and Appraisal

Bridge ID: CHARTER OAK-129800 Official SR: 43.5 SD/FO: Structurally Deficient FHWA No.: 129800 Unofficial SR: 42.5 SD/FO: Structurally Deficient

IDENTIFICATION 7 Facility Carried: LOCAL 5B Rte. Signing Prefix: 4 1 - MAINLINE 5C Level of Service:

00000

5D Inventory Route: City: RURAL 3 County: 024 - Crawford 084413201

0 - NOT APPLICABLE 5E Directional Suffix: SMALL STREAM 6 Feature Intersected:

2 District: 0 Garage: 000 98 Border Bridge Code: % Responsibility: 99 Border Bridge No.:

9 Location:

STRUCTURE TYPE AND MATERIALS

43A Main Span 3 - Steel 43B Main Span Design: 10 - Truss Thru

45 No. Spans Main Unit: 1

44A Appr. Span 003 - Steel

44B Appr. Span Design: 002 - Stringer/Multi-beam or Girder

Far 46 No. of Appr. Spans: Near

107 Deck Type: 8 - Wood or Timber 108A Wearing Surface: 8 - Gravel 108B Membrane: 0 - None

108C Deck Protection: 0 - None

GEOMETRIC DATA 64 ft

48 Length Max Span: 108 ft 49 Structure Length: 34 Skew: Deck Area: 1987.2 sq. ft.

50B Curb/Sdwk Width R: Oft. 50A Curb/Sdwk Width L: 0 ft. 51 Width Curb to Curb: 52 Width Out to Out: 18.4 ft. 32 Appr. Roadway width: 24 ft

(w/ Shoulders)

33 Median: 0 - No median 35 Structure Flared: 00 - No flare 10 Vertical Clearance: 99'99" 47 Horiz. Clearance: 53 Min. Vert. Clearance Over: 99'99' 54B Min. Vert. Underclearance: 00'00" 55 Min. Lat. Underclearance R: 00'00" 56 Min. Lat. Underclearance L: 00'00"

NAVIGATION DATA

0 - No navigation control on waterway (bridge permit not required)

111 Pier Protection:

38 Navigation Control:

39 Vertical Clearance: 00'00" 40 Horiz. Clearance:

16 Latitude: 42.05194823 17 Longitude: -95.64343601

FRA No. (if RR Bridge):

Mile Post:

INSPECTION

90 Inspection Date: 05/08/2014 Inspection Type: N/A 05/08/2016 Next Routine Insp Date: 91 Frequency:

> Next Insp Type: In-Depth

Inspection Agency: 5 - Consultant Inspection Group: Calhoun-Burns & Associates, Inc.

93A FC Inspection Date: 05/08/2014

92A FC Frequency: Next FC Insp.: 05/08/2016

93B UW Inspection Date:

92B UW Frequency: Next UW Insp.: NA

93C SI Date:

92C SI Frequency: Next Spec. Insp.: NA

Other Non-NBI Date:

Other Non-NBI Freq.: Next Other Insp.: NA

CONDITION

58 Deck: 5 - Fair Condition (minor section loss) 59 Super: 5 - Fair Condition (minor section loss) 5 - Fair Condition (minor section loss) 61 Channel/Channel Prot.: 5 - Bank eroded.. major damage

62 Culvert N - Not Applicable

APPRAISAL

67 Str. Evaluation: 2 - Intolerable - high priority of replacement

4 - Meets minimum tolerable limits 68 Deck Geometry:

69 Underclear Vert & Horiz: N - Not applicable

71 Waterway Adequacy: 5 - Occasional Flooding - Significant Delays 72 Approach Alignment: 7 - Better than present minimum criteria

36A Bridge Rail: 0 - DOES NOT MEET CURRENT SAFETY STANDARDS, OR IS NOT THERE AND IS NEEDED. 36B Transition: 0 - DOES NOT MEET CURRENT SAFETY STANDARDS, OR IS NOT THERE AND IS NEEDED 36C Approach Rail: 0 - DOES NOT MEET CURRENT SAFETY STANDARDS. OR IS NOT THERE AND IS NEEDED 36D Approach Rail Ends: 0 - DOES NOT MEET CURRENT SAFETY STANDARDS, OR IS NOT THERE AND IS NEEDED

