INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE REHABILITATION PLANS
FOR SPANS OVER 20 FEET
U.S. 41 NB OVER EAGLE CREEK
PROJECT NO. 0200634

NOTE: SEE ROAD PLANS FOR REMOVAL OF EXISTING GUARDRAIL, PROPOSED GUARDRAIL, PAVEMENT MARKINGS, EROSION CONTROL MEASURES AND MAINTENANCE OF TRAFFIC DETAILS.
**Utilities**

<table>
<thead>
<tr>
<th>COMMUNICATIONS</th>
<th>ELECTRIC</th>
<th>GEOTECH</th>
<th>SURVEY BOOK</th>
<th>VERTICAL SCALE</th>
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<td>AT&amp;T 134 NW Sixth Street</td>
<td>KENNEBDY CORPORATION</td>
<td>ATTIC, Karl Roos</td>
<td>Evansville, Indiana 47708</td>
<td>M. Matei</td>
</tr>
<tr>
<td>ATTN: Mary S. Took</td>
<td>P. (812) 464-4602</td>
<td>E. <a href="mailto:Piano@kennebdy.com">Piano@kennebdy.com</a></td>
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<td>M. Matei</td>
</tr>
<tr>
<td>E. <a href="mailto:Piano@kennebdy.com">Piano@kennebdy.com</a></td>
<td>INGERSOLL</td>
<td>Irv. Chapman</td>
<td>Evansville, Indiana 47711</td>
<td>INGERSOLL</td>
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<tr>
<td>1820 S. 4th Street</td>
<td>CHECKED:</td>
<td>M. Matei</td>
<td>Evansville, Indiana 47711</td>
<td>E. <a href="mailto:Piano@kennebdy.com">Piano@kennebdy.com</a></td>
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<tr>
<td>E. <a href="mailto:Piano@kennebdy.com">Piano@kennebdy.com</a></td>
<td>DESIGN ENGINEER</td>
<td>M. Matei</td>
<td>Evansville, Indiana 47711</td>
<td>E. <a href="mailto:Piano@kennebdy.com">Piano@kennebdy.com</a></td>
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<tr>
<td>E. <a href="mailto:Piano@kennebdy.com">Piano@kennebdy.com</a></td>
<td>FOR APPROVAL:</td>
<td>M. Matei</td>
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<td>E. <a href="mailto:Piano@kennebdy.com">Piano@kennebdy.com</a></td>
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<tr>
<td>E. <a href="mailto:Piano@kennebdy.com">Piano@kennebdy.com</a></td>
<td>RECOMMENDED DATE CONTRACTED:</td>
<td>M. Matei</td>
<td>Evansville, Indiana 47711</td>
<td>E. <a href="mailto:Piano@kennebdy.com">Piano@kennebdy.com</a></td>
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<td>E. <a href="mailto:Piano@kennebdy.com">Piano@kennebdy.com</a></td>
<td>INDIA NA REG.</td>
<td>M. Matei</td>
<td>Evansville, Indiana 47711</td>
<td>E. <a href="mailto:Piano@kennebdy.com">Piano@kennebdy.com</a></td>
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**Index Sheet**

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<td>INDEX SHEET</td>
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<td>6-8</td>
<td>GENERAL PLAN PROPOSED STRUCTURE</td>
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<tr>
<td>9-10</td>
<td>TYPICAL SECTIONS</td>
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**Notes:**
- See road plans for removal of existing guardrail, proposed guardrail, pavement markings, drivers' control measures and maintenance of traffic details.
- DRAFT: Not for Construction
NOTES
See Sheet 9 for Section "A-A".
See Sheets 6 thru 8 for Proposed Structure General Plans.

NOTE: SEE ROAD PLANS FOR REMOVAL OF EXISTING GUARDRAIL, PROPOSED GUARDRAIL, PAVEMENT MARKINGS, EROSION CONTROL MEASURES AND MAINTENANCE OF TRAFFIC DETAILS.

TWIN CONTINUOUS STEEL PLATE GIRDER AND R.C. GIRDER BRIDGES
17 SPANS: 1 AT 40'-0", 1 AT 65'-0", 3 AT 81'-0", 2 AT 65'-0", 3 AT 81'-0", 2 AT 65'-0", 3 AT 81'-0", 1 AT 65'-0" AND 1 AT 40'-0" NO SKEW, 39'-6" CLEAR ROADWAY ON U.S.41 NORTHBOUND OVER EAGLE CREEK

INDIANA DEPARTMENT OF TRANSPORTATION
GENERAL PLAN
EXISTING NORTHBOUND STRUCTURE

PARTIAL ELEVATION
Scale: 1" = 1'-0"
NOTE: See Road Plans for Removal of Existing Guardrails, Prohibited Signage, Pavement Markings, Broken or Missing Control Measures, and Maintenance of Traffic Details.

