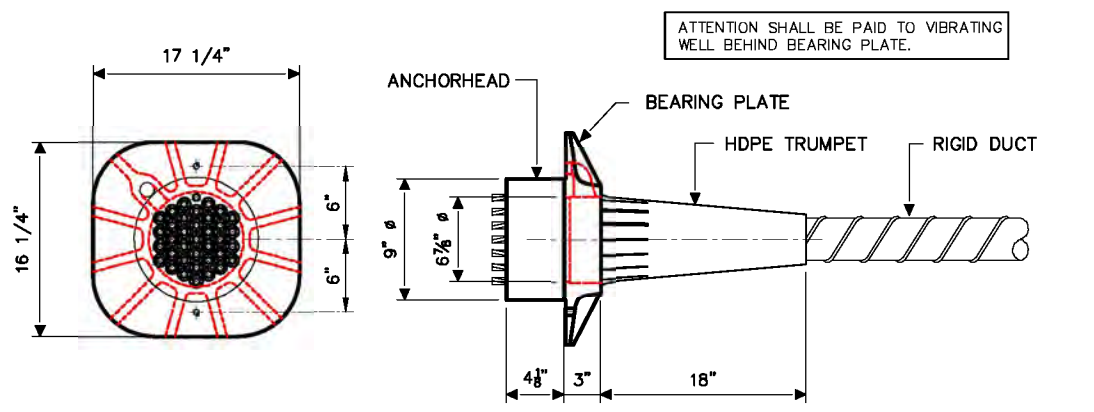
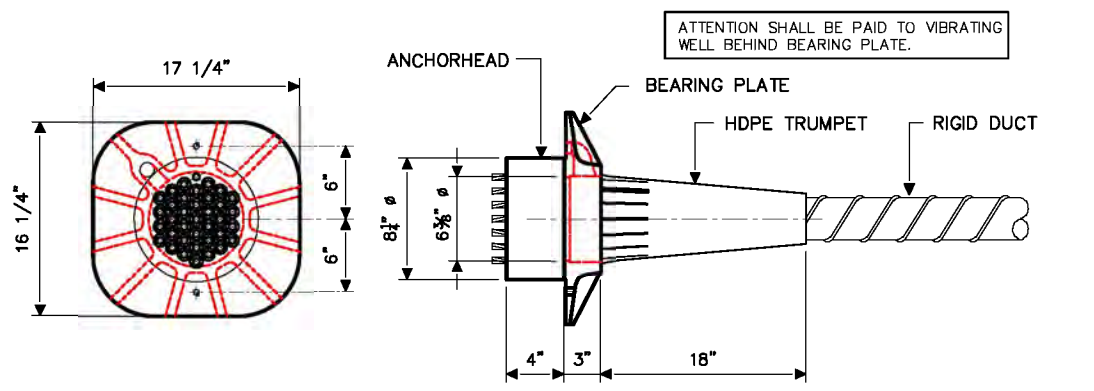


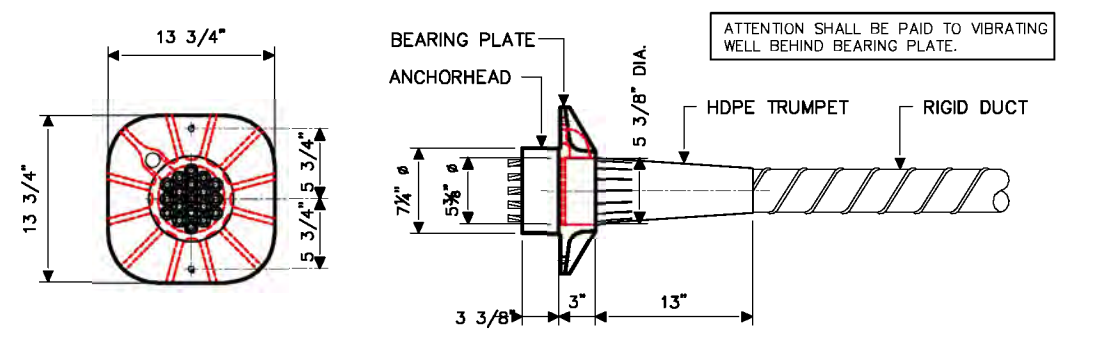
ACS - 27.6 ANCHORAGE



ACS - 22.6 ANCHORAGE



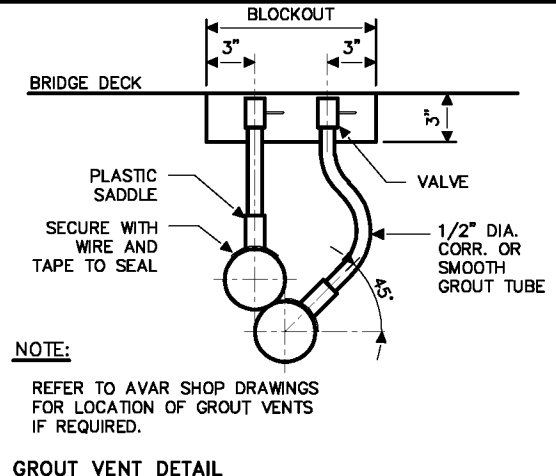
ACS - 19.6 ANCHORAGE



ACS - 12.6 ANCHORAGE

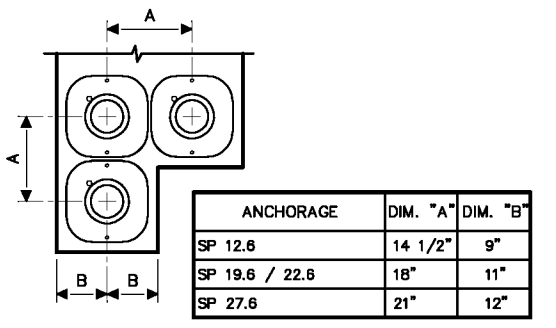
NOTE: A MIN. OF 5 FT OF THE TENDON BEHIND EACH BEARING PLATE SHALL BE STRAIGHT AND PERPENDICULAR TO THE BEARING PLATE.

