

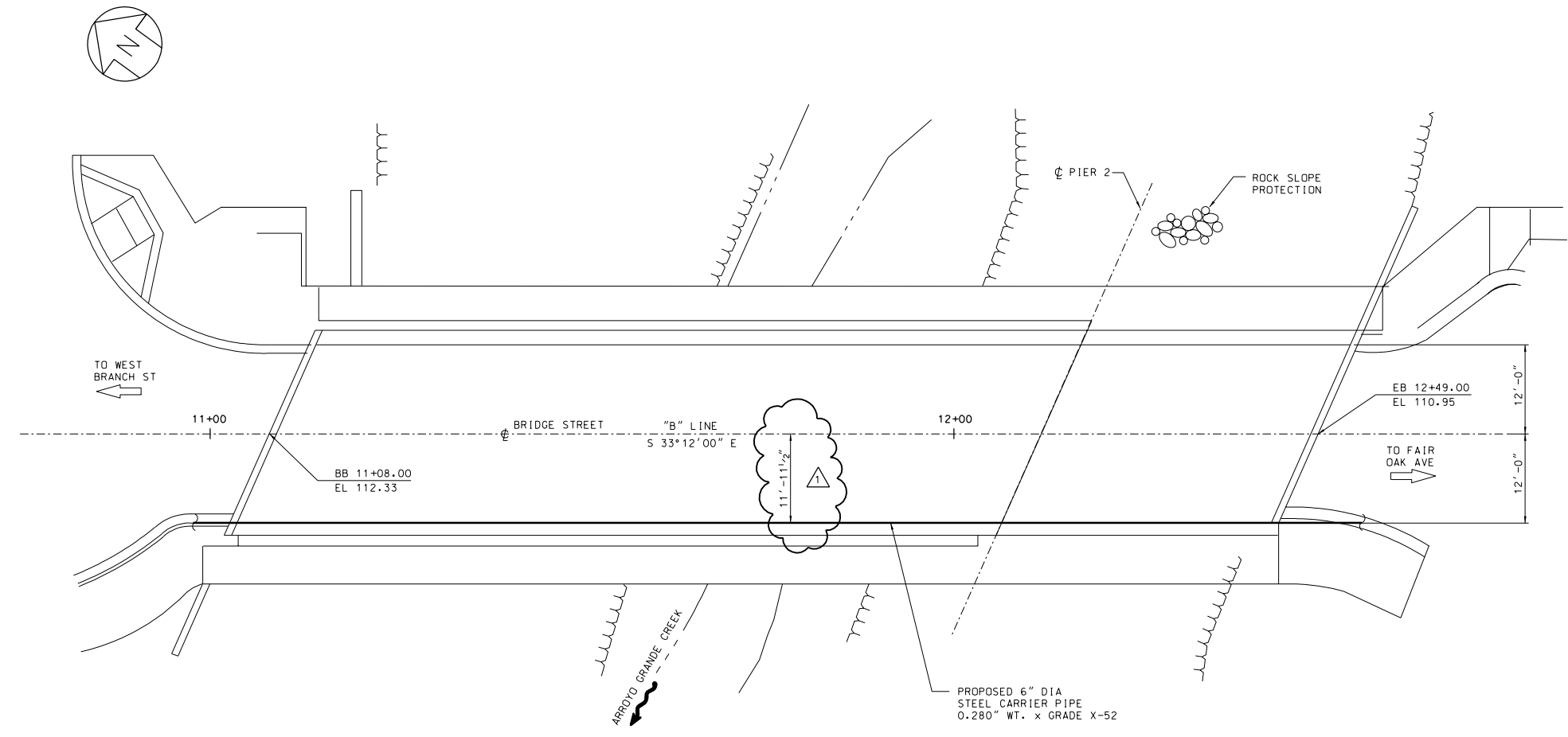
DRAWING NO.	REFERENCE DRAWING DESCRIPTION

GENERAL NOTES

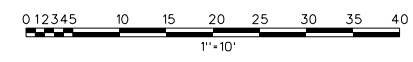
1. THE ABUTMENT OPENINGS AND HORIZONTAL LOCATION OF PIPE SHALL BE PER DIMENSIONS IN SHEET 33752-4002-D-STR. VERTICAL LOCATION SHALL FOLLOW VERTICAL CURVE OF BRIDGE DECK.
2. SUPPORT LOCATIONS SHALL BE SHOWN ON THE BRIDGE PLANS.
3. BRIDGE CONTRACTOR SHALL INITIATE A PRE-CONSTRUCTION MEETING WITH SCG 6 WEEKS PRIOR TO GAS LINE CONSTRUCTION. PRESENT SHALL BE THE SCG PROJECT PLANNER AND GENERAL FOREMAN FOR INSTALLATION.
4. BRIDGE CONTRACTOR SHALL NOTIFY SCG PROJECT PLANNER PRIOR TO SCHEDULED WORK. SCG WILL PROVIDE AN APPROXIMATE TIME FRAME FOR THE GAS PIPELINE INSTALLATION CLOSER TO CONSTRUCTION FOR BRIDGE CONTRACTOR TO ALLOT TIME IN ITS CONSTRUCTION SCHEDULE FOR SCG TO PERFORM THE FOLLOWING TASKS:
 - A. BRIDGE CONTRACTOR SHALL FURNISH ALL SPECIAL INSPECTION DOCUMENTS RELATED TO INSERTS INSTALLATION PRIOR TO THE INSTALLATION OF THE GAS HANGER SUPPORTS AND CARRIER PIPE BY SCG CONTRACTOR.

PIPE HANGER STRUCTURAL STEEL NOTES

1. STEEL WORK SHALL CONFORM TO THE LATEST AISC "CODE OF STANDARD PRACTICE" FOR THE DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING. ALL WELDING SHALL COMPLY WITH AWS D1.1 STRUCTURAL WELDING CODE. QUALIFICATIONS OF WELDERS SHALL BE IN ACCORDANCE WITH THE "STANDARD QUALIFICATION PROCEDURES" OF THE AWS.
2. E70XX ELECTRODES SHALL BE USED FOR WELDING OF STRUCTURAL STEEL.
3. ALL STEEL SHAPES AND PLATES SHALL BE ASTM A-36 STEEL.
4. UNLESS OTHERWISE NOTED: ALL ANCHOR BOLTS AND CONNECTION BOLTS SHALL BE A-307. BOLT HOLE DIAMETERS SHALL BE BOLT SIZE PLUS 1/16" FOR CONNECTION BOLTS. ANCHOR BOLTS SHALL BE CAST-IN-PLACE OR APPROVED EQUAL. ALL BOLTS SHALL BE GALVANIZED & TIGHTENED TO THEIR PROOF LOADS BY TURN-OF-NUT METHOD.
5. ALL STRUCTURAL STEEL SHALL BE GALVANIZED ACCORDING TO ASTM A123 AND A153. FABRICATOR SHALL COMPLY WITH ASTM A143, A384, AND A385.
6. SHOP DRAWINGS SHALL BE SUBMITTED FOR SCG APPROVAL PRIOR TO FABRICATION.
7. DAMAGED GALVANIZING SHALL BE TOUCHED UP BY 2 COATS OF ZINC-RICH PAINT.



