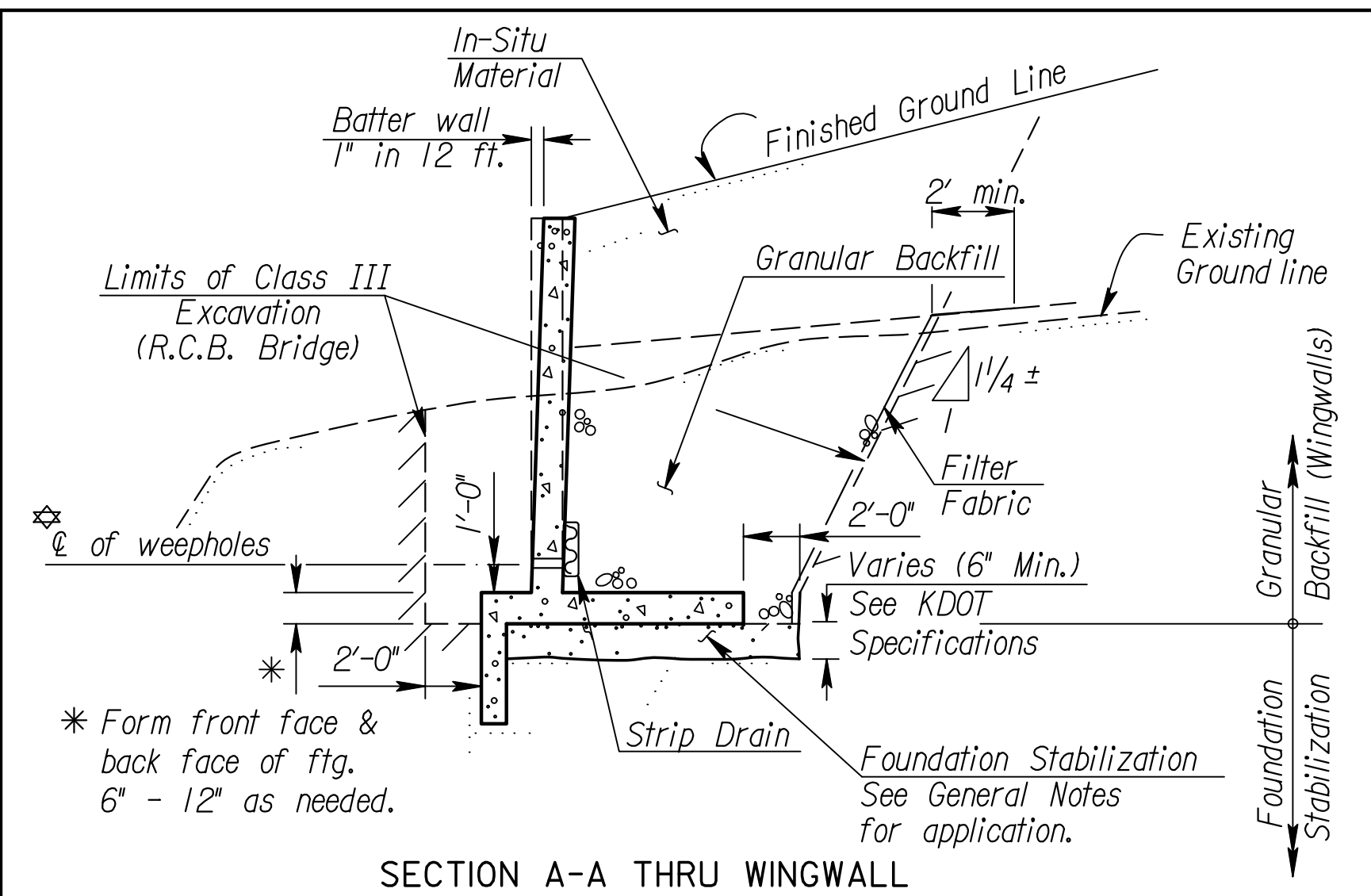
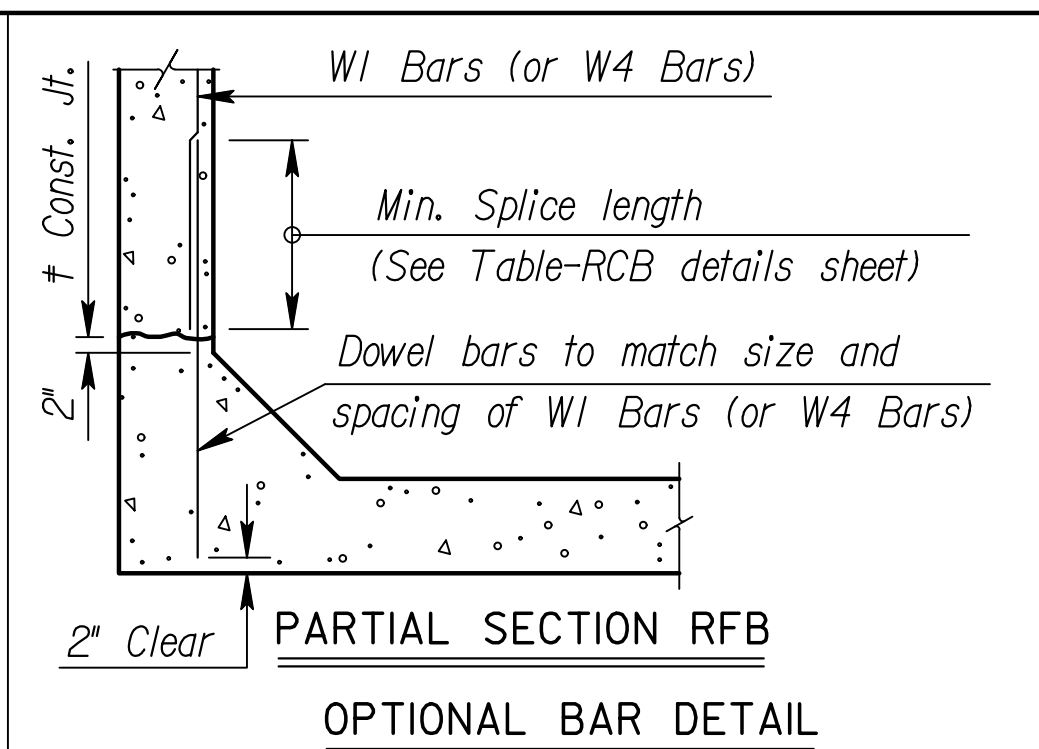


STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-85435	****	28	48



**SECTION A-A THRU WINGWALL**  
Granular Backfill And Foundation Stabilization

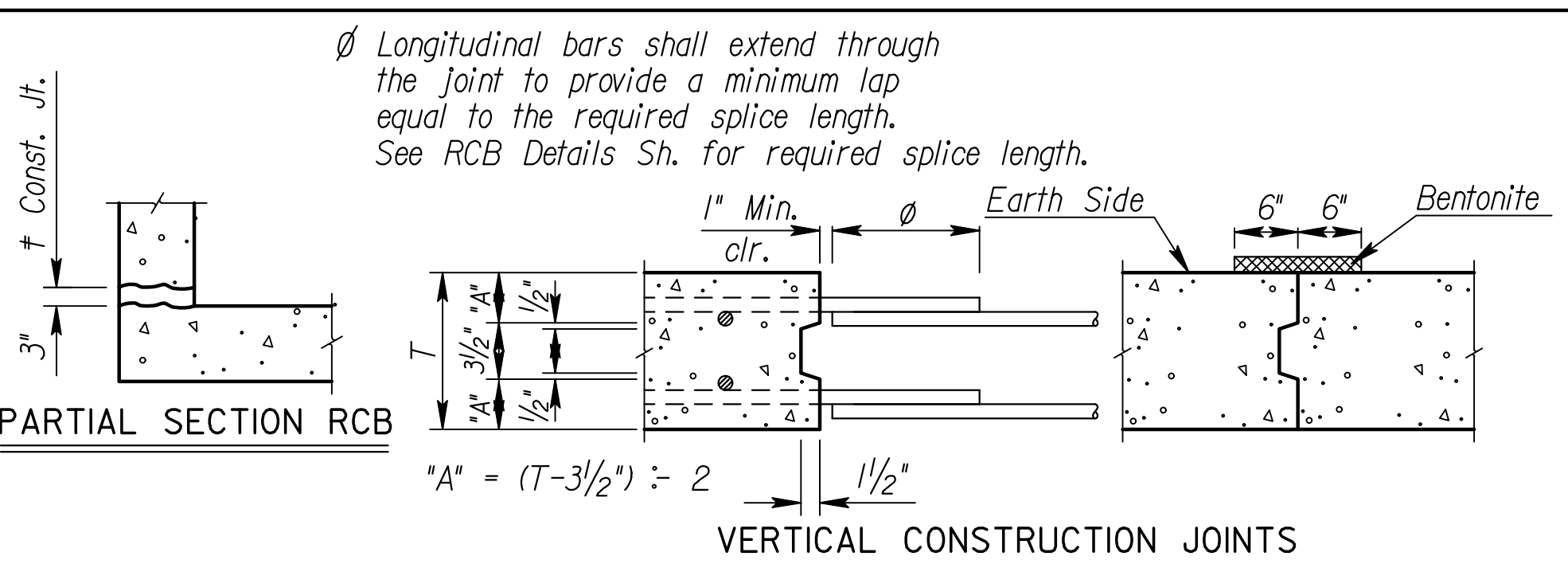


**OPTIONAL BAR DETAIL**

The Contractor shall have the option of using Dowel Bars to match vertical wall bars as shown, however no allowance will be made for additional steel required for bar laps.

