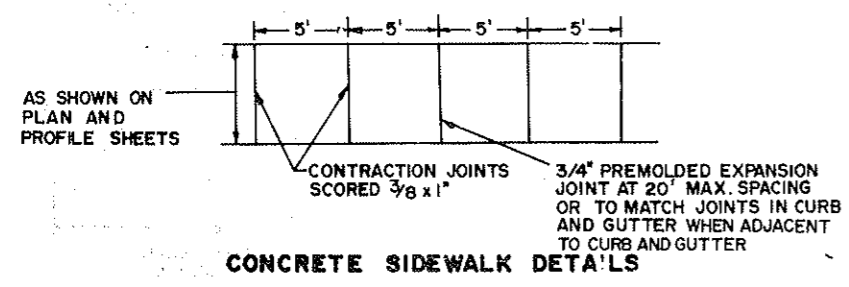
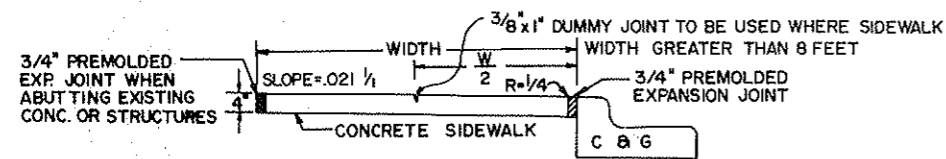
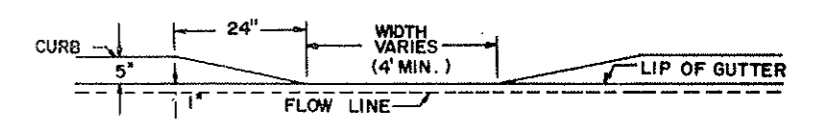
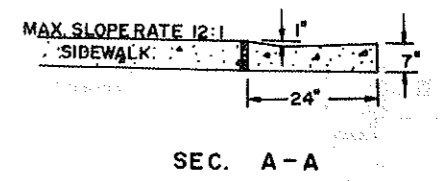
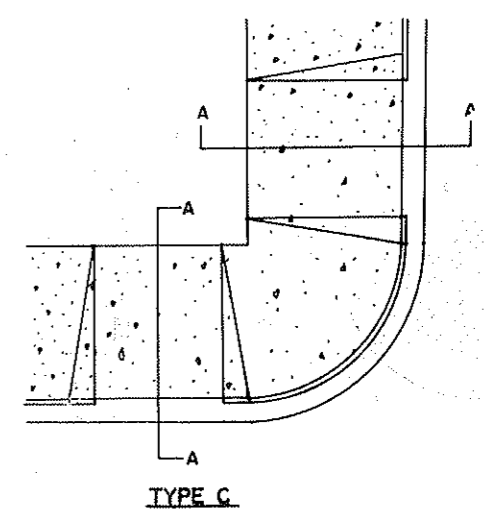
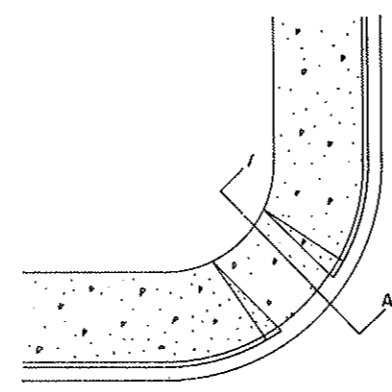
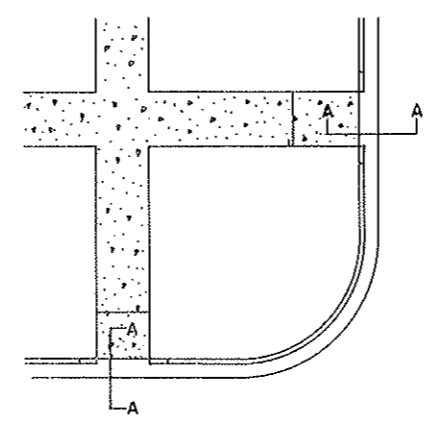


