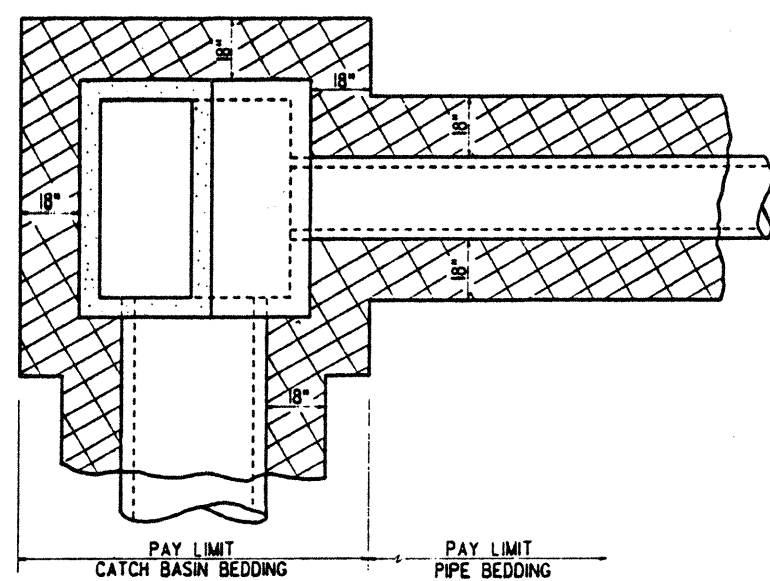
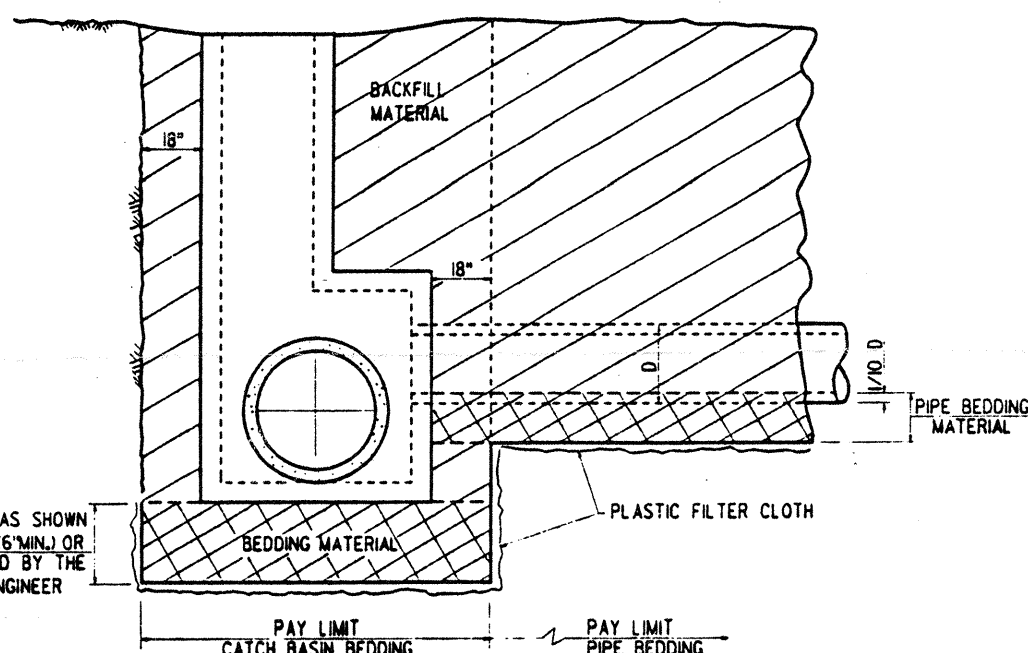