PLAN
SCALE: 1"=10'



ISSUED FOR CONSTRUCTION

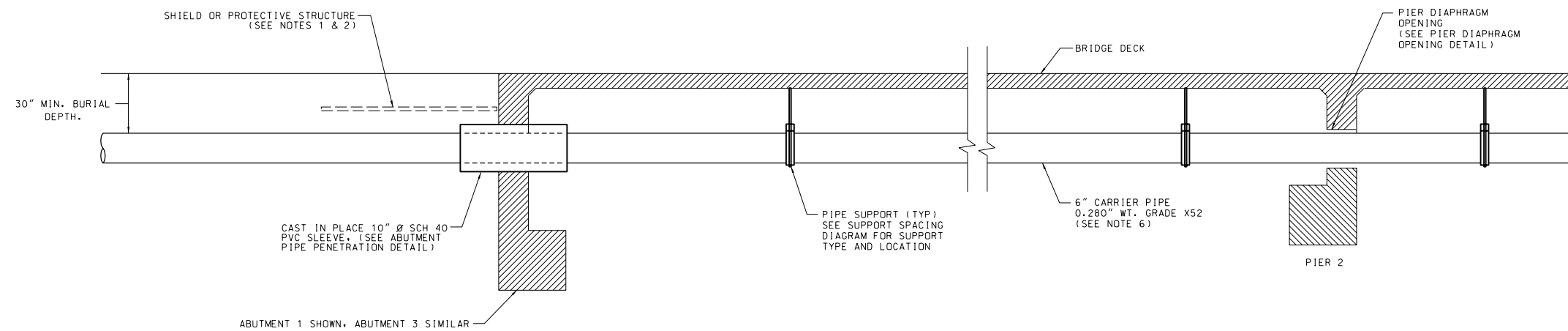
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1	BK	AA		PE18-075	05/02/19	PIPELINE LOCATION REVISED
0	BK	AA		PE18-075	12/04/18	ISSUED FOR CONSTRUCTION
CONTRACTOR NAME & PROJECT NUMBER						
BY		DATE				
DESIGNED A. AKMAL		09/14/18				
DRAWN R. LARGO		09/14/18				
CHK'D. N. HASAN		10/18/18				
APPR'D. M. MECHLOWICZ		10/18/18				
JOB FILE NO. PE18-075						
W.O.A.						
DIST. 100		SCALE		DRAWING NO.		
CLASS 26		AS NOTED		33752-4001-D-STR		
						REV. 1



Southern California Gas Company
GAS ENGINEERING LOS ANGELES
6" 60 PSIG STEEL CARRIER
BRIDGE ST BRIDGE
CITY OF ARROYO GRANDE
PLAN & GENERAL NOTES

DRAWING NO. 33752-4001-D-STR REV. 1

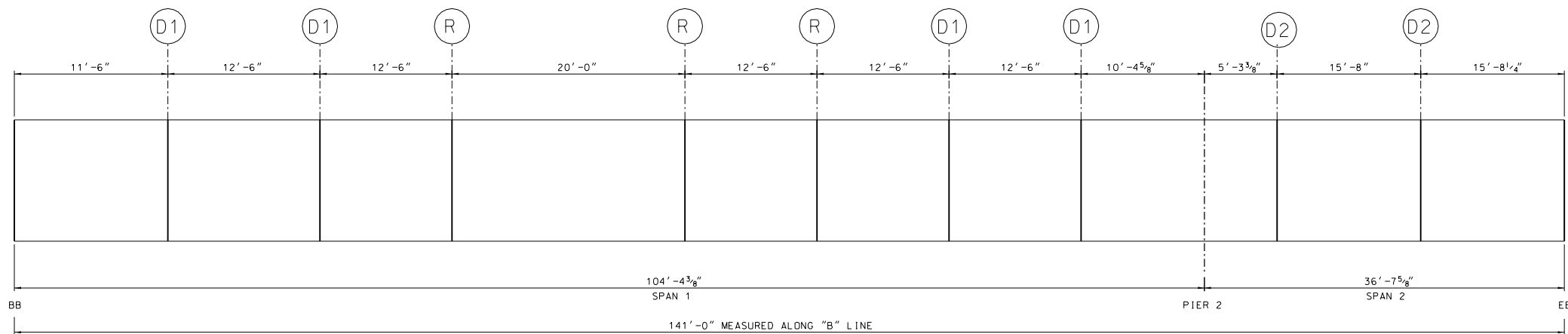
DRAWING NO.	REFERENCE DRAWING DESCRIPTION



PARTIAL LONGITUDINAL SECTION

NO SCALE
NOTE: BRIDGE STEEL TRUSS STRUCTURE NOT SHOWN FOR CLARITY

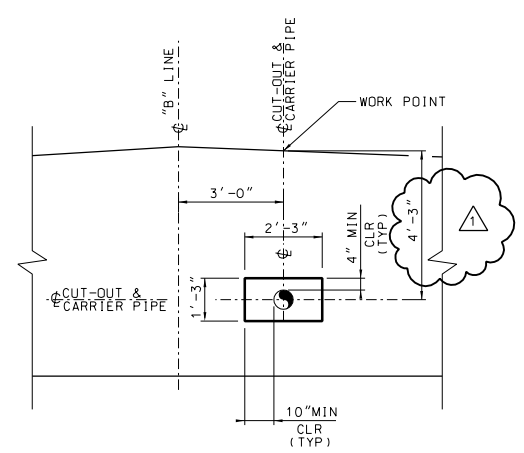
- GENERAL NOTES:**
- FOR CARRIER PIPE HAVING LESS THAN MINIMUM BURIAL DEPTH, BUT MORE THAN 24", USE THE FOLLOWING OPTION TO PROTECT PIPE:
 - 1/2" MIN. THICK STEEL PLATE FOR CARRIER PIPE UP TO 12" DIA. OR 1" MIN. THICK STEEL PLATE FOR CARRIER PIPE LARGER THAN 12" DIA. WIDTH OF PLATE SHALL BE 3 TIMES THE DIAMETER OF CARRIER PIPE.
 - FOR CARRIER PIPE HAVING LESS THAN 24" BURIAL DEPTH, AN ENGINEERED PROTECTIVE STRUCTURE SHALL BE DESIGNED.
 - 17-LB MAGNESIUM ANODE TO BE INSTALLED AT BOTH ENDS OF BRIDGE PER GAS STANDARD 186.0040.
 - BRIDGE CONTRACTOR SHALL ENSURE THE AXIS OF EACH DIAPHRAGM OPENING REMAINS PARALLEL TO THE AXIS OF THE PIPE.
 - BRIDGE CONTRACTOR SHALL VERIFY ALL CONTROLLING DIMENSIONS RELATED TO OPENING AND INSERTS PRIOR TO CONCRETE POURING. SCG CONTRACTOR SHALL VERIFY ALL CONTROLLING DIMENSIONS RELATED TO CARRIER PIPE AND SUPPORTS PRIOR TO ORDERING, FABRICATION AND INSTALLATION.
 - BURIED SECTION OF STEEL CARRIER SHALL BE COATED PER SCG GAS STANDARD 186.0100. CARRIER PIPE SECTION SUPPORTED ON BRIDGE SHALL BE COATED PER SCG GAS STANDARD 186.0117.
 - BRIDGE CONTRACTOR REQUIRED TO CAST 10" SCH 40 PVC SLEEVE INTO ABUTMENT BACKWALL AS SHOWN IN PARTIAL LONGITUDINAL SECTION.



SUPPORT SPACING DIAGRAM

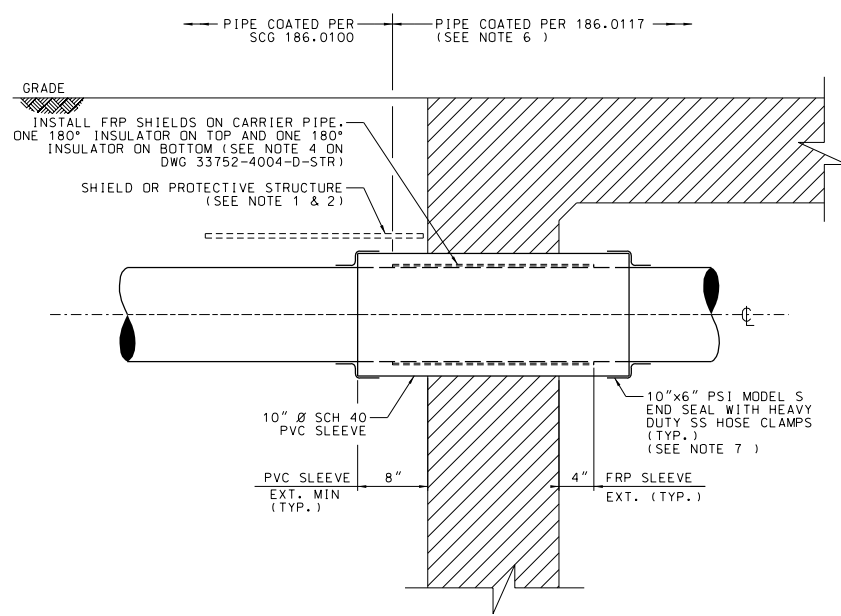
NO SCALE
FOR SPAN 1 SUPPORTS SHALL BE LOCATED 2'-6" OFF THE CENTERLINE OF EACH FLOOR BEAM, SUPPORT LOCATIONS SHOWN ABOVE ARE AT "B" LINE SO SUPPORTS ARE OFFSET 11'-11/2" RIGHT OF THESE LOCATIONS.

