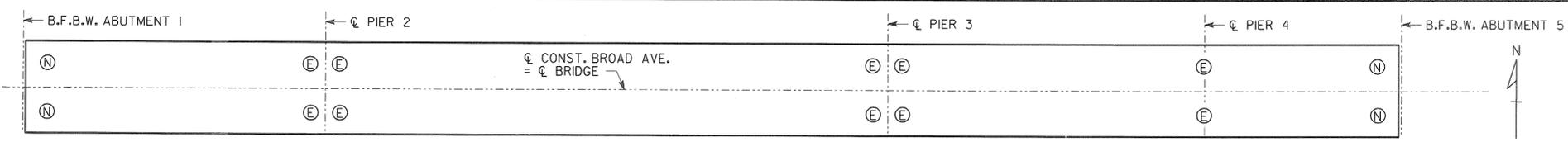


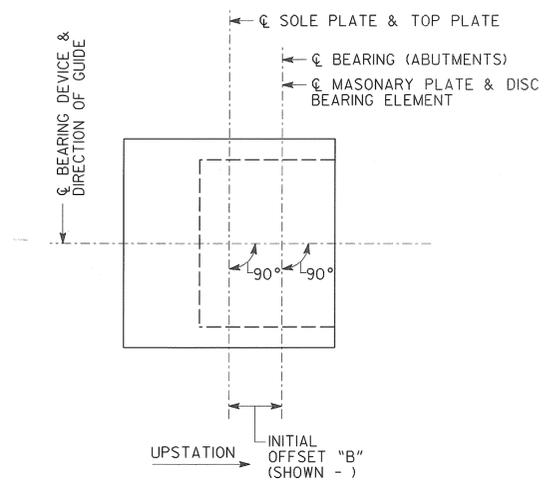
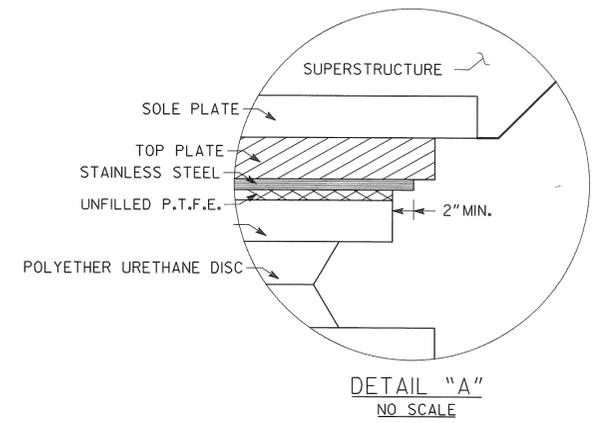
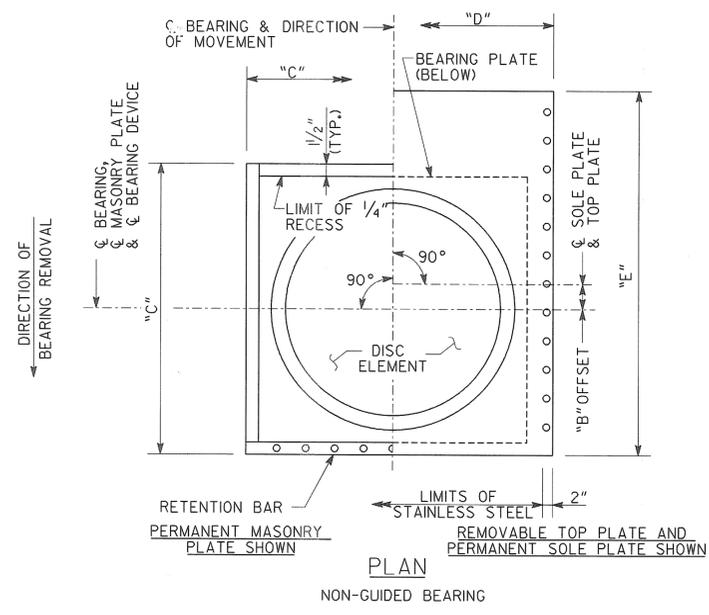
### DISC BEARING NOTES