See Special Provisions for Salvaging some Sections of the Existing Structure.

Note: Hatched Areas indicate Portions to be Removed.

**Not for Construction**
Note: Bridge Deck will be removed in Spans "C" and "Q" and portions of Spans "B" and "R".

Note: Hatched Areas indicate portions to be removed.

Note: Bridge Deck will be removed in Spans "B" and "R" and portions of Spans "C" and "Q".

Note: Bridge Deck will be removed in Spans "B" and "R" and portions of Spans "C" and "Q".
Pier No.3 El. 381.75
Pier No.16 El. 384.13

Scale: 3/8" = 1'-0"

New Girder (Typ.)

INDOT Type S6-A (55 Durometer)
Elastomeric Bearing Assembly (Typ.)

34'-0" 17'-0"

Existing Pier

PIER NO.3 OR NO.16

Scale: 3/8" = 1'-0"

ELEVATION-PIER NO.3 OR NO.16

PeDESTAL ELEVATIONS

New Pedestal (Typ.)

Existing Step (Typ.)

Existing Seat Dimensions

Existing Girder Spacing

SECTION

Bar Bending Details

Weight Length No. of
Mark or Bars (Ft.) (Lbs.)

A.S.T.M. A615, Grade 60

CONCRETE REINFORCING BARS

Bill of Materials

PIER NO.3
PIER NO.16 SAME
NORTHBOUND STRUCTURE

REINFORCING BARS

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<th>Weight (Lbs.)</th>
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<td>403c</td>
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<td>48</td>
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<tr>
<td>404c</td>
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PIER NO.3 NB
PIER NO.16 NB

Dimension "H"

402c Dowels set in 5" Deep Field Drilled Holes with an Approved Anchor System (Typ.)
(Min. Pullout = 12000 Lbs.) (Typ.)

401c x 9'-11"
403c x 3'-7"
404c x 2'-4"

PEDESTAL DETAILS

1.0 Cys.
4 Each
4 Each
4 Each

CONCRETE

Bill of Materials

PEDESTALS

PEDESTAL DETAILS

Northbound Structure

Not for Construction
PIER NO.2
PIER NO.17 SAME
NORTHBOUND STRUCTURE

BILL OF MATERIALS

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<td>3' 6&quot;</td>
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Note: See Special Provisions for Elastomeric Bearing Assembly.

A.S.T.M. A615, Grade 50
Concrete:
- Weight: 3' 6" x 6'-7" x 4'-6" x 2'-0"
- Length: 3' 6" x 6'-7" x 4'-6" x 2'-0"
- No. of Bars: 35, 35, 35, 35
- Total Weight: 430 lbs.

Elastomeric Bearing Assembly:
- Type: S6-A (55 Durometer)
- Size: 3' 6" x 6'-7" x 4'-6" x 2'-0"
Note: hatched areas indicate portions to be removed.
**Not for Construction**

**Girder 1**
- 3 spa. @ 10'-0" = 30'-0"

**DRAFT**
- 7'-0" 1'-1
- 8" 1'-1
- 5'-0" Min. Shim

**PIER NO. 2, NO. 3, NO. 7, NO. 12, NO. 16 AND NO. 17**
- 15'-8"1'-0"g 1'-3".
- 1'-2"x1'-10" Top Plate
- 3" Hex Bolt (A325) with Lock Washer (Typ.)
- 1'-6" Threaded Anchor Rod (A307) with Hex Nut and Washer (Typ.)

**Existing Built-up Plate Girder**
- 4'-10"x10'-0" Longitudinal Girder
- 1'-2"x1'-10" Top Plate
- 3" Hex Bolt (A325) with Lock Washer (Typ.)

**Proposed Built-up Plate Girder**
- 5'-0"x10'-0" Longitudinal Girder
- 1'-2"x1'-10" Top Plate
- 3" Hex Bolt (A325) with Lock Washer (Typ.)

**NOTES**
- Tack weld steel beam to bearing plate
- Top of Concrete

**RECOMMENDED FOR APPROVAL**
- 1'-3"x1'-0" Top Plate
- 3" Hex Bolt (A325) with Lock Washer (Typ.)

**INDIANA DEPARTMENT OF TRANSPORTATION**
- STRUCTURAL STEEL DETAILS
- NORTHBOUND STRUCTURE

**STRUCTURAL STEEL FABRICATION NOTES**
- All Structural Steel shall be A.S.T.M. A709, Grade 50 unless otherwise noted.
- All bolts shall be 5/8" A325 High Strength and all nuts shall be 5/8" A325 unless otherwise noted.
- Estimated weight of Structural Steel (14494 pounds) includes built-up Girder (10,700 pounds) and Grade 50. The weight of high strength bolts is not included in the estimated weight of Structural Steel. The cost of these bolts shall be included in the cost of Structural Steel.

