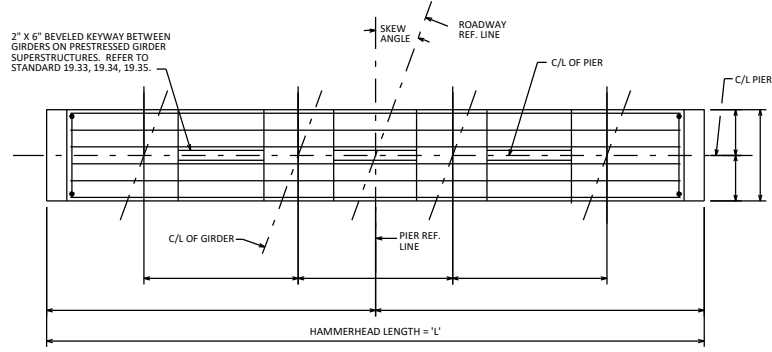
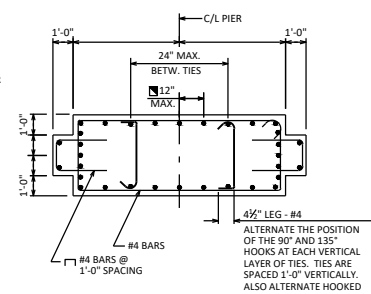