**OPTIONAL COLD JOINT**

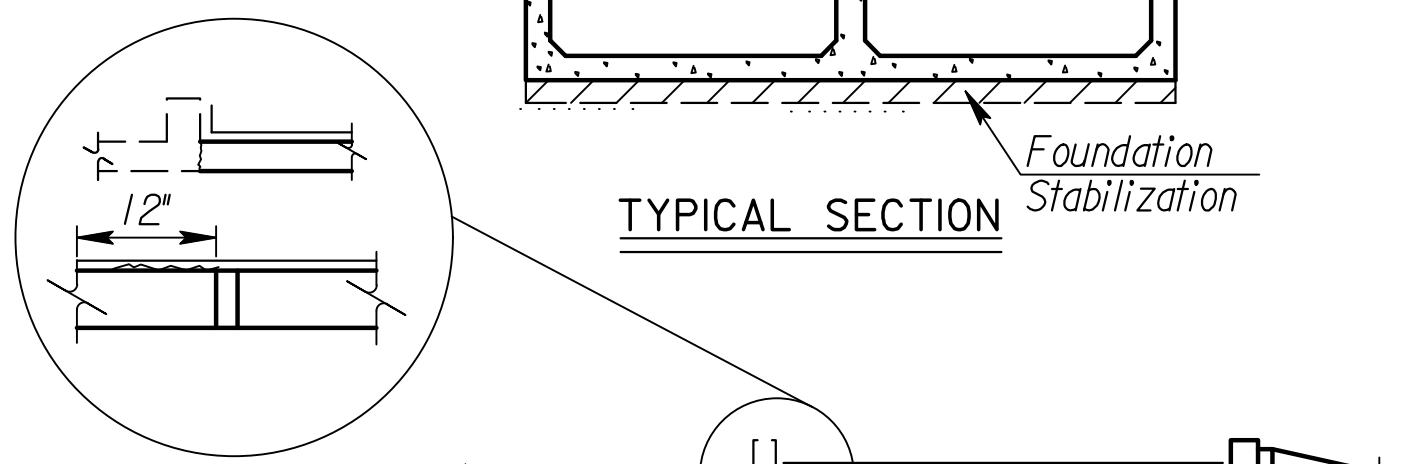
The Contractor has the option of placing the Lower Horizontal Construction Joint at the top of the slab for RCB's or at the top of the fillet for RFB's



**VERTICAL CONSTRUCTION JOINTS**

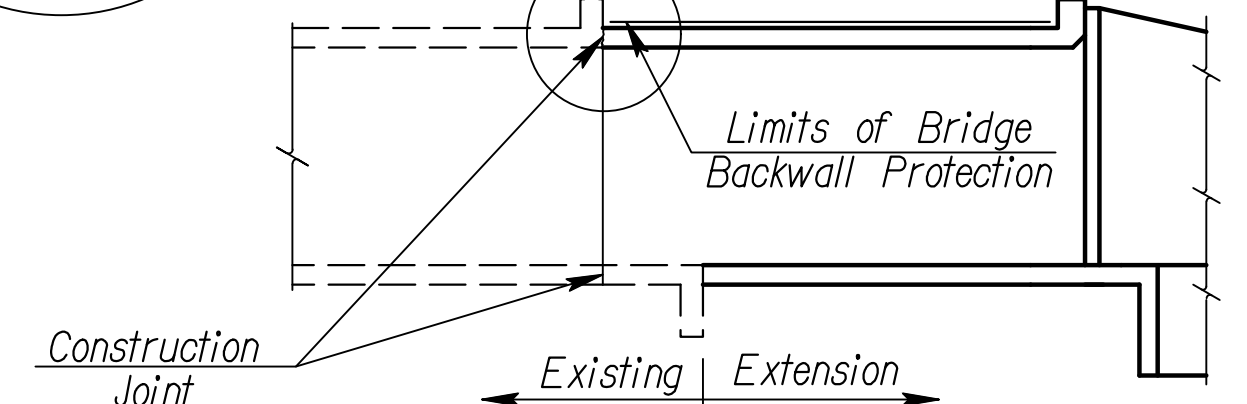
NOTE: Vertical construction joints shall be perpendicular to the longitudinal axis of the RCB and shall be placed at any location as needed for construction and as approved by the Engineer.

NOTE: Barrel Construction Joints located in a median with less than 5 ft. of fill or at locations specified by the Engineer, shall be protected by a bentonite based system as shown. Place the bentonite on the exterior walls and top slab. See requirements for bentonite in the KDOT Specifications for "Bridge Backwall Protection System". Material and installation of the bentonite system shall be subsidiary to the bid item "Grade 4.0 Concrete".

