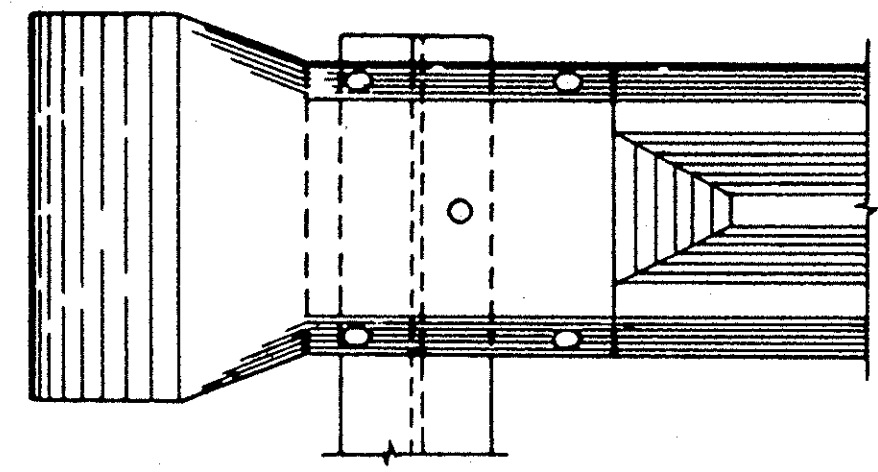
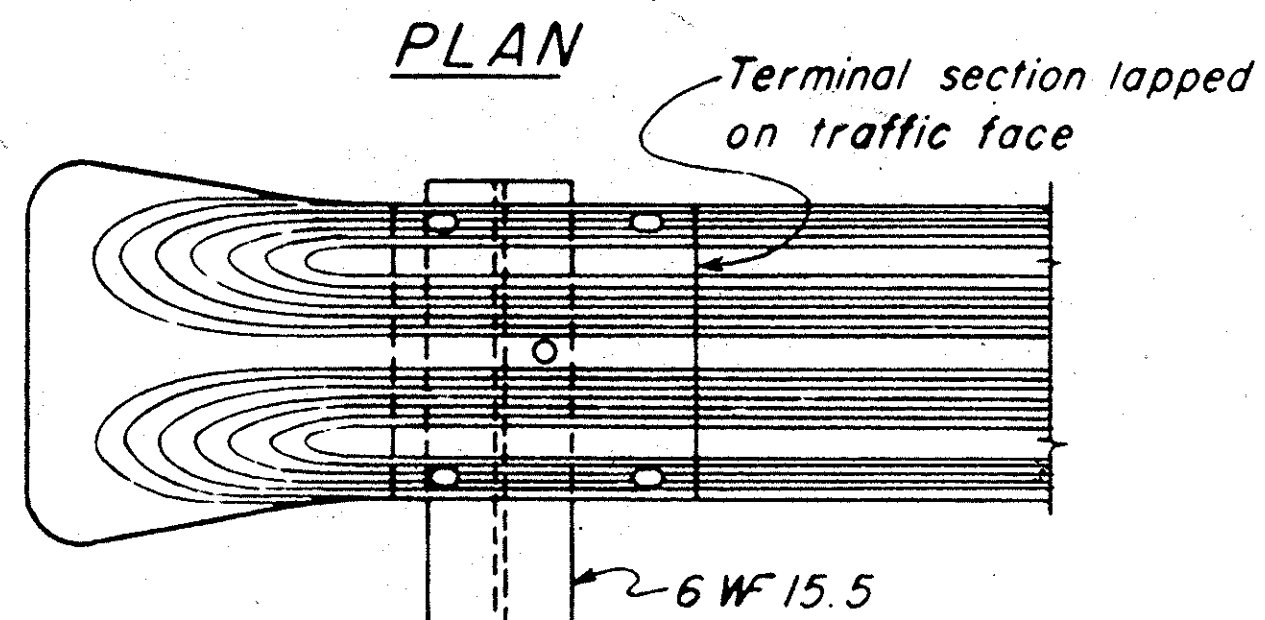
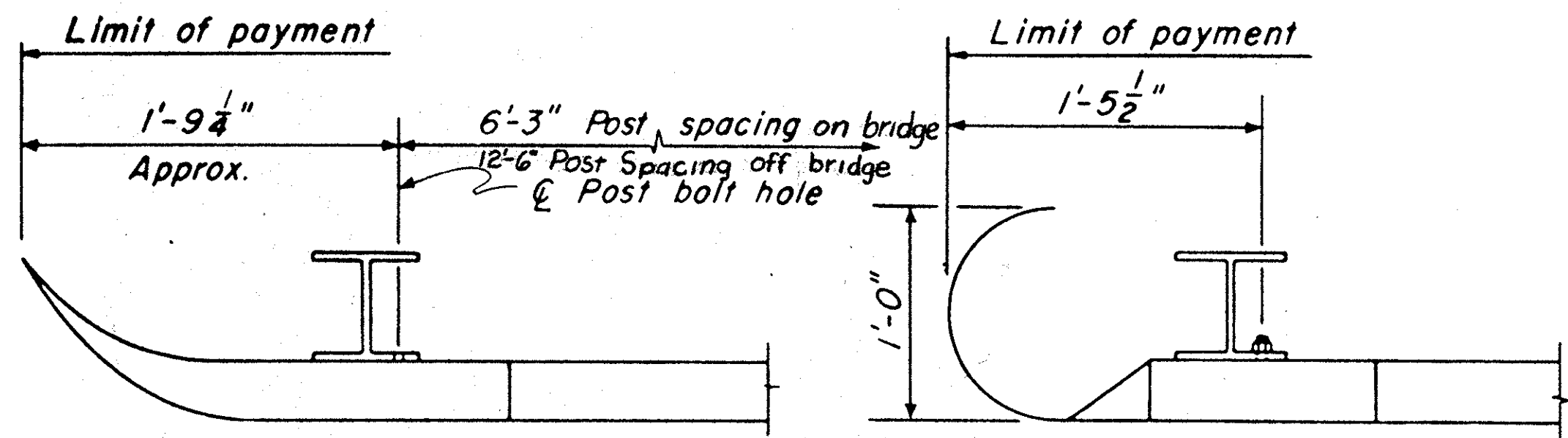