- The dimensions for these detail plans are based on construction plans/section shop drawings of the original structure. It is the contractor's responsibility to verify controlling dimensions in the field prior to fabrication.
New 12"x 3/4" Flange
27'-0" (C) 6'-6" (T/C)
@ 1'-1" = 29'-3"
65'-9"
17'-0"
2'-7 1/2"
1'-0"
4'-5 1/2"
126'-3"

Tension and/or Compression Zones
Stud Spacing (4 Per Row)

Web 4'-4"x 1 1/2"
Web 2'-6"x 1 1/2"

Holes for #6 Bars

Built-up Plate Girder

Bearing Stiffener Plate 5/8"x5 13/16"

NOTES
See Sheet 19 for Framing Plan and Structural Steel Fabrication Notes.
See Sheet 21 for Splice Detail.

DETAIL "A"
Not to Scale

Not for Construction
SPLICE NO. 1 AND NO. 2 DETAILS

SECTION "X-X"

Notes:
- Splice Elevations shown in Table are with falsework removed and allow for steel dead load only.
- Top of Splice Plates shall be adjusted to the Elevations shown in Table before field splices are bolted.

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<th>ELEVATION</th>
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<td>No. 2</td>
<td>390.09</td>
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<td>390.24</td>
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Top Flange:
- Top Flange Splice
  - 3/8" x 12" x 2-1/2" (Each Side)
  - 7/8" Holes (Typ.)

Bottom Flange:
- Bottom Flange Splice
  - 3/8" x 12" x 2-1/2" (Each Side)
  - 7/8" Holes (Typ.)

Fill Plate:
- Fill Plate for New Top Flange
  - 3/8" x 12" x 2-1/2" (Typ.)
- Fill Plate for New Bottom Flange
  - 3/8" x 12" x 2-1/2" (Typ.)
Note: All Structural Steel for the End and Intermediate Diaphragms shall be Grade 36 Steel.

See Sheet 19 for Framing Plan and Structural Steel Fabrication Notes.
FLOOR NOTES

After the slabs have been poured, concrete forms shall not be removed against the outside beams in making any joint adjacent to the lane space.

Suitable restraint shall be provided to prevent the rotation of the outside beams from construction loads such as finishing machines, forms, etc.

The top reinforcing in the slab shall be securely tied down to the slab forms and/or the beams to prevent lifting during concrete placement.

The Contractor shall have the option of using permanent metal deck forms in lieu of removable deck forms.

The Contractor shall space the reinforcing bars so to ensure a continuous bar is at the edge of each coping.

SECTION "A-A"
PORTIONS OF SPANS "C" AND "D"

Note: As an alternate, 501a #5 Dowels set in 3" deep field drilled holes with an approved anchor system (Min. Pullout = 18600 Lbs.)

#5x3'-6" Dowels set in 6" deep field drilled holes with an approved anchor system (Min. Pullout = 18600 Lbs.)

Existing W36 Concrete Median Barrier

New Exp. Joint Constr. Joint, Type "A"

#5x3'-6" Dowels set in 6" Deep Field Drilled Holes with an Approved Anchor System (Min. Pullout = 18600 Lbs.)

Sealing System

LIMITS OF Surface Seal

CHECKED: DESIGN ENGINEER
CHECKED: DESIGNED: FOR APPROVAL:
DRAWN: RECOMMENDED
DATE

DEPARTMENT OF TRANSPORTATION
INDIANA

FLOOR DETAILS
NORTHBOUND STRUCTURE

TYPICAL SECTION THRU BRIDGE RAILING TYPE FC

Notes: See Standard Drawing E766-6RFS-01 for Additional Details.

SAW CUT ALTERNATE FORMED ALTERNATE

Recess Details

Top to Face

Typical Rail Section

NOTE
See Sheet 31 for Bar Bending Details and Bill of Materials.

1'-6"
3" Drip Bead (Typ.)
Existing Built-up Plate Girder w/52" Web (Typ.)

New Bridge Railings, Type FC

Existing Bridge Railings, Type FC

TYPICAL RAIL SECTION

Top to Face

Face of Rail

Face of Rail

Recess Alternate

Chamfered Recesses at 5'-0" spacing (See Detail)
Note: Hatched Areas Indicate
Existing Bridge Floor
Portions to be Removed.