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For Information

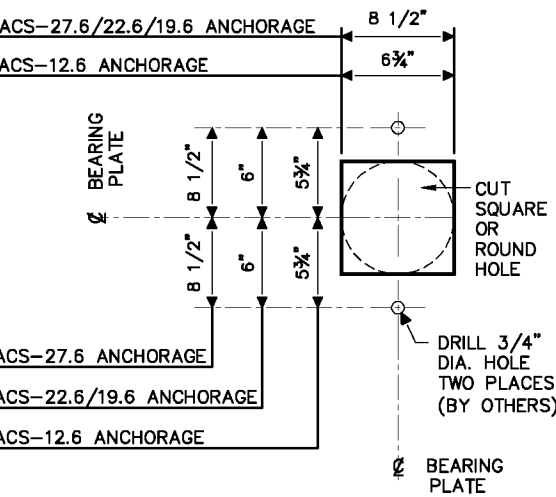


NOTE:
REFER TO AVAR SHOP DRAWINGS FOR LOCATION OF GROUT VENTS IF REQUIRED.

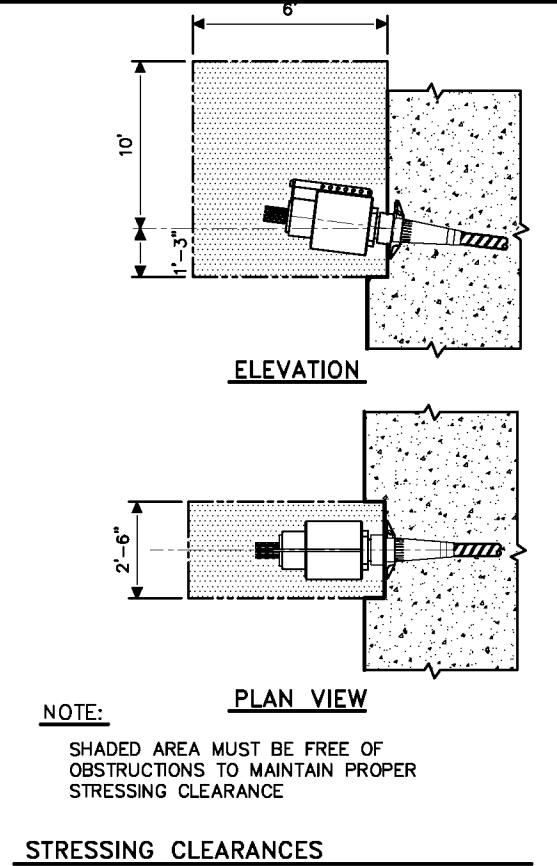
GROUT VENT DETAIL



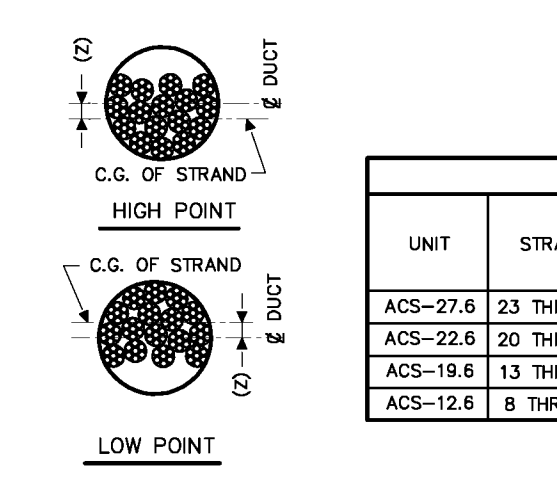
RECOMMENDED EDGE DISTANCE



EDGE FORM HOLE PATTERN



STRESSING CLEARANCES



STRAND POSITION

UNIT	STRAND	(Z)	DUCT O.D.			
			C.I.P. BOX GIRDER		SPliced GIRDER	
			TENDON < 750'	TENDON > 750'	TENDON < 750'	TENDON > 750'
ACS-27.6	23 THRU 27	3/4"	4 3/8"	4 5/8"	4 5/8"	4 7/8"
ACS-22.6	20 THRU 22	5/8"	4"	4 1/4"	4 1/4"	4 1/2"
ACS-19.6	13 THRU 19	5/8"	3 3/4"	4"	4"	4 1/4"
ACS-12.6	8 THRU 12	1/2"	3"	3 1/4"	3 1/4"	3 1/2"

GENERAL NOTES

PRESTRESSING STEEL :

0.6" ϕ , 270 KSI, 7-WIRE STRAND, LOW RELAXATION (ASTM A-416, INCL. SUPPLEMENT 1)
 ULTIMATE STRENGTH _____ 58.6 KIPS
 MAX. TEMPORARY FORCE (75%) _____ 44.0 KIPS
 INITIAL FORCE (70%) _____ 41.0 KIPS
 AREA _____ 0.217 SQ. IN.
 MODULUS OF ELASTICITY _____ 28,000 KSI