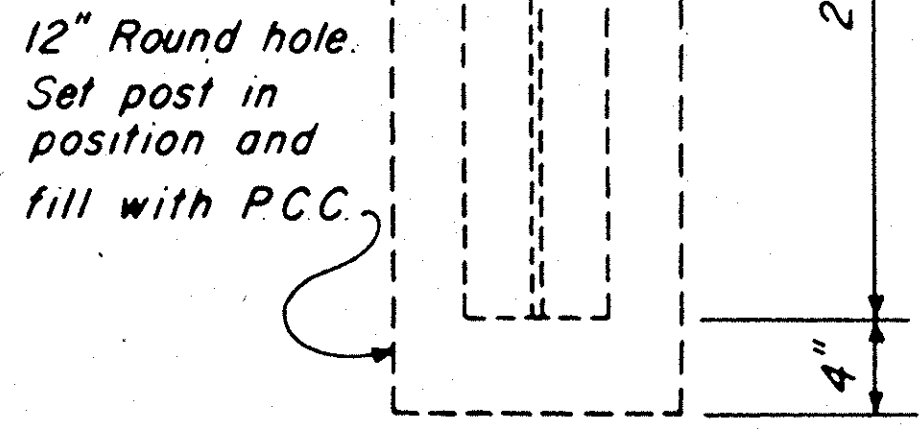
BRIDGE ENGINEER CIVIL ENGINEER—LICENSE 5558  
APPROVED September 4, 1962

|                          |  |      |
|--------------------------|--|------|
| COUNTY ROAD COMMISSIONER |  | DATE |
| BRIDGE PLANNING ENGINEER |  | DATE |



