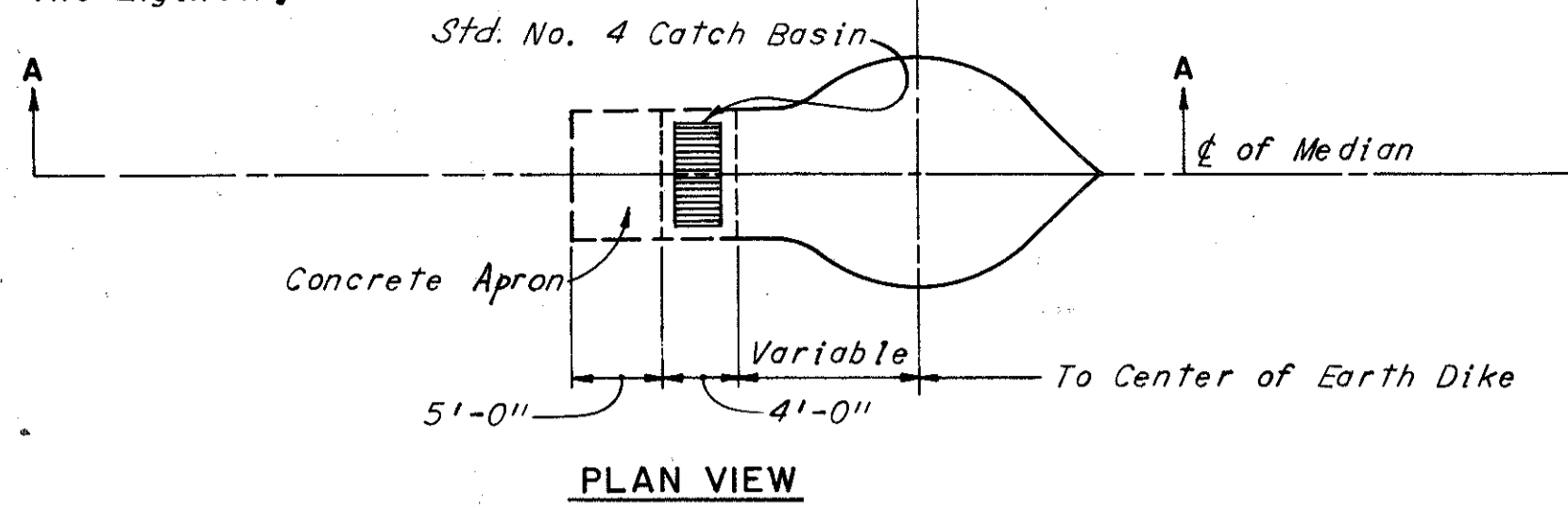


# MISCELLANEOUS DETAILS

FED. RD. DIVISION	STATE	PROJECT
5	OHIO	

LAKE COUNTY  
LAK-90-3.56

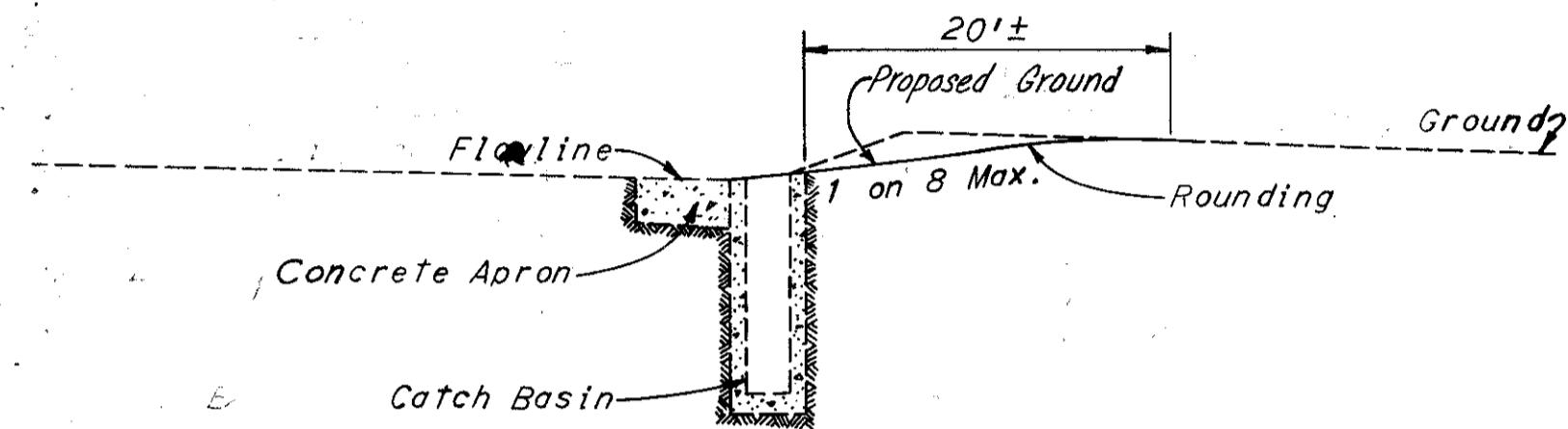
NOTE: Refer to Std. Drawing CB-4.  
All Grading to be under the direction of the Engineer.



