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<th>DESCRIPTION</th>
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<tr>
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<td>11 x 48 inch deck beam, no skew</td>
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<tr>
<td>PD-1148-L</td>
<td>11 x 48 inch deck beam, ahead left</td>
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<td>PD-1148-R</td>
<td>11 x 48 inch deck beam, ahead right</td>
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<td>11 x 52 inch deck beam, ahead right</td>
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<td>PD-1748-RD</td>
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<tr>
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</tbody>
</table>
5 pairs of #4 S(E) bars

A(E)

S(E)

B(E)

U(E)

"4
3
1
2
1
1
"2
1
1
4
1
1
48"

Showing dimensions

5 -#5 B(E) bars full length, Top

6'-3"

6'-3"

5'-9"

For information only

1'-3"

1'-3"

1'-6"

Top of Beam

270 ksi strands

2'-9"

1'-8"

3" Ø Holes

4'-0"

8" 3" Ø Hole

Expansion bearing pad shall be bonded to the substructure.

Expansion bearing pads shall be 1" thick.

Omit holes when using expansion bearings.

Notes:

Expansion bearing pad shall be bonded to the substructure.

Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 29/32" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.153 sq. in.

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Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

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Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

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Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
6 - #4 A(E) bars at 1'-6" cts., Top
-#4 S(E) bars at 9" cts., Top
-#4 U(E) bars at 5'-9" cts.

Similar about E except as noted

3'-2" #4 S2(E) bars
1 pair of #4 S1(E) bars
4 pairs of #4 B(E) bars full length, Top
S2(E) bars
1 pair of #4 S1(E) bars

9" Ø Conduit

Notes:
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/8" and the nominal cross-sectional area shall be 0.153 sq. in.
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 29/32" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 5000 psi.

Compressive strength of prestressed concrete at release, f'cm, shall be 6000 psi.
**PLAN VIEW**

- Section A-A
- Section B-B
- View C-C

**BILL OF MATERIAL**

- Fabric Bearing Pad
- Fixed

**BAR LIST**

- One Beam Only
- (For information only)

**NOTES**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 0.76" and the nominal cross-sectional area shall be 0.326 sq. in.
- Two 0.76" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 0.76" Ø lifting pin shall be used to engage the lifting loops during handling.

**SECTION B-B**

- (Showing dimensions)

**SECTION A-A**

**VIEW C-C**

**FABRIC BEARING PAD**

- Fixed

**BAR S(E)**

**BAR S1(E)**

**BAR S2(E)**

**BAR U(E)**

**LIFTING LOOP DETAIL**

**COMMENTS**

- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
5 pairs of #4 S1(E) bars

B(E)

A(E)

S(E)

S1(E)

U(E)

Lifting loop detail

SECTION A-A

52"

Showing dimensions

A minimum 2" Ø lifting pin shall be used to engage the lifting loops during handling.

Notes:

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be 0.5" and the nominal cross-sectional area shall be 0.153 sq. in.

Two ½" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for post-tension prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'c, shall be 5000 psi.

Bar List

NOTE:

Precast Prestressed Conc. Deck Bms. (11" depth)

Plant View

Lifting loop of lift 60° min. angle

VIEW C-C

VIEW B-B

(Showing dimensions)

(Showing reinforcement and permissible strand locations)

Strands

Strands

3" Ø Holes

3" Ø Holes

3" Ø Pin

3" Ø Conduit

Compressive strength of prestressed concrete at release, f'c, shall be 5000 psi.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

shall be used in the concrete for precast prestressed concrete deck beams.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for post-tension prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'c, shall be 5000 psi.

5" - #4 U(E) bars

1'-3"

End to end beam

3" Ø Hole

Expansion bearing pad shall be bonded to the substructure.

Omit holes when using expansion bearings.

Expansion bearing pad shall be bonded to the substructure.

Notes:

All bearing pads shall be 1" thick.

Lifting loops

3" Radius

Top of Beam

3-½" Ø

270 ksi strands

2-17-2017

11" x 52" PPC Deck Beam

Structure No.

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

FILE NAME = USER NAME

PLOT SCALE = CHECKED

PLOT DATE = DRAWN

CHECKED = DESIGNED

REVISED = REVISED

DEPARTMENT OF TRANSPORTATION

STATE OF ILLINOIS

F.A. RTE. SECTION

COUNTY CONTRACT NO.

TOTAL SHEETS SHEET NO.

STRUCTURE NO.

FABRIC BEARING PAD

FABRIC BEARING PAD

FIXED

ONE BEAM ONLY

BAR LIST

BAR S(E)

BAR S1(E)

BAR U(E)

8 ½" Ø Conduit

End to end beam

PLAN VIEW

SECTION B-B

(Showing dimensions)

5"-2" Ø Holes for dowel

Strands

Strands

End to end beam

B(E)

A(E)

S(E)

S1(E)

U(E)

Symmetrical about δ except as noted

Showing reinforcement and permissible strand locations

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

2'-3"

1'-8"

2'

1'

1" Ø Conduit

4'-0"

3'-11"

3" Ø Hole

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

2'-3"

1'-8"

2'

1'

1" Ø Conduit

4'-0"

3'-11"

3" Ø Hole

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

2'-3"

1'-8"

2'

1'

1" Ø Conduit

4'-0"

3'-11"

3" Ø Hole

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

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1'-8"

2'

1'

1" Ø Conduit

4'-0"

3'-11"

3" Ø Hole

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

2'-3"

1'-8"

2'

1'

1" Ø Conduit

4'-0"

3'-11"

3" Ø Hole

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

2'-3"

1'-8"

2'

1'

1" Ø Conduit

4'-0"

3'-11"

3" Ø Hole

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

2'-3"

1'-8"

2'

1'

1" Ø Conduit

4'-0"

3'-11"

3" Ø Hole

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.
**SECTION A-A**

- 6 #4 bars
- 3 spaces at 6" = 1'-3" spaces

**SECTION B-B**

- 5 #4 bars at 9" cts., Top
- #4 #5 bars at 3'-6" cts., Top

**SECTION C-C**

- 3" Ø holes for dowel rods at fixed ends only
- 2" Ø lifting pin shall be used to engage the lifting loops during handling.

**PLAN VIEW**

- 11 spaces at 2" cts.

**NOTES**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 2/3" and the nominal cross-sectional area shall be 0.153 sq. in.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2/3" Ø lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f', shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f', shall be 3000 psi.

**FABRIC BEARING PAD**

- Expansion bearing pad shall be bonded to the substructure.
- Omit holes when using expansion bearings.
- Expansion bearing pad shall be bonded to the substructure.

**BAR LIST**

- 3" Ø Conduit
- 9" Ø Holes

**BILL OF MATERIAL**

- 11" x 52" PPC DECK BEAM
- 9
- 1'-6"
- 4 spaces at 6" = 2'-11" spaces

**DEPARTMENT OF TRANSPORTATION**

- STATE OF ILLINOIS
S1(E) bars
4 pairs of #4
1'-3"

S2(E) bars
1 pair of #4
6'-7" U (E) bars

Cut to fit
Fan -#4 S2(E) bars.

