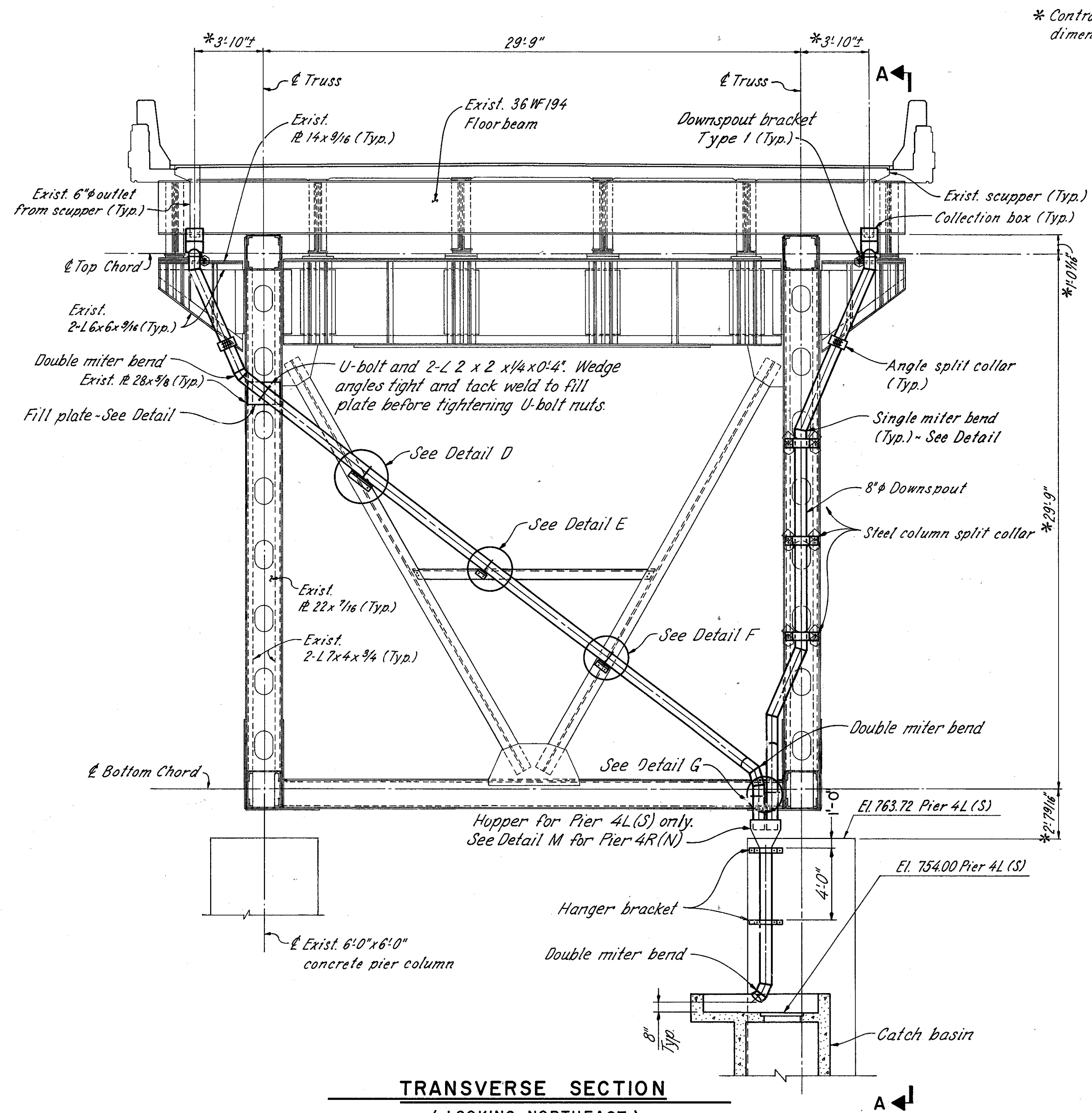
