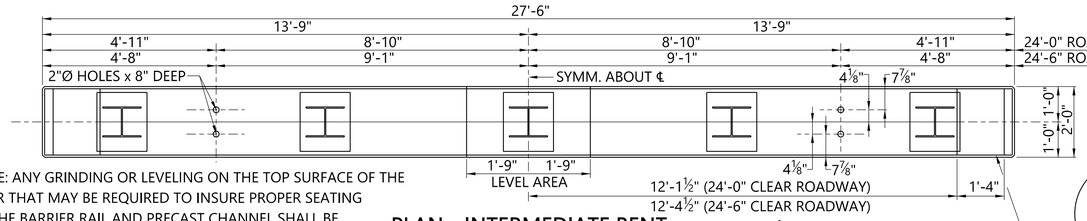
REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER

PLAN - INTERMEDIATE BENT

SCALE: ½" = 1'-0"



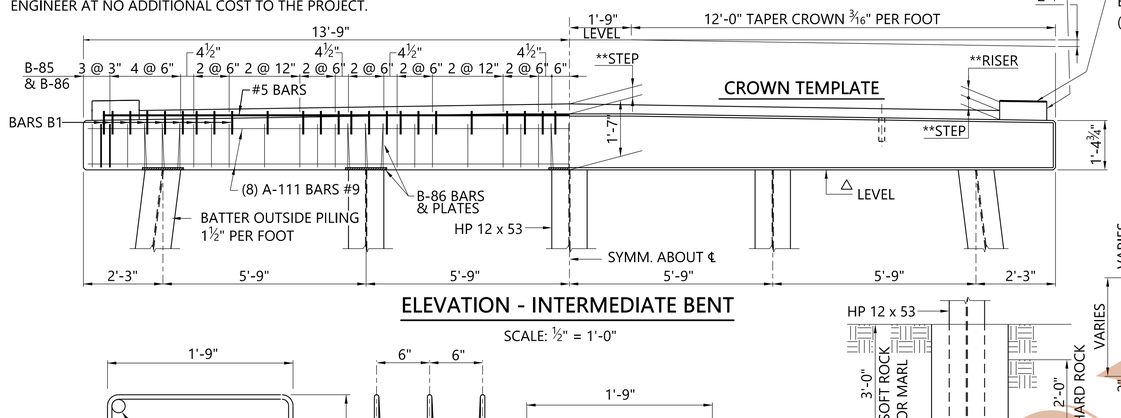
NOTE: ANY GRINDING OR LEVELING ON THE TOP SURFACE OF THE RISER THAT MAY BE REQUIRED TO INSURE PROPER SEATING OF THE BARRIER RAIL AND PRECAST CHANNEL SHALL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.

** x 22½" x 16" CONCRETE RISER BLOCK TO BE CAST MONOLITHICALLY WITH CAP.

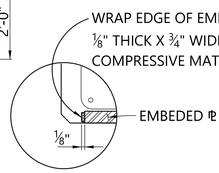
△ CAPS SHALL BE ERECTED SO THAT THE BOTTOM OF THE CAP IS LEVEL ALONG THE ROADWAY AND PERPENDICULAR TO THE ROADWAY. THE ACCEPTABLE ERECTION TOLERANCE (SLOPE ON BOTTOM OF CAP) SHALL BE 1/16'' PER FOOT ALONG THE ROADWAY AND 1/16'' PER FOOT PERPENDICULAR TO THE ROADWAY. CAPS ERECTED OUTSIDE THIS TOLERANCE SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE PROJECT.

ELEVATION - INTERMEDIATE BENT

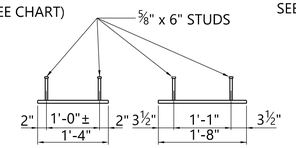
SCALE: ½" = 1'-0"



DETAIL "X"



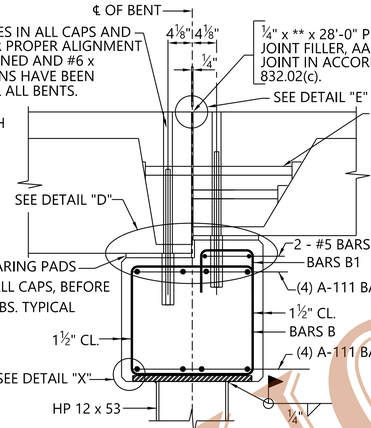
½" THICK TYPE I ELASTOMERIC BEARING 60 DURO HARDNESS (SEE CHART)