PLAN VIEW

Estimated quantity for grading location.

Excavation 75 Cu. Yds.  
Seeding 600 Sq. Yds.

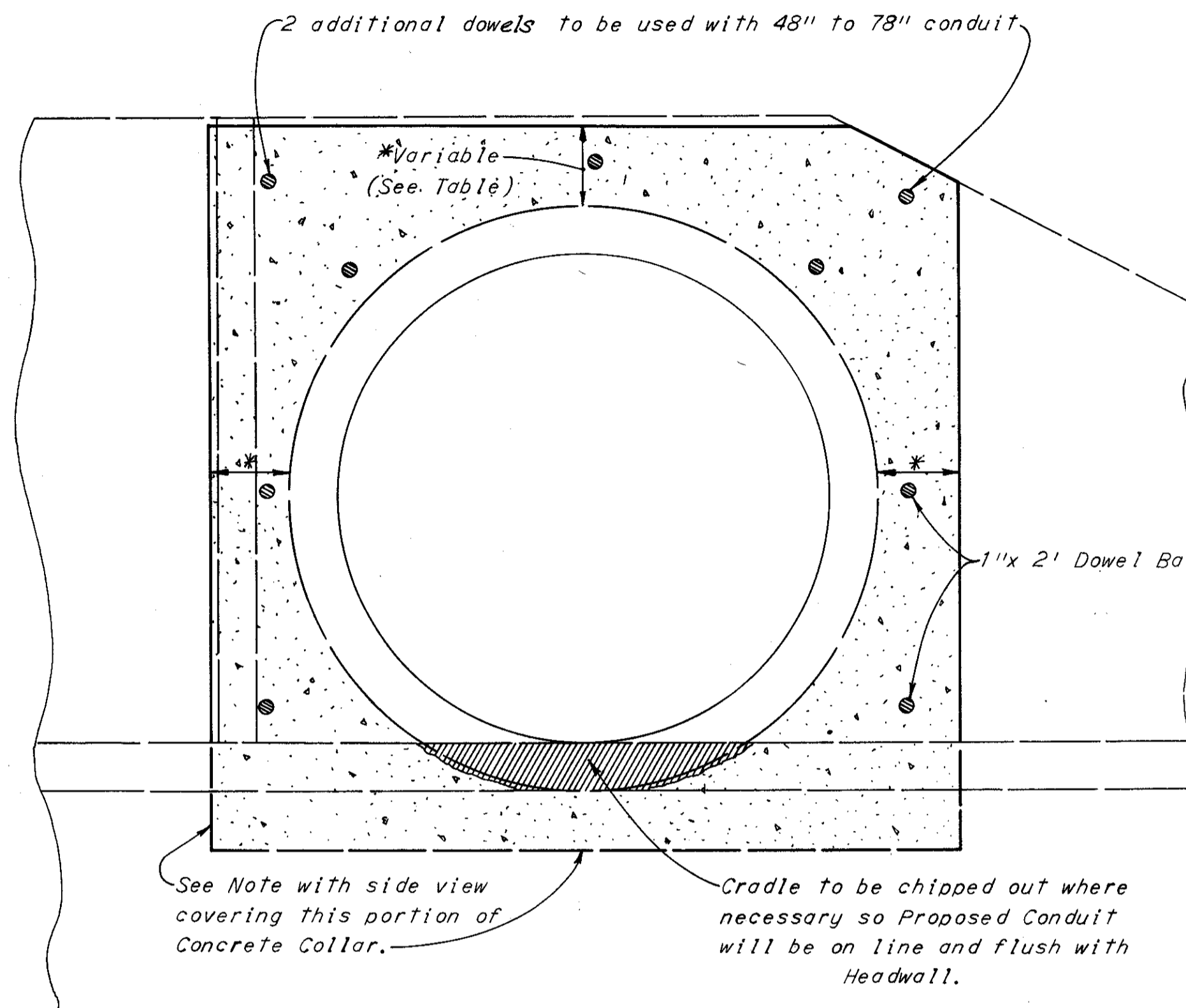


SECTION A-A (Typical X-Section)

There are estimated to be approximately 30 locations on this Project where grading is needed behind the median catch basins. The actual locations shall be determined by the Engineer.

DETAILS FOR GRADING BEHIND  
MEDIAN CATCH BASINS

NOTE: The cost of removing portions of headwalls to cradle proposed conduits, drilling and setting dowels, constructing concrete collars (using class C concrete), and all other related work such as sawing and removing concrete paved gutters, is to be included in the Pertinent Bid Item 603 Conduit, as per plan.