TYPICAL CATCH BASIN AND STORM SEWER PIPE INSTALLATION WITH BEDDING MATERIAL



PLAN OF TYPICAL CATCH BASIN (MANHOLE OR JUNCTION BOX) & PIPE

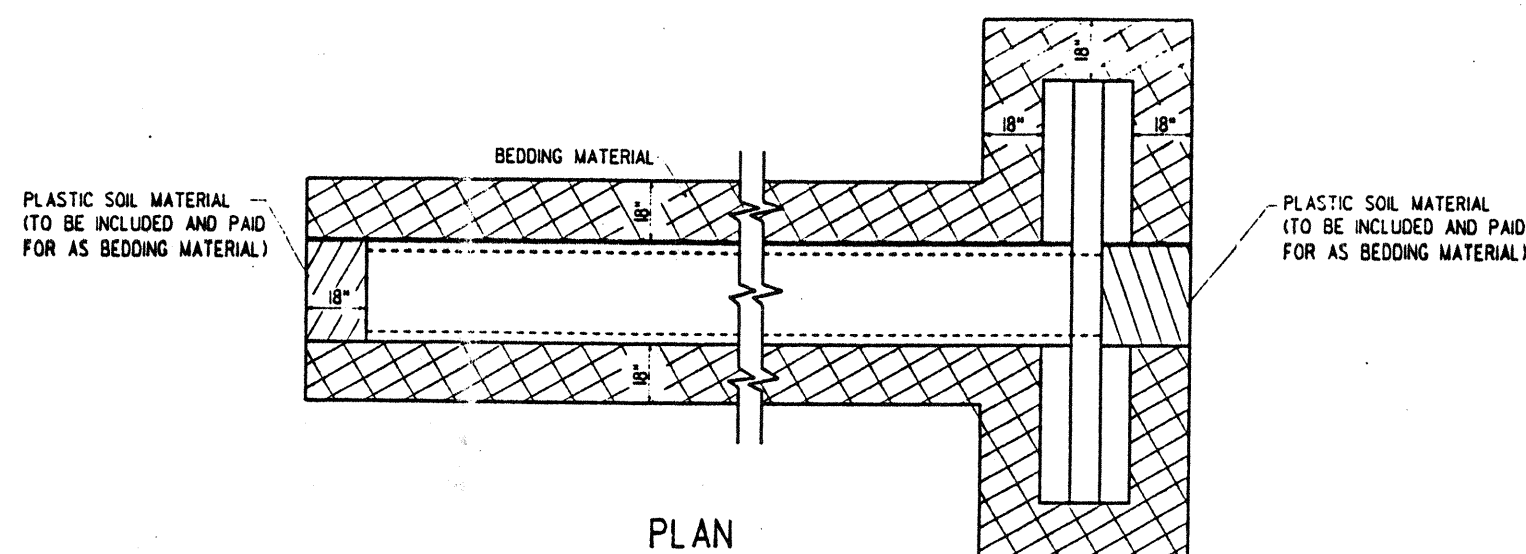


PROFILE OF TYPICAL CATCH BASIN, (MANHOLE OR JUNCTION BOX) AND PIPE

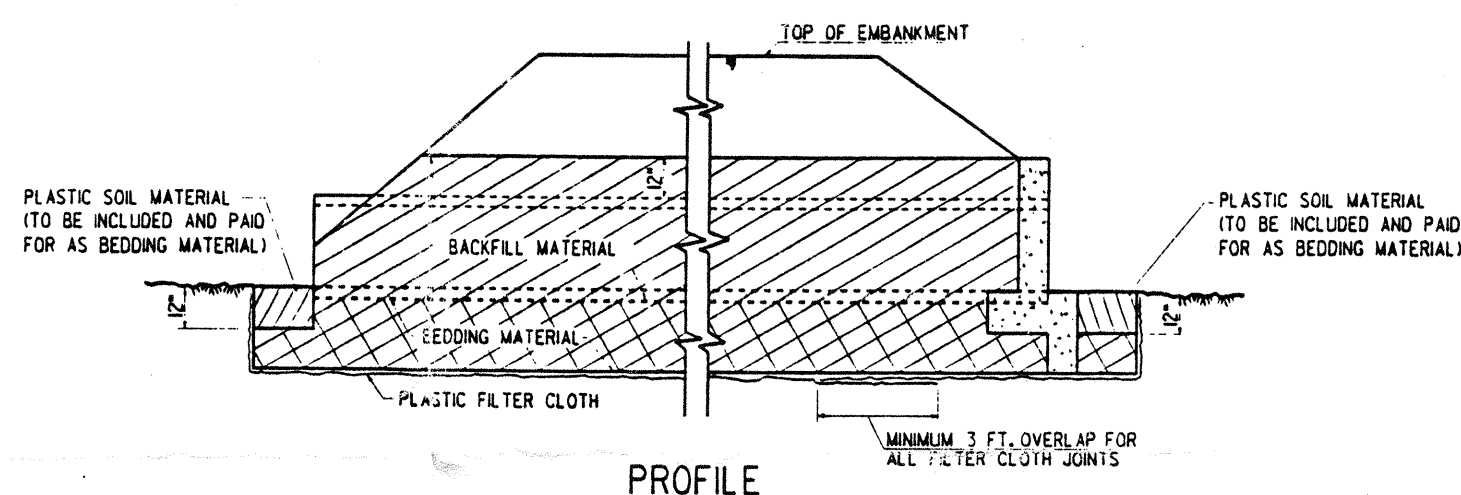
* DEDUCTION FROM BACKFILL QUANTITY		
R.C. PIPE	C.M. PIPE	
PIPE DIAMETER	CU. YDS./LIN. FT.	CU. YDS./LIN. FT.
15"	0.0768	0.0455
18"	0.1068	0.0654
24"	0.1818	0.1164
30"	0.2765	0.1818
36"	0.3900	0.2618
42"	0.5254	0.3563
48"	0.6795	0.4654
54"	0.8534	0.5890
60"	1.0471	0.7272
72"	1.4940	1.0472
84"	2.0200	1.4253
96"	2.6252	1.8617
108"	3.3096	2.3562
120"	3.9593	2.9089
132"	4.7908	3.5197
144"	5.7014	4.3888