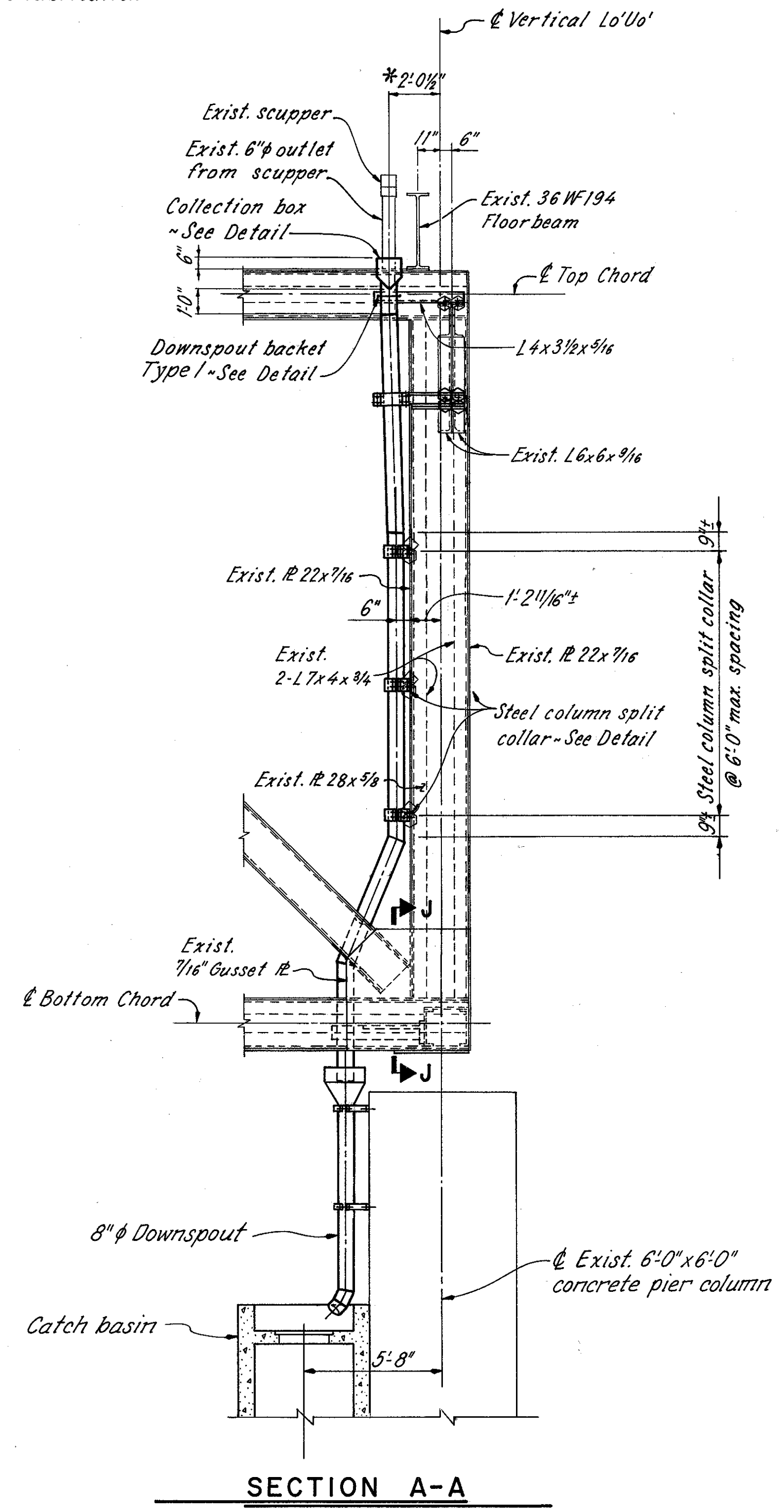