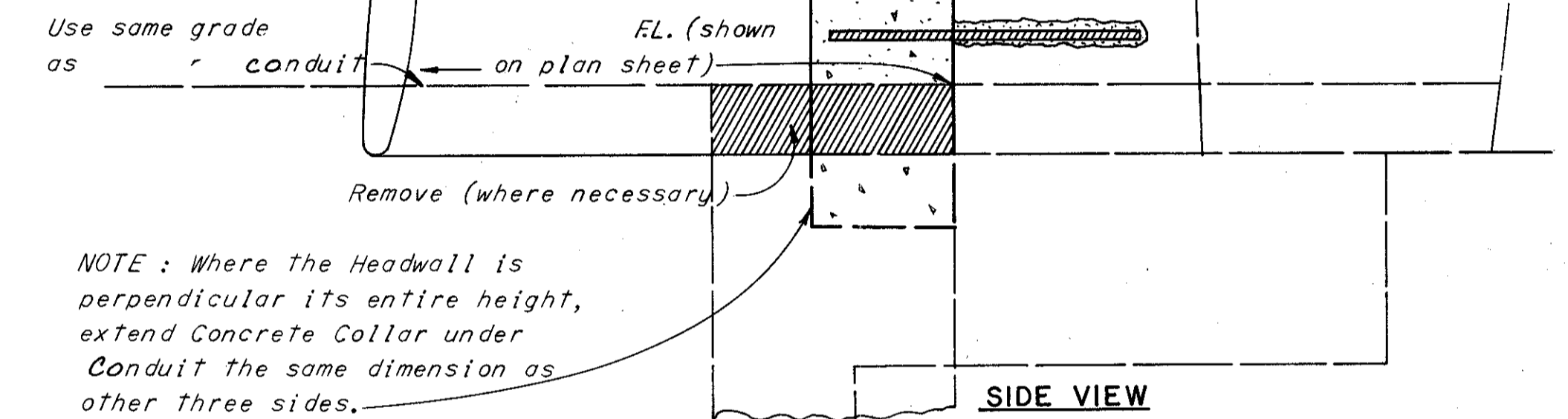
END VIEW

EDGE DISTANCE	PIPE SIZE
*6" Min.	30" Conduit
	36" "
*6" Min.	42" "
*8" Min.	48" "
	54" "
	60" "
*8" Min.	72" "

Note:

As an alternate to the dowelled concrete collar detailed, for culverts 24" in diameter or less, the headwall and the last section of the conduit may be removed and replaced with an additional section of new conduit at no additional cost to the State. If the alternate method is used, the cost of removing the wall and conduit and replacing the length of conduit removed shall be included in the unit price bid for the proposed conduit extension, measured from the face of the wall.