End to end beam
skew

PLAN VIEW

SECTION A-A

SECTION B-B
(Showing dimensions)

VIEW C-C

FABRIC BEARING PAD

FABRIC BEARING PAD

FIXED

Bar List

One Beam Only
(For information only)

Bar 5(E)
Bar 51(E)
Bar 52(E)
Bar U(E)
Lifting Loop Detail

Notes:

- All bearing pads shall be 1" thick.
- Omit holes when using expansion bearings.
- Expansion bearing pad shall be bonded to the substructure.

Compressive strength of prestressed concrete, \( f'_c \), shall be 5000 psi.
Compressive strength of prestressed concrete at release, \( f'_c \), shall be 6000 psi.

Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2 1/2" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.

Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2 1/2" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, \( f'_c \), shall be 6000 psi.

Compressive strength of prestressed concrete at release, \( f'_c \), shall be 5000 psi.

PD-1152-R
2-17-2017
Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

MINIMUM BAR LAP

#4 bar = 1'-11"
#5 bar = 2'-6"

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: See sheet of for additional details and Bill of Material.
Expansion bearing pad shall be bonded to the substructure.

Omit holes when using expansion bearings.

All bearing pads shall be 1" thick.

Notes:

- 3" Ø holes shall be used in the concrete for precast prestressed concrete deck beams.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 3/8" and the nominal cross-sectional area shall be 0.153 sq. in.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 1/8" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Notes:

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 3/8" and the nominal cross-sectional area shall be 0.153 sq. in.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 1/8" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION A-A

SECTION B-B

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

MINIMUM BAR LAP

#5 bar = 2'-6"

BAR LIST

For information only

Note: See sheet of for additional details and Bill of Material.
Expansion bearing pad shall be bonded to the substructure.

Omit holes when using expansion bearings.

All bearing pads shall be 1" thick.

Notes:

- Correct beams in pairs with the transverse tie configuration shown.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 3/8" and the nominal cross-sectional area shall be 0.153 sq. in.
- Two 1" Ø holes in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

PD-1736-LD 2-17-2017

Bill of Material

Compressive strength of prestressed concrete at release, f"CI, shall be 5000 psi.

Compressive strength of prestressed concrete, f"C, shall be 6000 psi.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Lifting pin shall be used to engage the lifting loops during handling.

Transverse tie configuration shall be shown.
SECTION A-A

PLAN VIEW

END TO END BEAM

SECTION B-B

(SHOWING DIMENSIONS)

VIEW C-C

SECTION B-B

(SHOWING REINFORCEMENT AND PERMISSIBLE STRAND LOCATIONS)

BAR LIST

ONE BEAM ONLY

MINIMUM BAR LAP

Note: Spacing of 3(E) and 5(E) bars may be adjusted up to 4' in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: See sheet of for additional details and Bill of Material.

State of Illinois
Department of Transportation

17" x 36" PPC Deck Beam
Structure No.

PD-1736-R
2-17-2017
FABRIC BEARING PAD (Exterior)

FIXED

Notes:
- All bearing pads shall be 1" thick.
- Omit holes when using expansion bearings.
- Expansion bearing pad shall be bonded to the substructure.

SECTION A-A

TYPICAL TRANSVERSE TIE ASSEMBLY

PLAN VIEW

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be 3/8" and the nominal cross-sectional area shall be 0.153 sq. in.

The 3/8" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2-1/2" lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

3" Ø lifting pin shall be used to engage the lifting loops during handling.

5" Ø Drains holes out

6" Ø Vent holes top

3" Ø Holes for dowel rods at fixed end only

3" Ø Hole for transverse tie configuration shown.

Expansion bearing pad shall be bonded to the substructure.

Notes:
- Omit holes when using expansion bearings.
- Expansion bearing pad shall be bonded to the substructure.

- All bearing pads shall be 1" thick.

5'-0" ty p.

6" Ø Hole for transverse tie configuration shown.

Transverse tie configuration shown.

2'-6" ty p.

1'-8" ty p.

Expansion bearing pad shall be bonded to the substructure.

Expansion bearing pad shall be bonded to the substructure.
Note: Spacing of S(E) and S1(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragm to miss the block outs for the transverse ties.
Expansion bearing pad shall be bonded to the substructure.

Omit holes when using expansion bearings.

All bearing pads shall be 1" thick.

Notes:
1. Connect beams in pairs with the transverse tie configuration shown.
2. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.153 in.².
3. Two 3/8" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
4. Two 3/8" lifting pins shall be used to engage the lifting loops during handling.
5. A minimum 2½" lifting pin shall be used to engage the lifting loops during handling.
6. Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
7. Compressive strength of prestressed concrete at release, f', shall be 4000 psi.
8. Compressive strength of prestressed concrete at release, f', shall be 5000 psi.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1 inch thick. Notes:

Compression strength of prestressed concrete at release, $f'_{ci}$, shall be 5000 psi.

Compressive strength of prestressed concrete, $f'_{c}$, shall be 6000 psi.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 3/8" and the nominal cross-sectional area shall be 0.153 sq. in.

Two 3/8" holes at fixed ends only.

Two 3/8" holes for dowel rods at free ends only.

The 3/8" holes in the transverse tie assembly shall be tightened to a snug fit and the threads set.

Pocket for 3/8" lifting pin shall be used to engage the lifting loops during handling. A minimum 29/32" lifting pin shall be used to engage the lifting loops during handling. A minimum 29/32" lifting pin shall be used to engage the lifting loops during handling.

Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, $f'_{c}$, shall be 6000 psi.

Compressive strength of prestressed concrete at release, $f'_{ci}$, shall be 5000 psi.

Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1 inch thick.

Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1 inch thick.

Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1 inch thick.
Plan View

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Minimum Bar Lap

- #4 bar = 1'-11" cts.
- #5 bar = 2'-6" cts.

Note: See sheet  for additional details and Bill of Material.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick.

Section A-A

Typical Transverse Tie Assembly

Notes:
- Connect beams in pairs with the transverse tie configuration shown.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.153 square inches.
- The 3/8" x 1 1/2" x 4" washers - required
- 3/8" x 1 1/2" x 4" nuts for 3/8" Rods - required
- 1/2" x 3" x 4" coupling nut
- 3/8" x 1 1/2" x 4" lifting pin shall be used to engage the lifting loops during handling.
- A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.
- Two 3/8” fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Interior Bearing Pad
- Exterior Bearing Pad
- FABRIC BEARING PAD (Interior)
- FABRIC BEARING PAD (Exterior)
- Lifting Loop Detail
- Section A-A
- TYPICAL TRANSVERSE TIE ASSEMBLY
- PLAN VIEW
- BILL OF MATERIAL
- 17" x 48" PPC Deck Beam Details
- Structure No.
**SECTION A-A**

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**SECTION B-B**

*Showing dimensions*

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**SECTION B-B**

*Showing reinforcement and permissible strand locations*

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**PLAN VIEW**

- **A1(E)** or **S2(E)** bars at 9" cts., Top
- **A(E)** bars at 3'-0" cts., Top
- **S1(E)** bars at 9" cts., Top
- **B(E)** bars at 2'-10" cts., Bottom of Top slab
- **B1(E)** bars at 3'-0" cts., Bottom
- **A1(E)** and **S1(E)** bars, Top
- **B1(E)** and **S1(E)** bars at 9" cts., Top
- **A1(E)** bars at 2'-10" cts., Bottom of Bottom slab
- **S1(E)** bars at 9" cts., Bottom
- **A1(E)** and **S1(E)** bars, Bottom
- **B1(E)** and **S1(E)** bars at 9" cts., Bottom

---

**MINIMUM BAR LAP**

#4 bars = 3'-11"
#5 bars = 2'-6"

---

**BAR LIST**

*One beam only*

**Note:** Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

---

**Note:** Spacing of **S(E)** and **S2(E)** bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

---

**VIEW C-C**

**A**

**B**

---

**C**

---

**End to end beam**

---

**Lifting loop of lift 60° min. angle**

---

**Face of outside beams**

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**State of Illinois Department of Transportation**
Expansion bearing pads shall be bonded to the substructure.