113 Scour Critical: 7 - Fixed - Not Scour Critical

LOAD RATING AND POSTING

31 Design Load: 0 - Unknown

63 Rating Method: 2 - Allowable Stress (AS) reported in english tons using HS-20 loading.

64 Operating Rating:

2 - Allowable Stress (AS) reported in english tons using HS-20 loading. 65 Rating Method:

66 Inventory Rating:

0 - More than 39.9% below legal loads 70 Postina:

41 Posting Status: P - Posted for Load

AGE AND SERVICE

0

1965 27 Year Built: Design No.:

106 Year Reconstructed: 0 42A Type of Service on: 1 - Highway 42B Type of Service Under: 5 - Waterway

28A Lanes on: 1 28B Lanes under: 29 ADT: 20 30 Year of ADT: 2012 109 Truck ADT: 30 % Speed Limit: 55

19 Detour Length: 4 mi

CLASSIFICATION

112 NBIS Length:

26 Functional Class: 09 - Rural - Local 100 STRAHNET: 0 - Not a defense highway 101 Parallel Structure: N - No parallel structure

102 Direction of Traffic: 3 - One lane bridge for 2-way traffic 22 Owner: 02 - County Highway Agency 21 Custodian: 02 - County Highway Agency

37 Historical Significance: 5 - Not eligible

75A Type of Work Proposed: 31 - Replacement - Load/Geometry 75B Work Done by: 1 - Work to be done by contract

108'x 18.0' BRIDGE

66' PONY TRUSS WITH 43.5' APPROACH SPAN

SEE ATTACHED FOR APPROACH SPAN RATING

THE TRUSS IS A MODIFIED X-14 SMNDARD.

'CONCRETE DECK REPLACED W/ TIMBER DECK & TIMBER STRINGERS (SEE ATTACHED STRINGER RATING)

THE FLOORBEAM AND MEMBER VILZ CONTROL THE RATING OF THE STANDARD XI4 TRUSS. SEE ATTACHED FLOORBEAM RATING.

FIND. DEAD LOAD IN MODIFIED TRUSS:

XI4 DL (FROM STID CALCS) = 1360 plf
- CONCRETE DECK = (18/2) X 7.5/12 X 150% f) = -844
- FILL = (3/12 X 18/2) X 120 # (15) = -270
+ 11/2 " ROCK = (1.5/12 X 18/2) (120) = +135
TIMBER FLOOR = (4.5/12) X 18/2) (50) = +169
TIMBER STRINGER = (17#/f+) (14 STRINGER S/2) = +119
669 plf

REVISED DL IS MUCH LOWER THAN ORIGINAL, STANDARD DL. TRUSS WILL RATE MUCH HIGHER THAN ORIGINAL STANDARD RATING. : U, L2 WILL NOT CONTROL RATING - FLOORBEAM NOW CONTROLS - SEE ATTACHED FLOORBEAM RATING.

U1L2: DL = 42.3 (669/1360) = 20.8 K

TYPE 4: OPER RATING =  $\frac{96.7-20.8}{67.7}$  (27.25) = 30.6 T (L) REGIECTS SECTION LOSS SECTION LOSS DUE TO CORROSION 3-3: OPER RATING =  $\frac{96.7-20.8}{73.3}$  (40) = 41.4 T (L) CORROSION CORROSION

FIELD REPORTS INDICATE TRUSS IS HEAVILY CORRODED. SINCE FLOORBEAM RATES SO MUCH LOWER THAN TRUSS, POST BASED ON FLOORBEAM RATING AND CONSIDER LOWERING POSTING AS WARRANTED BY TRUSS DETERIORATION (SEE RECOMMENDATIONS BY FIELD INSPECTORS).

POST "+14, 520, 624 ALL VEHICLES"