- (D1) (D2) • DISPLACEMENT TYPE SUPPORTS
- (R) • RESTRAINING TYPE SUPPORTS



PIER DIAPHRAGM OPENING DETAIL

NO SCALE



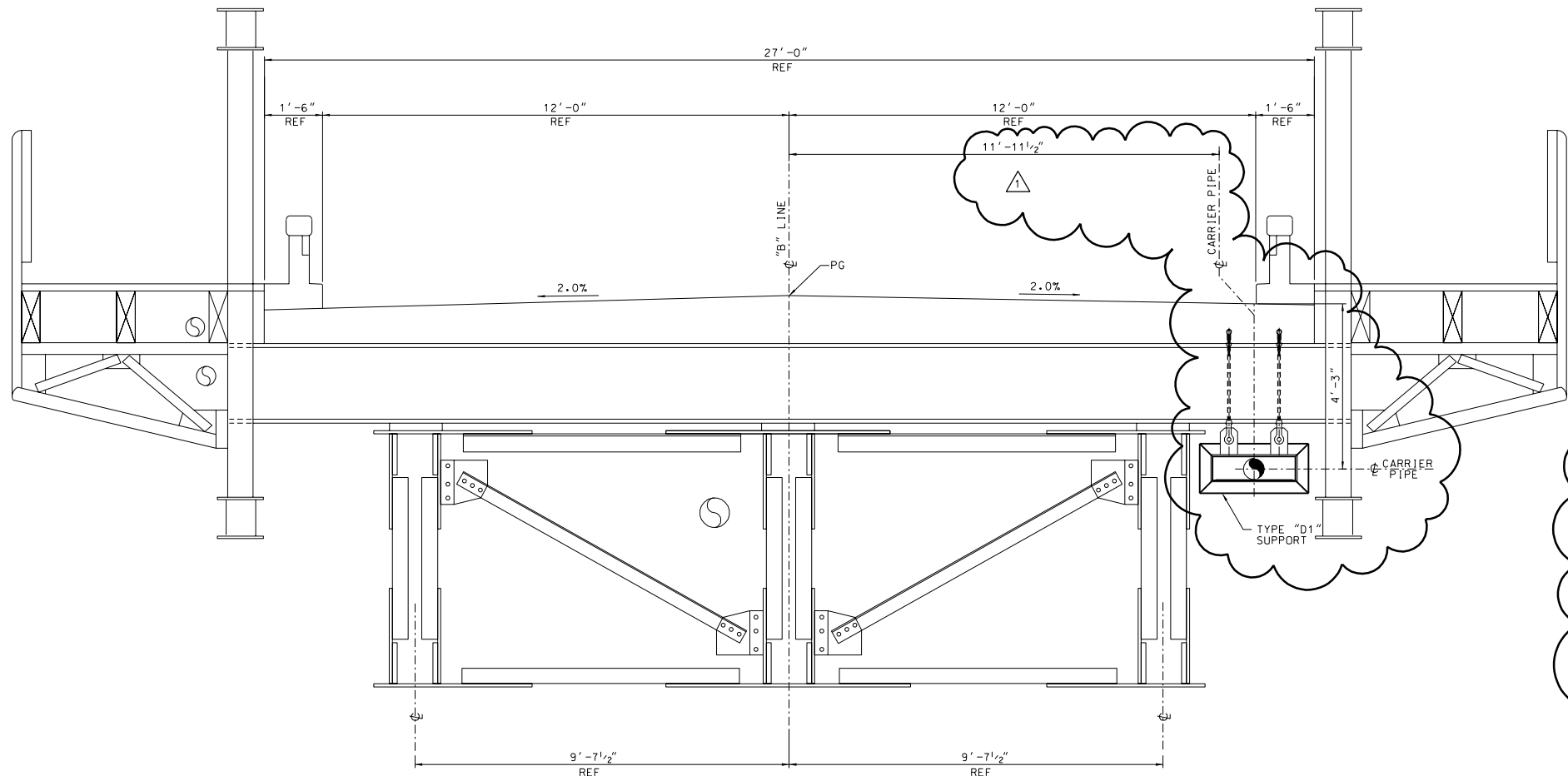
ABUTMENT PIPE PENETRATION DETAIL

NO SCALE
(TYPICAL ON BOTH ENDS OF BRIDGE)

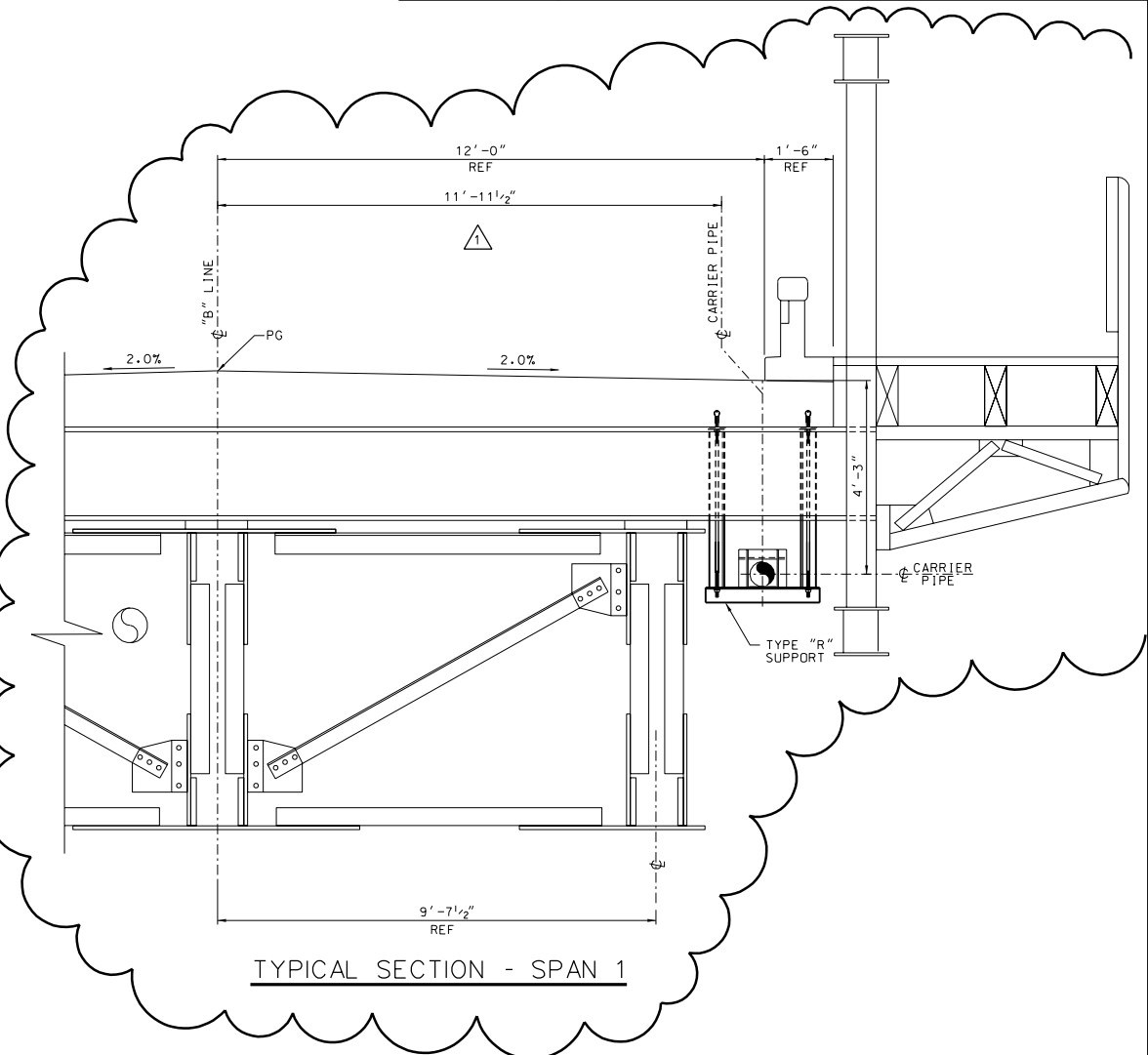
ISSUED FOR CONSTRUCTION

REV. NO.	DRAWN	CHECKED	PROJECT APPROVED	SO CAL APPROVED	JOB FILE NO.	DATE	DESCRIPTION
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0	BK	AA			PE18-075	12/04/18	ISSUED FOR CONSTRUCTION