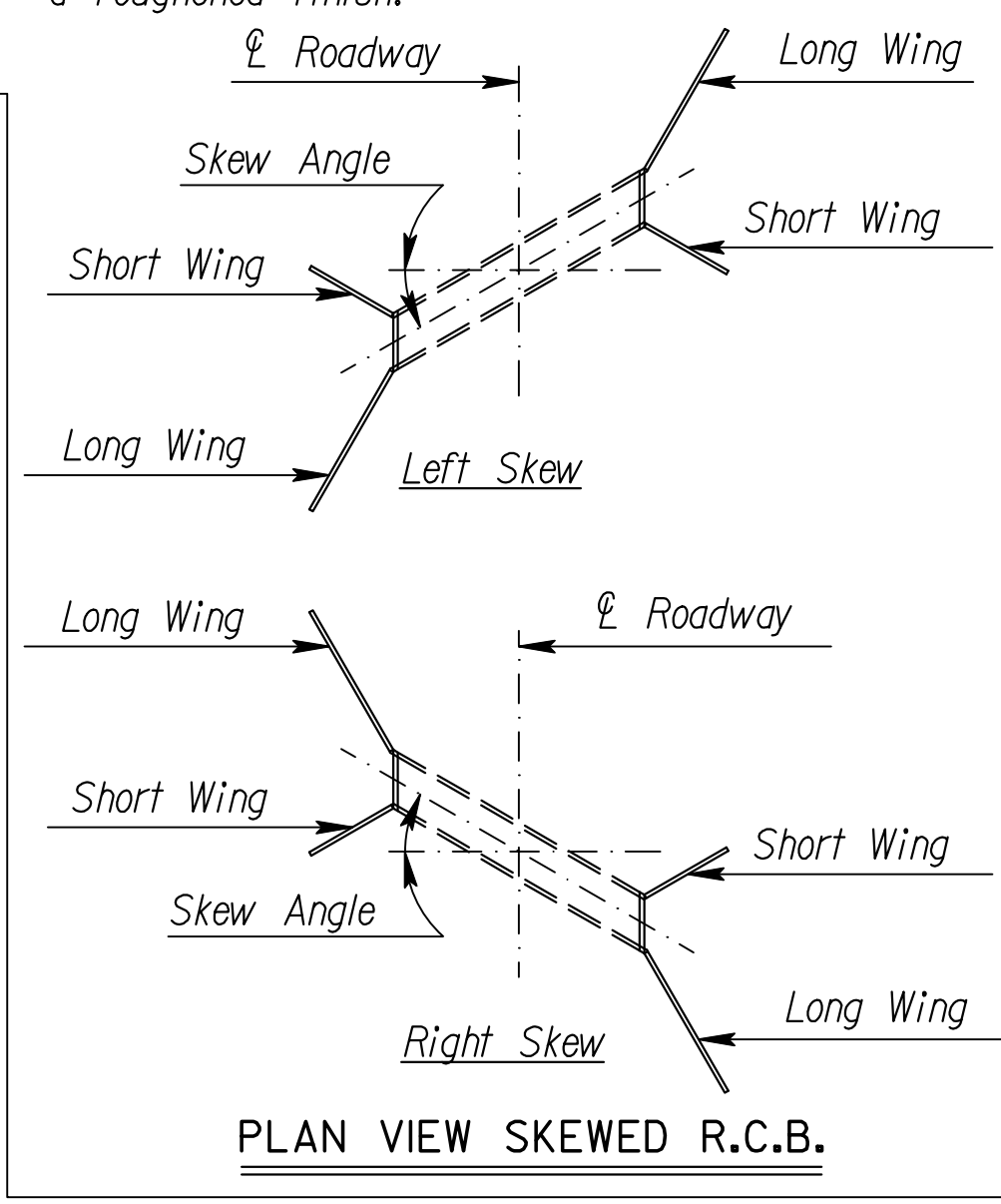


**TYPICAL SECTION**

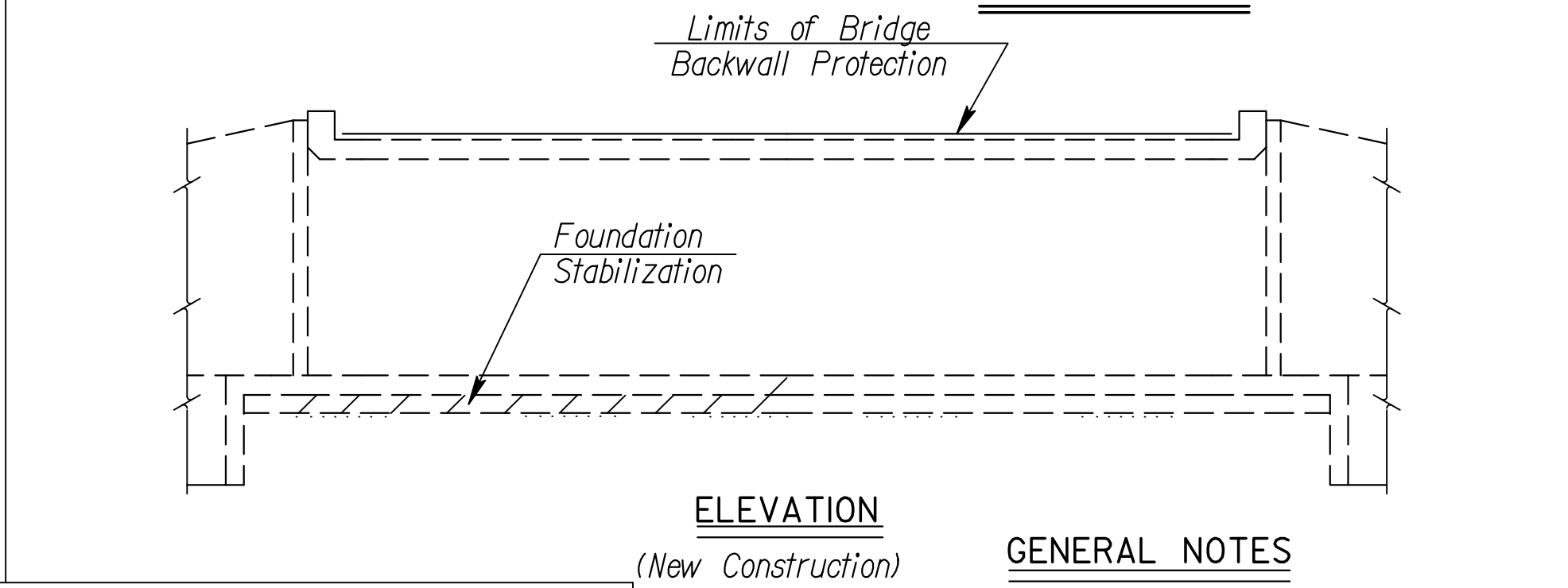
\* See "Typical Culvert Extension" RDO80 for additional information.