BEARING PLATES :

MATERIAL : ASTM A536 GR. 80-55-06 (DUCTILE CASING)
 BEARING PLATES SHALL BE PLACED PERPENDICULAR TO THE TENDON PATH AND WILL BE SHIMMED IF NECESSARY. (BY OTHERS)

ANCHORHEAD :

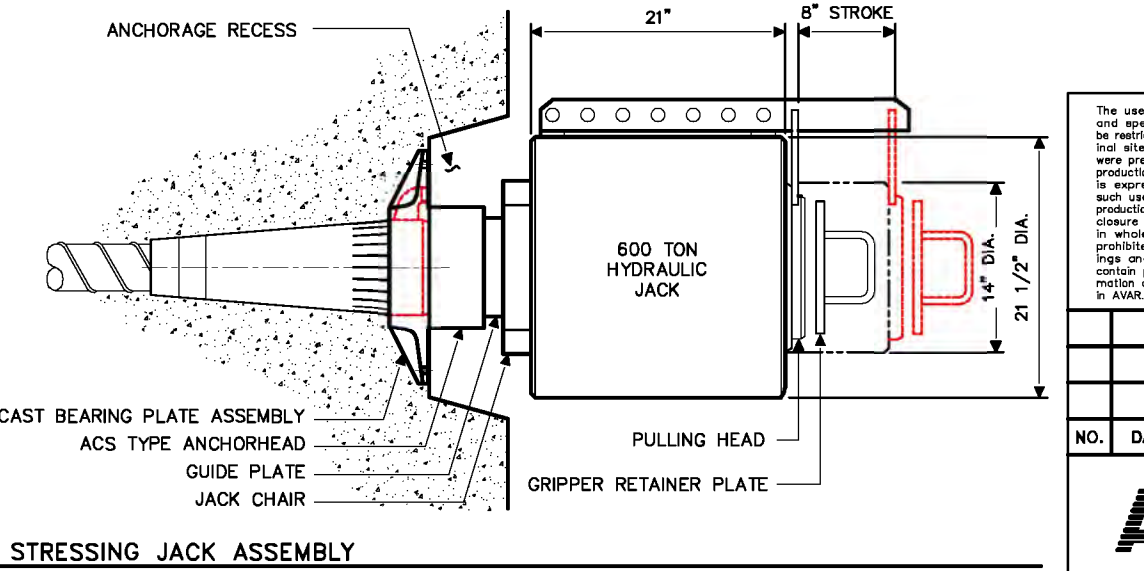
MATERIAL : ASTM A536 GR. 80-55-06

WEDGES :

MATERIAL: AISI 11L17 OR 12L14 (L = 1.81 IN.)

DUCT :

MATERIAL: SPIRO-TYPE, RIGID, GALVANIZED DUCT
 SIZE : AS SHOWN IN TABLE



STRESSING JACK ASSEMBLY

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PRESTRESSING DETAILS
GENERAL NOTES AND ANCHORAGE DETAILS

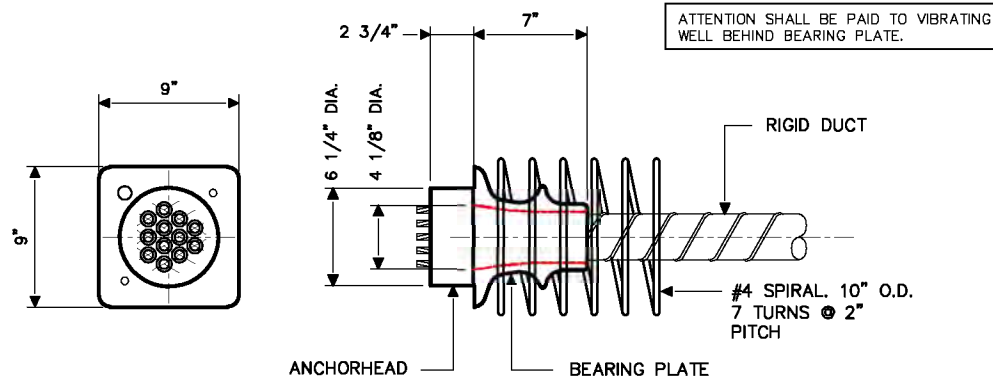
PROJECT: ---
 PROJECT NO: ---
 CONTRACT NO: ---
 CONTRACTOR: ---