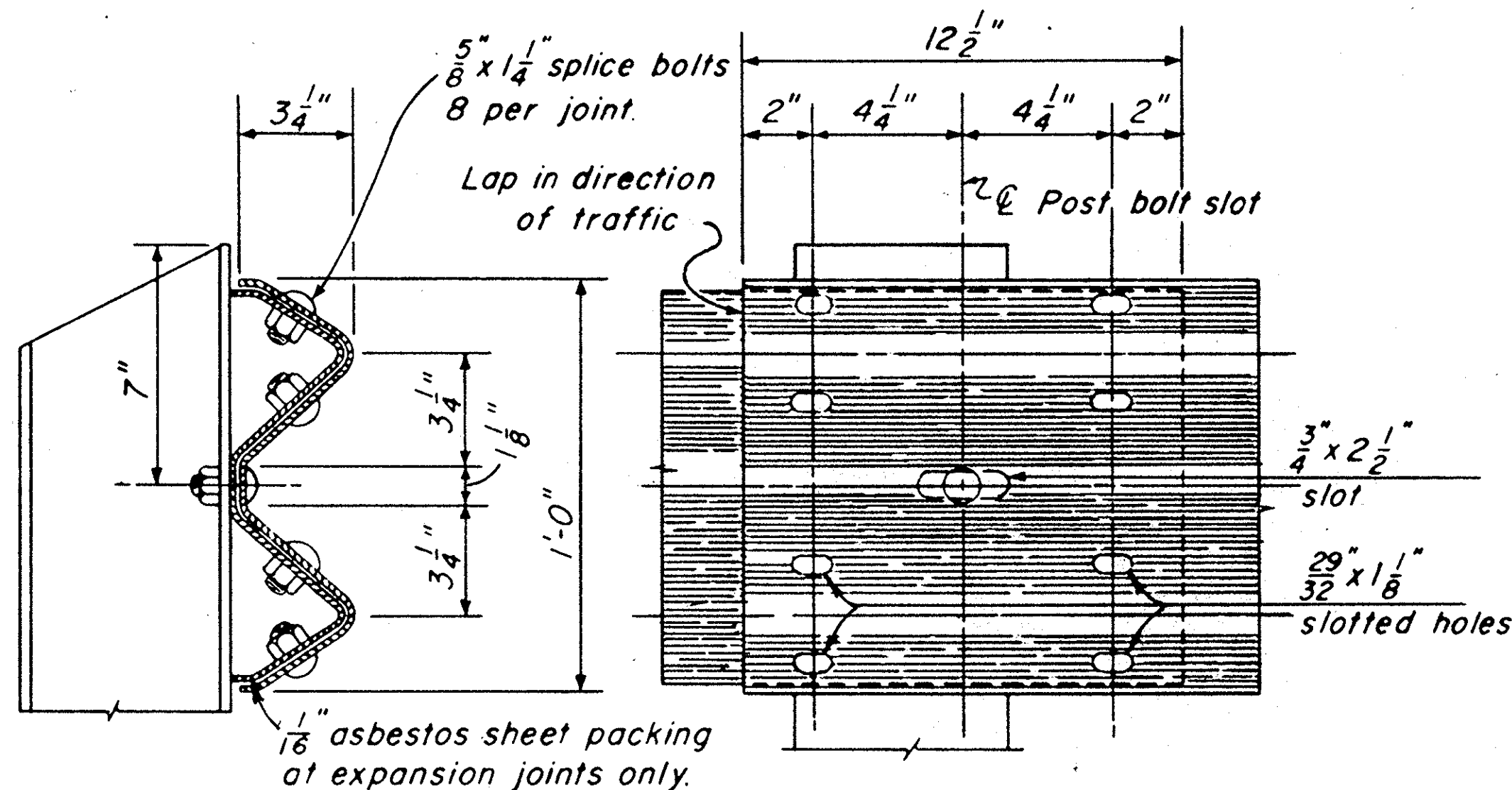
### ALTERNATIVE END DETAIL

NOTE: Place end post on shoulder if structure does not accommodate 12'-6" unit length.



