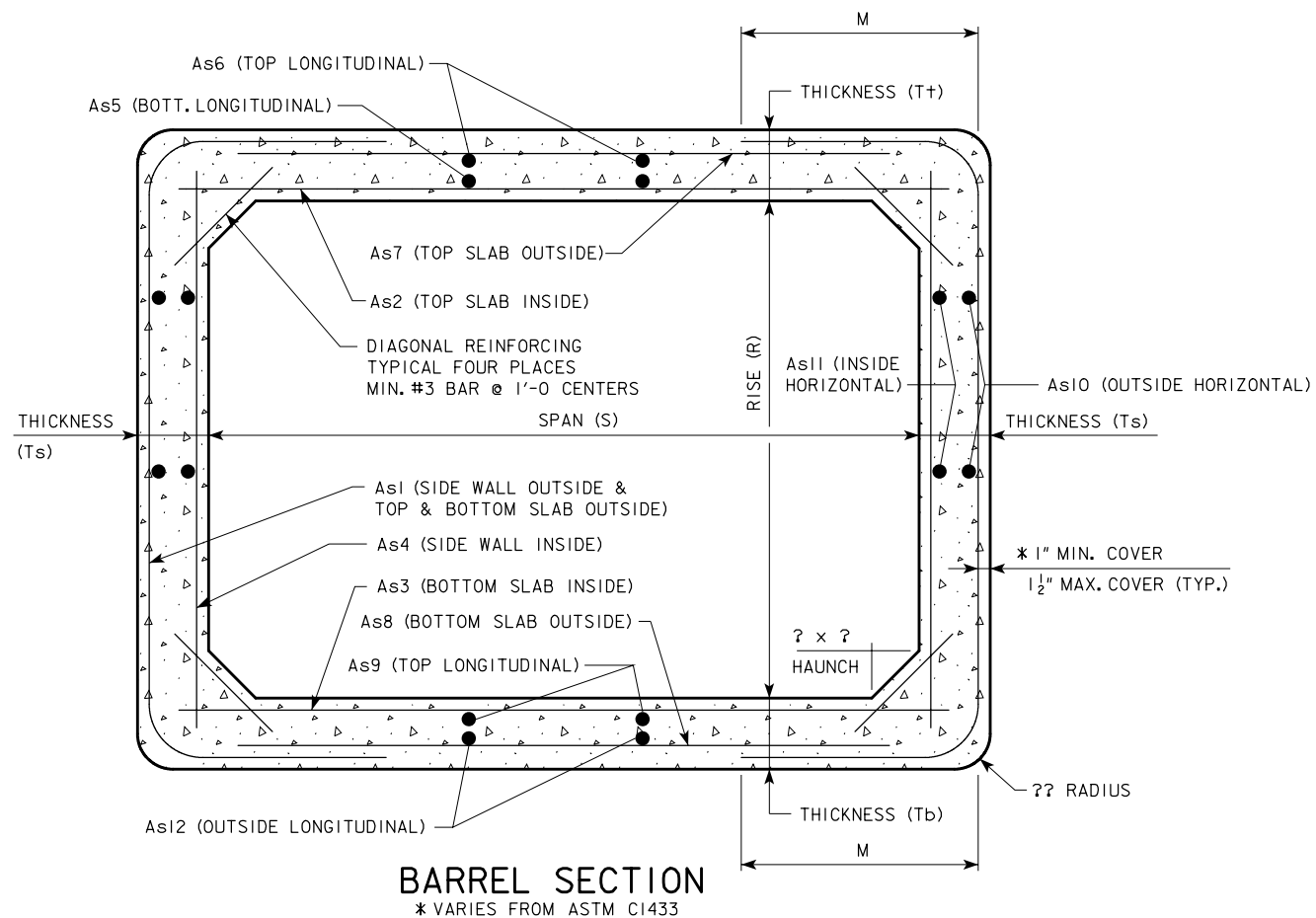
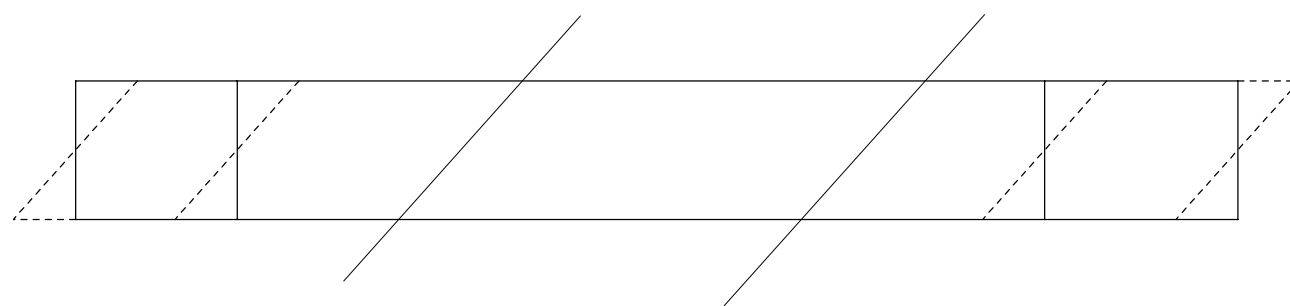
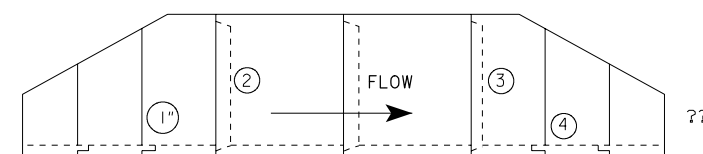