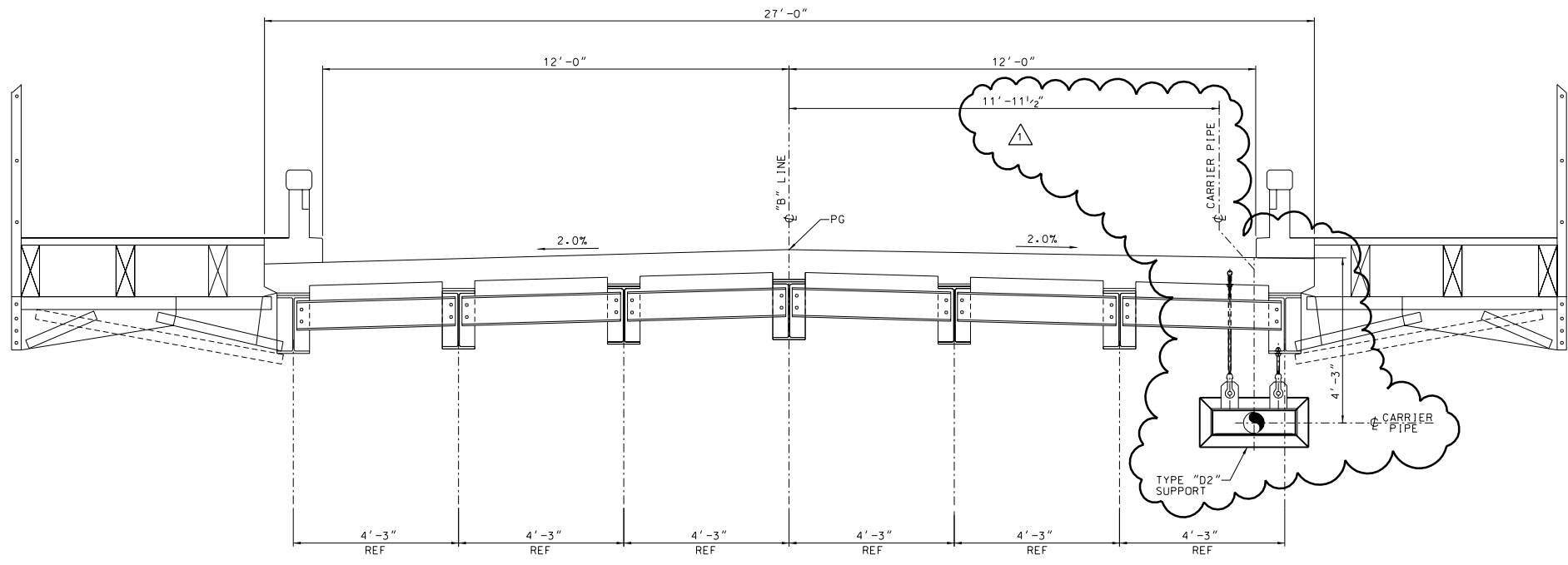
CONTRACTOR NAME & PROJECT NUMBER		 Southern California Gas Company GAS ENGINEERING LOS ANGELES
BY	DATE	
DESIGNED A. AKMAL	09/14/18	6" 60 PSIG STEEL CARRIER BRIDGE ST BRIDGE CITY OF ARROYO GRANDE PIPING SUPPORT DETAILS
DRAWN R. LARGO	09/14/18	
CHK'D N. HASAN	10/18/18	
APPR'D M.MECHLOWICZ	10/18/18	
JOB FILE NO. PE15-085		
G.W.O.		DRAWING NO. 33752-4002-D-STR
DIST. 100		
CLASS 26		SCALE AS NOTED REV. 1



TYPICAL SECTION - SPAN 1




TYPICAL SECTION - SPAN 1

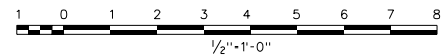


TYPICAL SECTION - SPAN 2

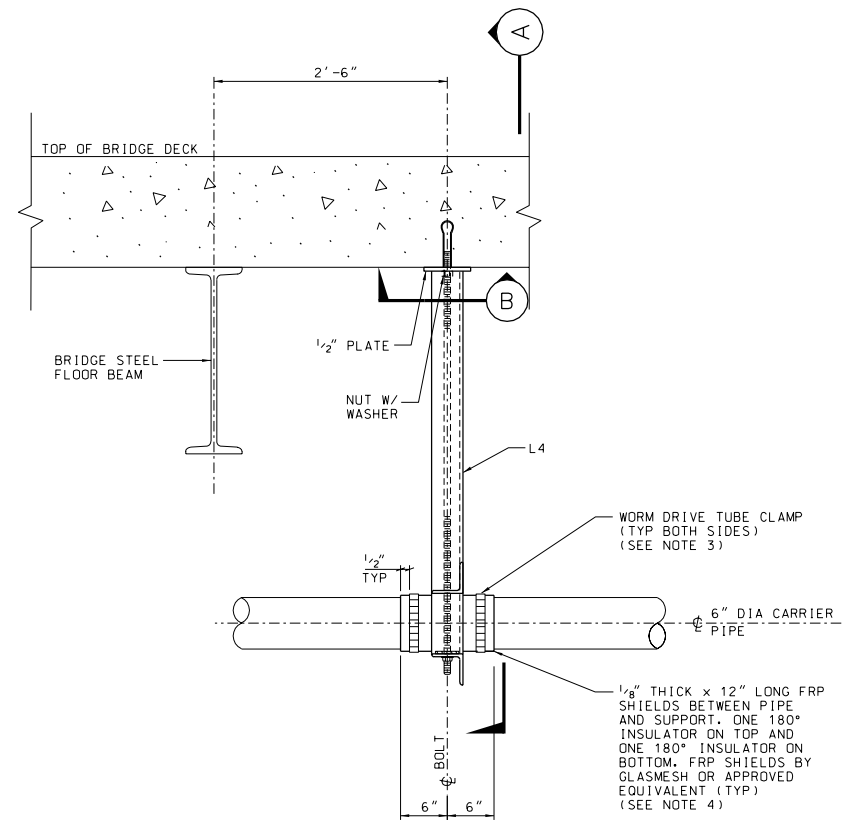
- NOTES:
- FOR GENERAL NOTES AND SUPPORT SPACING DIAGRAM, SEE DWG 33752-4001-D-STR AND 33752-4002-D-STR.