**BOX EXTENSION**



**PLAN VIEW SKEWED R.C.B.**



**ELEVATION**  
(New Construction)

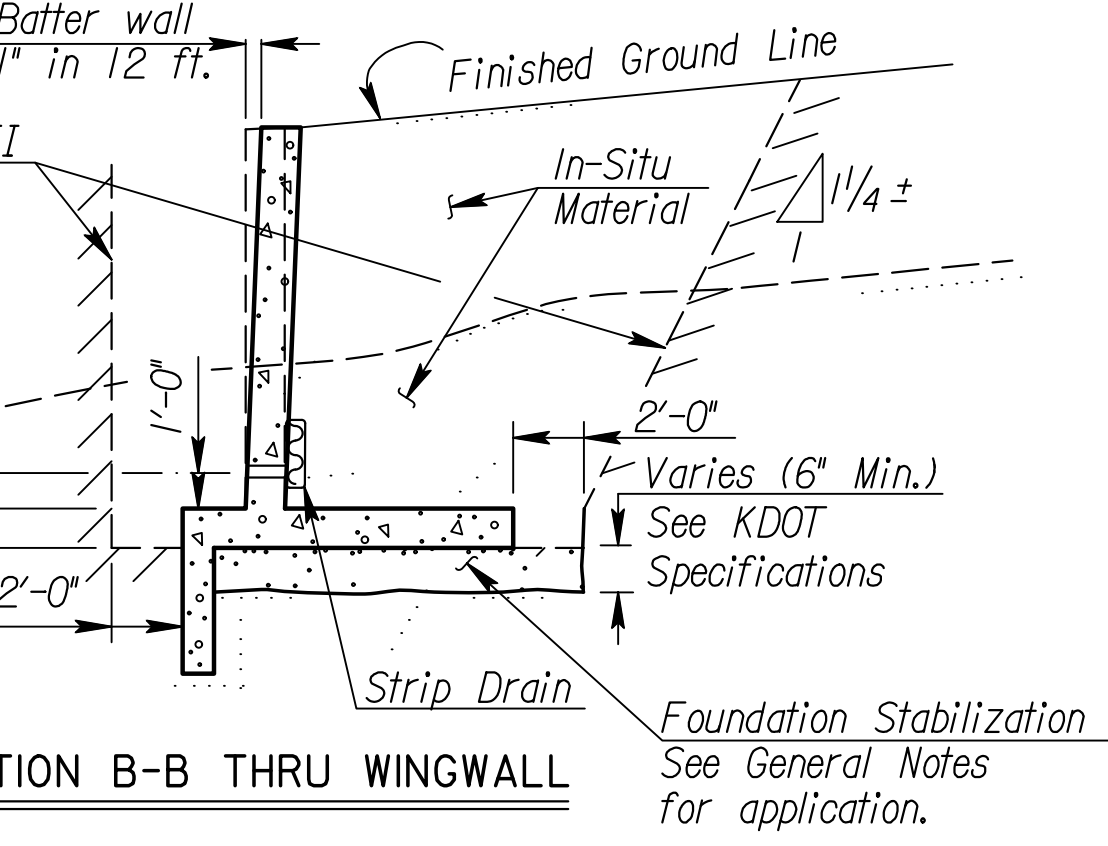
**GENERAL NOTES**

**GENERAL NOTES**

**Foundation Stabilization:**  
The depth of Foundation Stabilization may be increased by the Engineer. The Contractor may under-run Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

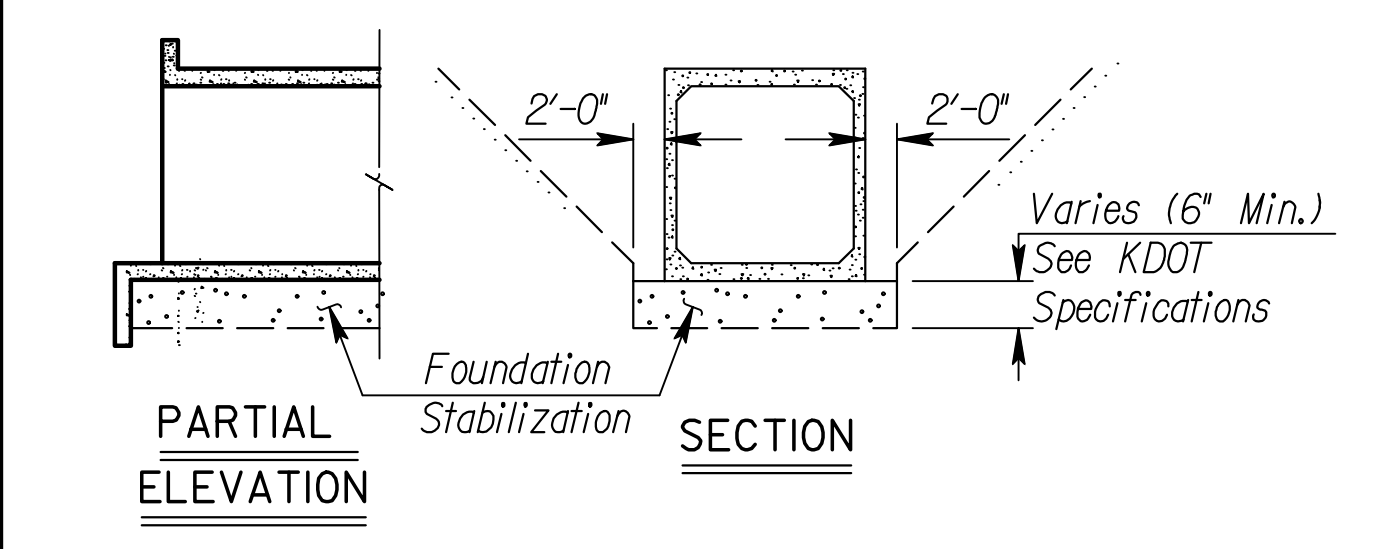
**Granular Backfill (Wingwalls):**  
1. Granular Backfill shall be used to backfill behind wingwalls to the limits shown in the WINGWALL PLAN and Elevation detail. Granular Backfill construction may be used separately or combined with Foundation Stabilization as directed by the Engineer.  
2. Measurement for the bid item, "Granular Backfill (Wingwalls)", shall be measured in Cubic Yards to the theoretical limits as shown.  
3. Material for Granular Backfill (Wingwalls) shall conform to the requirements of SB-1, SB-2, SCA-2, SCA-3 or SCA-5.  
4. Consolidate Granular Backfill using hand equipment only. Avoid over consolidation.  
5. Use filter fabric complying with Section 1710. Filter Fabric is subsidiary to "Granular Backfill". Use only within the limits of Granular Backfill.

**In-Situ Backfill (Wingwalls):**  
1. Use any material found within the project limits except Highly Plastic Clay(s) or organic material. The material is subsidiary to "Granular Backfill".  
2. Use Type "B" Compaction.  
3. Use only hand or walk behind equipment for Compaction.