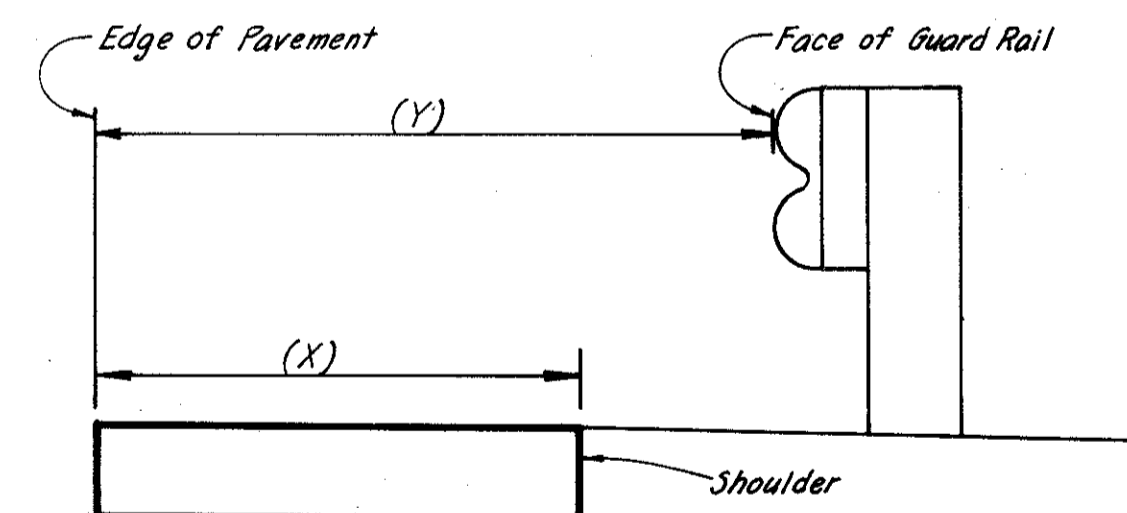
Use same grade as conduit on plan sheet



SIDE VIEW

NOTE: Where the Headwall is perpendicular its entire height, extend Concrete Collar under Conduit the same dimension as other three sides.