ISSUED FOR CONSTRUCTION

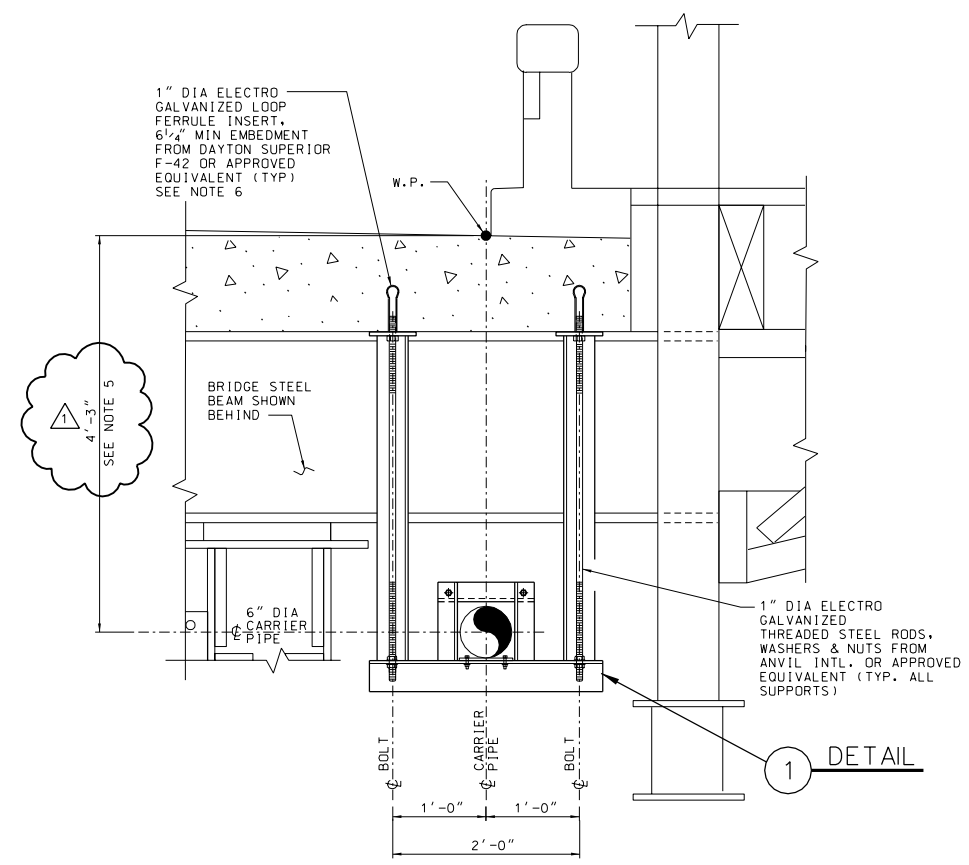
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	BK	AA			PE18-075	12/04/18	ISSUED FOR CONSTRUCTION
CONTRACTOR NAME & PROJECT NUMBER			Southern California Gas Company GAS ENGINEERING LOS ANGELES				
BY		DATE		 6" 60 PSIG STEEL CARRIER BRIDGE ST BRIDGE CITY OF ARROYO GRANDE TYPICAL SECTIONS			
DESIGNED A. AKMAL		09/14/18					
DRAWN R. LARGO		09/14/18					
CHK'D. N. HASAN		10/18/18					
APPR'D. M. MECHLOWICZ		10/18/18					
JOB FILE NO. PE18-075							
W.O.A.				SCALE		DRAWING NO.	
DIST. 100				1/2"=1'-0"		33752-4003-D-STR	
CLASS 26						REV. 1	



DRAWING NO.	REFERENCE DRAWING DESCRIPTION

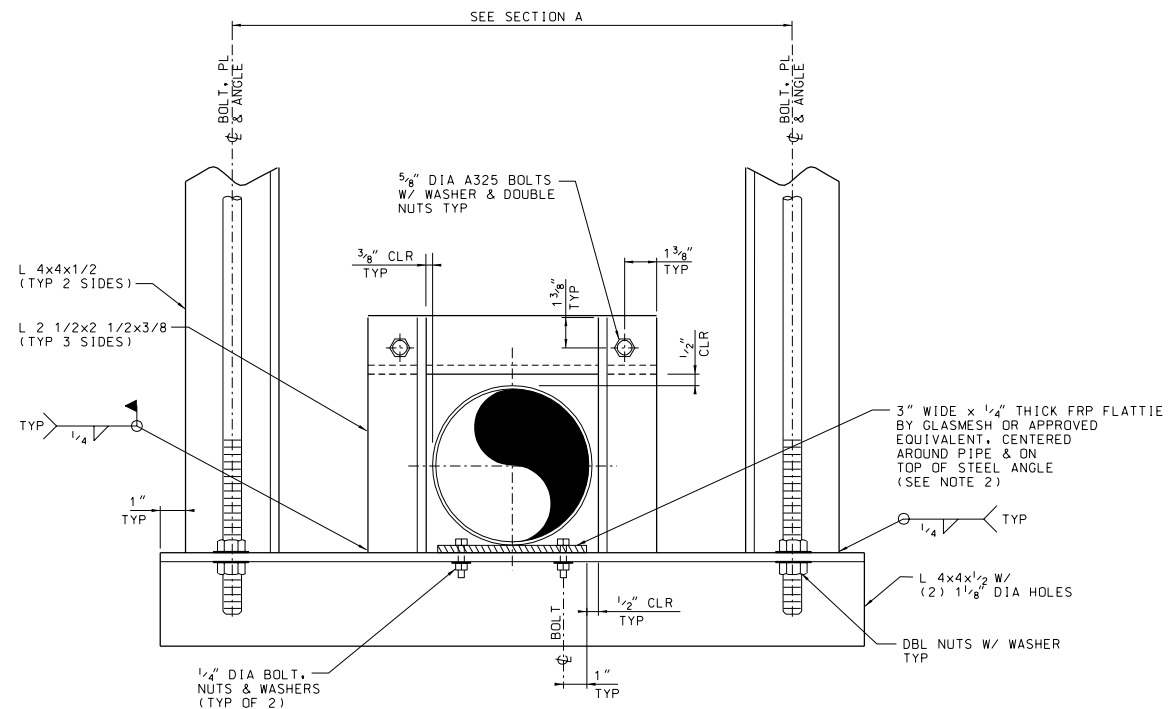


TYPE "R" PIPE SUPPORT HANGER

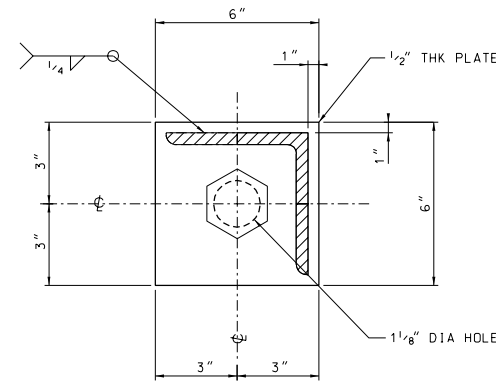


RESTRAINING SUPPORTS

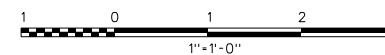
SECTION A



DETAIL 1
NOT TO SCALE



SECTION B
NOT TO SCALE
(TYP OF 2)



NOTES:

1. THREADED STEEL RODS SHALL CONFORM TO ASTM F1554, GR 105.
2. SEAL AND BOND THE SPACE BETWEEN FRP FLATTIE AND COATED STRUCTURAL STEEL SURFACE WITH EPOXY SEAM SEALER BY GLASMESH OR APPROVED EQUIVALENT. CLEAN AND DRY STEEL SURFACE. SMOOTH OUT ROUGH SPOTS WITHOUT REMOVING COATING. ROUGHEN FRP FLATTIE SURFACE WITH COARSE EMERY CLOTH. DO NOT GRIT BLAST.
3. STAINLESS STEEL WORM DRIVE TUBE CLAMP TO BE INSTALLED ON BOTH SIDES OF FRP SHIELDS. McMASTER CARR STOCK #5322K68 OR EQUIVALENT. LIMIT MAXIMUM TORQUE TO 35 IN-LBS.
4. SEAL THE SPACE BETWEEN THE INSIDE SURFACE OF THE GLASMESH FRP SHIELD AND FUSION BONDED EPOXY COATED STEEL PIPE BY HAND WRAPPING CARRIER WITH APPROVED ABOVE GRADE POLYKEN 4000 OR TAPE COAT PIPE WRAP; OR BY USING 3M EPOXY ADHESIVE 2216 PER GLASMESH INSTRUCTION. ROUGHEN THE SURFACES WITH COARSE EMERY CLOTH. DO NOT GRIT BLAST.
5. HEIGHT OF SUPPORTS TO BE FIELD VERIFIED. BOTTOM OF CARRIER PIPE SHALL FOLLOW VERTICAL CURVATURE OF BRIDGE DECK.
6. BRIDGE CONTRACTOR SHALL INSTALL LOOP FERRULE INSERTS AND SHALL ENSURE THE AXIS OF INSERT IS KEPT VERTICAL. INSERTS MUST BE ON CALTRANS AUTHORIZED CAST-IN PLACE CONCRETE INSERTS FOR INSTALLATION IN FRESH CONCRETE LIST.