SIDEWALKS AND CURB RAMPS



- NOTES:
- METHOD OF PAYMENT: THE CURB RAMP WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE QUANTITIES AND PAID FOR AT THE UNIT PRICE BID FOR CONCRETE SIDEWALK AND CURB AND GUTTER.
 - THE TYPE OF CURB RAMP TO BE USED AT EACH INTERSECTION WILL BE INDICATED ON THE PLANS.
 - THE LOCATION AND TYPE OF RAMPS MAY BE CHANGED BY THE ENGINEER IN THE FIELD TO CONFORM TO EXISTING CONDITIONS.



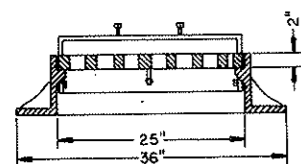
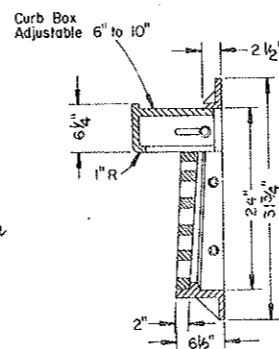
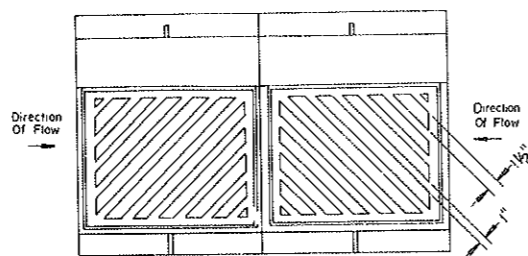
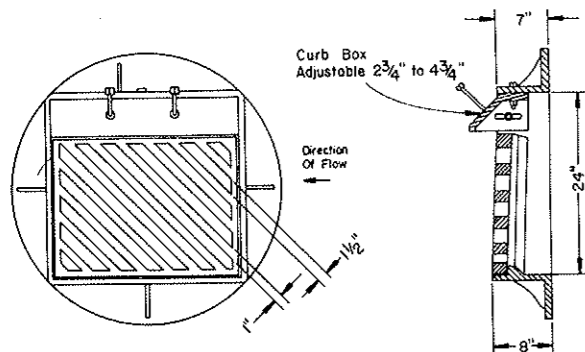
DEPRESSED CURB FOR PEDESTRIAN CROSSING

8-8-77		NORTH DAKOTA STATE HIGHWAY DEPARTMENT
REVISIONS		
DATE	CHANGE	Submitted: <i>Slater</i> Design Engineer
		Recommended: <i>Slater</i> Asst. Chief Engineer Pre-Construction
		Approved: <i>Slater</i> Chief Engineer

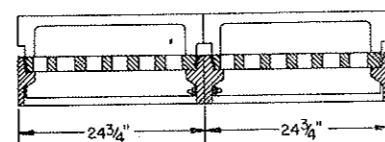
INLET DETAILS

NO.	STATE	REV. AND DATE	SHEET
8	N. D.	M-1-933(2)	50

D-714-1



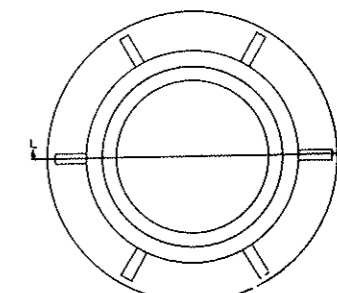
NOTE: Reversible grates to be furnished



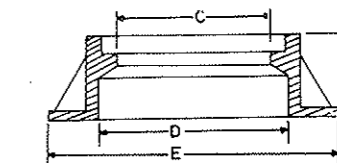
DOUBLE INLET CASTING DETAILS
NOTE: FOR TRIPLE INLETS ADD ONE ADDITIONAL INLET CASTING

	CATCH BASINS							WT. LBS
	DIMENSIONS IN INCHES							
	A	B	C	D	E	F	G	
TYPE A (24")	22	1 1/2	20	24	33	8	1 1/4	275
TYPE B (30")	23	1 3/4	20 3/4	26	36	9	1	420