NO.	DATE	REVISION	BY	AVAR JOB NO.
			DESIGN	DATE:
			DRAWN	BY: M.S DATE: 5-10-10
			CHECKED	BY: MP DATE: 5-10-10

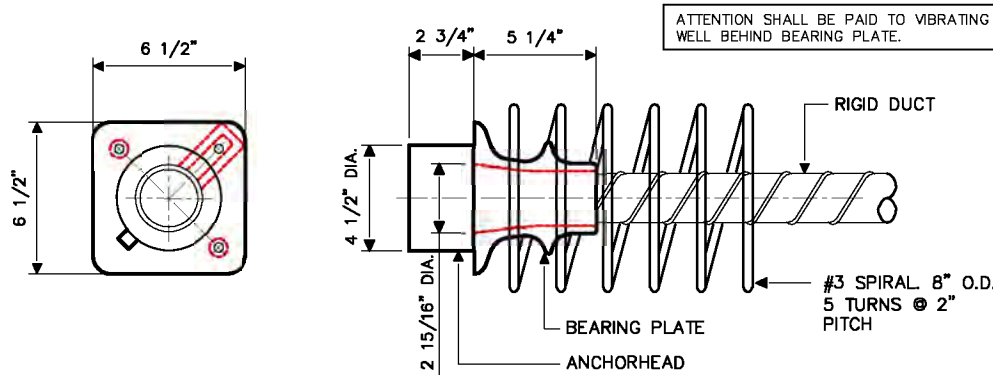


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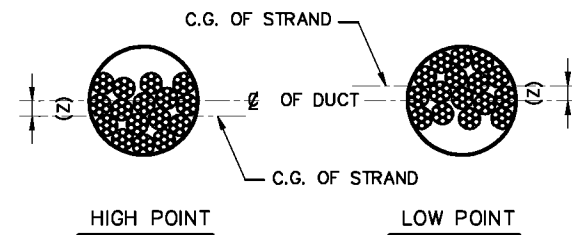
DRAWING NO.:
B1a
REV. 0



ACS MP - 12.5 ANCHORAGE



ACS MP - 7.5 ANCHORAGE

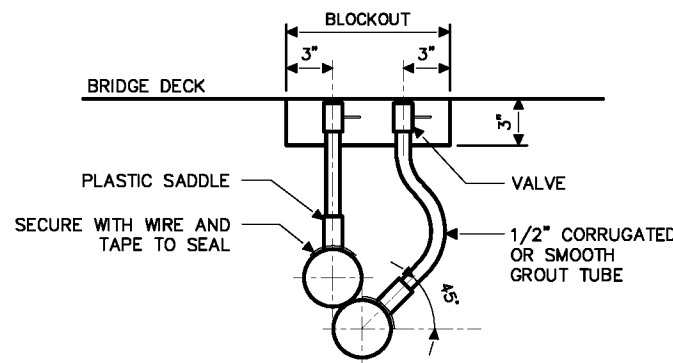


STRAND POSITION

DIMENSION TABLE						
UNIT	STRAND	(Z)	DUCT O.D.			
			C.I.P BOX GIRDER		SPLICED GIRDER	
			TENDON < 750'	TENDON > 750'	TENDON < 750'	TENDON > 750'
ACS-12.5	8 THRU 12	1/2"	2 7/8"	3 1/8"	3 1/8"	3 3/8"
ACS-7.5	1 THRU 7	3/8"	2 1/4"	2 1/2"	2 1/2"	2 3/4"

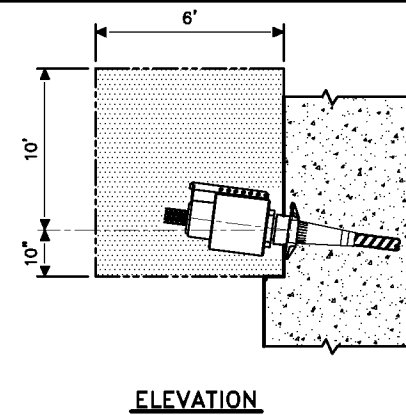
NOTE: A MIN. OF 5 FT. OF THE TENDON BEHIND EACH BEARING PLATE SHALL BE STRAIGHT AND PERPENDICULAR TO THE BEARING PLATE.

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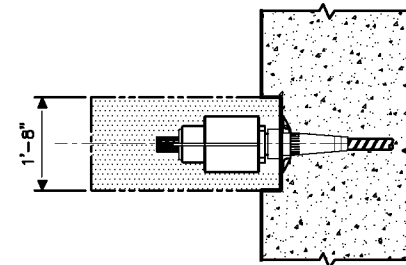


NOTE:
REFER TO AVAR SHOP DRAWINGS FOR LOCATION OF GROUT VENTS IF REQUIRED.