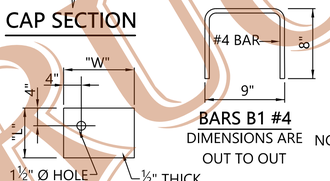
ALTERNATE ANCHOR SYSTEM

SCALE: 1" = 1'-0"

GROUT ALL HOLES IN ALL CAPS AND ALL SLABS AFTER PROPER ALIGNMENT HAS BEEN OBTAINED AND #6 x 1'-11" DOWEL PINS HAVE BEEN PLACED, TYPICAL ALL BENTS.



CAP SECTION

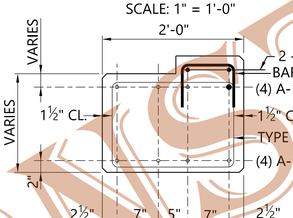


BARS B1 #4

DIMENSIONS ARE OUT TO OUT

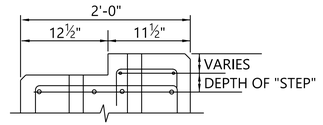
BEARING PAD DETAIL (SEE CHART)

***NOTE: 1½" Ø HOLE REQ'D. FOR PAD AT INTERIOR SIDE OF EXTERIOR SLAB



STEEL PLACEMENT DETAIL

SCALE: 1" = 1'-0"



DETAIL "D"

** DEPTH OF STEP, RISER BLOCK & JOINT FILLER

	STEP	RISER	JT. FILLER
24' SPAN TO 34' SPAN	4"	NA	20"
24' SPAN TO 40' SPAN	7"	NA	23"
34' SPAN TO 40' SPAN	3"	4"	23"

TYPE I ELASTOMERIC BEARING PAD DIMENSIONS

LOCATION	"L"	"W"
BARRIER RAIL	1'-10½"	1'-4"
*** INTERIOR SIDE OF EXTERIOR SLAB	11¼"	1'-4"
INTERIOR SLABS	11¼"	1'-4"
EXTERIOR SIDE OF EXTERIOR SLAB	11¼"	8"

SWAYBRACING TABLE

	"H"	"F"	"G"	"A"	"B"	"C"	"D"	WT. LBS.
SINGLE STORY SWAYBRACING	13'-0"	6'-11"	---	25'-6"	25'-6"	---	---	906
	14'-0"	7'-11"	---	25'-11"	25'-9"	---	---	916
	15'-0"	8'-11"	---	26'-4"	26'-0"	---	---	927
	16'-0"	9'-11"	---	26'-10"	26'-3"	---	---	938
	17'-0"	10'-11"	---	27'-4"	26'-6"	---	---	949
	18'-0"	11'-11"	---	27'-10"	26'-9"	---	---	961
	19'-0"	12'-11"	---	28'-5"	27'-0"	---	---	974
DOUBLE STORY SWAYBRACING	20'-0"	6'-11"	6'-0"	25'-6"	25'-6"	27'-0"	27'-3"	1862
	21'-0"	6'-11"	7'-0"	25'-6"	25'-6"	27'-5"	27'-6"	1872
	22'-0"	6'-11"	8'-0"	25'-6"	25'-6"	27'-10"	27'-9"	1882
	23'-0"	6'-11"	9'-0"	25'-6"	25'-6"	28'-3"	28'-0"	1892
	24'-0"	6'-11"	10'-0"	25'-6"	25'-6"	28'-9"	28'-3"	1903
	25'-0"	6'-11"	11'-0"	25'-6"	25'-6"	29'-2"	28'-6"	1914

NOTE: WEIGHT GIVEN IS TOTAL FOR TWO PIECES OF EACH LENGTH OF SWAYBRACING SHOWN IN TABLE. BATTEN WEIGHT INCLUDED IN ABOVE TABLE.