Remove BRIDGE DECK OVERLAY and Hydrodemolition
Existing Built-up Plate Girder
1" Surface Milling and Dehydration
Existing Reinforcing (Typ.)

Existing Bridge Floor

Remove BRIDGE DECK OVERLAY
Existing Built-up Plate Girder
1" Surface Milling and Dehydration
Existing Reinforcing (Typ.)

SECTION AT PIER NO.7 OR NO.12
(SHOWING REMOVALS)

SCALE:
6'-0" = 1'-0"
0.007'
0.008'
0.017'
0.018'

PARTIAL SPAN "Q", SPAN "R" AND SPAN "S"

CONCRETE DEAD LOAD DEFLECTION DIAGRAM
SPAN "A", SPAN "B" AND PARTIAL SPAN "C"

CONCRETE DEAD LOAD DEFLECTION DIAGRAM
PARTIAL SPAN "Q", SPAN "R" AND SPAN "S"

NOTE:
See Sheet 31 for Bar Bending Details and Bill of Materials.

DEPARTMENT OF TRANSPORTATION
INDIANA
FLOOR DETAILS
NORTHBOUND STRUCTURE

CHECKED: B. WRIGHT
DESIGN ENGINEER

CHECKED: C. OBRIEN

FOR APPROVAL: D. SHEETZ

REGISTRATION:

DATE

DESIGNATED:

SIGNATURE

FILLER: 80-66

RECOMMENDED FOR APPROVAL:

SIGNATURE

CONTRACT:

IN THIS SHEET
SCREED PLAN

Screed Line No.1 (West Coping)
Screed Line No.2 (Beam No.1)
Screed Line No.3 (Beam No.2)
Screed Line No.4 (NB Lanes)
Screed Line No.5 (Beam No.3)
Screed Line No.6 (Beam No.4)
Screed Line No.7 (East Coping)

43'-0" Bent to Pier

3'-3" 3 spa.@ 10'-0" = 30'-0"

8 equal spa. = 34'-4"

81'-0" Pier to Pier

6'-6" 7 8 8 equal spa. = 52'-7"

End of Bridge Floor

Bridge Floor Details

SCREED NOTES

Screed elevations will be given for setting screeds and coping forms so that the slab and coping will be at the required elevations after all the concrete has been poured.

Take elevations at the screed and coping points on top of adjacent beams, subtract these elevations from the given elevations and use resulting dimensions as the height for setting the screw or coping forms above that point. This dimension remains unchanged regardless of how much or what order the concrete is poured.

No concrete shall be poured until the above operation is completed.

Do not set screeds or coping forms by leveling.

THE CONTRACT DRAWINGS ARE NOT FOR CONSTRUCTION.

NOTE

See Sheet 30 for Screed Elevations.
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<th>G</th>
<th>C</th>
<th>D</th>
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**SCREW LINE**

- NORTHBOUND STRUCTURE
- AS NOTED
- BFS NO. 41-82-4999B
- 0200634
- 30 33
- 5605
Not for Construction
**Not for Construction**

**Approach Slab Details**

**South Approach Slab**

**Concrete Bridge Railing Transition, TFC**

*See Standards*

**Concrete, Bridge Railing Transition, TFC**

*See Standards*

**Sleeper Slab and Terminal Joint**

Required at South Approach Slab only if Concrete Pavement Option is used.

**Surface Seal**

730 Sft.

Does not include Bridge Railing Transition.

**Bar Bending Details**

*Note: Sleeper Slab and Terminal Joint required at South Approach Slab only if Concrete Pavement Option is used.*

**Bill of Materials**

**Concrete**

- Reinforced Concrete
  - Bridge Approach (12"
- Dense Graded Subbase

**Miscellaneous**

- Bridge Approach (12"
- Reinforced Concrete

**Reinforcing Bars**

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<tr>
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**Note:** Sleeper Slab and Terminal Joint required at South Approach Slab only if Concrete Pavement Option is used.
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#### Bridge Summary

**Northbound Structure**

- **Bent No. 1**
  - Spans "A" thru "S"

- **Bent No. 2**
- **Bent No. 3**
- **Bent No. 7**
- **Pier No. 12**
- **Pier No. 16**
- **Pier No. 17**

### Structure Quantities

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<th>SFT.</th>
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<th>SUBSTR.</th>
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- **Items**: Sleeper Slab and Terminal Joint required at South Approach Slab only if Concrete Pavement Option is used.

- **Note**: As an alternate, clean and straighten exposed existing transverse reinforcing in lieu of field drilled holes and dowels.