*FOR INFORMATIONAL PURPOSES ONLY, THE COST OF THE BACKFILL IS TO BE INCLUDED IN THE COST OF THE HYDRAULIC STRUCTURE.

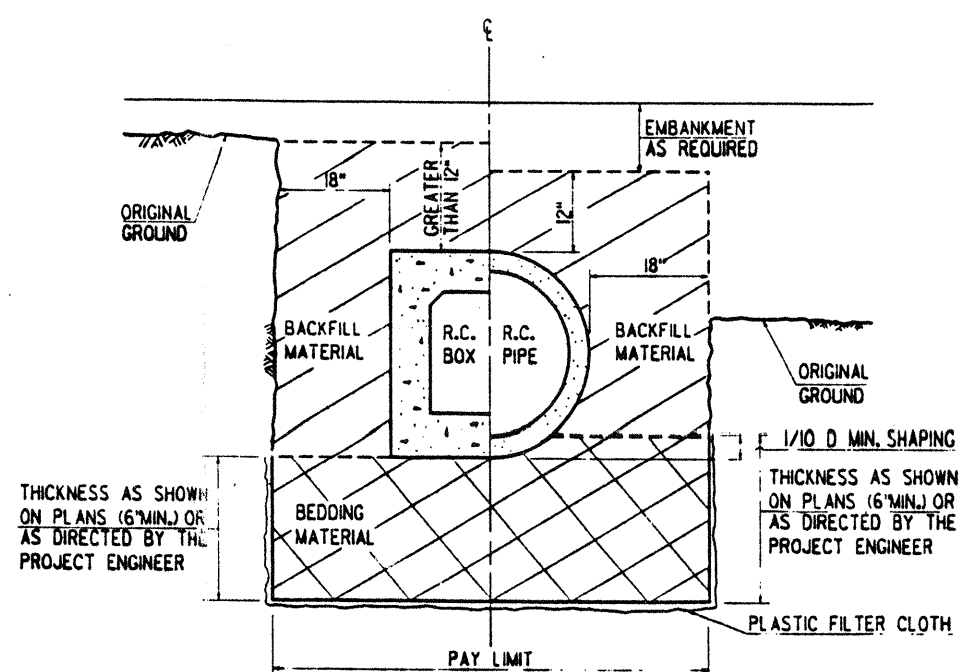
TYPICAL CROSS DRAIN INSTALLATION WITH BEDDING MATERIAL



PLAN



PROFILE

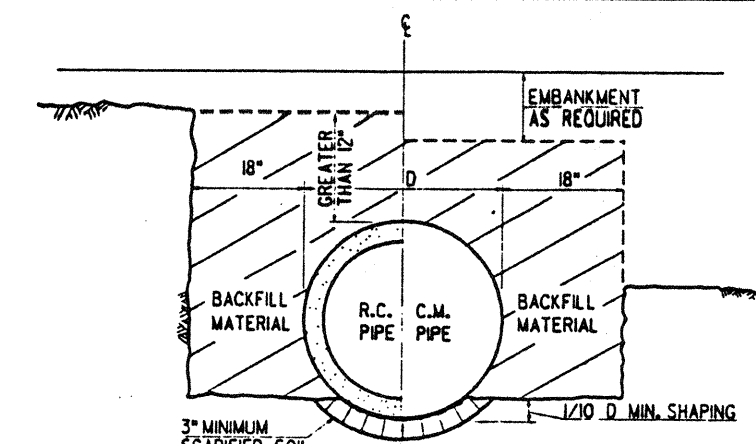


SECTION THRU TRENCH

HALF-SECTION SHOWING TOP HALF-SECTION SHOWING TOP OF BOX GREATER THAN 12" OF PIPE ABOVE ORIGINAL BELOW ORIGINAL GROUND (TRENCH INSTALLATION) GROUND (EMBANKMENT INSTALLATION)

STATE PROJECT	PARISH	SHEET NO.