**CATCH BASIN
FRAME AND GRATE**



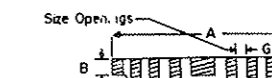
TOP VIEW



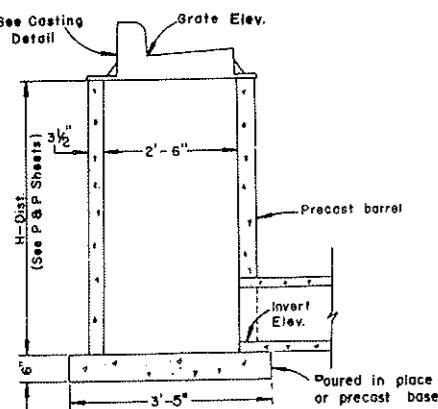
FRAME DETAIL
SECTION L-L



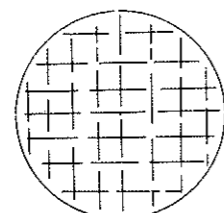
TOP VIEW



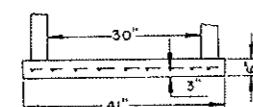
GRATE DETAIL
SECTION M-M



INLET DETAIL

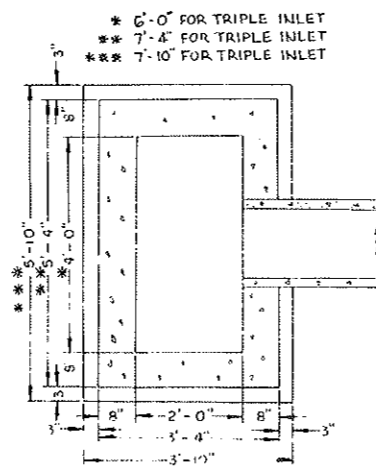


TOP VIEW



SIDE VIEW

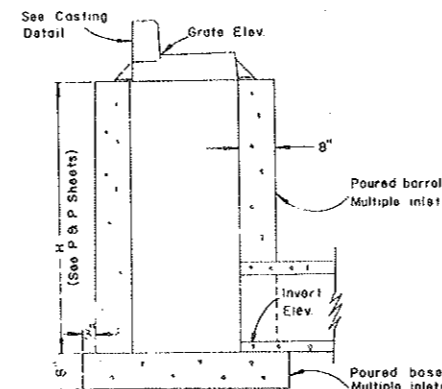
PRECAST INLET BASE



TOP VIEW

MULTIPLE INLET DETAIL

* Dimensions shown for double inlet. Add 2 feet for each additional inlet on multiple installations.



SIDE VIEW

Notes:

- Bottoms of curb inlets shall be cut or precast square to fit the base. Grout joint between base and wall with cement mortar.
- The Contractor may, if he so desires, construct the curb inlets lower than plan grade and bring the casting to grade using precast adjusting rings in a manner satisfactory to the Engineer in the field.
- Bolts shall be Temper Finish - Double Heat Treated 1038 S.A.E. Grade 5, with Cad-Dichromate plating.
- The Contractor may, if he so elects, construct multiple inlet boxes of solid concrete, block, or brick. The materials used shall be approved by the Engineer in writing. The type of construction shall be as specified in Section 714-3. of the Standard Specifications.
- The Contractor shall have the option of using precast or poured in place bases. Precast bases shall be reinforced with #3 deformed bars at 6" centers in each direction. The class of concrete used in poured bases shall be Class AE. The aggregate size shall be approved by the engineer.
- Precast barrels shall be constructed in accordance with ASTM 478.
- Other castings, similar in dimension, may be used if accepted by the engineer in writing.

12-22-75	
REVISIONS	
DATE	CHANGE

**NORTH DAKOTA
STATE HIGHWAY DEPARTMENT**

Submitted: *Richard J. Hoff*
Design Engineer

Recommended: *Asst. Chief Engineer
Pre-Construction*

Approved: *W. H. ...*
Chief Engineer