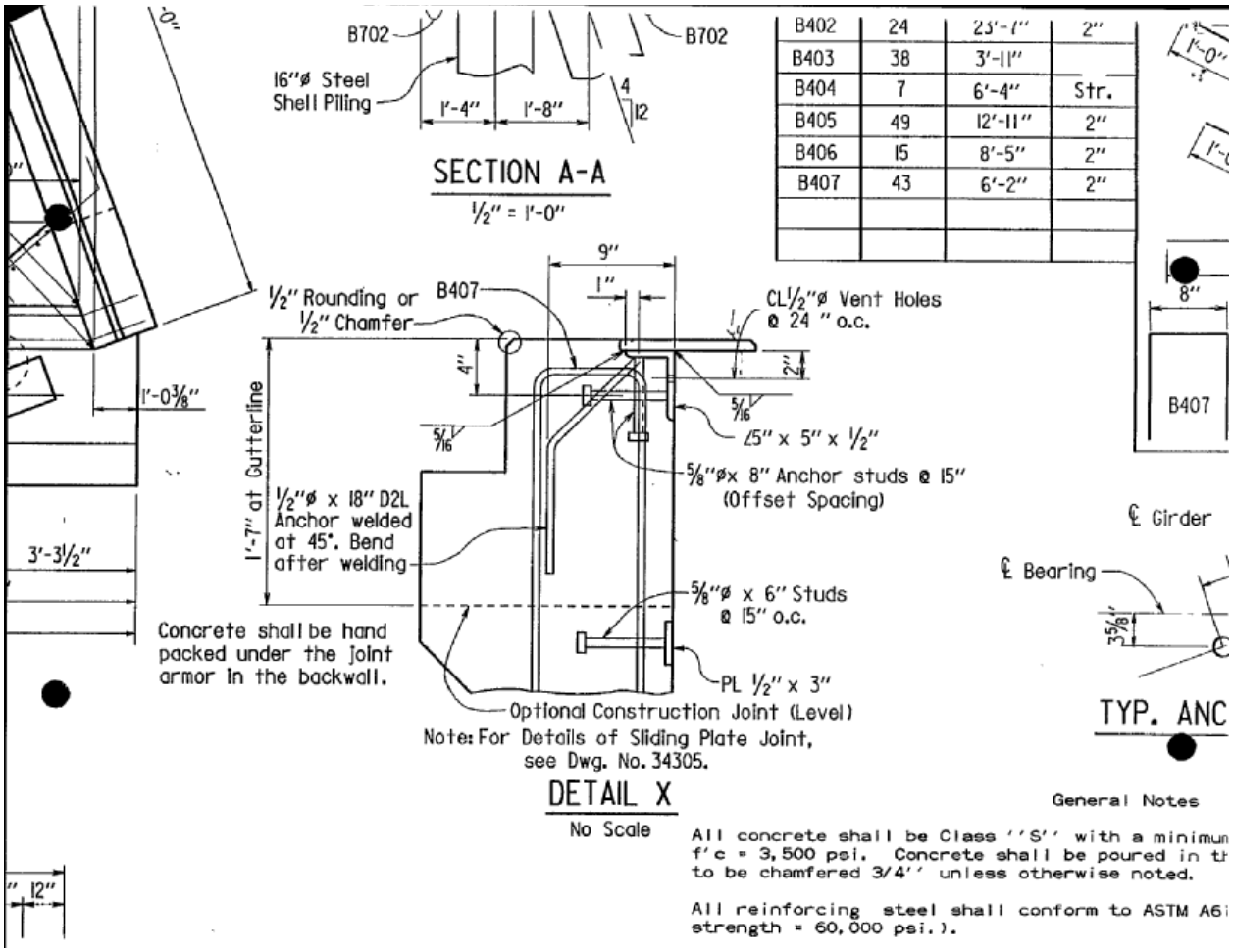
7-16-93

The attached drawings show a revised anchor system for U2 joint armor in backwalls. The revision was made after a failure occurred on a recently constructed bridge on I40 over Cadron Creek. It appeared that the construction sequence and construction tolerances left the¾ plate above the span when the bridge was opened to traffic. The original anchor system was insufficient when the¾" plated acted as a cantilever. A field review of six U2 joints revealed varying degrees of contact for the¾" plate and span. The worst joint had three points of contact with up to 3/16" gap elsewhere. In view of the observed construction tolerances and considering that the proposed LRFD specs require joint armor to be designed as a cantilever when spans are supported by elastomeric bearings, the attached changes were made. **Note the additional backwall reinforcing and hew optional construction joint. We will be using this system on all jobs from today forward.

Handwritten:

*Dale said to try this on a few jobs.*


B702
B702
16"ø Steel Shell Piling
1'-4"
1'-8"
4
12
SECTION A-A
1/2" = 1'-0"
B402 24 23'-1" 2"
B403 38 3'-11"
B404 7 6'-4" Str.
B405 49 12'-11" 2"
B406 15 8'-5" 2"
B407 43 6'-2" 2"
9"
1"
1/2" Rounding or 1/2" Chamfer
B407
CL 1/2"ø Vent Holes @ 24 " o.c.
4"
2"
5/16
5/16
L5" x 5" x 1/2"
5/8"øx 8" Anchor studs @ 15" (Offset Spacing)
1'-0 3/8"
1'-7" at Gutterline
1/2"ø x 18" D2L Anchor welded at 45°. Bend after welding
3'-3 1/2"
5/8"ø x 6" Studs @ 15" o.c.
PL 1/2" x 3"
Concrete shall be hand packed under the joint armor in the backwall.
Optional Construction Joint (Level)
Note: For Details of Sliding Plate Joint, see Dwg. No. 34305.
DETAIL X
No Scale
8"
B407
℄ Girder
℄ Bearing
3 5/8"
TYP. ANC
12"
General Notes
All concrete shall be Class ''S'' with a minimum
f'c = 3,500 psi. Concrete shall be poured in th
to be chamfered 3/4'' unless otherwise noted.
All reinforcing steel shall conform to ASTM A6
strength = 60,000 psi.).