LAKE COUNTY  
LAK-90-23.42 (L & R)

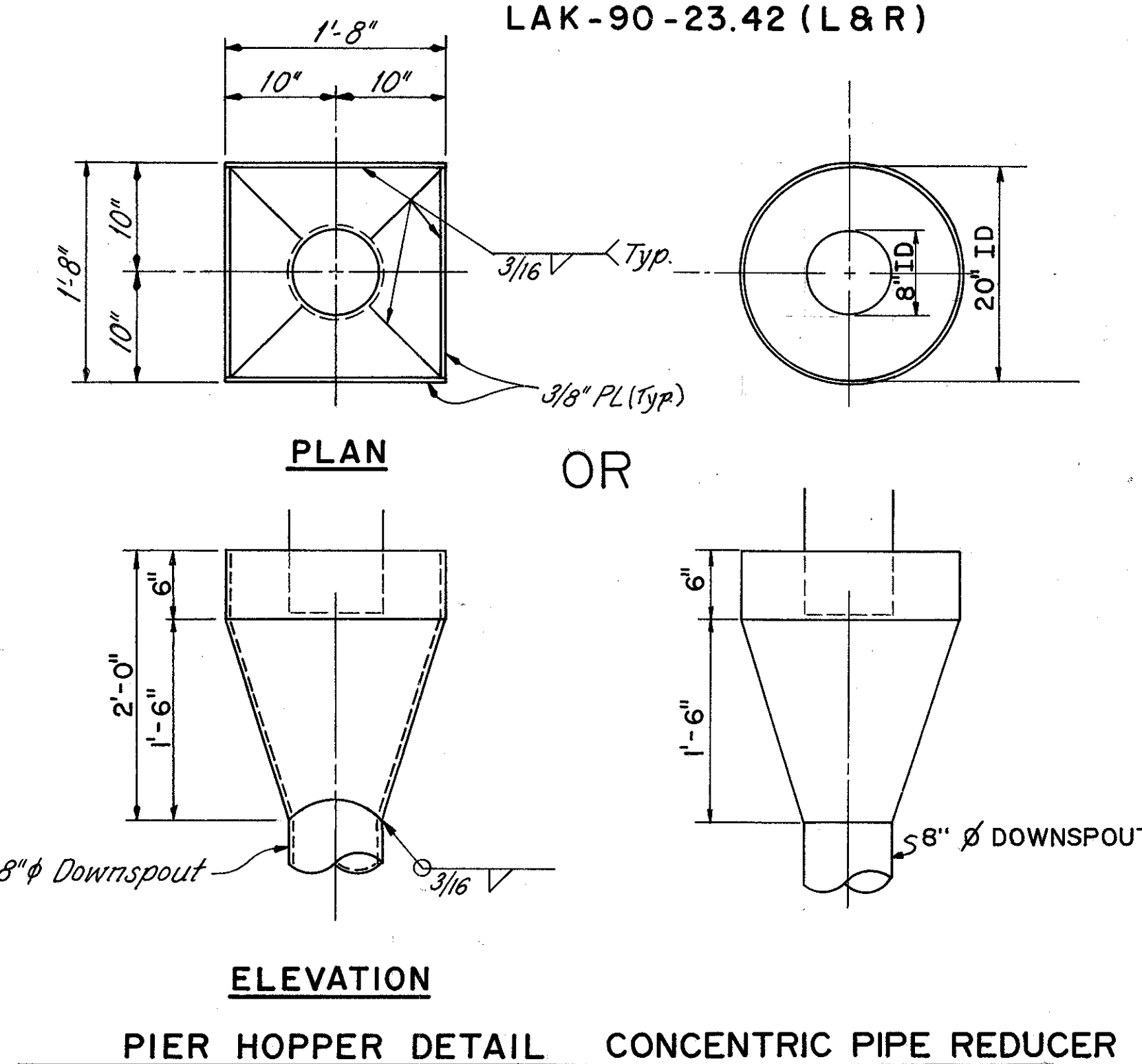


**TRANSVERSE SECTION**  
(LOOKING NORTHEAST)  
(WITH CATWALK REMOVED)

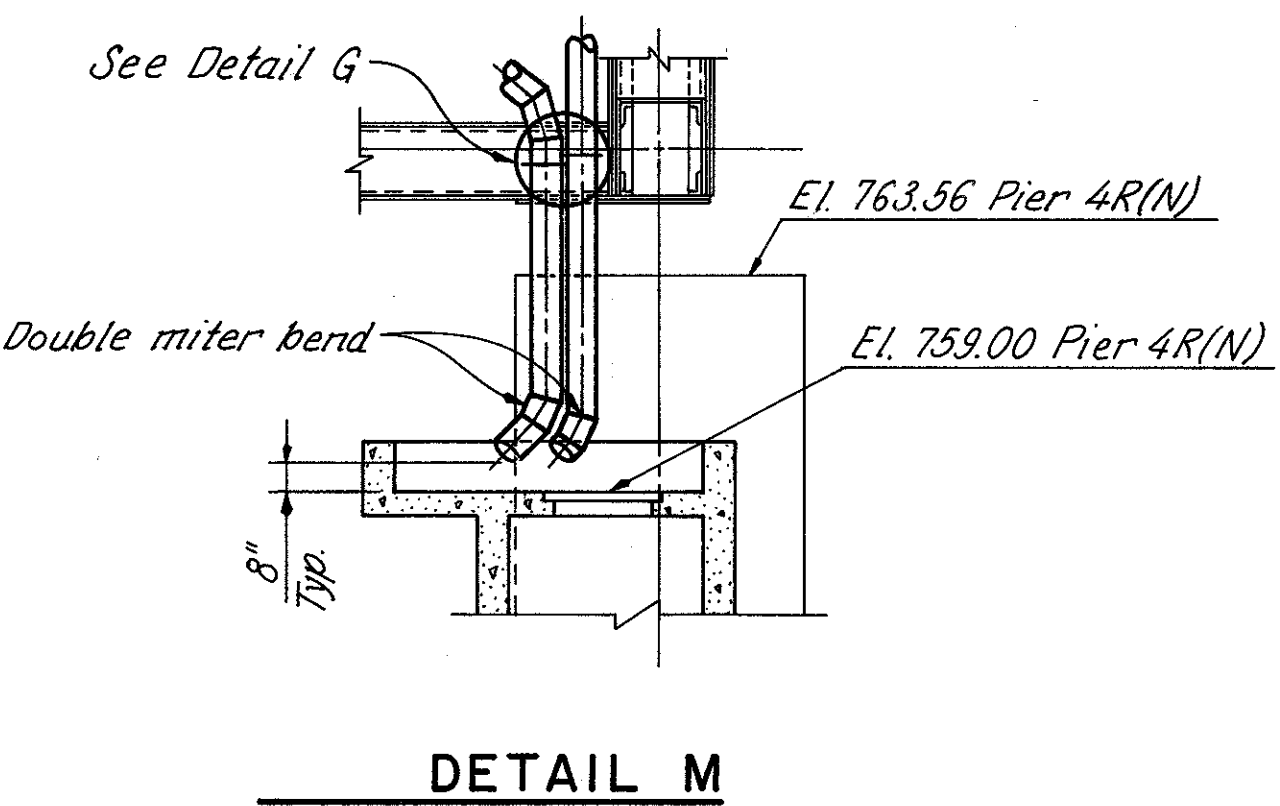
\* Contractor to field verify dimension before fabrication



