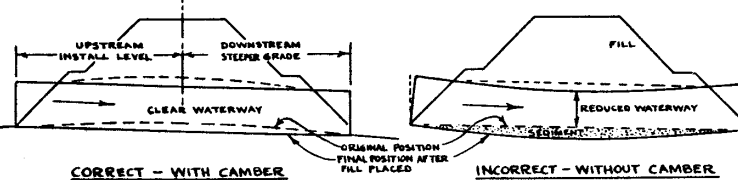
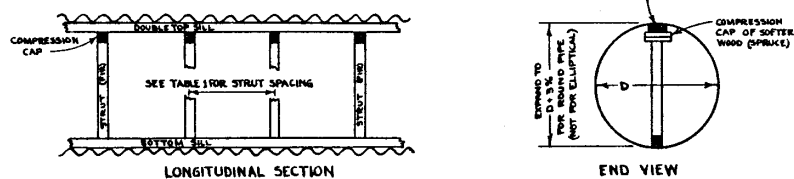


DESIGNED BY E.J.S. DATE APRIL 19 55  
 CHECKED BY A.P.E. DATE APRIL 23 55  
 TRACED BY D.G.L. DATE APRIL 19 55  
 CHECKED BY E.J.S. DATE APRIL 19 55

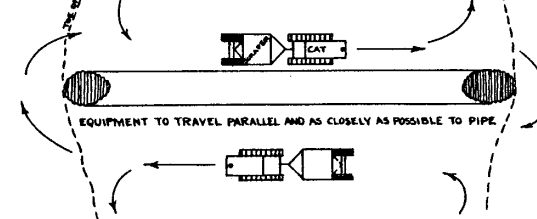
**① CAMBER REQUIRED**  
 MINIMUM 1/4% OF LENGTH



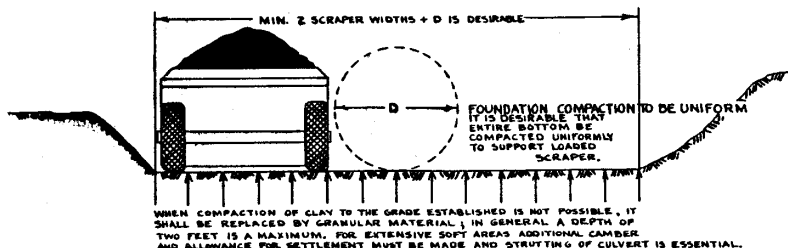
**④ STRUTTING**



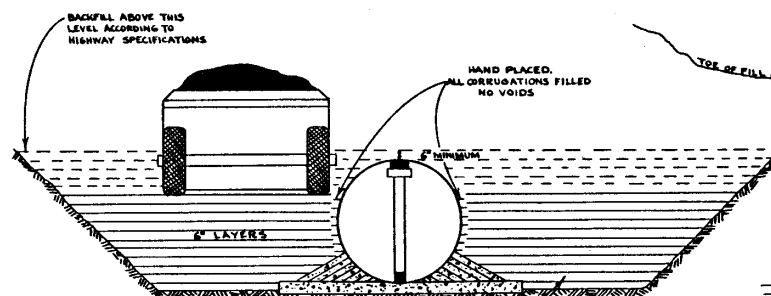
**⑥ COMPACTION**  
 (PLAN VIEW)



