

TYPICAL SECTION
(Phase 2 and Phase 3)

† All L1 bars to be spliced with Phase 3 construction using a mechanical connection. See "Rebar Splicing" note this sheet.

FOR INFORMATION ONLY

SUMMARY OF QUANTITIES - PHASE 2 (Barrels Only)	
Concrete (Grade 4.0)	153.0 C.Y.
Reinforcing Steel (Gr. 60)(Epoxy-Coated)	31,180 Lbs.
Class III Excavation	557.7 C.Y.
Concrete for Seal Course	16.5 C.Y.

Note: Quantities shown are for information only. All labor, materials, and equipment required for construction of RCBC shall be considered subsidiary to the bid item "Pipe, SWS, RCBC (3-12'x5)".

FOR INFORMATION ONLY

SUMMARY OF QUANTITIES - PHASE 3 (Barrels Only)	
Concrete (Grade 4.0)	126.3 C.Y.
Reinforcing Steel (Gr. 60)(Epoxy-Coated)	25,780 Lbs.
Class III Excavation	456.4 C.Y.
Concrete for Seal Course	13.5 C.Y.

Note: Quantities shown are for information only. All labor, materials, and equipment required for construction of RCBC shall be considered subsidiary to the bid item "Pipe, SWS, RCBC (3-12'x5)".

BARREL GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD Bridge Design Specifications, 8th Edition

DESIGN LOADING: HL-93

UNIT STRESSES: Grade 4.0 Concrete $f'_c = 4,000$ p.s.i.
Reinforcing Steel: $f_y = 60,000$ p.s.i.

FILL HEIGHT: Unless otherwise noted, the Design Fill Height is measured from the riding surface at the culvert and shall include the surfacing.

CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a 3/4 inch triangular moulding. Prior to casting concrete against a previous casting, all concrete joint surfaces shall have a brush sandblast, power wash, and water soaked prior to casting.

REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted. If reinforcing steel is field cut, the Contractor shall patch epoxy coating at the exposed ends of rebar according to KDOT Specifications. The patching material shall be selected from Kansas Department of Transportation Prequalified Materials List, PQL-10.2 "Patching Materials for Epoxy Coatings".

REBAR SPlicing: The Contractor shall provide mechanical connections between all L1 bars in Phase 2 and L2 bars in Phase 3 Construction. Plan dimensions for reinforcing bars were provided using dimensions of Dayton Superior D340 Taper-Lock Flange Couplers. The Contractor may select an alternate product from the K.D.O.T. "List of Prequalified Reinforcing Steel Splices" (PQL-32) and adjust rebar dimensions accordingly. The resistance of the full-mechanical connection shall not be less than 125 percent of the specified yield strength of the bar ($125\% f_y$).

EXCAVATION: Class III Excavation for RCB Bridges shall be considered subsidiary to the bid item "Pipe, SWS, RCBC, (3-12'x5)", see "Bridge Excavation" sheet.

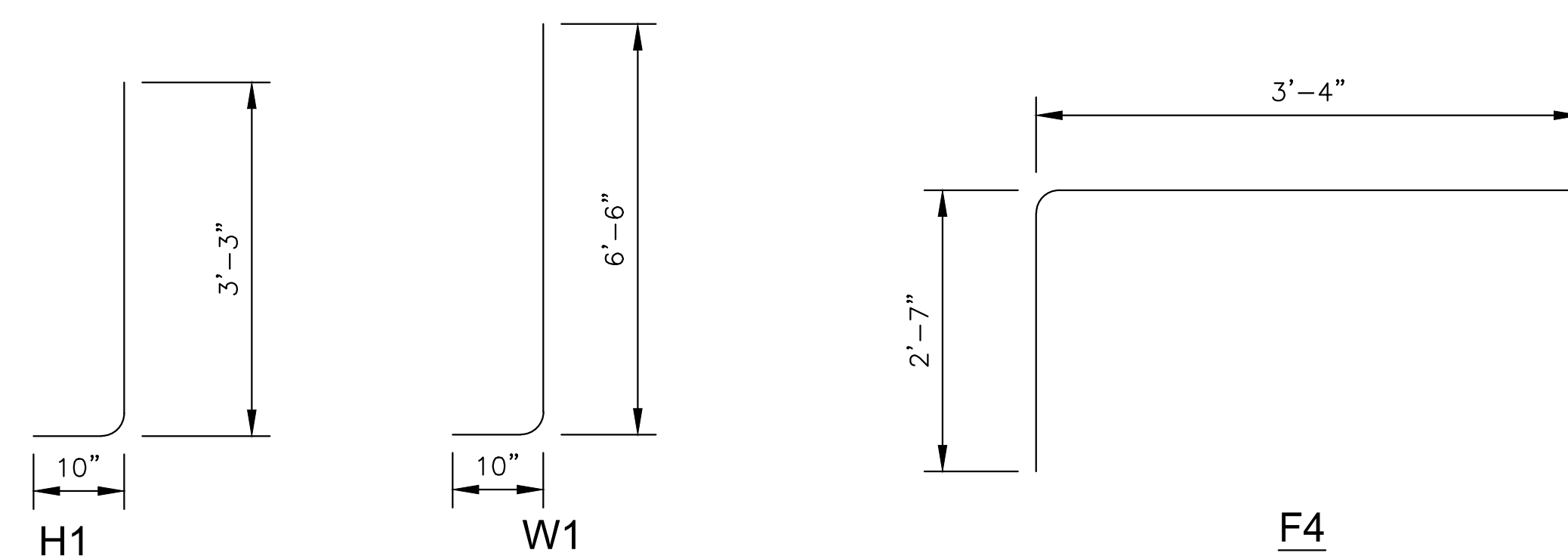
SEAL COURSE: A Seal Course is required. The Seal Course shall be unreinforced Concrete (Commercial Grade) to a minimum depth of 3 inches or as determined by the Engineer. Concrete for the seal course shall be considered subsidiary to the bid item "Pipe, SWS, RCBC, (3-12'x5)".

FOR INFORMATION ONLY

BILL OF REINFORCING STEEL - PHASE 2 (Grade 60, Epoxy-Coated)							
Straight Bars				Bent Bars			
Mark	Size	No.	Length	Mark	Size	No.	Length
F1	#6	352	39'-2"	H1	#5	40	4'-1"
F2	#5	3	39'-2"	F4	#5	36	5'-11"
F5	#5	5	37'-0"	W1	#5	180	7'-4"
L1	#5	184	43'-8"				

FOR INFORMATION ONLY

BILL OF REINFORCING STEEL - PHASE 3 (Grade 60, Epoxy-Coated)							
Straight Bars				Bent Bars			
Mark	Size	No.	Length	Mark	Size	No.	Length
F1	#6	288	39'-2"	H1	#5	40	4'-1"
F2	#5	3	39'-2"	F4	#5	37	5'-11"
F5	#5	5	37'-0"	W1	#5	148	7'-4"
L2	#5	184	35'-11"				
P1	#6	12	5'-0"				



BAR BENDING DIAGRAMS

Note: All dimensions are out to out of bars.

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**BARREL DETAILS
(SHEET 1 OF 3)**

PROJECT NO.	472-85436	
DATE	JULY 2019	
SCALE	N.T.S.	
DESIGNED	DRAWN	CHECKED
J.T.H.	J.D.H.	J.T.H.
NO.	REVISION	DATE