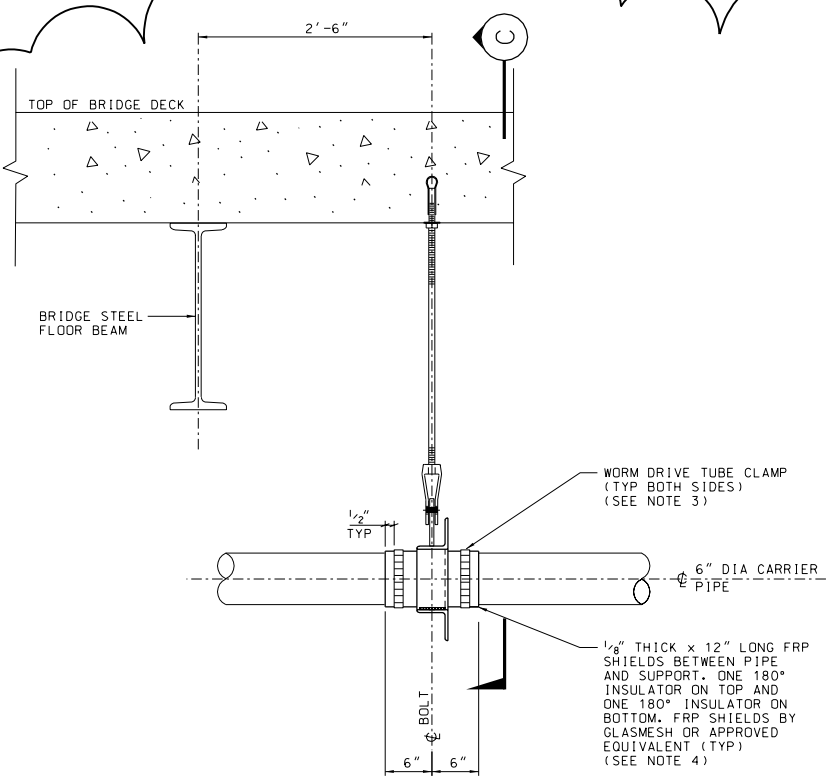
ISSUED FOR CONSTRUCTION

REV. NO.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
BY	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
DATE	09/18/18	09/18/18	10/18/18	10/18/18																	
PROJECT	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075	PE18-075
SO CAL APPROVED																					
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DATE	05/02/19	12/04/18																			
DESCRIPTION	PIPELINE LOCATION REVISED	ISSUED FOR CONSTRUCTION																			
CONTRACTOR NAME & PROJECT NUMBER		Southern California Gas Company GAS ENGINEERING LOS ANGELES																			
BY		DESIGNED A. AKMAL 09/18/18 DRAWN R. LARGO 09/18/18 CHK'D. N. HASAN 10/18/18 APPR'D. M. MECHLOWICZ 10/18/18																			
W.O.A.		100																			
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CLASS		26																			
SCALE		1"=1'-0"																			
DRAWING NO.		33752-4004-D-STR 1																			

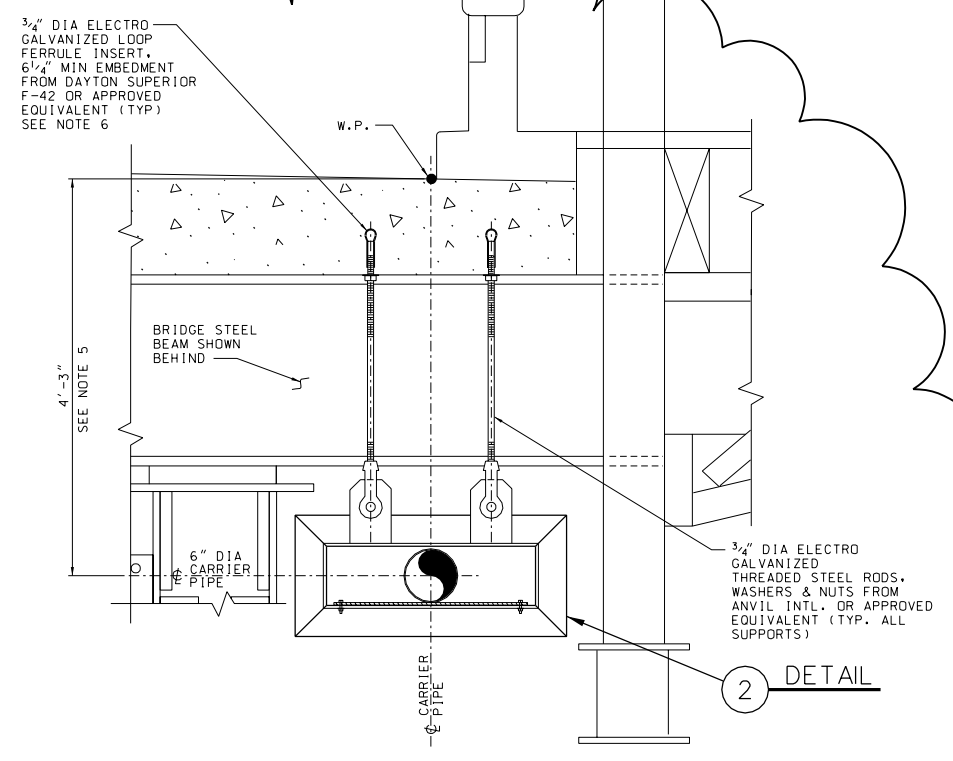
DRAWING NO.	REFERENCE DRAWING DESCRIPTION

NOTES:

1. THREADED STEEL RODS SHALL CONFORM TO ASTM F1554, GR 105.
2. SEAL AND BOND THE SPACE BETWEEN FRP FLATTIE AND COATED STRUCTURAL STEEL SURFACE WITH EPOXY SEAM SEALER BY GLASMESH OR APPROVED EQUIVALENT. CLEAN AND DRY STEEL SURFACE. SMOOTH OUT ROUGH SPOTS WITHOUT REMOVING COATING. ROUGHEN FRP FLATTIE SURFACE WITH COARSE EMERY CLOTH. DO NOT GRIT BLAST.
3. STAINLESS STEEL WORM DRIVE TUBE CLAMP TO BE INSTALLED ON BOTH SIDES OF FRP SHIELDS. McMASTER CARR STOCK #5322K68 OR EQUIVALENT. LIMIT MAXIMUM TORQUE TO 35 IN-LBS.
4. SEAL THE SPACE BETWEEN THE INSIDE SURFACE OF THE GLASMESH FRP SHIELD AND FUSION BONDED EPOXY COATED STEEL PIPE BY HAND WRAPPING CARRIER WITH APPROVED ABOVE GRADE POLYKEN 4000 OR TAPE COAT PIPE WRAP; OR BY USING 3M EPOXY ADHESIVE 2216 PER GLASMESH INSTRUCTION. ROUGHEN THE SURFACES WITH COARSE EMERY CLOTH. DO NOT GRIT BLAST.
5. HEIGHT OF SUPPORTS TO BE FIELD VERIFIED. BOTTOM OF CARRIER PIPE SHALL FOLLOW VERTICAL CURVATURE OF BRIDGE DECK.
6. BRIDGE CONTRACTOR SHALL INSTALL LOOP FERRULE INSERTS AND SHALL ENSURE THE AXIS OF INSERT IS KEPT VERTICAL. INSERTS MUST BE ON CALTRANS AUTHORIZED CAST-IN PLACE CONCRETE INSERTS FOR INSTALLATION IN FRESH CONCRETE LIST.