REVISION 06-08 - CHANGED TO STEEL COVER TO MIN. AND MAX. LIMITS. CHANGED THE ASTM REQUIREMENTS FOR WELDED WIRE FABRIC.
 PRECASTENGLISHCULVERT.DGN - BBL_SECT - THIS SHEET ISSUED 12-05.



ELEVATION VIEW FOR BARREL SECTION
(SHOW THE NUMBER OF BARREL SECTIONS)



PLAN VIEW FOR BARREL SECTION
(SHOW OVERALL LENGTH AND BACK TO BACK OF PARAPET)

LOADING, DESIGN METHODS AND MATERIALS

DESIGN REQUIREMENTS:

THE PRECAST CULVERT SECTIONS SHALL MEET THE MINIMUM REQUIREMENTS OF ASTM C 1433, TABLE 1 SECTIONS THAT ARE DESIGNED FOR COMBINED EARTH DEAD LOAD AND AASHTO HS-20 LIVE LOAD CONDITIONS. (* WITH THE FOLLOWING ADDITIONAL REQUIREMENTS)

ANY PRECAST BOX CULVERT DESIGNS SUBMITTED, THAT VARY FROM THE ASTM C 1433 STANDARD, SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER, CURRENTLY REGISTERED IN THE STATE OF IOWA.

* ADDITIONAL DESIGN REQUIREMENTS

MINIMUM LAYING LENGTH = 4'-0
 WWF ASTM A185 OR ASTM A497 $f_y = 65$ ksi
 CONCRETE STRENGTH MINIMUM $f'_c = 5$ ksi
 BOX CULVERT DESIGN AND ANALYSIS IS PERFORMED ON THE BOXCAR 2.0 OR LATER COMPUTER PROGRAM

---- FT. x ---- FT. x ---- FT. CULVERT																	
DESIGN EARTH COVER, f_t	f'_c ksi	T+ in.	Ts in.	Tb in.	CIRCUMFERENTIAL REINFORCEMENT AREA (IN. ² /FT.)												M (in.)
					As1	As2	As3	As4	As5	As6	As7	As8	As9	As10	As11	As12	
DESIGN CRITERIA CHECK ONE ASTM STANDARD <input type="checkbox"/> BOXCAR <input type="checkbox"/>																	

PRECAST BOX CULVERT SUBMITTAL SHEET
FOR BARREL SECTIONS
 (DOWNLOAD FROM INTERNET AT
<http://www.dot.state.ia.us/bridge/v8preculstd.htm>

NOTE:
 SINCE PRECAST CONCRETE CULVERT END SECTIONS HAVE THE FORESLOPE LOCATED AT THE BOTTOM OF THE PARAPET INSTEAD OF THE TOP (AS IN THE CASE OF RCB CULVERTS) THE MAIN BARREL SECTION WILL HAVE TO BE LENGTHENED FROM THE CAST IN PLACE DIMENSIONS.