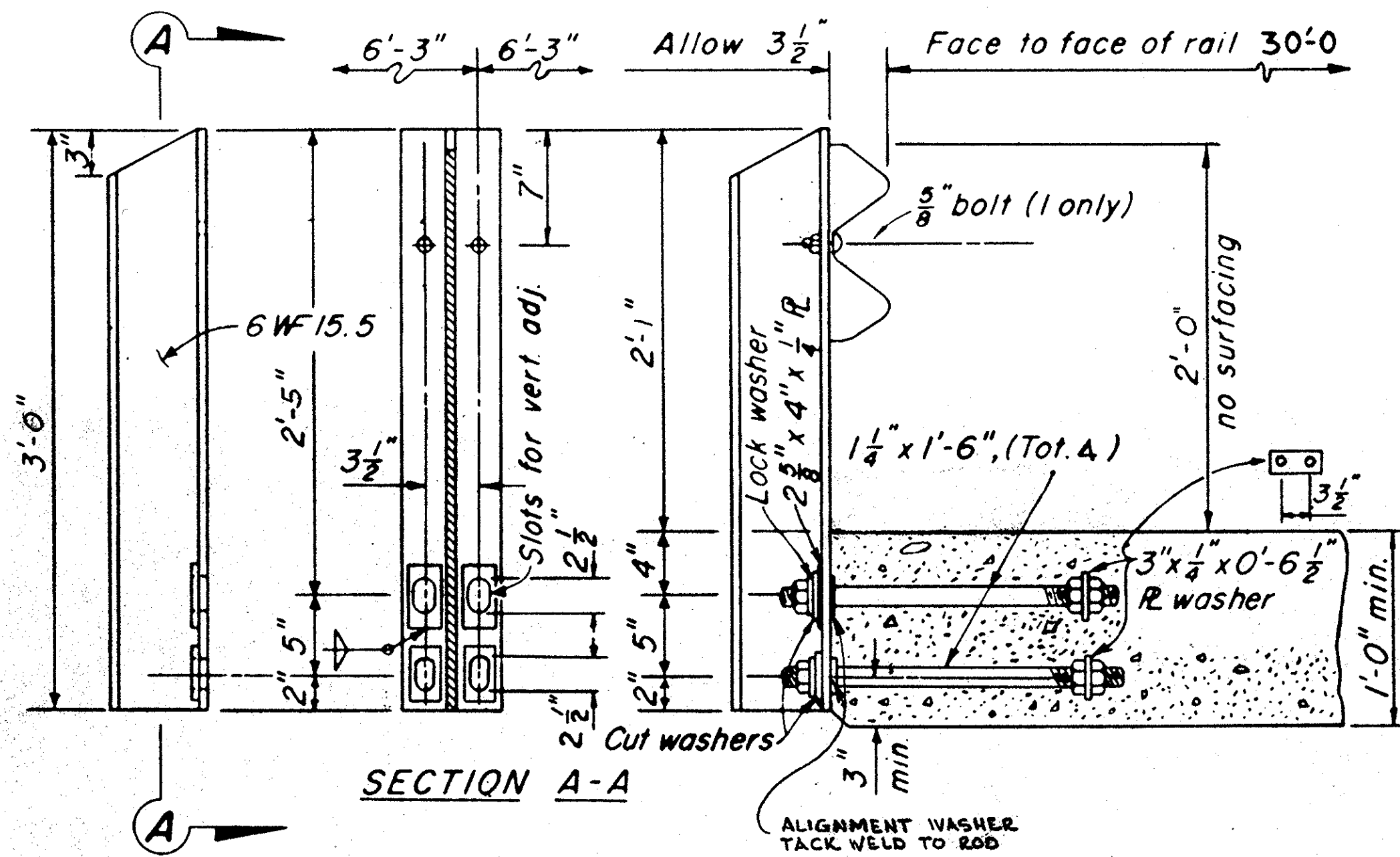
### ELEVATION END POST ON SHOULDER

SCALE: 1 1/2" = 1'-0"



### RAIL SPLICE

Scale: 3" = 1'-0"