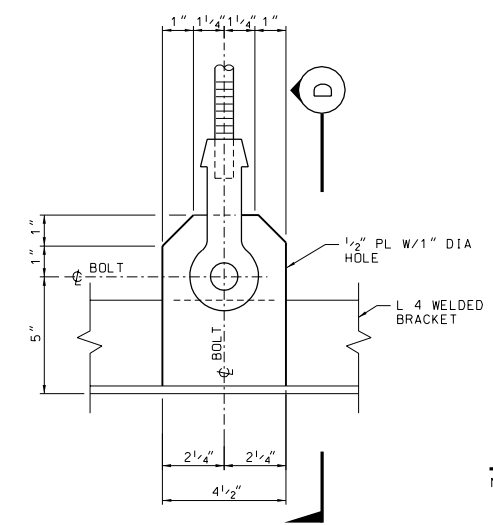


TYPE "D1" PIPE SUPPORT HANGER

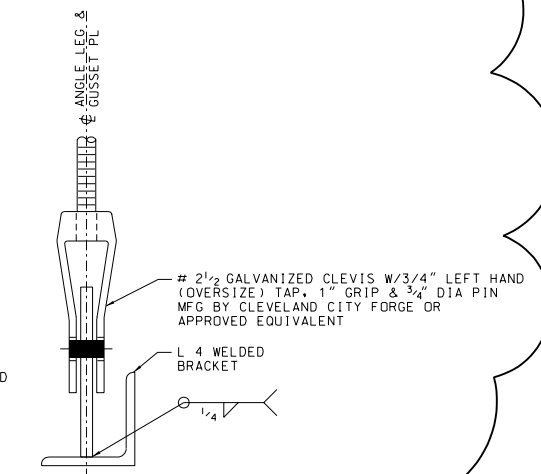


TYPE "D1" DISPLACEMENT SUPPORTS

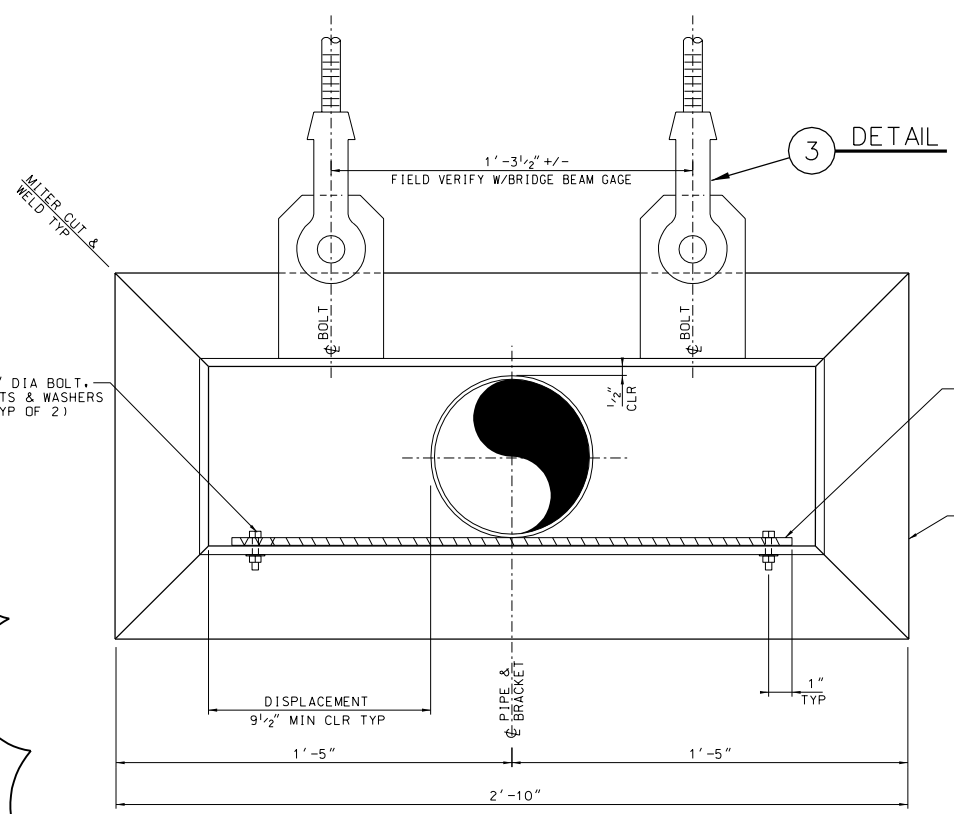
SECTION C



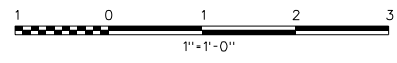
DETAIL 3
NOT TO SCALE



SECTION D
NOT TO SCALE



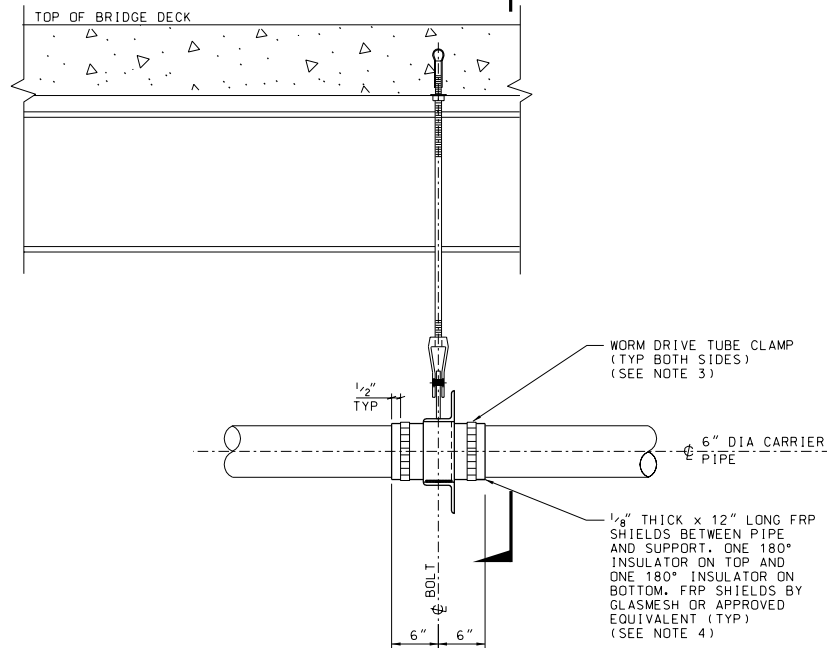
DETAIL 2
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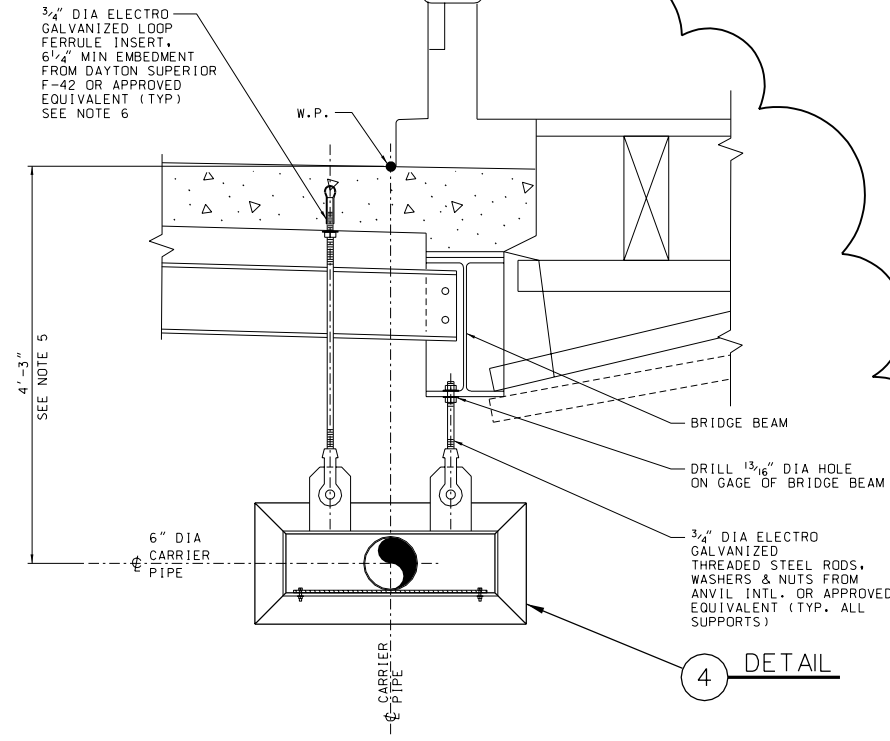
ISSUED FOR CONSTRUCTION

1	BK	AA	PE18-075	05/02/19	GENERAL REVISION		
0	BK	AA	PE18-075	12/04/18	ISSUED FOR CONSTRUCTION		
REV. NO.	DRAWN BY	CHECKED BY	PROJECT APPROVED	SO CAL APPROVED	JOB FILE NO.	DATE	DESCRIPTION
	DESIGNED A. AKMAL						
	DRAWN R. LARGO						
	CHK'D. N. HASAN						
	APPR'D. M. MECHLOWICZ						
CONTRACTOR NAME & PROJECT NUMBER			Southern California Gas Company				
BY			DATE				
DESIGNED A. AKMAL			09/18/18				
DRAWN R. LARGO			09/18/18				
CHK'D. N. HASAN			10/18/18				
APPR'D. M. MECHLOWICZ			10/18/18				
JOB FILE NO. PE18-075			SCALE				
W.O.A.			1"=1'-0"				
DIST. 100			DRAWING NO.				
CLASS 26			33752-4005-D-STR				
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DRAWING NO.	REFERENCE DRAWING DESCRIPTION

