Iowa Department of Transportation
Highway Division

PLANS OF PROPOSED IMPROVEMENTS ON THE

PRIMARY ROAD SYSTEM

JEFFERSON COUNTY

BRIDGE REPAIR

IA.78 OVER SKUNK RIVER
W. OF COPPOCK

THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 1000, PLUS APPLICABLE GENERAL, SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.

VALUE ENGINEERING SAVES, REFER TO THE GENERAL NOTES IN THESE PLANS.

REVISIONS

PROJECT NUMBER: I-78-076-5

INDEX OF SEALS

FILE NO: 200243

TOTAL SHEETS

7

STANDARD ROAD PLANS

ENGLISH STANDARD BRIDGE PLANS

STANDARD ISSUED REVISION

DESIGN DATA RURAL

SHEET NO NAME TYPE

2007 AADT FPD V.P.D

20 DTN V.P.H

20 TRUCKS V.P.M

TOTAL DESIGN SEALS

INDEX OF SHEETS

PROJECT NUMBER: I-78-076-5

NO DESCRIPTION

1 TITLE SHEET

2 ESTIMATE SHEET - DESIGN 207

3 DESIGN 207

C-01 ESTIMATE SHEET FOR ROADWAY

C-05-L1 ROADWAY SHEETS

STANDARD ROAD PLANS ARE LISTED ON SHEET (C-01)

DESIGNER

Norbert A. Kotters

9-27-2007

12-31-2007

My license renewal date is December 31, 2007.

Norbert A. Kotters

Printed or Typed Name

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Norbert A. Kotters

160999

Signature

Page or sheet covered by this seal: SHEETS 1 THRU 5 OF 8

No. 207

DESIGN NO. 207

R-BW

LOCATION MAP

WASHINGTON CO.

COPPOCK POP.

78

R-BW

HENRY CO.

WAU N U T

T-73N

DAMCO, INC.

T-72N

WASHINGTON RIVER

R-8W

CONVENTIONAL SIGNS

DIVIDED HIGHWAY

PAVED ROAD

BITUMINOUS ROAD

GRAVEL ROAD

EARTH ROAD

INTERSTATE HIGHWAY

UNITED STATES HIGHWAY

STATE HIGHWAY

COUNTY HIGHWAY

RAILROAD

PIPELINE

AIRPORT

HYDROLOGY

HYDROLOGY

WATER

STATE BOUNDARY

COUNTY BOUNDARY

CORPORATE LIMIT LINE

TOWNSHIP LINE

SECTION LINE

JULY 2004 - IOWA DOT - ENRIGUE MACHADO
GENERAL NOTES:

THIS DESIGN IS FOR REPAIRS TO THE EXISTING 2-150'X24'-HIGH TRUSS SPANS WITH 2-40'-4'-4'-BEAM APPROACH SPANS. DESIGN NO. 400. COPIES OF ORIGINAL DESIGN PLAN WILL BE MADE AVAILABLE TO THE CONTRACTOR, CONTACT THE OFFICE OF CONTRACTS - HIGHWAY DIVISION IOWA DOT - AMES.

IT IS THE INTENTION OF THIS DESIGN TO REPLACE, AS NEAR AS POSSIBLE, THE CAPACITY OF THIS BRIDGE THAT WAS LOST DUE TO COLLISION DAMAGE TO THE U.S. 36 VERTICAL MEMBERS ON BOTH SIDES OF THE NEW TRUSS SPAN, AND TO THE SWAY FRAME CONNECTED TO THESE TWO MEMBERS.

ALL DIMENSIONS AND DETAILS SHOWN ON THESE PLANS PERTAIN TO NEW CONSTRUCTION SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING CONSTRUCTION.

ALL DIMENSIONS REQUIRED TO FABRICATE NEW STRUCTURAL STEEL SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

FAINT LINES ON PLANS INDICATE EXISTING PORTIONS OF THE BRIDGE.

NO VEHICLES WILL BE ALLOWED ON THE DAMAGED TRUSS SPAN NO. 3, UNTIL STRONGBACKS ARE IN PLACE AS NOTED IN THE REPAIR PROCEDURE.

HEAVY CONSTRUCTION EQUIPMENT WILL NOT BE ALLOWED ON THE BRIDGE DURING CONSTRUCTION UNLESS PRIOR WRITTEN APPROVAL OF THE ENGINEER IS OBTAINED. APPROVAL SHALL BE OBTAINED BY SUBMITTING A WRITTEN REQUEST TO THE ENGINEER. THIS REQUEST SHALL INCLUDE THE FOLLOWING:

A. A DETAILED PLAN ACCEPABLY DESCRIBING THE EQUIPMENT AND HOW IT IS PROPOSED TO BE USED. THIS PLAN SHALL CONTAIN AT A MINIMUM, THE FOLLOWING INFORMATION:

1. THE CONFIGURATION AND WEIGHT OF THE EQUIPMENT PROPOSED TO BE PLACED ON THE BRIDGE, INCLUDING THE DEAD WEIGHT ON ALL AXLES/VUES.