DESIGN PARAMETERS

THE FOLLOWING DESIGN PARAMETERS WERE USED TO DEVELOP THIS STANDARD DRAWING:

DESIGN AXIAL LOAD = 37 TONS / PILE FOR 24'-0" SPAN
DESIGN AXIAL LOAD = 44 TONS / PILE FOR 34'-0" SPAN
DESIGN AXIAL LOAD = 54 TONS / PILE FOR 40'-0" SPAN
"K" FOR COMPUTING UNBRACED PILE LENGTH = 2.0
SCOUR DEPTH = 0 FEET
DISTANCE FROM GROUNDLINE TO PILE FULLY FIXED = 15 FEET
FACTOR OF SAFETY FOR UNSCOURED CONDITION = 2.0

THE DESIGNER OF RECORD IS RESPONSIBLE FOR DETERMINING ACTUAL PILE SIZE AND BRACING REQUIREMENTS FOR CONDITIONS NOT SATISFIED BY THE ABOVE NOTED DESIGN PARAMETERS.

GENERAL NOTES

SPECIFICATIONS: ALABAMA DEPARTMENT OF TRANSPORTATION, CURRENT

DESIGN LOADING: A.A.S.H.T.O. HS20-44

CONCRETE: CONCRETE FOR PRECAST BENT CAP SHALL BE IN ACCORDANCE WITH SECTION 512 OF THE STANDARD SPECIFICATIONS. ALL EXPOSED CORNERS TO BE CHAMFERED ¾" BY 45° UNLESS OTHERWISE NOTED. ALL OTHER CORNERS ARE TO BE ROUNDED TO ¼" RADIUS. CONCRETE WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED AS SUBSIDIARY TO THE ITEM PRECAST CONCRETE CAP UNIT.

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND FIRMLY HELD IN PLACE AS REQUIRED BY ITEM 502.03(c)4 OF THE STANDARD SPECIFICATIONS. REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF SECTION 835 OF THE STD. SPEC. REINFORCING DIMENSIONS ARE TO THE CENTER LINE OF THE BARS UNLESS OTHERWISE NOTED. THE ABOVE STEEL WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED AS SUBSIDIARY TO THE ITEM OF PRECAST CONCRETE CAP UNIT.

STRUCTURAL STEEL AND PILING: ALL STRUCTURAL STEEL SHALL CONFORM TO SECTION 836 OF THE STANDARD SPECIFICATIONS. ALL PILING SHALL BE 12" STEEL "H" PILING, 53 LBS. FOR PILE SPLICE DETAILS SEE BRIDGE SPECIAL PROJECT DRAWING SBD-1.

WELDING: ALL WELDING SHALL CONFORM TO ARTICLE 836.46 OF THE STANDARD SPECIFICATIONS.

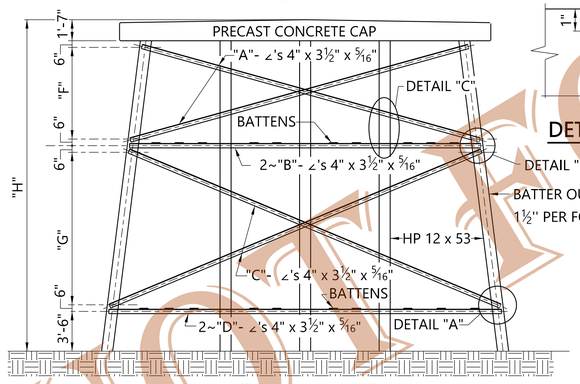
TOLERANCES: A DEVIATION OF MORE THAN ⅛" MAY BE CAUSE FOR THE REJECTION OF THE UNIT.

DESIGN DATA: A.A.S.H.T.O. 2002 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES & INTERIMS SERVICE LOAD DESIGN

BID ITEMS:
511-A ELASTOMERIC BEARINGS, TYPE 1 - PER EACH.
512-B PRECAST CONCRETE INTERMEDIATE BENT CAPS, 2'-0" WIDE BY 1'-7" DEEP (PLUS STEP) BY 27'-6" LONG - PER EACH.

