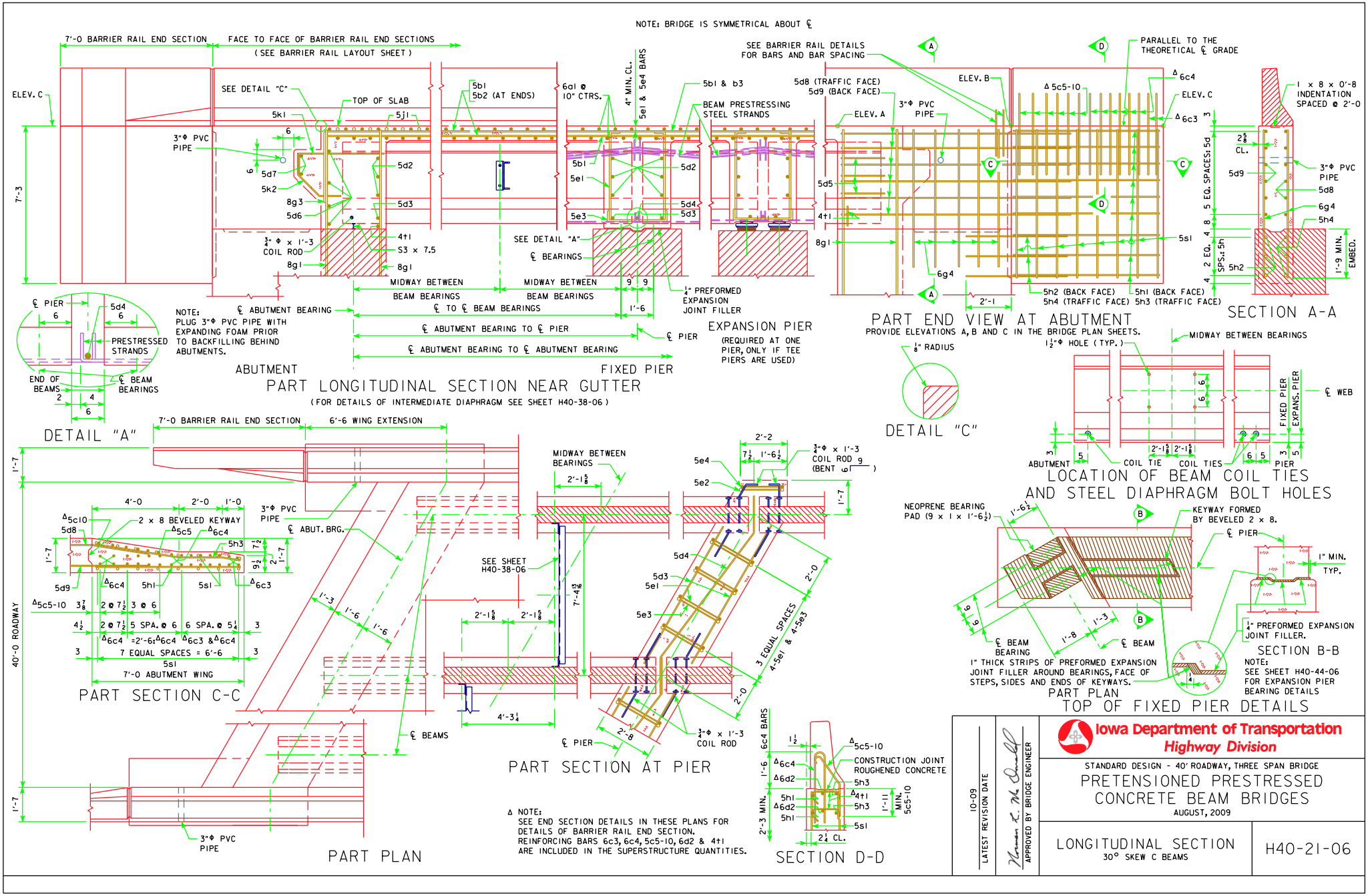
NOTE: BRIDGE IS SYMMETRICAL ABOUT ℄
7'-0 BARRIER RAIL END SECTION
FACE TO FACE OF BARRIER RAIL END SECTIONS
(SEE BARRIER RAIL LAYOUT SHEET)
ELEV. C
SEE DETAIL "C"
TOP OF SLAB
5k1
5j1
5b1
5b2 (AT ENDS)
6a1 @ 10" CTRS.
4" MIN. CL.
5e1 & 5e4 BARS
5b1 & b3
BEAM PRESTRESSING STEEL STRANDS
SEE BARRIER RAIL DETAILS FOR BARS AND BAR SPACING
5d8 (TRAFFIC FACE)
5d9 (BACK FACE)
3"Φ PVC PIPE
ELEV. A
ELEV. B
Δ 5c5-10
Δ 6c4
ELEV. C
Δ 6c3
PARALLEL TO THE THEORETICAL ℄ GRADE
1 x 8 x 0'-8 INDENTATION SPACED @ 2'-0
7'-3
5d7
5k2
8g3
5d6
5d2
5d3
4t1
S3 x 7.5
8g1
3/4" Φ x 1'-3 COIL ROD
5b1
5e1
5e3
5d4
SEE DETAIL "A"
℄ BEARINGS
5d5
5s1
6g4
5h2 (BACK FACE)
5h4 (TRAFFIC FACE)
5h1 (BACK FACE)
5h3 (TRAFFIC FACE)
2'-1
5 EQ. SPACES: 5d
2 EQ. SPS.: 5h
2 5/8 CL.