- THIS DRAWING IS A SCHEMATIC OF THE REQUIRED DISC BEARINGS. MANUFACTURER IS RESPONSIBLE FOR THE DESIGN OF THE BEARING DEVICES, INCLUDING THE SOLE AND MASONRY PLATES AND REQUIRED SHEAR CONNECTORS. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL.
- PROVIDE EACH BEARING ASSEMBLY TO ACCOMMODATE THE CONTRACTION AND EXPANSION MOVEMENTS SHOWN. SHOW THE PROPER INSTALLED POSITION OF ALL PLATES WITH RESPECT TO THE DISC ELEMENT AND SETTING TEMPERATURE ON THE SHOP DRAWINGS. THE POSITIVE AND NEGATIVE MOVEMENT AND OFFSETS GIVEN ARE RELATIVE TO THE PROJECT STATIONING.
- DESIGN BEARINGS TO PROVIDE A TOTAL ROTATION CAPACITY OF 0.015 RADIAN. THESE CAPACITIES INCLUDE A FACTORED BEARING ROTATION PLUS AN ALLOWANCE FOR UNCERTAINTIES OF 0.005 RADIAN.
- DESIGN AND CONSTRUCT BEARING ASSEMBLIES TO PERMIT REMOVAL OF BEARING ELEMENTS AND SLIDING SURFACES FOR REPAIR OR REPLACEMENT. THIS REQUIRES THE FABRICATION OF A MINIMUM OF A FOUR PLATE SYSTEM INCLUDING A MASONRY PLATE, BOTTOM BEARING PLATE, TOP PLATE AND SOLE PLATE. SUGGESTED DETAILS FOR THIS ALLOWANCE HAVE BEEN PROVIDED BUT THE MANUFACTURER MAY SUBMIT ALTERNATE DETAILS. THE DISC ELEMENT SHOWN IS ASSUMED TO INCLUDE THE DISC, SHEAR RESISTING MECHANISM AND THE BOTTOM SLIDING SURFACE. REPAIR OR REPLACEMENT OF THE BEARINGS IS ACCOMPLISHED BY VERTICALLY JACKING THE BRIDGE NO MORE THAN 3/8" AT EACH ABUTMENT.
- BEARING RETENTION BAR IS DESIGNED TO HOLD THE LOWER BEARING PLATE IN PLACE DURING SERVICE AND TO BE REMOVED SO THE BEARING DEVICE CAN SLIDE TOWARDS THE FACE OF THE ABUTMENT TO FACILITATE REPAIR OR REPLACEMENT. MASONRY PLATE MUST BE CAST INTO BEARING PEDESTAL SUCH THAT THE RETENTION BAR IS FACING OUT.
- BEARINGS ARE TO BE SET LEVEL. LONGITUDINAL GRADE IS GIVEN AS INFORMATION TO FACILITATE FORMING OF THE BEARINGS PLINTHS.
- MASONRY PLATE AND SOLE PLATE SHALL BE CAST INTO INTEGRAL BEARING PEDESTALS.
- PLATE DIMENSIONS GIVEN ARE ESTIMATED DIMENSIONS.
- NUMBER, SIZE AND SPACING OF SHEAR CONNECTORS ARE DETERMINED BY THE BEARING MANUFACTURER. CONSIDER THE LOCATION OF THE BOTTOM SLAB TENDONS IN THE ABUTMENT DIAPHRAGM WHEN DETERMINING THE LAYOUT AND DESIGN OF THE SHEAR STUDS INTO THE SOLE PLATE.
- TOP OF BEARING ELEVATIONS SHOWN ARE GIVEN AT THE TOP OF THE TOP PLATE.
- THE BEARING HEIGHTS ASSUMED FOR DETAILING PURPOSES, MEASURED FROM THE TOP OF THE PLATE TO THE BOTTOM OF THE MASONRY PLATE, ARE 5" AT THE ABUTMENT 1 AND 6" AT ABUTMENT 5. SMALL DIFFERENCE IN FABRICATED HEIGHTS (+/-1") CAN BE TAKEN UP IN THE BEARING PEDESTALS, WHILE LARGE DIFFERENCES MAY REQUIRE ADJUSTMENT OF THE BEARING SEAT ELEVATIONS.
- LOADS ARE PER AASHTO LRFD LOAD COMBINATIONS SERVICE I AND STRENGTH I.
- MOVEMENTS ARE PER AASHTO LRFD LOAD COMBINATION STRENGTH II AND INCLUDE BRAKING FORCE (BR), WIND ON STRUCTURE (WS), WIND ON LIVE LOAD (WL), UNIFORM TEMPERATURE, PRESTRESS, CREEP AND SHRINKAGE EFFECTS.
- DISC BEARINGS ARE TO BE PAID FOR AS 581-1000, POT BEARING.