2. THE PROPOSED LOCATIONS OF THE EQUIPMENT ON THE BRIDGE DURING ALL LIFTING OPERATIONS.

3. THE WEIGHT OF ALL PROPOSED AXLES TO BE MADE BY THE EQUIPMENT.

4. THE LOAD TO ALL WHEELS/AXLES/OUTSIDERS RESULTING FROM THE PROPOSED LIFTING OPERATIONS DURING ALL CRITICAL PHASES OF THE LIFTING OPERATIONS.

NO TOWING, CLEANING, GRINDING OR DRILLING OF HOLES ON THE EXISTING STRUCTURAL STEEL OF THE BRIDGE SHALL BE PERFORMED WHEN THE AIR TEMPERATURE AND STEEL TEMPERATURE ARE BELOW 40°,

THE BRIDGE CONTRACTOR IS ENCOURAGED TO TAKE FULL ADVANTAGE OF SPECIFICATION ITEM 105: ENGINEERING INSPECTOR PROOF TESTS AND CONCEPTUAL PROOF TESTS. APK INTEL, AND CONCEPTUAL, PROOF TESTS. APK INTEL, THESE PLAN PROVIDE ALL AVAILABLE AT THE PRECONSTRUCTION CONFERENCE.

CARE SHALL BE TAKEN TO PREVENT FURTHER DAMAGE TO THE EXISTING BRIDGE. ANY BRIDGE MEMBERS THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY HIM AT HIS OWN EXPENSE TO THE STATE.

ALL NEW STRUCTURAL STEEL SHALL CONFORM TO A-36.

ALL HOLE FOR BOLTED CONNECTIONS ARE TO BE 1/2" UNLESS OTHERWISE NOTED OR SHOWN.

ALL NEW BOLTS ARE TO BE 1" HIGH STRENGTH ASTM A-325.

THREADED BOLTS SHALL MEET THE SAME REQUIREMENTS AS FOR BRIDGE SWING AND OR BOLTS PER MATERIAL 1-40.0.

DAMAGED MEMBERS NEED NOT BE REMOVED UNLESS THEY APPEAR LIKELY TO INTERFERENCE WITH TRAFFIC AFTER BRIDGE IS REOPENED.

THE BRIDGE CONTRACTOR SHALL INFORM THE OFFICE OF BRIDGES AND STRUCTURES OF THE ANTICIPATED DATE OF COMPLETION OF THE REPAIR PROJECT APPROXIMATELY 60 DAYS PRIOR TO COMPLETION OF THE REPAIR PROJECT.

REPAIR PROCEDURE:

1. PLACE THE THREE LOOP ROUND ROPE 10'-0" BEYOND BREAKING STRENGTH OF 40'-0" LACES, ON THE EAST SIDE OF VERTICALS, TRUSS MEMBER U33, AS NEAR AS PRACTICABLE TO THE ORIGINAL CENTERLINE OF THIS MEMBER, THIS TO BE DONE ON BOTH THE NORTH AND SOUTH SIDES OF THE BRIDGE. ROUND ROPE IS TO BE ANCHORED IN PLACE PERMANENTLY, ROUND ROPE IS TO MEET THE REQUIREMENTS OF ASTM A-74.

2. STRONGBACK BEAMS SHALL BE PLACED ON WOODEN BLOCKS AND ATTACHED TO THE EXISTING FLOOR SYSTEM AS SHOWN ON DESIGN SHEET NO. 3. NO VEHICLE WILL BE ALLOWED ON THE BRIDGE UNTIL BEAM U8 AND U85 HAVE BEEN REMOVED AND LATERALLY Secured AS SHOWN ON DESIGN SHEET NO. 3. UNTIL BEAMS U8 AND U85 ARE REMOVED, U8 AND U85 ARE SHOWN ON DESIGN SHEET NO. 3. IT MAY BECOME NECESSARY TO MOVE THE LOCATION OF THE NEW SWAY BRACING IN ORDER TO AVOID INTERFERENCE WITH THE EXISTING DAMAGED SWAY BRACING. LENGTH OF THE DIAGONALS ON THE NEW SWAY FRAMES WILL HAVE TO BE ADJUSTED AS REQUIRED.