Omit holes when using expansion bearings.

All bearing pads shall be 1" thick.

Expansion bearing pad shall be bonded to the substructure.

Notes:

- All bearing pads shall be 1" thick.
- Omit holes when using expansion bearings.
- Expansion bearing pad shall be bonded to the substructure.

SECTION A-A

TYPICAL TRANSVERSE TIE ASSEMBLY

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4 and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 1/2 rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2 fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2 fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'c, shall be 6000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4 and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 1/2 rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2 fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'c, shall be 6000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4 and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 1/2 rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2 fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'c, shall be 6000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4 and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 1/2 rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2 fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'c, shall be 6000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4 and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 1/2 rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2 fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 lifting pin shall be used to engage the lifting loops during handling.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'c, shall be 6000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4 and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 1/2 rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2 fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'c, shall be 6000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4 and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 1/2 rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2 fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 lifting pin shall be used to engage the lifting loops during handling.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'c, shall be 6000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4 and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 1/2 rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2 fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'c, shall be 6000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4 and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 1/2 rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2 fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'c, shall be 6000 psi.
End to end beam

PLAN VIEW

SECTION A-A

View C-C

SECTION B-B

TABLE OF CONTENTS

Bar List

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 8 in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Note: See sheet of for additional details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 1'-11"
#2 bar = 2'-0"

VIEW A-A

PLAN VIEW

Showing dimensions

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 8 in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Note: See sheet of for additional details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 1'-11"
#2 bar = 2'-0"

SECTION B-B

BAR LIST

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 8 in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Note: See sheet of for additional details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 1'-11"
#2 bar = 2'-0"

SECTION B-B

BAR LIST

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 8 in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Note: See sheet of for additional details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 1'-11"
#2 bar = 2'-0"

SECTION B-B

BAR LIST

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 8 in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Note: See sheet of for additional details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 1'-11"
#2 bar = 2'-0"

SECTION B-B

BAR LIST

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 8 in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Note: See sheet of for additional details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 1'-11"
#2 bar = 2'-0"
**NOTES**

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 5/32" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1"Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 3/8"Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'ci, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'c, shall be 5000 psi.

- **Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.**
- **The nominal diameter shall be 5/32" and the nominal cross-sectional area shall be 0.153 sq. in.**
- **The 1"Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.**
- **Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.**
- **A minimum 3/8"Ø lifting pin shall be used to engage the lifting loops during handling.**
- **Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.**
- **Compressive strength of prestressed concrete, f'ci, shall be 6000 psi.**
- **Compressive strength of prestressed concrete at release, f'c, shall be 5000 psi.**
PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4' in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

MINIMUM BAR LAP

#5 bar = 2'-6"

SECTION B-B

Showing dimensions

SECTION A-A

VIEW C-C

BAR LIST

One beam only

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Size</th>
<th>Length</th>
<th>Shape</th>
</tr>
</thead>
<tbody>
<tr>
<td>A(E)</td>
<td>#4</td>
<td>2'-6&quot;</td>
<td></td>
</tr>
<tr>
<td>B(E)</td>
<td>#4</td>
<td>2'-8&quot;</td>
<td></td>
</tr>
<tr>
<td>B1(E)</td>
<td>#4</td>
<td>6'-5&quot;</td>
<td></td>
</tr>
<tr>
<td>S(E)</td>
<td>#4</td>
<td>5'-2&quot;</td>
<td></td>
</tr>
<tr>
<td>S1(E)</td>
<td>#4</td>
<td>5'-2&quot;</td>
<td></td>
</tr>
<tr>
<td>S2(E)</td>
<td>#5</td>
<td>2'-6&quot;</td>
<td></td>
</tr>
<tr>
<td>S3(E)</td>
<td>#5</td>
<td>6'-5&quot;</td>
<td></td>
</tr>
<tr>
<td>S4(E)</td>
<td>#5</td>
<td>6'-5&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Note: See sheet of for additional details and Bill of Material.

DEPARTMENT OF TRANSPORTATION
STATE OF ILLINOIS
21" x 36" PPC DECK BEAM
STRUCTURE NO.

PD-2136-R
2-17-2017

FILE NAME = USER NAME =
PLOT SCALE = PLOT DATE =
CHECKED = DRAWN =
CHECKED = DESIGNED =
REVISED = REVISED = REVISED = REVISED =
Expansion bearing pad shall be bonded to the substructure.

Notes:
- Connect beams in pairs with the transverse tie configuration shown.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 25'Ø lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of precast concrete at release, f'ci, shall be 5000 psi.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 3/8" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 25'Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compression strength of prestressed concrete at release, f'c, shall be 5000 psi.

Skew - 1.5°
PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION B-B
(Showing reinforcement and permissible strand locations)
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

MINIMUM BAR LAP
#4 bar = 1'-11"
#5 bar = 2'-4"

Note: See sheet of for additional details and Bill of Material.

BAR LIST
ONE BEAM ONLY
(For Information Only)

<table>
<thead>
<tr>
<th>Size</th>
<th>#</th>
<th>Bar Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>#4</td>
<td>#</td>
<td>#4 S(E) bars at 9&quot; cts., top</td>
</tr>
<tr>
<td>#4</td>
<td></td>
<td>#4 S(E) bars at 3'-0&quot; cts., top</td>
</tr>
<tr>
<td>#4</td>
<td></td>
<td>#4 A(E) bars at 3'-0&quot; cts., top</td>
</tr>
<tr>
<td>#4</td>
<td></td>
<td>#4 A(E) bars at 3'-5&quot; cts., top</td>
</tr>
<tr>
<td>#4</td>
<td></td>
<td>#4 A(E) bars at 1'-6&quot; cts., bottom of top slab</td>
</tr>
</tbody>
</table>

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick. Two fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.115 sq. in.

A minimum 5/8" Ø lifting pin shall be used to engage the lifting loops during handling. Lifting loops shall be used in pairs with the transverse tie configuration shown.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Rust shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete at release, f'ci, shall be 6000 psi.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.115 sq. in.

A minimum 5/8" Ø lifting pin shall be used to engage the lifting loops during handling. Lifting loops shall be used in pairs with the transverse tie configuration shown.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Rust shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete at release, f'ci, shall be 6000 psi.
See sheet of for additional details and Bill of Material.

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diagrams to miss the block outs for the transverse ties.

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.
NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 0.75" and the nominal cross-sectional area shall be 0.052 sq. in.