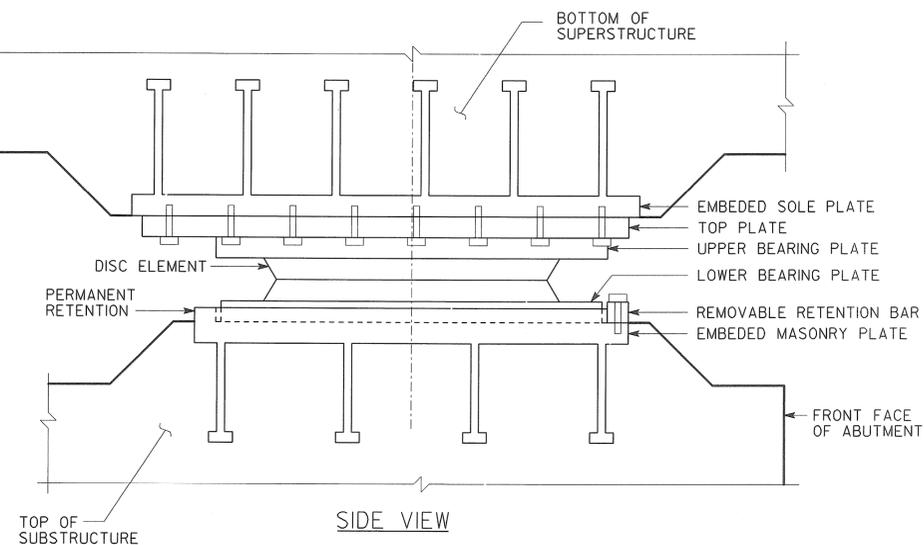
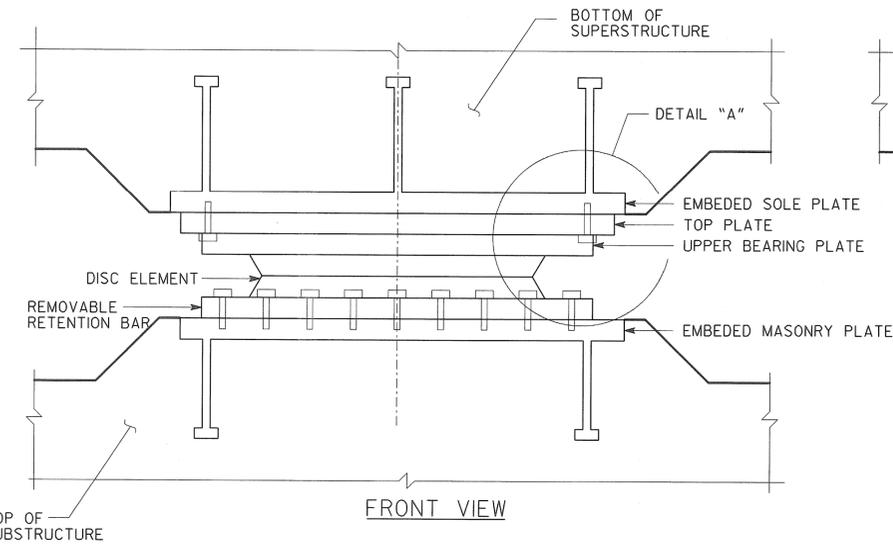
### DISC BEARING LAYOUT