5d9
5d8
6g4
5h4
5h2
1'-9 MIN. EMBED.
℄ PIER
5d4
PRESTRESSED STRANDS
END OF BEAMS
℄ BEAM BEARINGS
NOTE: PLUG 3"Φ PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.
℄ ABUTMENT BEARING
MIDWAY BETWEEN BEAM BEARINGS
℄ TO ℄ BEAM BEARINGS
℄ ABUTMENT BEARING TO ℄ PIER
℄ ABUTMENT BEARING TO ℄ ABUTMENT BEARING
1/4" PREFORMED EXPANSION JOINT FILLER
℄ PIER
ABUTMENT
FIXED PIER
EXPANSION PIER
(REQUIRED AT ONE PIER, ONLY IF TEE PIERS ARE USED)
PART LONGITUDINAL SECTION NEAR GUTTER
(FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE SHEET H40-38-06)
DETAIL "A"
PART END VIEW AT ABUTMENT
PROVIDE ELEVATIONS A, B AND C IN THE BRIDGE PLAN SHEETS.
SECTION A-A
1/8" RADIUS
DETAIL "C"
1 1/2"Φ HOLE (TYP.)
MIDWAY BETWEEN BEARINGS
℄ WEB
FIXED PIER
EXPANS. PIER
ABUTMENT
COIL TIE
COIL TIES
PIER
LOCATION OF BEAM COIL TIES AND STEEL DIAPHRAGM BOLT HOLES
7'-0 BARRIER RAIL END SECTION
6'-6 WING EXTENSION
40'-0 ROADWAY
4'-0
2'-0
1'-0
2 x 8 BEVELED KEYWAY
Δ5c10
5d8
Δ5c5
Δ6c4
5h3
5d9
Δ6c4
5h1
5s1
Δ6c3
Δ5c5-10
2 @ 7 1/2
3 @ 6
5 SPA. @ 6
6 SPA. @ 5 1/4
Δ6c4 =2'-6: Δ6c4 Δ6c3 & Δ6c4
7 EQUAL SPACES = 6'-6
5s1
7'-0 ABUTMENT WING
PART SECTION C-C
3"Φ PVC PIPE
℄ ABUT. BRG.
℄ BEAMS
3"Φ PVC PIPE
PART PLAN
MIDWAY BETWEEN BEARINGS
2'-1 5/8
SEE SHEET H40-38-06
7'-4 13/16
4'-3 1/4
℄ PIER
2'-8
2'-2
3/4"Φ x 1'-3 COIL ROD 9 (BENT 6)
5e4
5e2
5d4
5d3
5e1
5e3
3 EQUAL SPACES 4-5e1 & 4-5e3
3/4"Φ x 1'-3 COIL ROD
PART SECTION AT PIER
NEOPRENE BEARING PAD (9 x 1 x 1'-6 1/2)
KEYWAY FORMED BY BEVELED 2 x 8.
℄ PIER
℄ BEAM BEARING
℄ BEAM
1" THICK STRIPS OF PREFORMED EXPANSION JOINT FILLER AROUND BEARINGS, FACE OF STEPS, SIDES AND ENDS OF KEYWAYS.
PART PLAN
1" MIN. TYP.
1/4" PREFORMED EXPANSION JOINT FILLER.
SECTION B-B
NOTE: SEE SHEET H40-44-06 FOR EXPANSION PIER BEARING DETAILS
TOP OF FIXED PIER DETAILS
Δ NOTE: SEE END SECTION DETAILS IN THESE PLANS FOR DETAILS OF BARRIER RAIL END SECTION. REINFORCING BARS 6c3, 6c4, 5c5-10, 6d2 & 4t1 ARE INCLUDED IN THE SUPERSTRUCTURE QUANTITIES.
6c4 BARS
Δ5c5-10
CONSTRUCTION JOINT ROUGHENED CONCRETE
Δ6c4
Δ6d2
5h3
Δ4t1
5h1
Δ6d2
5h1
5s1
2'-3 MIN.
1'-6
1'-11 MIN. 5c5-10
2 1/4 CL.
SECTION D-D
REVISED 10-09 - ABUT. WINGS SHAPE CHANGED.
10-09
LATEST REVISION DATE
APPROVED BY BRIDGE ENGINEER
Iowa Department of Transportation
Highway Division
STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE
PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES
AUGUST, 2009
LONGITUDINAL SECTION
30° SKEW C BEAMS
H40-21-06