- The 1 1/8" rods in the transverse tie assembly shall be tightened to a snug fit and the threads shall be used in the concrete for precast prestressed concrete deck beams. The nominal diameter shall be 0.75" and the nominal cross-sectional area shall be 0.153 sq. in.

- Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings.

- All bearing pads shall be 1" thick.

- Notes:
  - Connect beams in pairs with the transverse tie configuration shown.
  - Two 1 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
  - Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

- The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads shall be used in the concrete for precast prestressed concrete deck beams. The nominal diameter shall be 0.75" and the nominal cross-sectional area shall be 0.153 sq. in.

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 0.75" and the nominal cross-sectional area shall be 0.052 sq. in.

- A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling. Compression of the top of beam shall be 5000 psi.

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- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 0.75" and the nominal cross-sectional area shall be 0.153 sq. in.

- Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings.

- All bearing pads shall be 1" thick.

- Notes:
  - Connect beams in pairs with the transverse tie configuration shown.
  - Two 1 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
  - Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

- The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads shall be used in the concrete for precast prestressed concrete deck beams. The nominal diameter shall be 0.75" and the nominal cross-sectional area shall be 0.153 sq. in.

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- All bearing pads shall be 1" thick.

- Notes:
  - Connect beams in pairs with the transverse tie configuration shown.
  - Two 1 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
  - Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

- The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads shall be used in the concrete for precast prestressed concrete deck beams. The nominal diameter shall be 0.75" and the nominal cross-sectional area shall be 0.153 sq. in.

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 0.75" and the nominal cross-sectional area shall be 0.052 sq. in.

- A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling. Compression of the top of beam shall be 5000 psi.

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<table>
<thead>
<tr>
<th>Bar Location</th>
<th>Size (No.)</th>
<th>Length</th>
<th>Shape</th>
</tr>
</thead>
<tbody>
<tr>
<td>U(E)</td>
<td>#4</td>
<td>3'-0&quot;</td>
<td></td>
</tr>
<tr>
<td>S(E)</td>
<td>#4</td>
<td>9&quot;</td>
<td></td>
</tr>
<tr>
<td>S3(E)</td>
<td>#4</td>
<td>9&quot;</td>
<td></td>
</tr>
<tr>
<td>S4(E)</td>
<td>#4</td>
<td>9&quot;</td>
<td></td>
</tr>
<tr>
<td>U1(E)</td>
<td>#5</td>
<td>7'-5&quot;</td>
<td></td>
</tr>
<tr>
<td>B(E)</td>
<td>#4</td>
<td>5'-11&quot;</td>
<td></td>
</tr>
<tr>
<td>B1(E)</td>
<td>#5</td>
<td>5'-11&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

**Minimum Bar Lap**

- #4 bar = 1'-11"
- #5 bar = 2'-8"
**Fabric Bearing Pad (Interior)**

**Fabric Bearing Pad (Exterior)**

**Plan View**

Note: Connect beams in pairs with the transverse tie configuration shown.

**Lifting Loop Detail**

**Typical Transverse Tie Assembly**

Compressive strength of prestressed concrete, $f'_c$, shall be 6000 psi. Compressive strength of prestressed concrete at release, $f'_c$, shall be 5000 psi.

Expansion bearing pad shall be bonded to the substructure.

Omit holes when using expansion bearings.

All bearing pads shall be 1" thick.

Expansion bearing pad shall be bonded to the substructure.

**NOTES**

Pre-stressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1/2" rod in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2 1/2" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Expansion bearing pad shall be bonded to the substructure.

Omit holes when using expansion bearings.

All bearing pads shall be 1" thick.

Expansion bearing pad shall be bonded to the substructure.

**Fixed**

**Notes:** All bearing pads shall be 1" thick. Omit holes when using expansion bearings. Expansion bearing pad shall be bonded to the substructure.

**Section A-A**

**Typical Transverse Tie Assembly**

- $\Phi 7$ holes at fixed ends only
- $\Phi 3$ holes (no shown)
- $\Phi 3$ holes
- $\Phi 6$ Ø Vent
- $\Phi 6$ Ø Opening
- $\Phi 4$ x $\Phi 4$ Ø Conduit
- $\Phi 3$Ø lifting pin shall be used to engage the lifting loops during handling.
- $\Phi 3$Ø Conduit
- $\Phi 3$Ø Vent
- $\Phi 3$Ø Lifting Loop
during handling.
- $\Phi 3$Ø Conduit
- $\Phi 3$Ø Lifting Loop
during handling.
- $\Phi 3$Ø Conduit
- $\Phi 3$Ø Lifting Loop
during handling.
- $\Phi 3$Ø Conduit
- $\Phi 3$Ø Lifting Loop
during handling.
- $\Phi 3$Ø Conduit
- $\Phi 3$Ø Lifting Loop
during handling.
- $\Phi 3$Ø Conduit
- $\Phi 3$Ø Lifting Loop
during handling.
- $\Phi 3$Ø Conduit
- $\Phi 3$Ø Lifting Loop
during handling.
- $\Phi 3$Ø Conduit
- $\Phi 3$Ø Lifting Loop
during handling.
- $\Phi 3$Ø Conduit
- $\Phi 3$Ø Lifting Loop
during handling.
- $\Phi 3$Ø Conduit
- $\Phi 3$Ø Lifting Loop
during handling.
- $\Phi 3$Ø Conduit
- $\Phi 3$Ø Lifting Loop
during handling.
PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION A-A

SECTION B-B

MINIMUM BAR LAP

#4 bar = 3'-11"
#5 bar = 2'-0"

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

See sheet of for additional details and Bill of Material.

FILE NAME =
USER NAME =
PLOT SCALE =
PLOT DATE =
CHECKED =
DRAWN =
CHECKED =
DESIGNED =
REVISED =
REVISED =
REVISED =

DEPARTMENT OF TRANSPORTATION
STATE OF ILLINOIS
F.A. R.T.E. SECTION
CONTRACT NO.
TOTAL SHEETS
SHEET NO.
STRUCTURE NO.
27" x 36" PPC DECK BEAM

2017-01-01
2-17-2017

PD-2736-0
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick.

Notes:
- 2" Ø Holes for dowel rods at fixed ends only
- 3" Ø Hole for transverse tie assemblies
- 3" Ø Hole for transverse tie configuration shown
- Fixed tie configuration shown.
- Transverse tie configuration shown.
- Lifted loop detail.
- Typical transverse tie assembly.

Compressive strength of prestressed concrete at release, $f'_{ci}$, shall be 5000 psi.

Compressive strength of prestressed concrete, $f'_{c}$, shall be 6000 psi.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{3}{8}$" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum $\frac{3}{4}$" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion inhibiter, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of precast concrete at release, $f_{c}$, shall be 6000 psi.

Compressive strength of prestressed concrete at release, $f_{ci}$, shall be 5000 psi.
End to end beam bars full length, Top cl.

2-#4 B(E) bars

A(E) and B(E)

2-#5 B (E) bars full length, Bottom of Top slab

1'-2" cts.

5 spaces at 6" = 1'-6"
cuts.

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

2'-7" 7'-5"

2'-10" 5'-11"

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

MINIMUM BAR LAP

#4 bar = 1'-11"
#5 bar = 2'-6"

Note: For additional details and Bill of Material, see sheet of for additional details and Bill of Material.