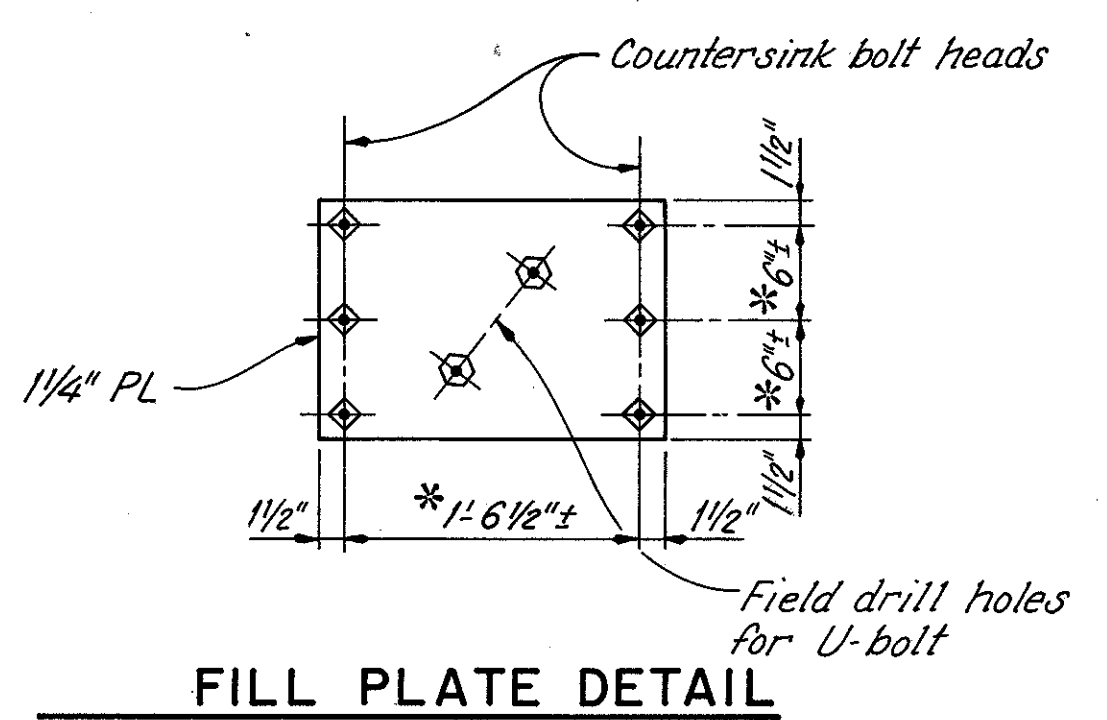
**SECTION A-A**



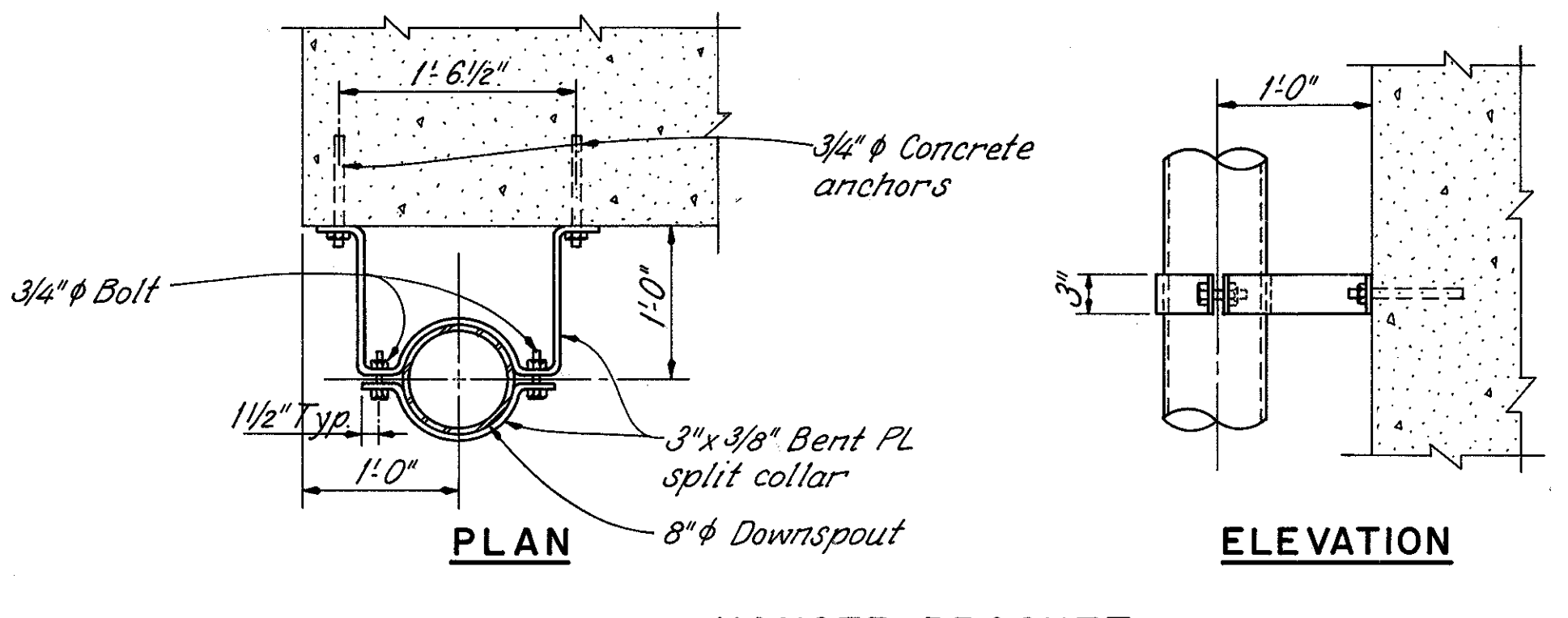
**PIER HOPPER DETAIL CONCENTRIC PIPE REDUCER**



**DETAIL M**



**FILL PLATE DETAIL**



**HANGER BRACKET**

**NOTES**

- COLLECTION BOX DETAIL: SEE SHEET 18/19
- BOLT LEGEND: SEE SHEET 2/19
- SPLIT COLLAR DETAILS: SEE SHEET 18/19
- DOWNSPOUT BRACKET DETAILS: SEE SHEET 18/19
- NOTATION: N-NORTH  
S-SOUTH  
L-LEFT BRIDGE (WESTBOUND)  
R-RIGHT BRIDGE (EASTBOUND)
- SINGLE & DOUBLE MITER BEND DETAILS: See sheet 18/19
- DETAILS D, E, F, & G AND SECTION J-J: See sheet 14/19
- CONCRETE ANCHORS shall be HVA Adhesive Anchor (HAS 34-958), as manufactured by Hilti Corporation; Molly Parabond Capsule Anchor as manufactured by Emhart Corporation, or an approved equal. Minimum embedment shall be 6 3/8"
- ADDITIONAL NOTES: See sheet 18/19

15/19

**RICHLAND ENGINEERING LIMITED**  
MANSFIELD, OHIO

**DRAINAGE DETAILS AT PIER 4**  
SUPERSTRUCTURE  
BRIDGE NO. LAK-90-2342 (L & R)  
OVER THE GRAND RIVER

LAKE COUNTY I.R. 90

DESIGNED	DHT	DRAWN	KH	TRACED	KH	CHECKED	DT	REVIEWED	DAP	DATE	9/13/89	REVISED	
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