GROUT VENT DETAIL



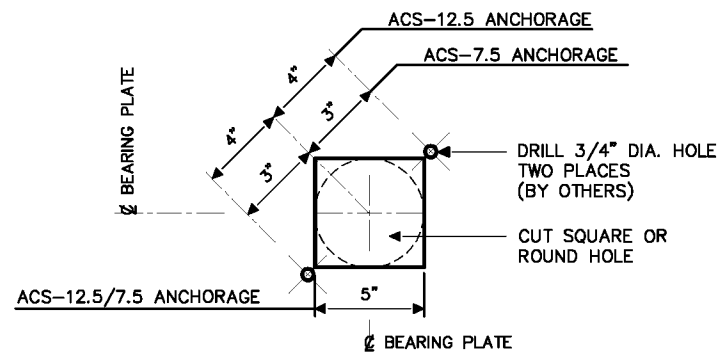
ELEVATION



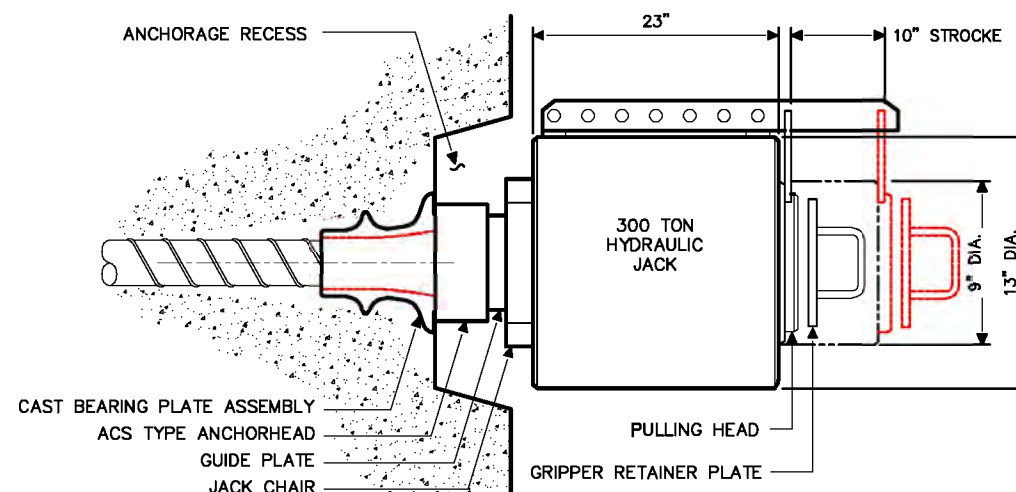
PLAN VIEW

NOTE:
SHADED AREA MUST BE FREE OF OBSTRUCTIONS TO MAINTAIN PROPER STRESSING CLEARANCE

STRESSING CLEARANCES



EDGE FORM HOLE PATTERN



STRESSING JACK ASSEMBLY

GENERAL NOTES

PRESTRESSING STEEL :

1/2" ϕ , 270 KSI, 7-WIRE STRAND, LOW RELAXATION (ASTM A-416, INCL. SUPPLEMENT 1)
 ULTIMATE STRENGTH _____ 41.3 KIPS
 MAX. TEMPORARY FORCE (75%) _____ 31.0 KIPS
 INITIAL FORCE (70%) _____ 28.9 KIPS
 AREA _____ 0.153 SQ. IN.
 MODULUS OF ELASTICITY _____ 28,000 KSI

BEARING PLATES :

MATERIAL : ASTM A536 GR. 80-55-06 (DUCTILE CASING)
 BEARING PLATES SHALL BE PLACED PERPENDICULAR TO THE TENDON PATH AND WILL BE SHIMMED IF NECESSARY. (BY OTHERS)

ANCHORHEAD :

MATERIAL : ASTM A536 GR. 80-55-06

WEDGES :

MATERIAL: AISI 11L17 OR 12L14 (L = 1.46 IN.)

DUCT :

MATERIAL: SPIRO-TYPE, RIGID, GALVANIZED DUCT
 SIZE : AS SHOWN IN TABLE

GENERAL NOTES :

PLACING, STRESSING AND GROUTING PROCEDURES ARE TO CONFORM TO THE STANDARD SPECIFICATIONS AND AS MODIFIED BY THE SPECIAL PROVISIONS.

GENERAL CONTRACTOR TO BE RESPONSIBLE FOR END BULKHEADS, BUILDOUTS, BLOCKOUTS, INCLUDING VENT PIPE BLOCKOUTS AND CONSTRUCTION OF FORMS TO ATTACH POST-TENSIONING ANCHORAGES.

REINFORCING BARS SHALL BE ADJUSTED, OR RELOCATED, DURING THE INSTALLATION OF THE TENDON ENCLOSURES TO PROVIDE PLANNED CLEARANCES TO THE POST-TENSIONING TENDONS, ANCHORAGES AND STRESSING EQUIPMENT AS DIRECTED BY THE ENGINEER.

IN CASE OF CONFLICT BETWEEN REINFORCING STEEL AND POST-TENSIONING TENDONS, THE LOCATION OF THE TENDONS SHALL TAKE PRECEDENCE. THE GENERAL CONTRACTOR SHALL COORDINATE THE DETAILING AND PLACEMENT OF ALL REINFORCING STEEL TO ELIMINATE CONFLICT WITH REQUIRED PRESTRESSING STEEL LOCATIONS.

ALL FORMS SHALL BE BRACED AND ANCHORED TO SUPPORT THE WEIGHT OF THE BEARING PLATES.

LOCATION OF STRANDS IN ANCHORHEAD:
 ALL OUTSIDE HOLES SHALL BE FILLED FIRST.