PLAN VIEW

Fan -#4 S3(E) bars Bottom. Cut to fit

Fan -#4 S4(E) bars Top. Cut to fit

Similar about x

2-#4 S(E) bars, Bottom

4-#4 S1(E) bars, Top

Note: Permit key on exterior face of outside beams

MINIMUM BAR LAP

A1(E) or S2(E)

Bars full length, Bottom of Top slab

BAR LIST

For information only

Note: Placement and Bill of Material.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick.

Notes:
- Connect beams in pairs with the transverse tie configuration shown.
- Rods at fixed ends only
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/8" and the nominal cross-sectional area shall be 0.123 sq. in.
- The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- Compressive strength of prestressed concrete at release, f'_ci, shall be 5000 psi.
- Compressive strength of prestressed concrete, f'_c, shall be 6000 psi.
- Prestressed concrete for precast prestressed concrete deck beams shall be used in the concrete for precast prestressed concrete deck beams.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- Compressive strength of prestressed concrete at release, f'_ci, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'_c, shall be 6000 psi.
- Prestressed concrete for precast prestressed concrete deck beams shall be used in the concrete for precast prestressed concrete deck beams.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
SECTION A-A

End to end beam

Fan 4 S(E) bars, top. Cut to fit
Fan 4 S(E) bars, bottom. Cut to fit

PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

MINIMUM BAR LAP

#4 bar = 1'-11"   #5 bar = 2'-6"

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

(Showing reinforcement and permissible strand locations)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

27" x 36" PPC DECK BEAM
STRUCTURE NO.

PD-2736-R
2-17-2017
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings.

All bearing pads shall be 1" thick. Notes:
- Rods at fixed ends only
- 2" Ø Holes for dowel
- 3" Ø Holes
- 1" Ø x Rods
- Washer - required
- Nut for 1" Ø
- Nut for 3" Ø
- Washer - required
- Nut for 1" Ø
- Rod - required
- 1" Ø Lift pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

A minimum 2" Ø lifting pin shall be used to engage the lifting loops during handling.

Consolidated Bridge (27" depth)

The nominal diameter shall be 2.17" and the nominal cross-sectional area shall be 0.123 sq. in.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Positions on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 5/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 3/4" lifting pin shall be used to engage the lifting loops during handling.

Consolidated Bridge (27" depth)

The nominal diameter shall be 2.17" and the nominal cross-sectional area shall be 0.153 sq. in.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be 2.17" and the nominal cross-sectional area shall be 0.123 sq. in.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Positions on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 5/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 3/4" lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
S(E) and S1(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diagrams to miss the block outs for the transverse ties.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diagrams to miss the block outs for the transverse ties.

Minimum Bar Lap

#4 bar = 1'-11" (For information only)

MINIMUM BAR LAP

#5 bar = 2'-6"

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diagrams to miss the block outs for the transverse ties.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick.

Notes:
- Expansion bearing pad shall be bonded to the substructure.
- Holes when using expansion bearings.
- All bearing pads shall be 1" thick.

Transverse tie configuration shown.

Notes:
- Connect beams in pairs with the transverse tie configuration shown.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 3/8" and the nominal cross-sectional area shall be 0.353 sq. in.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 3/8" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of precast concrete at release, f'_c, shall be 5000 psi.

Compressive strength of prestressed concrete at release, f'_c, shall be 6000 psi.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be 3/8" and the nominal cross-sectional area shall be 0.353 sq. in.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

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Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of precast concrete at release, f'_c, shall be 5000 psi.

Compressive strength of prestressed concrete at release, f'_c, shall be 6000 psi.
BAR LIST
(For information only)

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<th>Single</th>
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</thead>
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<tr>
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<td>#4</td>
<td>#4</td>
<td>#4</td>
</tr>
<tr>
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<td>#4</td>
<td>#4</td>
<td>#4</td>
</tr>
<tr>
<td>S2(E)</td>
<td>#4</td>
<td>#4</td>
<td>#4</td>
</tr>
</tbody>
</table>

MINIMUM BAR LAP
#4 bar = 2'-6"  
#5 bar = 2'-6"  

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

PLAN VIEW

Note: Space between #4 S(E) and #4 S(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION A-A

SECTION B-B

MINIMUM BAR LAP
#4 bar = 2'-6"  
#5 bar = 2'-6"  

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

PLAN VIEW

Note: Space between #4 S(E) and #4 S(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION A-A

SECTION B-B

MINIMUM BAR LAP
#4 bar = 2'-6"  
#5 bar = 2'-6"  

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

PLAN VIEW

Note: Space between #4 S(E) and #4 S(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION A-A

SECTION B-B

MINIMUM BAR LAP
#4 bar = 2'-6"  
#5 bar = 2'-6"  

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

PLAN VIEW

Note: Space between #4 S(E) and #4 S(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION A-A

SECTION B-B

MINIMUM BAR LAP
#4 bar = 2'-6"  
#5 bar = 2'-6"  

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

PLAN VIEW

Note: Space between #4 S(E) and #4 S(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.
Fabric Bearing Pad (Interior)

Notes:
- All bearing pads shall be 3" thick.
- Omit holes when using expansion bearings.
- Expansion bearing pad shall be bonded to the substructure.

Fabric Bearing Pad (Exterior)

FIXED

SECTION A-A

Typical Transverse Tie Assembly

Plan View

Note: Connect beams in pairs with the transverse tie configuration shown.

Notes:
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 9/32" and the nominal cross-sectional area shall be 0.123 sq. in.
- The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads
  set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly
  is in place.
- Two 3" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided
  for each bearing pad location.
- A minimum 3/4" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications,
  shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f', shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f', shall be 5000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 9/32" and the nominal cross-sectional area shall be 0.123 sq. in.
- The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads
  set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly
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  shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f', shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f', shall be 5000 psi.
U1(E)

"2 1

1

B1(E)

B(E)

U(E)

2-#4 U1(E) bars

Lifting loop

60° min. angle

tack of exterior beams

U1(E)

cl.

2

1

B(E)

S2(E)

S(E) and

S1(E)

6 -#5 B(E) bars full length, top

3'-0" cts.

9 spaces at 6" = 9" #4 A(E) bars at 3'-0" cts., top

-#4 A1(E) bars at 1'-6" cts., bottom of top slab

-#4 S(E) bars at 9" cts., bottom

-#4 S2(E) bars at 9" cts., top

9"

plan view

Note:

Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION A-A

End to end beam

Fan -#4 S2(E) bars, top. Cut to fit

Fan -#4 S4(E) bars, bottom. Cut to fit

2-#4 S3(E) bars, bottom

2-#4 S4(E) bars, top

4-#4 S(E) bars, bottom

4-#4 S1(E) bars, top

MINIMUM BAR LAP

#4 bar = 1'-11" #5 bar = 2'-6"

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

SECTION B-B

(Showing reinforcement and permissible strand locations)

BAR LIST

(For information only)

Note: See sheet of for additional details and Bill of Material.

S4(E)

2'-6" cts.

SECTION C-C

VIEW C-C

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Bar List

One Beam Only

File Name =

User Name =

Plot Scale =

Plot Date =

Checked =

Drawn =

Designed =

Revised =

Department of Transportation

State of Illinois

F.A. Rte.