TYPICAL PIPE INSTALLATION WITHOUT BEDDING MATERIAL



SECTION THRU TRENCH

HALF-SECTION SHOWING TOP HALF-SECTION SHOWING TOP OF PIPE GREATER THAN 12" OF PIPE ABOVE ORIGINAL BELOW ORIGINAL GROUND (TRENCH INSTALLATION) GROUND (EMBANKMENT INSTALLATION)

GENERAL NOTES:

1. STANDARD D.O.T.D. PIPE INSTALLATION, BEDDING, AND BACKFILL ARE DEFINED IN SECTIONS 701 AND 726 OF THE 'LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES'.
2. THE NEED AND/OR THE THICKNESS OF BEDDING MATERIAL WILL BE DETERMINED BY THE GEOTECHNICAL SECTION AND WILL BE SHOWN ON THE PLANS. ADDITIONAL BEDDING MATERIAL MAY BE REQUIRED BY THE PROJECT ENGINEER AT NO COST TO THE CONTRACTOR.
3. THE DETAILS ON THIS SHEET DEPICT PAY LIMITS FOR BEDDING MATERIALS. THE BEDDING MATERIAL PAY QUANTITIES ARE TO BE BASED ON THE THEORETICAL NET SECTION WITH NO PIPE DEDUCTIONS. FULL PIPE DEDUCTIONS (SEE TABLES ON THIS SHEET) FOR BACKFILL QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. THE COST OF THE BACKFILL IS TO BE INCLUDED IN THE COST OF THE HYDRAULIC STRUCTURE.
4. REINFORCED CONCRETE PIPE, REINFORCED CONCRETE BOX AND CORRUGATED METAL PIPE ARE SHOWN AS TYPICAL STRUCTURES. DETAILS FOR REINFORCED CONCRETE PIPE ARCH, CORRUGATED METAL PIPE ARCH, AND CORRUGATED STRUCTURAL PLATE STRUCTURES ARE SIMILAR.
5. PLASTIC FILTER CLOTH SHALL BE REQUIRED WHEN BEDDING MATERIAL IS REQUIRED AND SHALL BE PLACED IN ACCORDANCE WITH DETAILS PRIOR TO PLACING BEDDING MATERIAL. ADJACENT STRIPS OF FILTER CLOTH SHALL LAP EACH OTHER FOR AT LEAST 3 FEET. PLASTIC FILTER CLOTH WILL NOT BE MEASURED FOR PAYMENT.
6. BEDDING SHOWN ON THIS STANDARD PLAN CONFORMS TO CLASS 'B' AS DEFINED BY THE 1983 AASHTO SPECIFICATIONS.

* DEDUCTION FROM BACKFILL QUANTITY			
R.C. PIPE ARCH		C.M. PIPE ARCH	
EQUIV. DIAM.	CU. YDS./LIN. FT.	EQUIV. DIAM.	CU. YDS./LIN. FT.
18"	0.0979	18"	0.0593
24"	0.1615	24"	0.1037
30"	0.2495	30"	0.1630
36"	0.3488	36"	0.2370
42"	0.4742	42"	0.3222
48"	0.6171	48"	0.4222
54"	0.7654	54"	0.5296
60"	0.9226	60"	0.6519
72"	1.3599	72"	0.9630
84"	1.8302	84"	1.3983
96"	2.3655	96"	1.7037
108"	3.3170	108"	2.3481