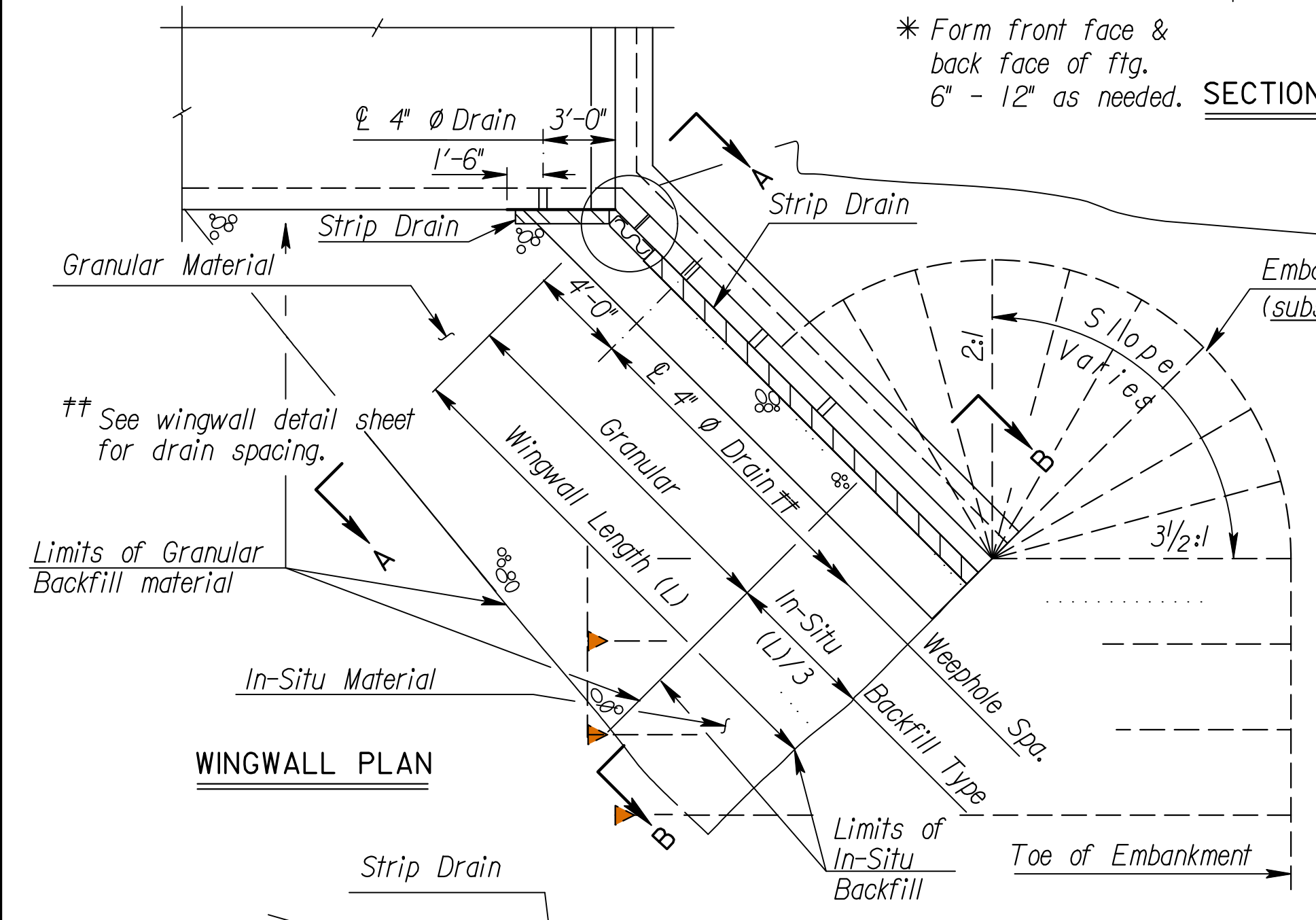


**SECTION B-B THRU WINGWALL**

Weep holes will be adjusted up by the amount of embedment shown on BR025 if the structure is embedded.