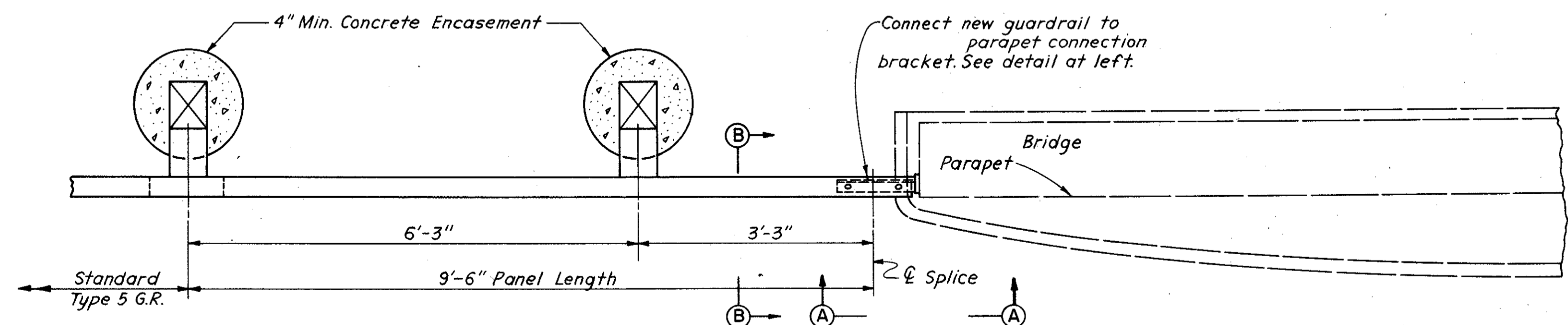
## CONCRETE COLLAR DETAILS



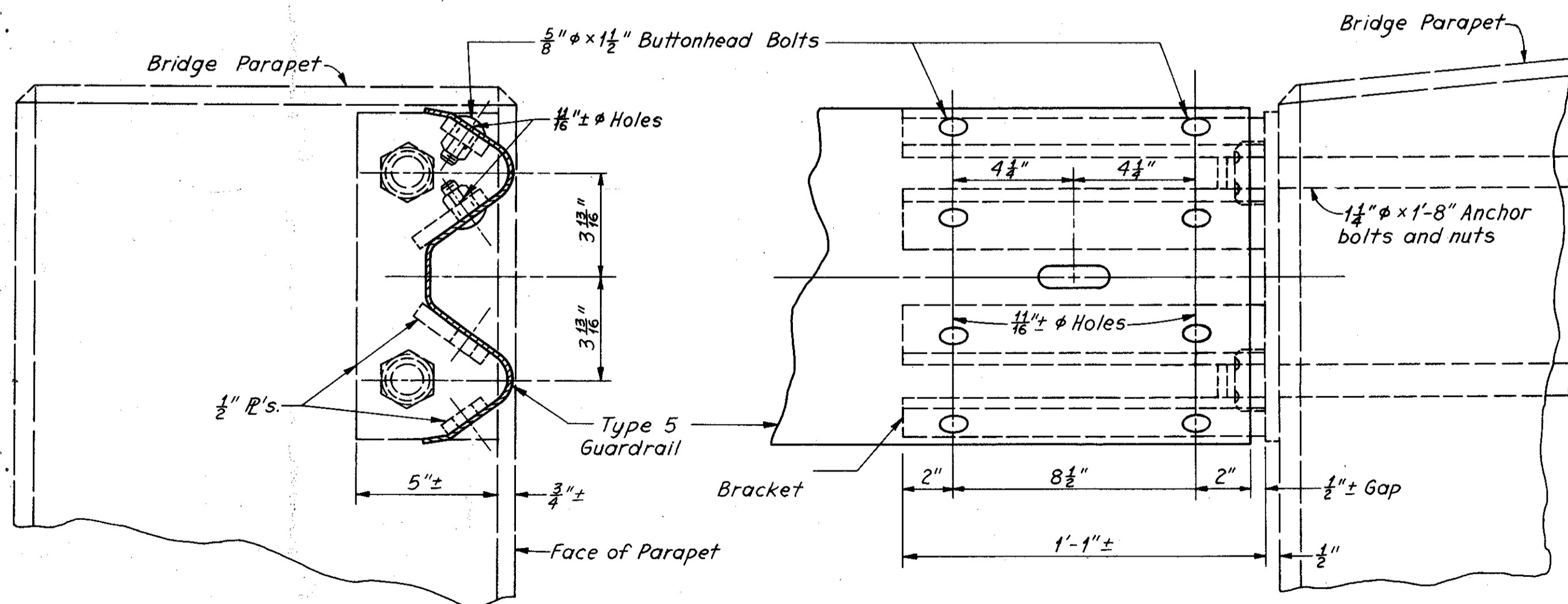
GUARD RAIL OFFSET DISTANCES	
Shoulder Widths (X)	Distance from Edge of Pavement to Normal Face of Guard Rail (Y)
3'-0"	5'-0"
4'-0"	6'-0"
5'-0"	7'-0"
8'-0"	10'-0"
10'-0"	12'-0"

## TYPICAL GUARD RAIL PLACEMENT

(Except as Noted)  
No Scale



TYPE FM CONNECTION



SECTION B-B

VIEW A-A

## TRAILING END

SCALE No Scale  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
MADE T.P.M. DATE 3-14-72  
CONSULTING ENGINEERS  
TRCD V.S.C. DATE 3-16-72  
CKD. L.J.D. DATE 11-8-72  
KANSAS CITY CLEVELAND NEW YORK