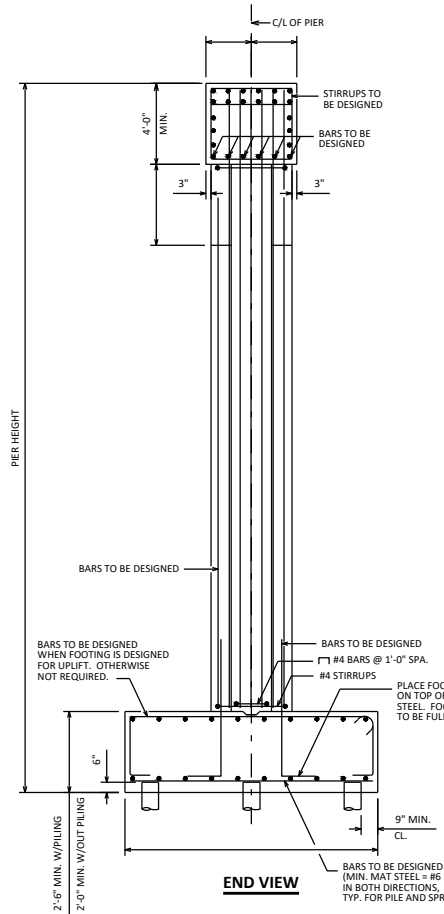
**SECTION P1**



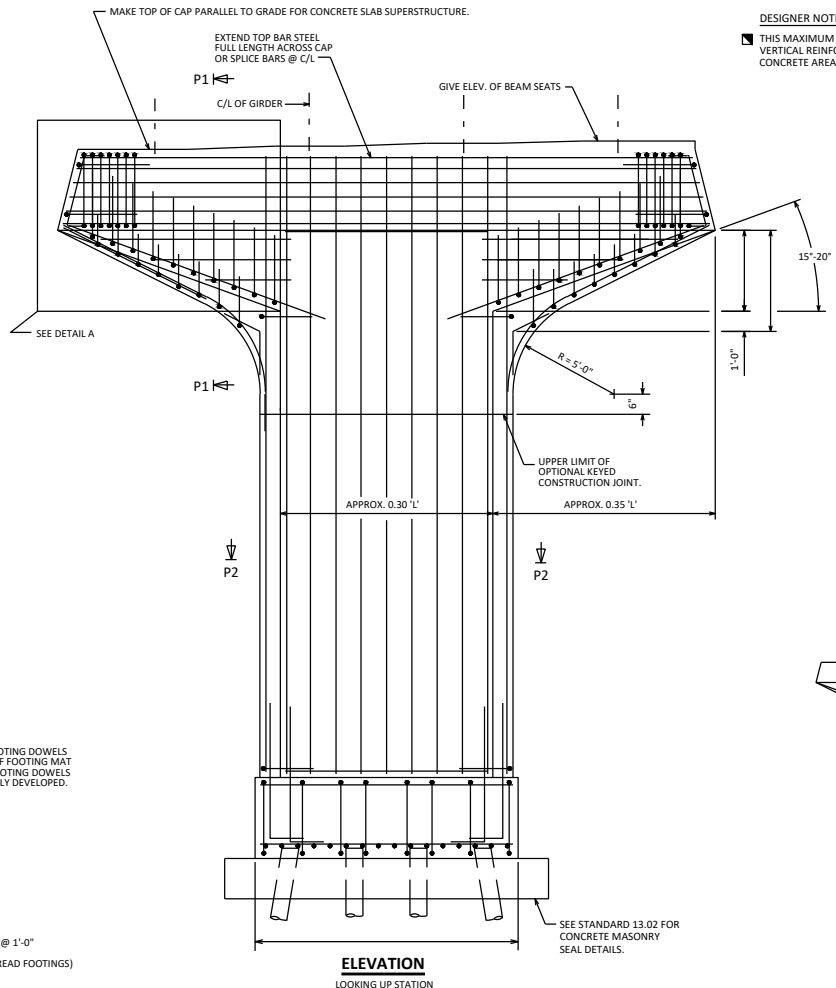
**PLAN OF PIER CAP**



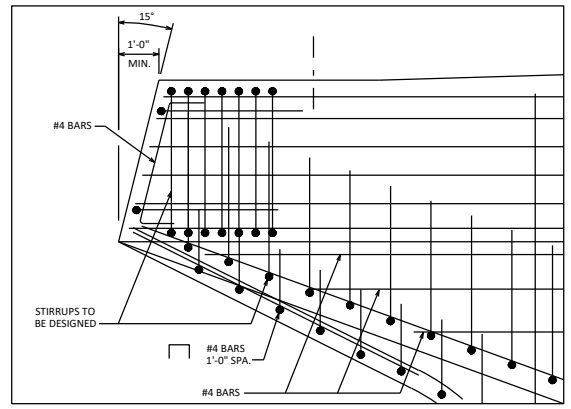
**SECTION P2**



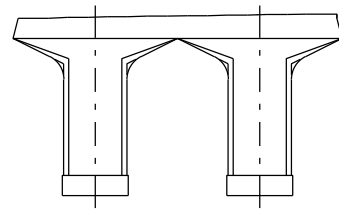
**END VIEW**



**ELEVATION**  
LOOKING UP STATION



**DETAIL A**



**TWO SHAFT PIER**

**DESIGNER NOTES**

ALL BAR SPLICES TO BE BASED ON "CLASS C" TENSION LAP SPLICE UNLESS OTHERWISE SHOWN.  
OPTIONAL KEYED CONSTRUCTION JOINTS IN SHAFT, IF PROVIDED, SHALL BE PLACED APPROXIMATELY 2'-0" ABOVE NORMAL WATER ELEVATION. OPTIONAL KEYED CONSTRUCTION JOINTS IN SHAFT SHOULD BE PROVIDED SO THAT THE MAXIMUM HEIGHT OF POUR NEED NOT EXCEED 25'-0" ±. DETAIL BAR SPLICES AT OPTIONAL JOINTS IF THE BAR PROJECTION WOULD BE GREATER THAN 20'-0" ±.

KEYED CONSTRUCTION JOINTS SHALL BE FORMED BY BEVELED KEYWAY 4" DEEP X 1/3 THICKNESS OF SHAFT X 4'-0" LESS THAN LENGTH OF SHAFT. EXPOSED EDGES OF CONSTRUCTION JOINT SHALL BE FLUSH AND NOT BEVELED.

BEARING SEAT AREAS SHALL BE LEVEL EXCEPT FOR THE TWO CASES LISTED BELOW:

1. FOR GIRDER WITH 1/2" ELASTOMERIC BEARING PADS WHEN THE BOTTOM OF THE GIRDERS SLOPE MORE THAN 1%. SEE STANDARD 13.01.
2. WHEN A CAP IS USED FOR CONCRETE SLAB SUPERSTRUCTURES MAKE THE TOP OF CAP PARALLEL TO GRADE. SEE STANDARD 18.01.

BEAM SEATS MAY BE ANGLED TO MATCH SKEW AT THE DESIGN ENGINEER'S DISCRETION.

SEE STANDARD 12.01 FOR ADDITIONAL REINFORCING STEEL IN BEARING AREA FOR BEAM SEATS THAT ARE 4" OR MORE ABOVE LOWEST BEAM SEAT.

FOR "HAMMERHEAD LENGTH" GREATER THAN 45'-0", CONSIDER A TWO SHAFT PIER FRAME RESEMBLING TWO HAMMERHEAD PIERS PLACED SIDE BY SIDE.

SEE STANDARD 13.01 FOR MINIMUM OFFSETS FROM BEARINGS TO SIDES OF CAP AND TO ADJACENT BEARING SEAT STEPS.

EPOXY COAT BAR STEEL DOWN TO TOP OF FOOTINGS IN ALL PIERS UNDER EXPANSION JOINTS AND ON ALL PIERS AT GRADE SEPARATIONS.

**NOTES**

THE BAR SPLICES AT THE OPTIONAL KEYED CONSTRUCTION JOINTS MAY BE ELIMINATED WHETHER OR NOT THE JOINT IS UTILIZED. PAYMENT WILL BE FOR THE ACTUAL BATS INSTALLED.

**DESIGNER NOTES (CONT')**

THIS MAXIMUM VERT. BAR SPACING APPLIES ONLY WHEN THE VERTICAL REINFORCEMENT IS 1% OR MORE OF THE GROSS CONCRETE AREA.

**HAMMERHEAD PIER - TYPE 2**



APPROVED: *Laura Shadewald*

DATE: 7-21