DATE	DESCRIPTION	BY	REVISIONS
2-19-96	REVISED		
3-2-79	RETRACTED		

STANDARD PLAN NO. **BM-01** SHEET **1 OF 1**

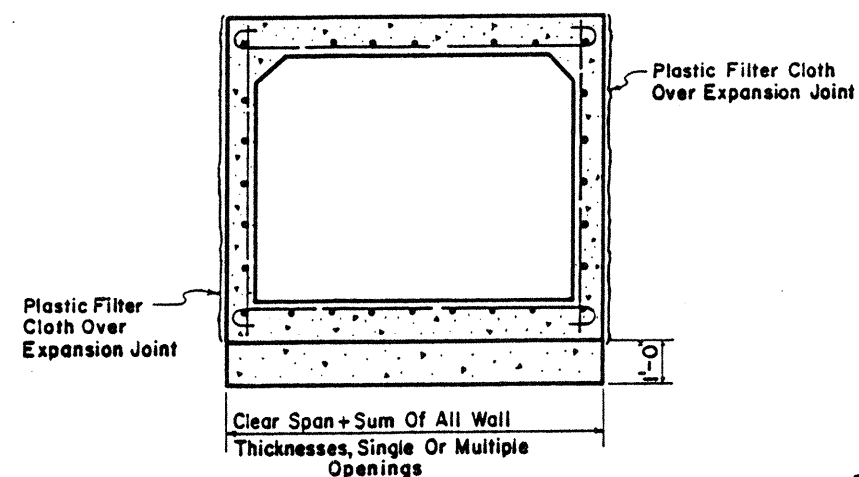
STANDARD PLAN
BEDDING AND BACKFILL FOR
DRAINAGE STRUCTURES

DATED **JUNE 8, 1971**

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

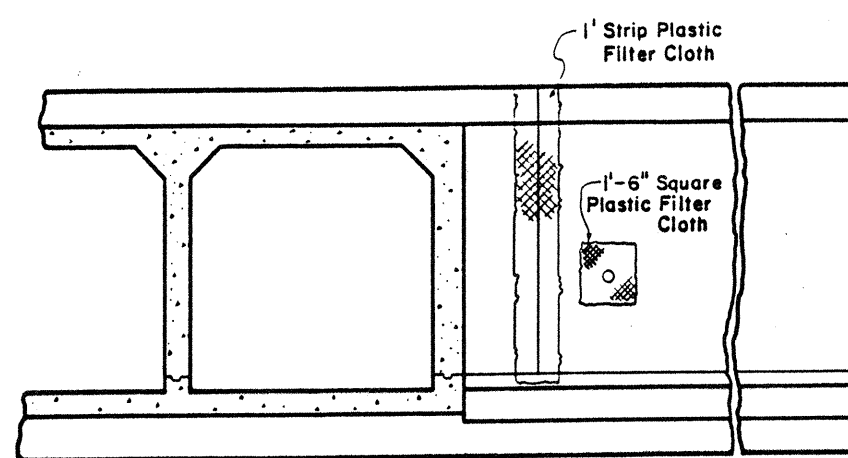
DESIGNED BY **P.A.A.** TRACED BY **K.A.J.**
CHECKED BY **J.C.M.** CHECKED BY **C.D.J.**
APPROVED BY **CHIEF ENGINEER** *Raymond Mitchell* DATE **1-2-96**

STATE PROJECT	PARISH	SHEET NO.

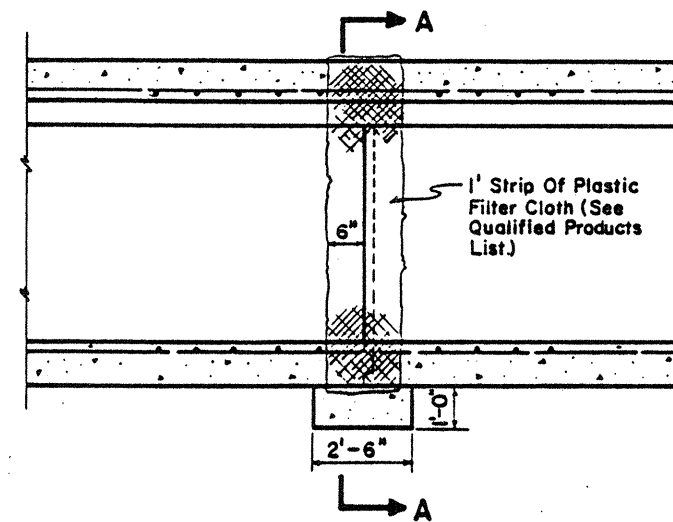


SECTION A-A

Wall or Slab	A	B	C
6"	1 1/2"	2"	1 1/2"
6 1/2"	1 5/8"	2 1/4"	1 3/8"
7"	1 3/4"	2 1/2"	1 3/4"
7 1/2"	2"	2 3/4"	2"
8"	2 1/8"	2 3/4"	2 3/8"
8 1/2"	2 1/8"	2 3/4"	2 3/8"
9"	2 1/2"	3"	2 1/2"
9 1/2"	2 3/4"	3"	2 3/4"
10"	2 3/4"	3 1/4"	2 3/4"
10 1/2"	3"	3 1/2"	3"
11"	3 1/8"	3 1/2"	3 1/8"
11 1/2"	3 1/2"	4"	3 1/2"
12"	3 1/2"	4"	3 1/2"