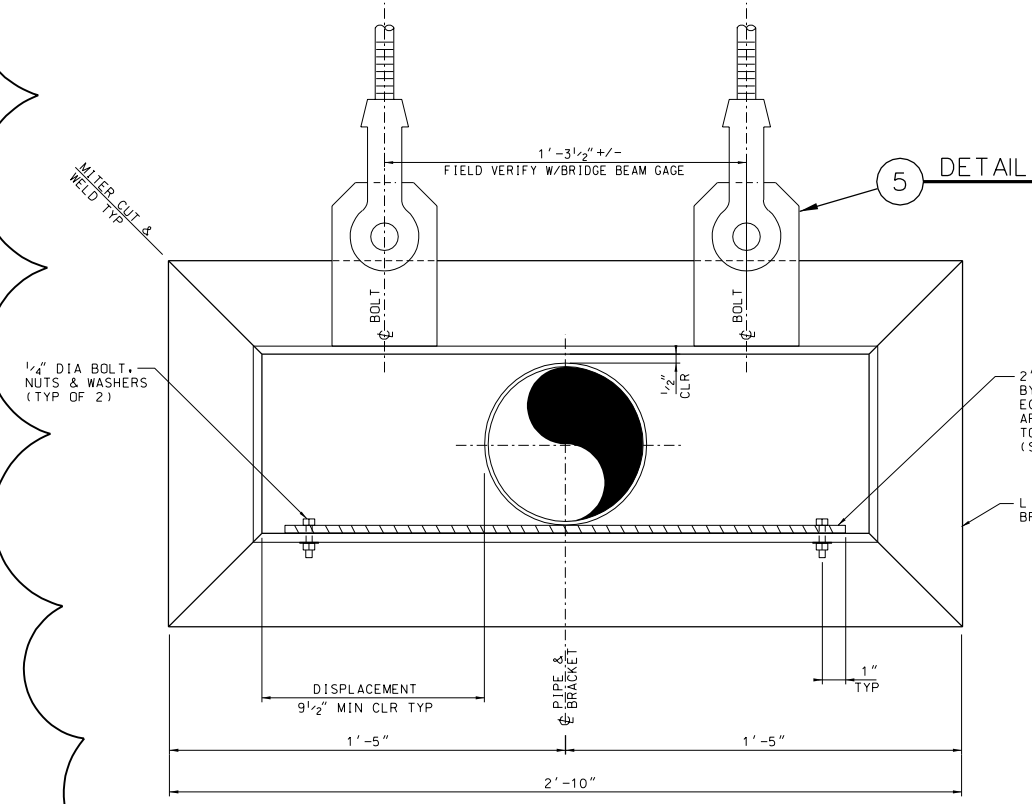


TYPE "D2" PIPE SUPPORT HANGER

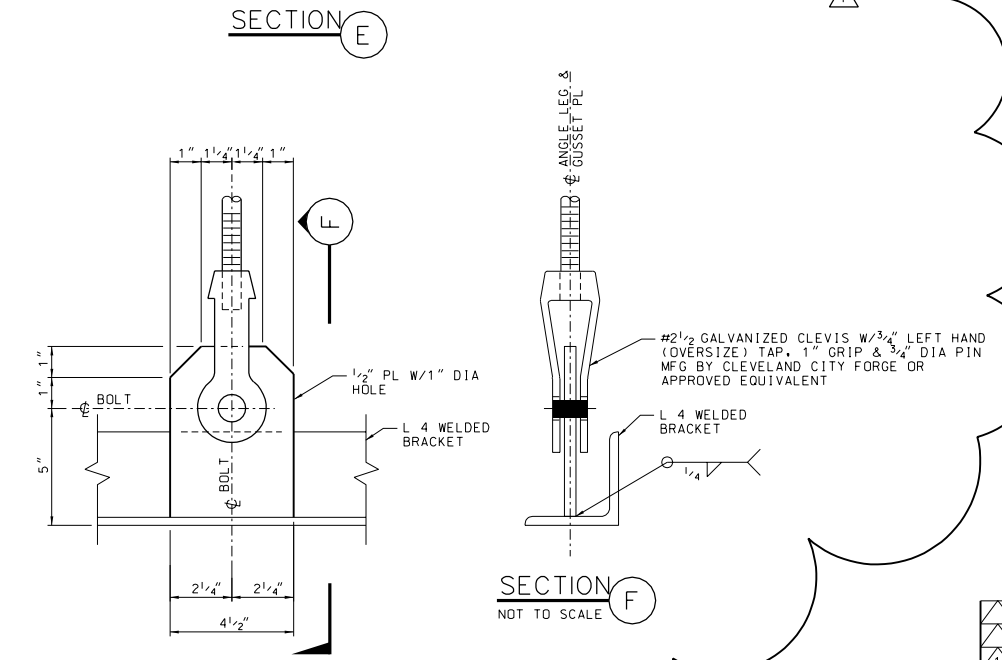


TYPE "D2" DISPLACEMENT SUPPORTS

- NOTES:
1. THREADED STEEL RODS SHALL CONFORM TO ASTM F1554, GR 105.
 2. SEAL AND BOND THE SPACE BETWEEN FRP FLATTIE AND COATED STRUCTURAL STEEL SURFACE WITH EPOXY SEAM SEALER BY GLASMESH OR APPROVED EQUIVALENT. CLEAN AND DRY STEEL SURFACE. SMOOTH OUT ROUGH SPOTS WITHOUT REMOVING COATING. ROUGHEN FRP FLATTIE SURFACE WITH COARSE EMERY CLOTH. DO NOT GRIT BLAST.
 3. STAINLESS STEEL WORM DRIVE TUBE CLAMP TO BE INSTALLED ON BOTH SIDES OF FRP SHIELDS. MCMASTER CARR STOCK #5322K68 OR EQUIVALENT. LIMIT TORQUE MAXIMUM TO 35 IN-LBS.
 4. SEAL THE SPACE BETWEEN THE INSIDE SURFACE OF THE GLASMESH FRP SHIELD AND FUSION BONDED EPOXY COATED STEEL PIPE BY HAND WRAPPING CARRIER WITH APPROVED ABOVE GRADE POLYKEN 4000 OR TAPE COAT PIPE WRAP; OR BY USING 3M EPOXY ADHESIVE 2216 PER GLASMESH INSTRUCTION. ROUGHEN THE SURFACES WITH COARSE EMERY CLOTH. DO NOT GRIT BLAST.
 5. HEIGHT OF SUPPORTS TO BE FIELD VERIFIED. BOTTOM OF CARRIER PIPE SHALL FOLLOW VERTICAL CURVATURE OF BRIDGE DECK.
 6. BRIDGE CONTRACTOR SHALL INSTALL LOOP FERRULE INSERTS AND SHALL ENSURE THE AXIS OF INSERT IS KEPT VERTICAL. INSERTS MUST BE ON CALTRANS AUTHORIZED CAST-IN PLACE CONCRETE INSERTS FOR INSTALLATION IN FRESH CONCRETE LIST.



DETAIL 4 NOT TO SCALE



DETAIL 5 NOT TO SCALE

ISSUED FOR CONSTRUCTION

REV. NO.	DESCRIPTION	DATE	BY	DATE
1	BK AA	PE18-075	05/02/19	GENERAL REVISION
0	BK AA	PE18-075	12/04/18	ISSUED FOR CONSTRUCTION
DRAWN	PROJECT	SO CAL	DATE	DESCRIPTION
CHECKED	APPROVED	APPROVED	JOB FILE NO.	
CONTRACTOR NAME & PROJECT NUMBER				
Southern California Gas Company GAS ENGINEERING LOS ANGELES				
6" 60 PSIG STEEL CARRIER BRIDGE ST BRIDGE CITY OF ARROYO GRANDE SPAN 2 LATERAL DISPLACEMENT TYPE "D2" SUPPORT DETAILS				
DESIGNED	A. AKMAL	09/18/18		
DRAWN	R. LARGO	09/18/18		
CHK'D	N. HASAN	10/18/18		
APPR'D	M. MECHLOWICZ	10/18/18		
JOB FILE NO. PE18-075				
W.O.A.				
DIST.	100	SCALE	1"=1'-0"	DRAWING NO.
CLASS	26			33752-4006-D-STR
				REV. 1