SPECIFICATIONS:


CONSTRUCTION: IOWA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, SERIES 1992, PLUS CURRENT SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

DESIGN STRESSES:

DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE ASHGO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SERIES OF 1992, STRUCTURAL STEEL IN ACCORDANCE WITH SECTION 10, ASTM A-36.

2 - 150'X24'-HIGH TRUSS SPANS WITH 4 - 40'-4'-4'-BEAM APPROACH SPANS

NOTES & QUANTITIES

JEFFERSON COUNTY

DESIGN FOR REPAIRS TO

STATION 17+00.00, IOWA DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION DESIGN SHEET NO. 06-09-1996, FILE NO. 06-09-1996 PROJECT NO. 06-09-1996 SHEET NO. 06-09-1996

JEFFERSON COUNTY

PROJECT NUMBER 06-09-1996 9.56 3.39 E+01 SHEET NUMBER 2
NOTES:

- BOTTOM AND TOP CHORDS ARE C12x20.7, DIAGONALS ARE CBx13.75.
- ALL DIMENSIONS REQUIRED TO FIELD FABRICATE THE CHORDS AND DIAGONALS FOR THE NEW SWAY FRAMES SHALL BE VERIFIED IN THE FIELD.
- THE MATERIAL USED TO FABRICATE THE NEW SWAY FRAMES IS TO BE ASTM A36 STEEL.
- ** - 305 HIGH STRENGTH BOLTS ARE REQUIRED FOR ** HOLES.

DETAIL 'A'

DETAIL 'B'

ELEVATION OF SWAY FRAME

SEE DESIGN SHEETS 2 & 3 FOR LOCATIONS OF SWAY FRAMES.

DESIGN FOR REPAIR TO:

2 - 150" X 24' HIGH TRUSS SPANS
WITH 4 - 40' X 24' I-BEAM APPROACH SPANS

JEFFERSON COUNTY

DESIGN SHEET NO. 5 OF 5 - FILE NO. 510270504  - SHEET NUMBER 5
### ESTIMATED ROADWAY QUANTITIES

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### ESTIMATE REFERENCE INFORMATION

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### TRAFFIC CONTROL PLAN

1. All traffic control devices shall be furnished, erected, and maintained by the BRBN-78-3(6)-39-51 contractor until such time as the BRBN-78-3(6)-39-51 contractor has closed IA 76 to through traffic. Upon closure of IA 76 by the BRBN-78-3(6)-39-51 contractor all traffic control devices shall be removed by the BRBN-78-3(6)-39-51 contractor. The BRBN-78-3(6)-39-51 contractor shall coordinate this traffic control device removal with the BRBN-78-3(6)-39-51 contractor.

2. The Iowa Department of Transportation will monitor all traffic control devices for damage that may occur and advise the contractor. The contractor will have 24 hours from the time of notification in order to make complete and satisfactory repairs to any traffic control device having been damaged.

3. Traffic control for this project will be in accordance with the 2017 Standard Road Plan or 2017 Supplement. For additional information refer to Part 6 of the Manual on Uniform Traffic Control Devices and the current Supplemental Specifications for Traffic Control.

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### ROADWAY DESIGN

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am duly licensed Professional Engineer under the laws of the State of Iowa.

James R. Shenkman
Professional Engineer

[Signature]

Date: 3-26-07

[Stamp]
**TABULATION OF PAVEMENT MARKINGS**

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*Refer to Modified Standard Road Plan TC-217*

**TABULATION OF TEMPORARY FLOODLIGHTING LUMINAIRES**

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<td>02</td>
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<td>03</td>
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**TEMPORARY BARRIER RAIL**

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*Refer to Modified Standard Road Plan TC-217*

**TEMPORARY TRAFFIC SIGNALS**

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Lighting Contractor shall check for locations of utilities, drainage structures or other facilities in the construction area. Any damage to such facilities due to the contractor's carelessness shall be corrected at the contractor's expense.

It shall be the contractor's responsibility to provide needed areas for disposal of excess material (excavated material or broken concrete) which is not desirably to be incorporated into the work involved on this project. These areas shall not impact cultural resources, wetlands or "Waters of the U.S." U.S. Army Corps of Engineers (CDE) regulations prohibit placement of material on stream banks below the "ordinary high water mark" without an approved CDE 404 Permit.

It is recommended that the contractor contact the Office of the State Archaeologist and State Historic Preservation Office to request an historic site search and recommendation of suitability for the purpose intended. The contractor is to provide a copy of OSAs and SHPO's response to the contracting authority and the Office of Location and Environment.

No payment for overbid will be allowed for material housed to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans.

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Design No. 207  File No. 30041

Jefferson County  Project Number  BRFN-078-3(6)-39-51  Sheet Number C.02