Section

County

Contract No.

Total

Sheets

Structure No.

27" x 48" PPC Deck Beam

2-17-2017

PD-2748-R

27" x 48" PPC DECK BEAM

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

27" x 48" PPC Deck Beam

Structure No.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick.

Notes:
- Connect beams in pairs with the transverse tie configuration shown.
- Rods at fixed ends only
- Two 1\" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2\" lifting pin shall be used to engage the lifting loops during handling.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/8" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1\" rods in the transverse tie assembly shall be tightened to a snug fit and the threads shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

The 1\" Ø lifting pin shall be used to engage the lifting loops during handling. Two 1\" lifting loops shall be provided for each bearing pad location.

Notes:
- All bearing pads shall be 1\" thick.
- Expansion bearing pad shall be bonded to the substructure.
- All bearing pads shall be 1\" thick.
- Rods at fixed ends only.
- Two 1\" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2\" lifting pin shall be used to engage the lifting loops during handling.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/8\" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1\" rods in the transverse tie assembly shall be tightened to a snug fit and the threads shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- The 1\" Ø lifting pin shall be used to engage the lifting loops during handling.

State of Illinois
Department of Transportation

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/8\" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1\" rods in the transverse tie assembly shall be tightened to a snug fit and the threads shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

The 1\" Ø lifting pin shall be used to engage the lifting loops during handling.

Note: Connect beams in pairs with the transverse tie configuration shown.
SECTION A-A
6-#4 S(E) bars, top
6-#4 S(E) bars, bottom
6-#4 S2(E) bars, top
6-#4 S2(E) bars, bottom
-#4 A(E) bars at 9" cts., top
-#4 A(E) bars at 9" cts., bottom
-#4 A(E) bars at 3'-0" cts., top
-#4 A(E) bars at 3'-0" cts., bottom of top slab
-#4 B(E) bars at 9" cts., top
-#4 B(E) bars at 9" cts., bottom of top slab
-#4 B(E) bars at 3'-0" cts., top
-#4 B(E) bars at 3'-0" cts., bottom of top slab
-#4 B(E) bars at 3'-0" cts., bottom of top slab
-#4 B(E) bars at 3'-0" cts., bottom of top slab

SECTION B-B
Symmetrical about q
6 spaces at 6" = 7" 2'-0"
6 spaces at 6" = 7" 2'-0"
4 spaces at 6" = 7" 2'-0"

PLAN VIEW
End to end beam
Lifting loop
60° min. angle of lift
3-#4 U1(E) bars

SECTION B-B
(Showing dimensions)
Notes:
Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

BAR LIST
(For information only)

MINIMUM BAR LAP
#3 bar = 7'-17"
#5 bar = 2'-6"

Note:
See sheet of for additional details and Bill of Material.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. Expansion bearing pad shall be bonded to the substructure.

**NOTES**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set.
- Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 5/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 20° Ø lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'y, shall be 5000 psi.
U(E) A(E) S2(E) S(E) and 3-#4 U1(E) bars
Lifting loop of lift 60° min. angle
B1(E) B(E) or B2(E)

Bar No. Size Length Shape
A(E) #4 2'-0"
B(E) #5 7'-8"
B1(E) #4 2'-7"
S1(E) #4 6'-5"
S2(E) #4 6'-8"
U1(E) #6 2'-0"

MINIMUM BAR LAP
#4 bar = 7'-11"
#6 bar = 2'-6"

PLAN VIEW

SECTION A-A

2-4 S(E) bars, top
5-#4 S(E) bars, bottom

SECTION A-B

3-#4 S(E) bars, top
4-#4 S(E) bars, bottom

VIEW C-C

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY (For Information Only)

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Size</th>
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</thead>
<tbody>
<tr>
<td>S1(E)</td>
<td>#4</td>
<td>2'-0&quot;</td>
<td></td>
</tr>
<tr>
<td>S2(E)</td>
<td>#4</td>
<td>6'-5&quot;</td>
<td></td>
</tr>
<tr>
<td>U(E)</td>
<td>#6</td>
<td>5'-0&quot;</td>
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<tr>
<td>U1(E)</td>
<td>#6</td>
<td>2'-0&quot;</td>
<td></td>
</tr>
<tr>
<td>B(E)</td>
<td>#5</td>
<td>7'-8&quot;</td>
<td></td>
</tr>
<tr>
<td>B1(E)</td>
<td>#4</td>
<td>2'-7&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Note: See sheet of for additional details and Bill of Material.
Expansion bearing pad shall be bonded to the substructure.

Omit holes when using expansion bearings.

All bearing pads shall be 1" thick.

Note: Connect beams in pairs with the transverse tie configuration shown.

Note: Connect beams in pairs with the transverse tie configuration shown.

Compressive strength of prestressed concrete, \( f'_c \), shall be 6000 psi.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two ½ fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two ½ fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, \( f'_c \), shall be 6000 psi.

Compressive strength of prestressed concrete at release, \( f'_c \), shall be 5000 psi.
Plan View

Section A-A
End to end beam

Section B-B
(Showing dimensions)

Bar List
One beam only

Minimum bar lap
#4 bar = 1'-11"  
#6 bar = 2'-6"

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 6" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick.

Notes:
- 3" Ø Holes for dowel rods at fixed ends only.
- 2" Ø Holes for prestressed concrete for precast prestressed concrete deck beams.
- Two 1/4" lifting pins shall be used to engage the lifting loops during handling.
- A minimum 25/32" lifting pin shall be used to engage the lifting loops during handling.

Compressive strength of prestressed concrete at release, f'c, shall be 5000 psi.

Compressive strength of precast prestressed concrete at release, f'c, shall be 6000 psi.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be 1/4" and the nominal cross sectional area shall be 0.153 sq. in.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 1/4" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

Bar U(E)

Bar S(E)

Bar S2(E)

Bar S3(E)

BAR S4(E)

BAR U1(E)

BAR U2(E)

BAR U3(E)

BAR U4(E)

Typical Transverse Tie Assembly

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- The nominal diameter shall be 1/4" and the nominal cross sectional area shall be 0.153 sq. in.
- The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/4" lifting pins shall be used to engage the lifting loops during handling.
- A minimum 25/32" lifting pin shall be used to engage the lifting loops during handling.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of precast prestressed concrete at release, f'c, shall be 5000 psi.
PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diagrams to miss the block outs for the transverse ties.

Minimum Bar Lap

- #4 bar = 1'-11"
- #5 bar = 2'-6"

Note: See sheet of for additional details and Bill of Material.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick. Expansion bearing pad shall be bonded to the substructure.

Notes:
- All bearing pads shall be 3" thick.
- 3" Ø Holes
- Expansion bearing pad shall be bonded to the substructure.

SECTION A-A

TYPICAL TRANSVERSE TIE ASSEMBLY

PLAN VIEW

Note: Connect beams in pairs with the transverse tie configuration shown.

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.

Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

The 1" Ø lifting pin shall be used to engage the lifting loops during handling.

Two 1/4" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 21/8" lifting pin shall be used to engage the lifting loops during handling.

Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Compressive strength of prestressed concrete at release, f'c, shall be 6000 psi.