**PARTIAL ELEVATION**



**WINGWALL PLAN**

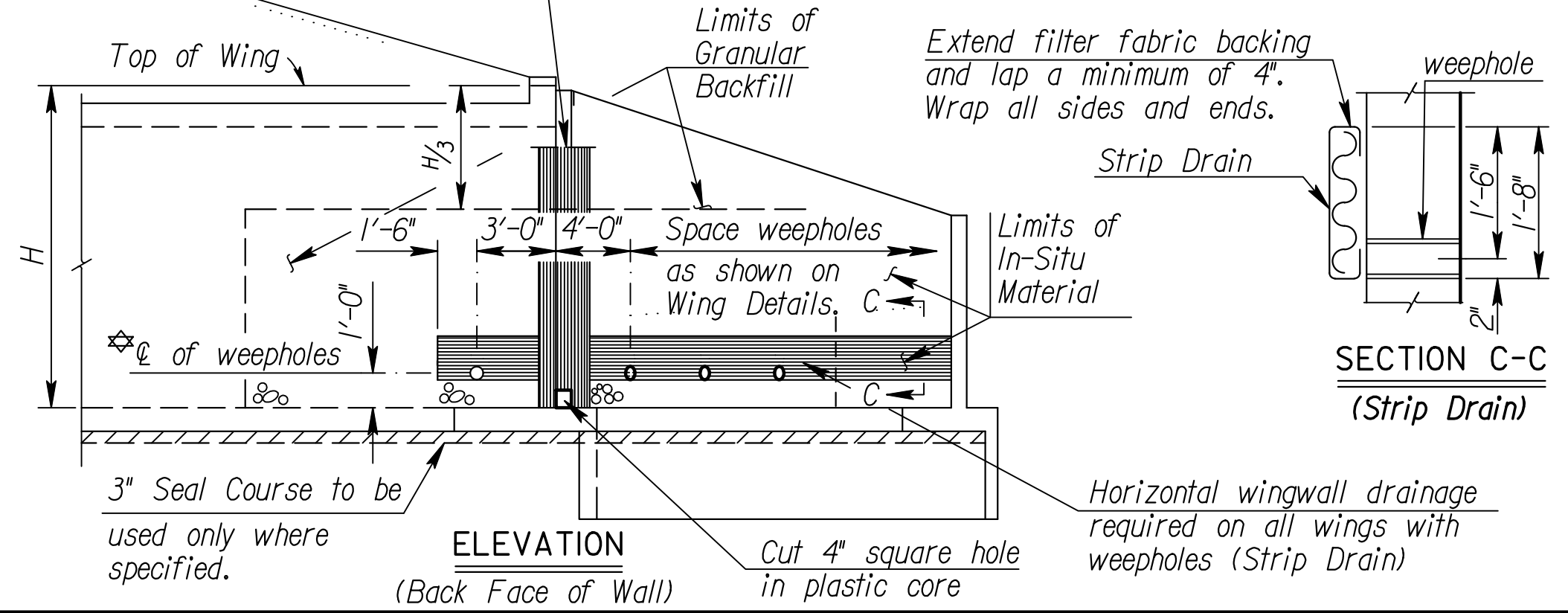
**VERTICAL STRIP DRAIN**

**GENERAL NOTES**

**Wingwall Drainage:**  
1. All wingwalls with weepholes shall have horizontal and vertical wingwall drainage as shown. Strip drains will be used. See KDOT Specifications for "Abutment Strip Drains" for strip drain requirements.  
2. Construction and materials for wingwall drainage, including weepholes, and strip drain shall be subsidiary to the bid item, "Grade 4.0 Concrete". Weepholes may be a formed opening or corrugated polyethylene tubing.

**Wingwall Foundation Stabilization:**  
The Foundation Stabilization quantity has been calculated to the limits shown in the Section Thru Wingwall. The depth may be increased by the Engineer. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

**Seal Course:**  
1. Seal Course consisting of 3" min. of Commercial Grade Concrete shall be constructed to the limits directed by the Engineer. No reinforcing in the floor of the slab or wall footing shall be placed until the Seal Course has gained sufficient strength to permit working upon it without injury.



**SECTION C-C (Strip Drain)**

**ELEVATION**  
(Back Face of Wall)

**Bridge Backwall Protection System:**  
1. For all structures with less than or equal to 2'-0" of fill, apply a "Bridge Backwall Protection System" from Section 1700 to the limits shown. Do not place hot mix asphalt directly on this material.  
2. Use a "non-coal tar" material from KDOT's approved list.  
3. Protect this material from damage during backfilling. Repair at no additional cost.  
4. When the Plans show hot mix asphalt placed directly on the slab, substitute "Pavement Water Proofing" material from Section 800, this material shall be subsidiary. Wait 28 days after top slab is completed before applying this material.

NO.	DATE	REVISIONS	BY	APP'D
7	10/11/13	Granular Backfill Limits	JPJ	LRR
6	10/11/12	Added Weep Hole Note	JPJ	TLF
5	8/2/12	Modified Backwall Notes	JPJ	TLF
4	3/7/12	Added Filter Fabric to Detail	JPJ	TLF
3	12/15/11	Added Bridge Backwall Protection	JPJ	TLF
2	3/3/10	Modified Backfill Details	JPJ	TLF
1	7/14/08	Change Type 'C' Compaction to 'B'	JPJ	KFH

**KANSAS DEPARTMENT OF TRANSPORTATION**

**RCB AUXILIARY DETAILS (LRFD)**

**BR020B** 28

FHWA APPROVAL	4/17/10	APP'D	TERRY L. FLECK
DESIGNED	JPJ	DETAILED	RAA
DESIGN CK.	JSR	DETAIL CK.	JPJ
QUANTITIES	RAA	CADD	RAA
QUAN.CK.	JPJ	CADD CK.	JPJ