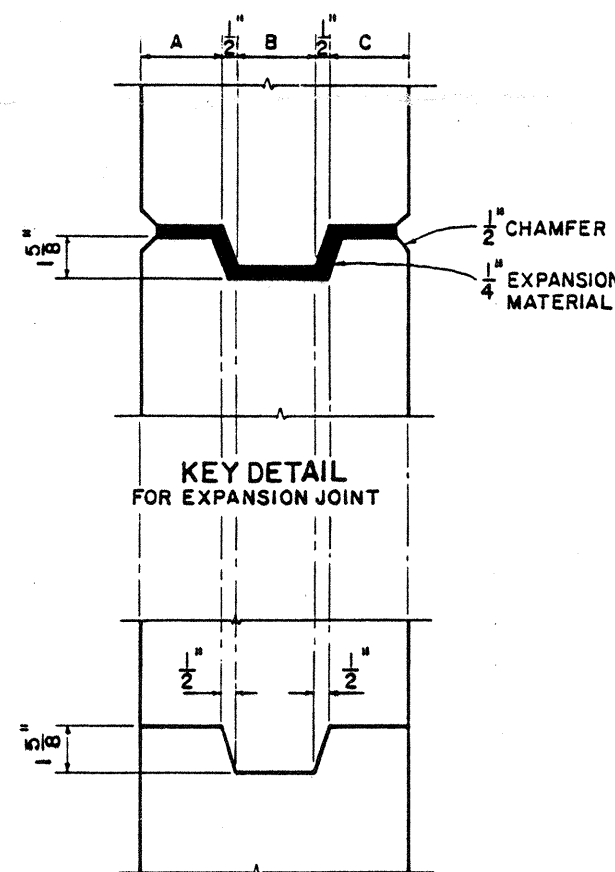
SECTION SHOWING REAR SIDE OF WING WALL



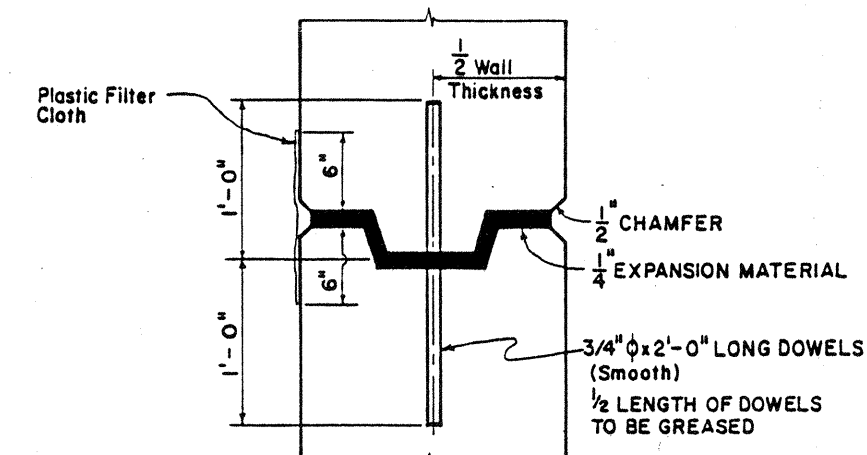
LONGITUDINAL BARREL SECTION

EXPANSION JOINT DETAILS

EXPANSION JOINTS TO BE SPACED SO THAT BARREL SHALL NOT BE CONTINUOUS FOR MORE THAN 60'. NO REINFORCING STEEL SHALL EXTEND THROUGH JOINT. CONCRETE BLOCK TO BE PAID FOR AS CLASS "A" CONCRETE.



KEY DETAIL FOR CONSTRUCTION JOINT



KEY DETAIL FOR KEYED JOINT (Showing Method Of Placing Dowel Bars In Wings Of Culverts)

STANDARD PLAN NO.	CM-49
EXPANSION & CONSTRUCTION JOINTS FOR CONCRETE STRUCTURES	
DATED Mar. 1946	
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT OFFICE OF HIGHWAYS	
DESIGNED	TRACEC K A J
CHECKED	CHECKED J C M
DATE	DATE 2-10-78

NO.	REVISIONS	BY
2-10-78	Retraced - Sq. Steel Omitted - Filter Cloth	W T J

APPROVED: *Dampier D. G. Galt* CHIEF ENGINEER