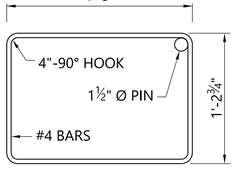
B-86 BARS & ANCHOR PLATES

SCALE: 1½" = 1'-0"

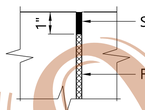


B-85 BARS - 36 REQ'D

SCALE: 1½" = 1'-0"



DETAIL "E"



DETAILS FOR PILING ON CONCRETE PEDESTAL FOUNDATION

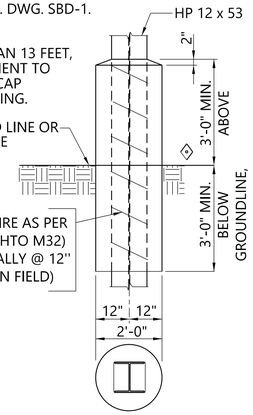
SCALE: ½" = 1'-0"

NOTE: WHERE SUFFICIENT PILE PENETRATION CANNOT BE OBTAINED, PILES SHALL BE ENCASED WITH CONCRETE PEDESTALS AS SHOWN. COST OF THE CONCRETE PEDESTALS TO BE PAID FOR IN ACCORDANCE WITH SUBARTICLE 505.05(f) OF THE STANDARD SPECIFICATIONS. APPROVAL FOR USE MUST BE OBTAINED FROM THE BUREAU OF CONSTRUCTION.

* NOTE: PILE ENCASEMENT MAY BE STOPPED 1'-0" BELOW THE BOTTOM OF CAP. THE CONTRACTOR SHALL CLEAN AND PAINT THE STEEL PLATE AND THE PILING FROM THE BOTTOM OF THE CAP TO 12" BELOW THE TOP OF THE PILE ENCASEMENTS AS PER SPECIFICATIONS. TOP OF ENCASEMENT SHALL BE SLOPED TO DRAIN. FOR ALTERNATE PAINT DETAILS, SEE BR. SPEC. PROJ. DWG. SBD-1.

* WHERE "H" IS LESS THAN 13 FEET, EXTEND THE ENCASEMENT TO THE BOTTOM OF THE CAP AND OMIT SWAYBRACING.

◇ WHERE PILE BENT IS LOCATED IN WATER, ENCASEMENT SHALL EXTEND 3'-0" MIN. ABOVE NORMAL WATER LINE AS DETERMINED BY ENGINEER.



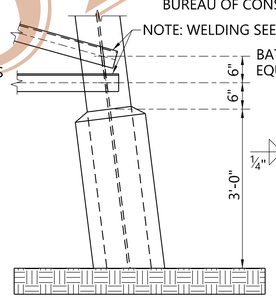
PILE ENCASEMENT DETAILS

SCALE: ½" = 1'-0"

SWAYBRACING DETAILS

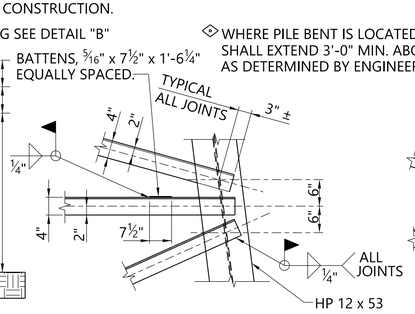
N.T.S.

TWO STORY BENT SHOWN, SINGLE STORY BENTS SIMILAR. SWAYBRACING FOR SINGLE STORY BENTS SHALL BE 4" x 3½" x 5/16" ANGLES & DESIGNATED BY THE LETTER "A" AND "B". ALL PILING AT GROUND AND OR WATER LINE SHALL BE ENCASED IN CONCRETE. NOTE ENCASEMENT DETAILS.



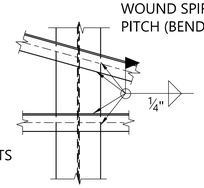
DETAIL "A"

SCALE: ¾" = 1'-0"



DETAIL "B"

SCALE: ¾" = 1'-0"



DETAIL "C"

SCALE: ¾" = 1'-0"

ASSISTANT BRIDGE ENGINEER	BRIDGE ENGINEER
11/6/22 DATE	11/7/2022 DATE

ALABAMA DEPARTMENT OF TRANSPORTATION	REVISIONS	THIS BRIDGE SPECIAL PROJECT DRAWING FOR USE ONLY ON: PROJECT NO. _____ COUNTY(S) _____

PRECAST CONCRETE BENT CAP FOR USE WITH STEEL PILING AND PRECAST CONCRETE BRIDGE SLABS CONNECTING 24'-0", 34'-0" OR 40'-0" SPANS 24'-6" CLEAR ROADWAY

BRIDGE SPECIAL PROJECT DRAWING

PCB-2440-1

SHEET 1 OF 1