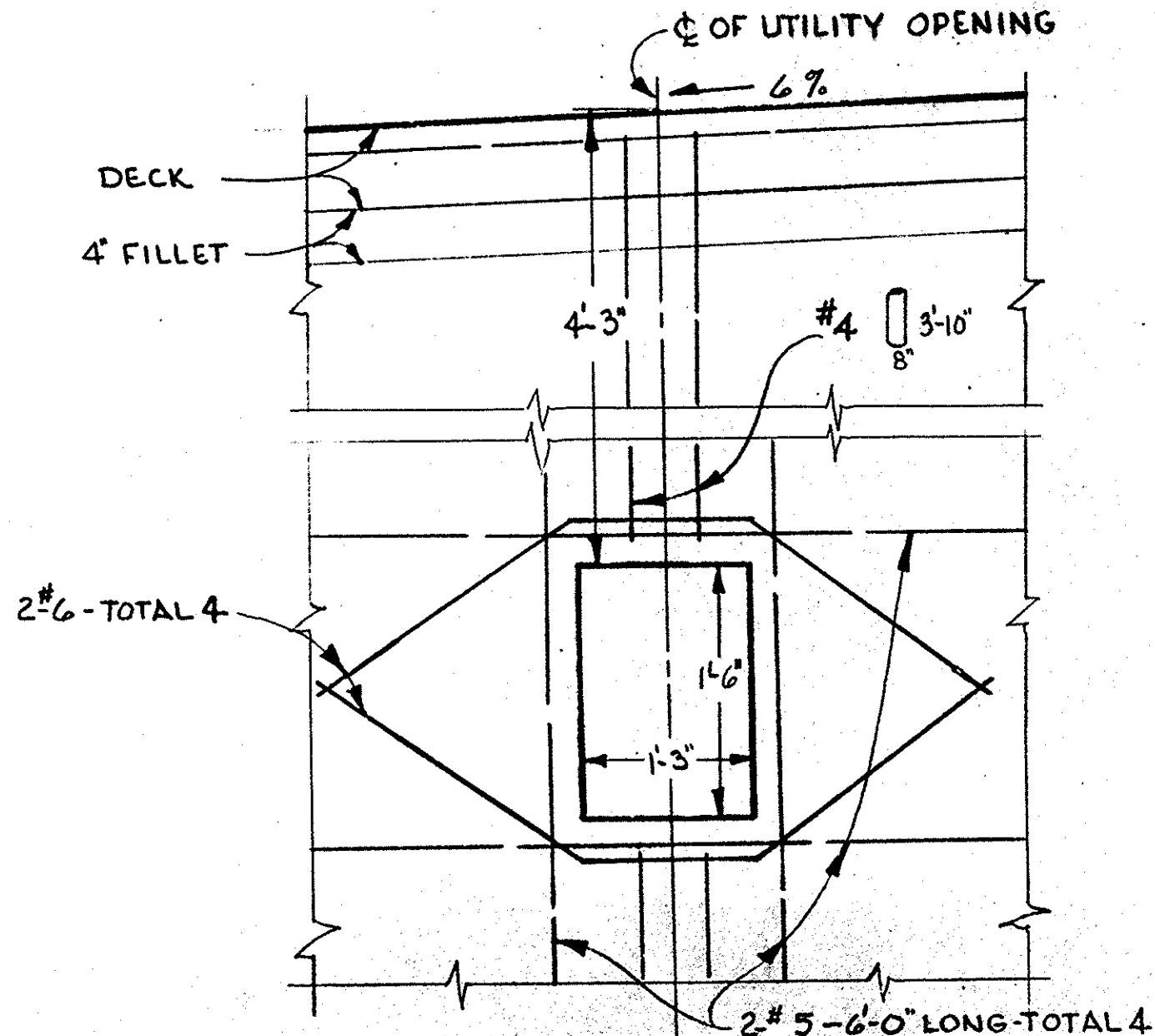
### POST FOR THIN SLABS

SCALE: 1 1/2" = 1'-0"

### Notes:

At rail splice nearest expansion joint in bridge deck, slot holes in movable section of rail to allow same amount of movement as is provided in bridge deck. Place 1/8" asbestos sheet packing between rail elements. Adjust bolts to provide sliding fit and set threads.

Use 3'-6" posts whenever possible. All anchor rods to have hex. nuts. Provide lock washers for top anchor rods. Weld 2 5/8" x 4" x 1 1/4" plates on W F posts when using 1 1/4" anchor rods. Contractor to provide metal shims to align posts. Space posts to clear expansion joints by 1'-0" min. to E post. Posts and anchors to be galvanized after fabrication. Railings on retaining walls to be placed after walls are backfilled. Bend rods if necessary to maintain minimum clearance on superelevated slabs. Shims for post alignment shall be galv. wedges.



### UTILITY OPENING AT THE ABUTMENTS

SCALE 1" = 1'-0"

### NOTES:

1. FOR LOCATION & DIRECTION OF OPENINGS SEE OTHER SHEETS
2. OPENINGS SHALL BE COVERED WITH 1" REDWOOD ON FILL SIDE, 4" EDGE LAP
3. ALL REINFORCEMENT DETAILED TO BE PLACED IN ADDITION TO REINFORCEMENT SHOWN ON OTHER SHEETS.
4. MAIN REINFORCEMENT TO CLEAR OPENING 2" MIN.

### AS BUILT

CONTRACT NO. 63-7Y24C3-P  
RESIDENT ENGR. D.E. Bourgeois  
DATE 6/21/63

|                                  |                |
|----------------------------------|----------------|
| ORANGE COUNTY HIGHWAY DEPARTMENT |                |
| SANTIAGO CANYON<br>BRIDGE SC-9   |                |
| RAIL DETAIL                      |                |
| SCALE NOTED                      | SHEET 22 OF 29 |

Structural Details  
Checked By  
Reviewed By  
Approved By