PD-3348-0D 2-17-2017

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. 12' Length 50 ft
PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION A-A

SECTION B-B

(Showing dimensions)

MINIMUM BAR LAP

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
33" x 48" PPC DECK BEAM
STRUCTURE NO.

PD-3348-L
2-17-2017
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick.

Notes:

- Two 3" Ø holes for dowel rods at fixed ends only.
- A minimum 3/8" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Note: Connect beams in pairs with the transverse tie configuration shown.

Section A-A

Typical transverse tie assembly

Notes:

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 3/8" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 3/8" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
### BAR LIST

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<td>10'-0&quot;</td>
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</tbody>
</table>

Note: Spacing of #5 and S/E bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the bolt outs for the transverse ties.

**PLAN VIEW**

- #4 bars at 3'-0" cts., top
- #5 bars at 2'-0"

**SECTION A-A**

- #4 bars at 3'-0" cts., top
- #5 bars at 2'-0"

**SECTION B-B**

- #4 bars at 3'-0" cts., top
- #5 bars at 2'-0"

**MINIMUM BAR LAP**

- #4 bar = 1'-11"
- #5 bar = 2'-0"

Note: Spacing of #5 and S/E bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the bolt outs for the transverse ties.

**Note:** Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 5/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 3/8" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 5000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 6000 psi.
PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION A-A

PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

MINIMUM BAR LAP

#4 bar = 2'-11"
#5 bar = 2'-6"

B (E) or B2 (E)

-#5 bar = 2'-6" length, bottom of top slab
-#4 S(E) bars at 9" cts., bottom
-#4 S2(E) bars at 9" cts., bottom
-#4 A(E) bars at 3'-0" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-5 spaces at 6" = 2'-6"

B2(E)

-#4 A(E) bars at 1'-6" cts., bottom of top slab
-#6 bar = 2'-7"

U1(E)

5 spaces at 6" = 2'-6"

SECTION B-B

(Showing dimensions)

MINIMUM BAR LAP

#4 bar = 2'-11"
#5 bar = 2'-6"

S(E) and S1(E)

-#4 S(E) bars at 9" cts., top
-#4 S1(E) bars at 9" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-Symmetrical about

S2(E)

-#5 bar = 2'-6" length, bottom of top slab
-#4 S(E) bars at 9" cts., bottom
-#4 S2(E) bars at 9" cts., bottom
-#4 A(E) bars at 3'-0" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-5 spaces at 6" = 2'-6"

S1(E)

-#4 S(E) bars at 9" cts., top
-#4 S1(E) bars at 9" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-5 spaces at 6" = 2'-6"

U(E)

-#4 A(E) bars at 1'-6" cts., bottom of top slab
-#6 bar = 2'-7"

B(E)

10'-0" length, bottom of top slab

U1(E)

5 spaces at 6" = 2'-6"

SECTION B-B

(Showing dimensions)

MINIMUM BAR LAP

#4 bar = 2'-11"
#5 bar = 2'-6"

B (E) or B2 (E)

-#5 bar = 2'-6" length, bottom of top slab
-#4 S(E) bars at 9" cts., bottom
-#4 S2(E) bars at 9" cts., bottom
-#4 A(E) bars at 3'-0" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-5 spaces at 6" = 2'-6"

B2(E)

-#4 A(E) bars at 1'-6" cts., bottom of top slab
-#6 bar = 2'-7"

U1(E)

5 spaces at 6" = 2'-6"

SECTION B-B

(Showing dimensions)

MINIMUM BAR LAP

#4 bar = 2'-11"
#5 bar = 2'-6"

S(E) and S1(E)

-#4 S(E) bars at 9" cts., top
-#4 S1(E) bars at 9" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-Symmetrical about

S2(E)

-#5 bar = 2'-6" length, bottom of top slab
-#4 S(E) bars at 9" cts., bottom
-#4 S2(E) bars at 9" cts., bottom
-#4 A(E) bars at 3'-0" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-5 spaces at 6" = 2'-6"

S1(E)

-#4 S(E) bars at 9" cts., top
-#4 S1(E) bars at 9" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-5 spaces at 6" = 2'-6"

U(E)

-#4 A(E) bars at 1'-6" cts., bottom of top slab
-#6 bar = 2'-7"

B(E)

10'-0" length, bottom of top slab

U1(E)

5 spaces at 6" = 2'-6"

SECTION B-B

(Showing dimensions)

MINIMUM BAR LAP

#4 bar = 2'-11"
#5 bar = 2'-6"

B (E) or B2 (E)

-#5 bar = 2'-6" length, bottom of top slab
-#4 S(E) bars at 9" cts., bottom
-#4 S2(E) bars at 9" cts., bottom
-#4 A(E) bars at 3'-0" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-5 spaces at 6" = 2'-6"

B2(E)

-#4 A(E) bars at 1'-6" cts., bottom of top slab
-#6 bar = 2'-7"

U1(E)

5 spaces at 6" = 2'-6"

SECTION B-B

(Showing dimensions)

MINIMUM BAR LAP

#4 bar = 2'-11"
#5 bar = 2'-6"

S(E) and S1(E)

-#4 S(E) bars at 9" cts., top
-#4 S1(E) bars at 9" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-Symmetrical about

S2(E)

-#5 bar = 2'-6" length, bottom of top slab
-#4 S(E) bars at 9" cts., bottom
-#4 S2(E) bars at 9" cts., bottom
-#4 A(E) bars at 3'-0" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-5 spaces at 6" = 2'-6"

S1(E)

-#4 S(E) bars at 9" cts., top
-#4 S1(E) bars at 9" cts., top
-#4 RE(E) bars at 5'-6" cts., bottom of top slab
-5 spaces at 6" = 2'-6"

U(E)

-#4 A(E) bars at 1'-6" cts., bottom of top slab
-#6 bar = 2'-7"

B(E)

10'-0" length, bottom of top slab

U1(E)

5 spaces at 6" = 2'-6"
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. Expansion bearing pad shall be bonded to the substructure.

Notes:
- All bearing pads shall be 1" thick.
- Excess holes when using expansion bearings.
- Expansion bearing pad shall be bonded to the substructure.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/8" and the nominal cross-sectional area shall be 0.133 sq. in.

The 1-1/8" rods in the transverse tie assembly shall be tightened to a snug fit and the threads shall be used in the concrete for precast prestressed concrete deck beams. The compressive strength of prestressed concrete, f'c, shall be 5000 psi.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

The 1" Ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads shall be used in the concrete for precast prestressed concrete deck beams. The compressive strength of prestressed concrete, f'c, shall be 5000 psi.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete, f'c, shall be 5000 psi.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete, f'c, shall be 5000 psi.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
**Plan View**

- Fan -4# S4(E) bars, top. Cut to fit
- Fan -4# S4(E) bars, bottom. Cut to fit
- End to end beam

**Section A-A**

- 6-#4 S1(E) bars, top
- 5-#4 S1(E) bars, bottom

**Section B-B**

- 4-#5 B(E) bars full length, bottom of top slab
- 3-#4 B1(E) bars full length, top of slab
- 2-#5 B2(E) bars, top

**Minimum Bar Lap**

- #5 bar = 2'-6" (Showing reinforcement and permissible strand locations)
- Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

**Bar List**

- For information only
- #4...#6 bars
- #5 bars
- Symmetrically about the centerline of beam in the face of outside beams

**Note:** Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.
**Transverse Tie Configuration**

- **Fabric Bearing Pad**
  - Interior
  - Exterior

- **Fixed**

- **Section A-A**

- **Typical Transverse Tie Assembly**

- **Notes:**
  - All bearing pads shall be 1" thick.
  - Omit holes when using expansion bearings.
  - Expansion bearing pad shall be bonded to the substructure.