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PRESTRESSING DETAILS
 GENERAL NOTES AND ANCHORAGE DETAILS

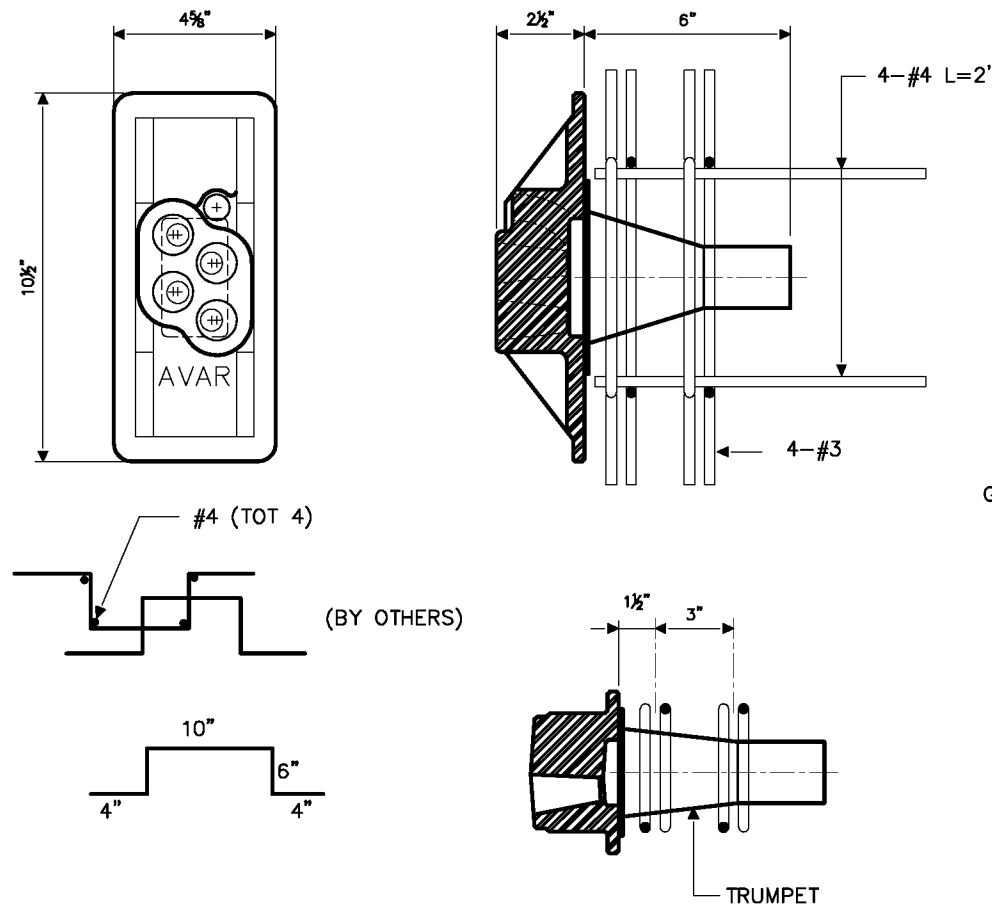
PROJECT: _____
 PROJECT NO: _____
 CONTRACT NO: _____
 CONTRACTOR: _____

NO.	DATE	REVISION	BY	AVAR JOB NO.

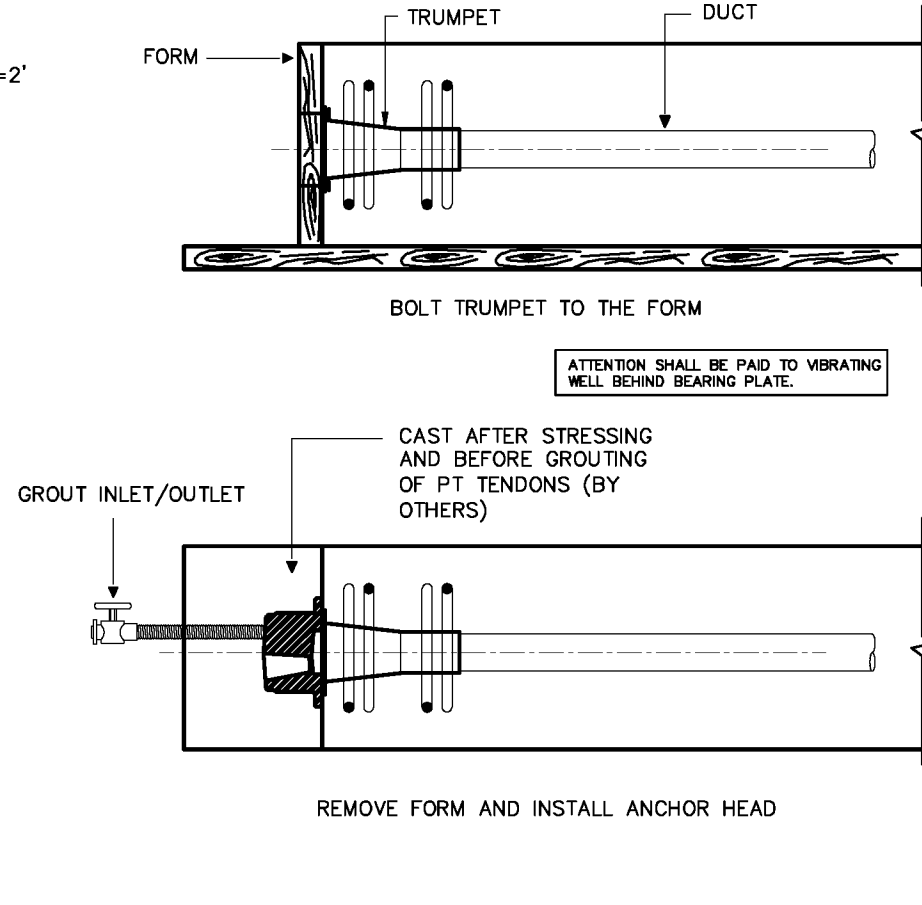


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ACS F - 4.6 ANCHORAGE



ANCHORAGE INSTALLATION

GENERAL NOTES

PRESTRESSING STEEL :

0.6" ϕ , 270 KSI, 7-WIRE STRAND, LOW RELAXATION (ASTM A-416 INCL. SUPPLEMENT 1)
 ULTIMATE STRENGTH _____ 58.6 KIPS
 MAX. TEMPORARY FORCE (75%) _____ 44.0 KIPS
 INITIAL FORCE (70%) _____ 41.0 KIPS
 AREA _____ 0.217 SQ. IN.
 MODULUS OF ELASTICITY _____ 28,000 KSI

ANCHOR HEAD :

MATERIAL : ASTM A536 GR. 80-55-06 (DUCTILE CASTING)

WEDGES :

MATERIAL: AISI 11L17 OR 12L14 (L = 1.81 IN.)

