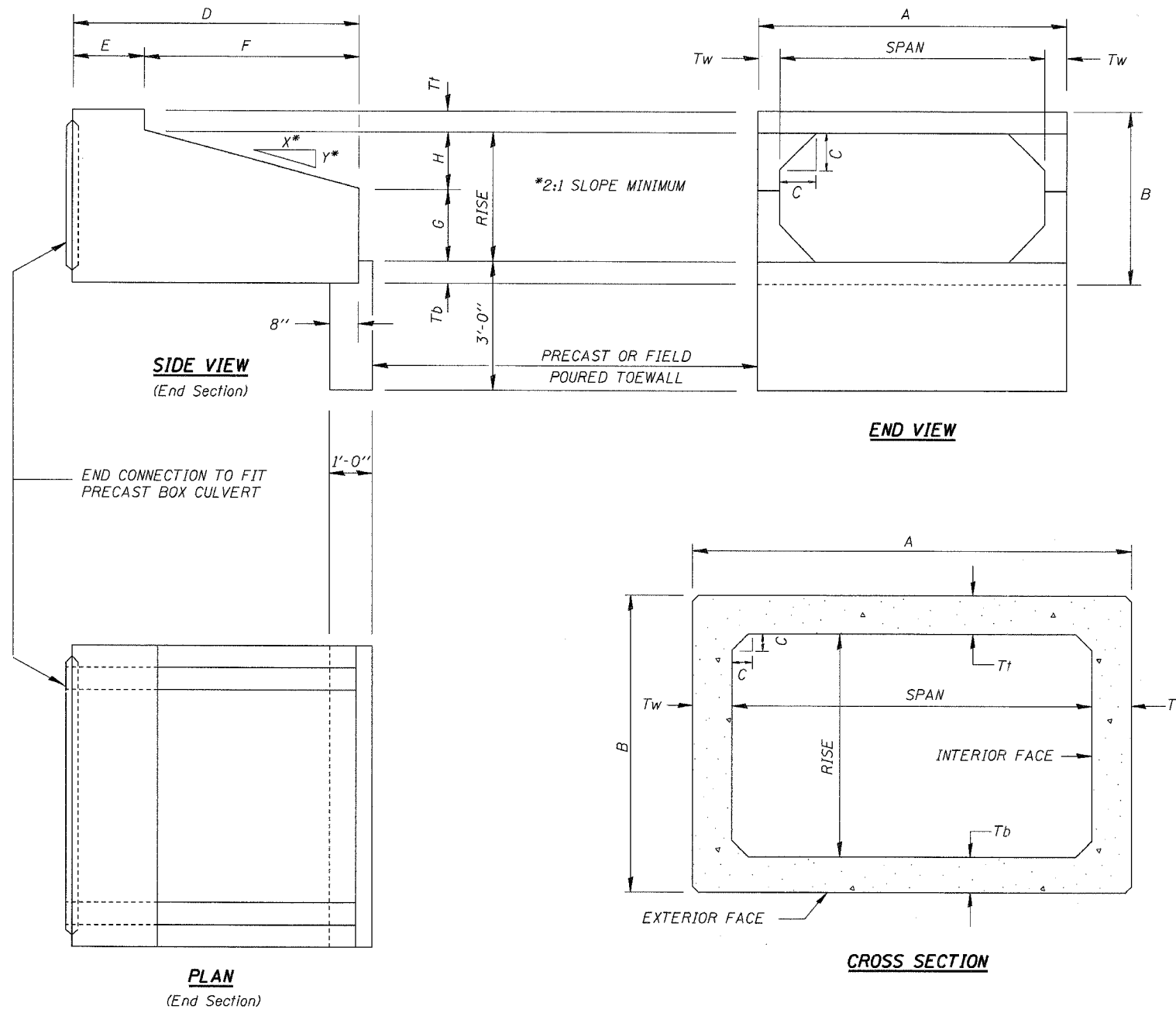


# DETAIL OF PRECAST CONCRETE BOX CULVERTS AND END SECTIONS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 621	05-00075-05-RS	SANGAMON	72	34

CONTRACT NO. 93439



**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
BOX CULVERT END SECTION, CULVERT NO. 5	EACH	2
BOX CULVERT END SECTION, CULVERT NO. 14	EACH	2
PRECAST CONCRETE BOX CULVERT, 5'x4'	FOOT	63
PRECAST CONCRETE BOX CULVERT, 6'x3'	FOOT	50
PRECAST CONCRETE BOX CULVERT, 6'x4'	FOOT	57

NOTE: PRECAST END SECTION DETAILS APPLY ONLY TO LOCATIONS 5 AND 14. SEE CAST-IN-PLACE END SECTION DETAIL ON SHEET 33 FOR LOCATION 1.

**DESIGN SPECIFICATIONS**  
2002 AASHTO

**LOADING HS20-44**  
Allow 50 psf for future wearing surface

**DESIGN STRESSES (PRECAST)**  
 $f'_c = 5,000$  psi  
 $f_y = 65,000$  psi (welded wire fabric)  
 $f_y = 60,000$  psi (reinforcement)

Notes:  
 All precast concrete box culvert sections shall conform to the requirements of Article 540 of the Standard Specifications, and shall be constructed in accordance with the Bureau of Materials and Physical Research (BMPR) Policy Memorandum 07-22 for the Quality Control/Quality Assurance Program for Precast Concrete Products. In addition, the precast culverts shall be designed in accordance with the AASHTO Specification designated in the Design Details table.  
 Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified). See Special Provisions. Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.

**PRECAST CONCRETE BOX CULVERT DETAILS**

LOCATION	Rte.	Station	Span	Rise	AASHTO Designation	Design Fill Height	Interstate Loading	THICKNESS			A	B	C	D	E	F	G	H	SLOPE X:Y
								T1 (top slab)	T2 (bot. slab)	Tw (wall)									
1	IL 104	9+25	6'	4'	M 273	< 2'	No	8"	7"	7"	7'-2"	5'-3"	8"	-	-	-	-	-	-
5	CH 10	45+34	6'	3'	M 273	< 2'	No	8"	7"	7"	7'-2"	4'-3"	8"	6'-0"	2'-0"	4'-0"	1'-0"	2'-0"	2:1
14	CH 10	293+56	5'	4'	M 259	3'	No	6"	6"	6"	6'-0"	5'-0"	6"	6'-0"	2'-0"	4'-0"	2'-0"	2'-0"	2:1

**PRECAST CONCRETE BOX CULVERT DETAILS**

FAS 621 (CH 10)  
 SECTION 05-00075-05-RS  
 SANGAMON COUNTY

CUMMINS ENGINEERING CORPORATION  
 JOB #: 2171  
 FILE: 2171PRECAST  
 DATE: 5/3/07