- **Prestressing Steel:**
  - Uncoated high strength, low relaxation 7-wire strand, Grade 270.

- **Compressive Strength:**
  - Prestressed concrete at release, \( f'c_{ci} \), shall be 5000 psi.
  - Prestressed concrete, \( f'c \), shall be 6000 psi.
  - Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
  - Compressive strength of prestressed concrete, \( f_c \), shall be 6000 psi.
  - Compressive strength of prestressed concrete at release, \( f'c_{ci} \), shall be 5000 psi.

- **Dimensions:**
  - 3" Ø holes
  - 4" Ø lifting pin

- **Other Notes:**
  - Specifications and details are subject to change prior to construction.
  - All materials shall comply with the Standard Specifications.
  - Use of materials not listed may require approval from the Engineer.
  - Connections and details shall be checked and approved by the Engineer.
  - Final dimensions shall be determined by the Engineer.

---

**Plan View**

- **Fabric Bearing Pad:**
  - Interior
  - Exterior

- **Fixed**

- **Section A-A**

- **Typical Transverse Tie Assembly**

- **Notes:**
  - Connect beams in pairs with the transverse tie configuration shown.

---

**Lifting Loop Detail**

- **Bill of Material**

- **PD-4236-LD**
- **2-17-2017**
**PLAN VIEW**

- **U(E) bars** at 9" cts., top
- **#4 S(E) bars** at 9" cts., top
- **#4 S2(E) bars** at 9" cts., top
- **S(E) and S1(E) strands**
- **S(E) and S2(E) strands**
- **S(E) and S3(E) strands**
- **S(E) and S4(E) strands**
- **#5 bar = 2'-6"**
- **#4 bar = 1'-11"**

**Note:** Spacing of #5(E) and S(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

**MINIMUM BAR LAP**

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<td>#3</td>
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</tbody>
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**Section B-B**

- **4-#4 U1(E) bars, top**
- **Fan-#4 S3(E) bars, bottom. Cut to fit**
- **Fan-#4 S4(E) bars, top. Cut to fit**
- **2-#4 S3(E) bars, bottom**
- **2-#4 S4(E) bars, top**
- **6-#4 S(E) bars, bottom**
- **6-#4 S1(E) bars, top**
- **#4 A(E) bars at 1'-6" cts., bottom of top slab**
- **#4 A(E) bars at 1'-6" cts., bottom**
- **#4 A(E) bars at 3'-0" cts., top**
- **3-#4 B1(E) bars, top**
- **4-#5 B(E) bars full length, top**
- **3-#4 B1(E) bars, full length, bottom of top slab**

**Note:** Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

**Sheet of** for additional details and Bill of Material.
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.153 sq. in.
The 7/8" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set.

Two 3" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 5/8" lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications,
shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Expansion bearing pad shall be bonded to the substructure.
Omit holes when using expansion bearings.
All bearing pads shall be 1" thick.

Expansion bearing pad shall be bonded to the substructure.
Notes:

- **Fabric adjusting shims** of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 5/8" lifting pin shall be used to engage the lifting loops during handling.
- **Corrosion Inhibitor**, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

**Fabric bearing pad**
- **Fixed**
  - All bearing pads shall be 1" thick.
  - Omit holes when using expansion bearings.
  - Expansion bearing pad shall be bonded to the substructure.

**Notes:**
- Connect beams in pairs with the transverse tie configuration shown.
### BAR LIST

**ONE BEAM ONLY**

(for information only)

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Note: See sheet of for additional details and Bill of Material.

### MINIMUM BAR LAP

Note: Place the number of strands specified in each row symmetricaly about the centerline of beam in the permissible strand locations shown.

- #4 S(E) bars at 9" cts., bottom
- #4 S2(E) bars at 9" cts., top
- #-4 A(E) bars at 3'-0" cts., bottom
- &#4 S(E) bars at 9" cts., bottom
- #4 S1(E) bars at 3'-0" cts., top
- #4 S2(E) bars at 9" cts., top
- #4 A(E) bars at 1'-6" cts., bottom
- #5 B(E) bars full length, top slab
- #5 B2(E) bars full length, top slab
- #4 S(E) bars bottom
- #4 S(E) bars top
- 2 spaces at 6" = 2'-0"
- 5 spaces at 6" = 2'-6"
- 9" cts.
- 9" cts.

### Notes

- Symmetrical about the face of outside beams
- Omit key on exterior
- Strands must have a minimum of 6" lap
- Lifting loop of lift 60° min. angle
- U(E) bars, topliff
- 7-#4 S(E) bars, bottom
- 7-#4 S(E) bars, top
- Maximum lap = 15 spaces or 2'-6"

### Plan View

- Note: Spacing of S(E) and S2(E) bars may be adjusted up to 6" in the immediate area of the transverse tie diagrams to miss the block outs for the transverse ties.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick. Expansion bearing pad shall be bonded to the substructure.

Notes:
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1/4" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/4" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2" Ø lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, $f'c$, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, $f'ci$, shall be 5000 psi.
- Prestressing shall be on the top surface of the transverse tie assembly.

**NOTES**
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1/4" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/4" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2" Ø lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, $f'c$, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, $f'ci$, shall be 5000 psi.
PLAN VIEW

MINIMUM BAR LAP

NOTE: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diagrams to miss the block outs for the transverse ties.

SECTION B-B

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST

(Sheet No. 4248-L)

For information only

Sheet 1 of 1

See sheet of for additional details and Bill of Material.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

42" x 48" PPC DECK BEAM
STRUCTURE NO.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick.

Notes:
- Connect beams in pairs with the skew configuration shown.
- Expansion bearing pad shall be bonded to the substructure.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1/8" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- A minimum 2½" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. A compressive strength of prestressed concrete, f′c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f′ci, shall be 5000 psi.
PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION A-A

End to end beam

Fan -#4 S4(E) bars, top. Cut to fit
Fan -#4 S3(E) bars, bottom. Cut to fit

Fan -#4 S4(E) bars, top. Cut to fit
Fan -#4 S3(E) bars, bottom. Cut to fit

PLAN VIEW

MINIMUM BAR LAP

#4 bar = 1'-12"
#5 bar = 2'-6"

Bar List
One Beam Only
(For Information Only)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: See sheet of for additional details and Bill of Material.
NOTES

- Prestressing steel shall be uncoated high-strength, low-relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1/2" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set.
- Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2/5" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete at release, f'c', shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'c', shall be 5000 psi.
- Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings.
- All bearing pads shall be 1" thick. Expansion bearing pad shall be bonded to the substructure.

PLAN VIEW

Note: Connect beams in pairs with the transverse tie configuration shown.

SECTION A-A

TYPICAL TRANSVERSE TIE ASSEMBLY

LIFTING LOOP DETAIL