DUCT :

MATERIAL: SPIRO-TYPE, RIGID, GALVANIZED DUCT
 SIZE : AS SHOWN IN SHOP DRAWING

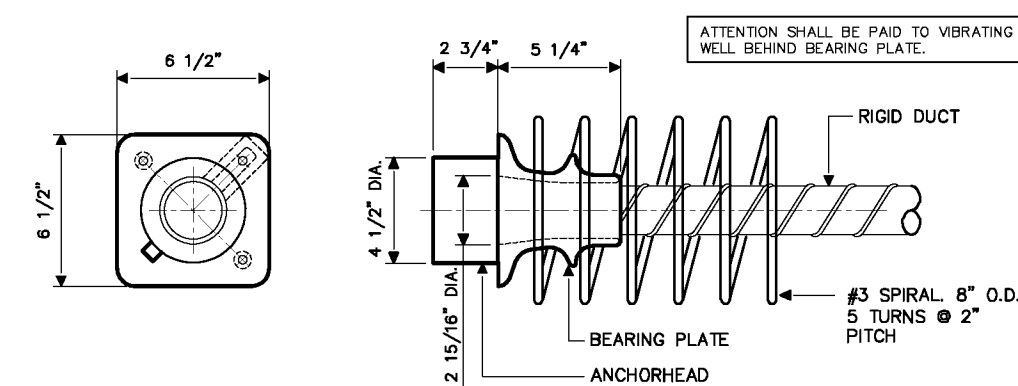
GENERAL NOTES :

PLACING, STRESSING AND GROUTING PROCEDURES ARE TO CONFORM TO THE STANDARD SPECIFICATIONS AND AS MODIFIED BY THE SPECIAL PROVISIONS.

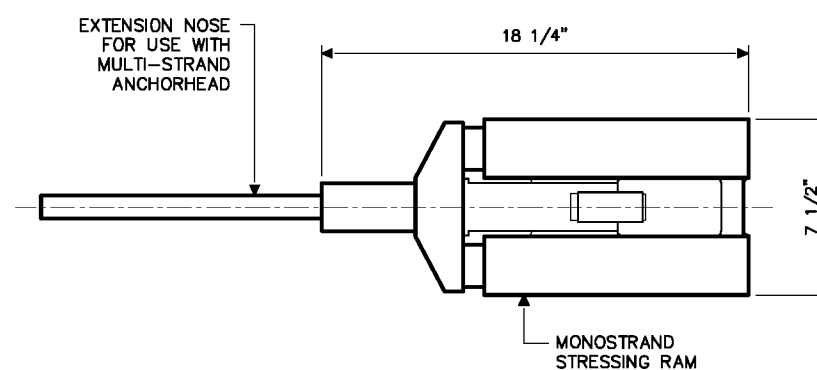
GENERAL CONTRACTOR TO BE RESPONSIBLE FOR BLOCKOUTS AND CONSTRUCTION OF FORMS TO ATTACH POST-TENSIONING ANCHORAGES.

REINFORCING BARS SHALL BE ADJUSTED, OR RELOCATED, DURING THE INSTALLATION OF THE TENDON ENCLOSURES TO PROVIDE PLANNED CLEARANCES TO THE POST-TENSIONING TENDONS, ANCHORAGES AND STRESSING EQUIPMENT AS DIRECTED BY THE ENGINEER.

IN CASE OF CONFLICT BETWEEN REINFORCING STEEL AND POST-TENSIONING TENDONS, THE LOCATION OF THE TENDONS SHALL TAKE PRECEDENCE. THE GENERAL CONTRACTOR SHALL COORDINATE THE DETAILING AND PLACEMENT OF ALL REINFORCING STEEL TO ELIMINATE CONFLICT WITH REQUIRED PRESTRESSING STEEL LOCATIONS.



ACS MP - 4.6/7.5 ANCHORAGE



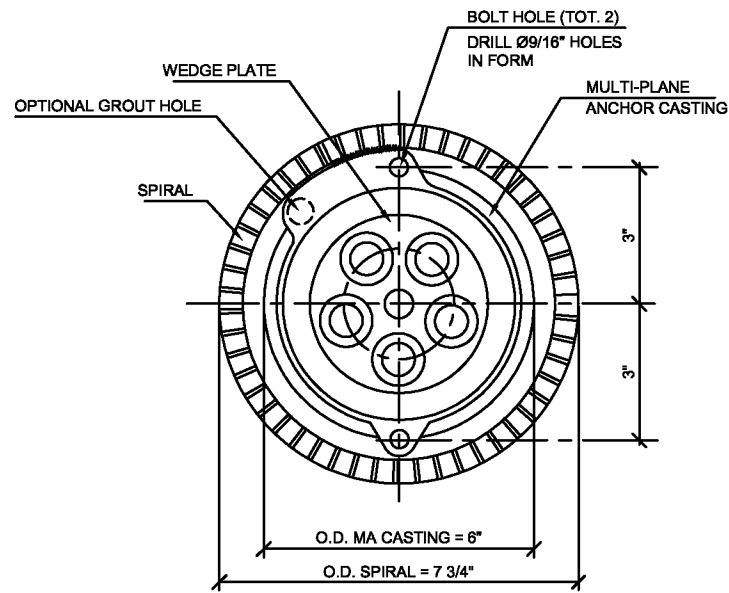
STRESSING JACK ASSEMBLY

NOTE: A MIN. OF 5 FT OF THE TENDON BEHIND EACH BEARING PLATE SHALL BE STRAIGHT AND PERPENDICULAR TO THE BEARING PLATE.