Ⓝ DENOTES NON-GUIDED BEARING  
ⓔ DENOTES ELASTOMERIC BEARING



### INITIAL OFFSET DETAIL

INITIAL OFFSET GIVEN IN BEARING TABLE IS FOR 75° F. ADJUSTMENT FOR CORRECTION SHOWN IN TABLE FOR EACH 10° F INCREMENT DEPARTURE FROM 75° F. TEMPERATURE TO BE USED SHALL BE ANTICIPATED AVERAGE CONCRETE SUBSTRATE TEMPERATURE AT THE TIME OF CASTING CLOSURE SEGMENTS IN SPAN 1 (ABUT. 1) OR SPAN 4 (ABUT. 5).



### SERVICE LOAD COMBINATIONS (SEE NOTE 12)

LOCATION	DISC BEARING TYPE	DEAD LOAD PER BEARING AT OPENING (KIPS)	DEAD LOAD PER BEARING AT 10,000 DAYS (KIPS)	** MIN. DEAD LOAD	MINIMUM LIVE LOAD PER BEARING * (KIPS)	MAXIMUM LIVE LOAD PER BEARING * (KIPS)	NEGATIVE TEMPERATURE GRADIENT	POSITIVE TEMPERATURE GRADIENT	MINIMUM VERTICAL LOAD	MAXIMUM VERTICAL LOAD	MINIMUM VERTICAL LOAD PER BEARING (KIPS)	MAXIMUM VERTICAL LOAD PER BEARING (KIPS)
ABUT. 1	N	175	212	185	-92	264	-10	34	88	493	1	743
ABUT. 5	N	553	549	511	-80	242	-9	31	426	826	315	1130

LOCATION	DISC BEARING TYPE	ESTIMATED PLATE DIMENSIONS (IN) (SEE NOTE 7)			TRANSIENT LOAD MOVEMENT			PRESTRESS, CREEP & SHRINKAGE	LONGITUDINAL STRUCTURE MOVEMENT (IN) (SEE NOTE 13)		BEARING PLACEMENT - TEMPERATURE ADJUSTMENTS (IN)		LONGITUDINAL GRADE (SEE NOTE 11)	TOP OF BEARING ELEVATION
		"C"	"D"	"E"	BR	WS	WL		50° F TEMP. FALL	30° F TEMP. RISE	TOTAL CONTRACTION	TOTAL EXPANSION		
ABUT. 1	N	23	26	32	±0.32"	±1.14"	±0.17"	+1.38	-0.83	+1.51"	-1.71"	±0.332	-2.4503%	190.458
ABUT. 5	N	27	30	36	±0.32"	±1.14"	±0.17"	-1.41	-0.85	-1.71"	+1.71	±0.339	-2.4503%	187.575

\* WITHOUT DYNAMIC LOAD ALLOWANCE.  
\*\* THE LIVE LOADS SHOWN ARE FOR THE FUTURE CONDITION OF FOUR LANES OF TRAFFIC. THE MINIMUM DEAD LOAD SHOWN IS THE MINIMUM DEAD LOAD APPLICABLE IN CONJUNCTION WITH THE LIVE LOADS SHOWN.

BRIDGE NO. 1



STATE OF GEORGIA  
**DEPARTMENT OF TRANSPORTATION**  
ENGINEERING DIVISION - OFFICE OF BRIDGE AND STRUCTURES

DISC BEARING DETAILS  
CR 1297 (BROAD AVE.) OVER FLINT RIVER  
DOUGHERTY COUNTY  
CSHPP-0007-00(550)  
CSSTP-M002-00(960)

NO SCALE  
NOVEMBER 2011

DATE	REVISIONS

DRAWING NO.  
35 - 940  
BRIDGE SHEET  
40 OF 53

DESIGNED GTP	CHECKED RLF	REVIEWED WEI/WMD
DRAWN GTP	DESIGN GROUP	APPROVED BFR

J:\2009039\0007550\STRUCTURES\BRIDGE\PLANS\0007550-BEARING DETAILS - DISC.DGN