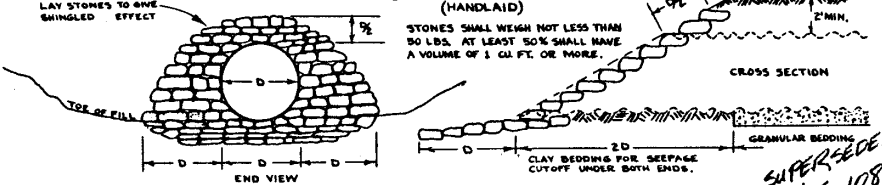
**② FOUNDATION EXCAVATION**



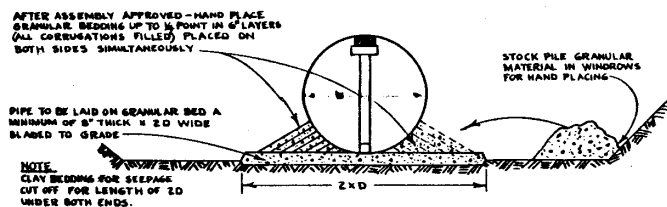
**⑤ BACKFILLING**



**⑦ RIP-RAP**  
 (HANDLAID)



**③ GRANULAR BEDDING**



**NOTE:**  
 1. INSTALLATION PROCEDURE FOR PIPE ARCH IDENTICAL WITH ROUND PIPE.  
 2. IN NO CASE SHALL PIPE BE FOUNDED ON SOO.  
 3. CLEAR SPACING BETWEEN MULTIPLE CULVERTS TO BE DIAMETER OF LARGER PIPE - CLEAR SCRAPER WIDTH PREFERRED.  
 4. READ CAREFULLY SUPPLIER'S INSTRUCTIONS FOR DETAILS OF S.P.C.I.P. CULVERT ASSEMBLY.  
 5. WHEN STONES OF SUITABLE SIZE ARE NOT ECONOMICALLY AVAILABLE, CEMENT-SANDSAG RIP-RAP SHALL BE MANUFACTURED AND PLACED AS PER SPECIFICATIONS FOR THAT WORK.

**TABLE 1**  
**SIZE AND SPACING OF STRUTS**

PIPE DIAMETER	EQUIV. ARCH	MINIMUM STRUT SIZE (IN)	HEIGHT OF COVER IN FEET							
			5	10	15	20	30	40	50	70
60"	72" x 44"	4 x 4	6.0	6.0	6.0	6.0	4.0	3.0	3.5	3.0
72"	84" x 61"	4 x 6	6.0	6.0	6.0	6.0	5.0	3.5	3.0	3.5
84"	96" x 69"	4 x 6	6.0	6.0	6.0	5.0	3.0	3.0	4.0	3.0
96"	117" x 79"	6 x 6	6.0	6.0	6.0	5.5	4.5	3.5	4.5	3.5
108"	137" x 87"	6 x 6	6.0	6.0	6.0	5.0	3.5	3.0	4.0	3.0
120"	150" x 95"	6 x 6	6.0	6.0	6.0	4.0	3.0	4.0	3.5	3.0
132"	169" x 105"	6 x 6	6.0	6.0	6.0	4.5	3.5	3.5	4.5	3.0
144"	186" x 113"	6 x 6	6.0	6.0	6.0	5.5	4.0	3.0	4.5	4.0
156"		6 x 6	6.0	6.0	6.0	6.0	4.5	3.0	4.5	3.5
168"		6 x 6	6.0	6.0	6.0	6.0	5.0	4.0	4.0	3.0

STRUTS MAY BE OMITTED WHEN CAREFUL PREPARATION OF THE FOUNDATION, BEDDING, AND BACKFILL IS TO A FIRST CLASS STANDARD.

**INSTALLATION PROCEDURE FOR LARGE METAL CULVERTS C.I.P. AND S.P.C.I.P. 1955**

GOVERNMENT OF THE PROVINCE OF ALBERTA  
 DEPARTMENT OF HIGHWAYS  
 BRIDGE BRANCH, EDMONTON

FILE NO. \_\_\_\_\_ HWY. NO. \_\_\_\_\_ DWG. NO. **S-521**  
 LOCATION \_\_\_\_\_ SCALE \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_

**REVISIONS**

NO.	DATE	DESCRIPTION	BY
4	APRIL 20/55	ARCH SIZES CHANGED	D.G.L.
3	APRIL 8/55	FOUNDATION COMPACTION NOTES ADDED	E.J.S.
2	JUNE 1/55	NOTE 5 ADDED	E.J.S.