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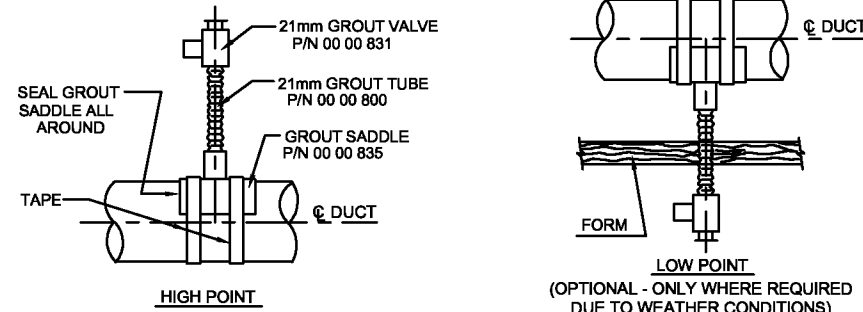
DIMENSION TABLE			
UNIT	STRAND	DUCT	
		ROUND (O.D)	FLATE
ACS-4.6	1 THRU 4	2"	1" x 3"

PRESTRESSING DETAILS			
GENERAL NOTES AND ANCHORAGE DETAILS			
PROJECT:		-	
PROJECT NO:		-	
CONTRACT NO:		-	
CONTRACTOR:		-	
DESIGN	BY:	DATE:	
DRAWN	BY: M.S	DATE: 3-30-10	
CHECKED	BY: MP	DATE: 3-30-10	
NO.	DATE	REVISION	BY
AVAR JOB NO.		-	
			DRAWING NO.:
AVAR Construction Systems, Inc. 47375 Fremont Blvd Fremont, California 94538 (510)354-2000			B1c REV. 0

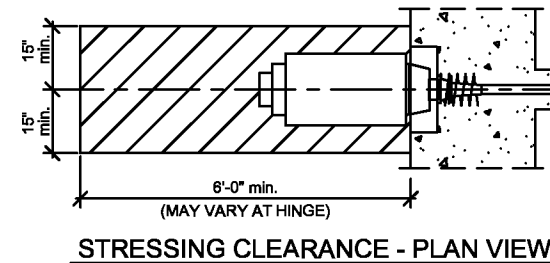
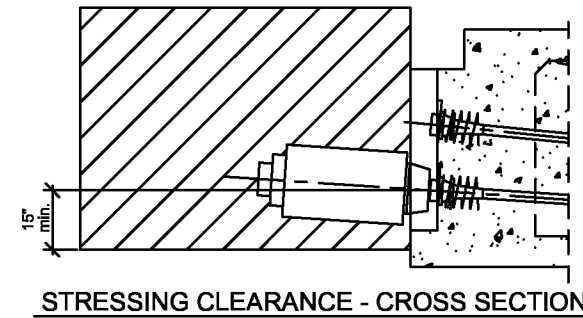


TYP. FRONT VIEW OF WEDGE PLATE AND MA ANCHORAGE

HIGH POINT NOTE:
21mm GROUT TUBE IS TO BE PLUGGED WITH 21mm GROUT PLUG PRIOR TO STRESSING. REMOVE PLUG BEFORE GROUTING. EXTEND GROUT TUBE BY A MINIMUM OF 2 FT ABOVE THE DECK AND ATTACH 21mm GROUT VALVE.



INTERMEDIATE VENT DETAILS
(USE ONLY WHEN INDICATED ON LAYOUT DRAWING)



INSTALLATION PROCEDURE

- 1.) PREASSEMBLE THE MULTIPLANE ANCHOR, BOLTED SPIRAL, AND PE TRUMPET. LIGHTLY GREASE MOUNTING STUDS TO FACILITATE REMOVAL.
 - 2.) BOLT THE MULTIPLANE ANCHOR ASSEMBLY TO THE FORMWORK AS SHOWN. THE ANCHOR MUST BE ORIENTED SUCH THAT THE GROUT HOLE IS AT THE TOP. TAPE THE GROUT HOLE TO PREVENT CONCRETE LEAKAGE.
 - 3.) INSTALL DUCT AS SHOWN ON SHOP DRAWINGS (TOLERANCE = ±1/4"). CONNECT DUCT TO TRANSITION TRUMPET AS SHOWN ON THIS DRAWING. TAPE ALL JOINTS TO ENSURE LEAK-TIGHT CONNECTIONS.
 - 4.) DUCTS MUST BE TIED AT MAXIMUM 4'-0" CENTERS TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.
- CONCRETE PLACEMENT MAY NOW PROCEED**
- 5.) AFTER INITIAL CURE AND REMOVAL OF FORMWORK, INSTALL STRANDS LEAVING SUFFICIENT LENGTH FOR STRESSING.
 - 6.) INSPECT HARDWARE FOR RUST, DIRT AND GRIT. DISCARD RUSTY WEDGES. IF NECESSARY, CLEAN WEDGE PLATE HOLES WITH WIRE BRUSH.
 - 7.) INSTALL WEDGE PLATE AND WEDGES. LOOSELY SEAT WEDGES INTO HOLES.
- STRESSING MAY NOW PROCEED PER PLANS**
- 8.) AFTER STRESSING, CUT OFF STRAND TAILS APPROXIMATELY 3/4" FROM WEDGE FACE.
 - 9.) LIGHTLY GREASE GROUT CAP AND INSTALL OVER WEDGE PLATE WITH SEAL.
 - 10.) THREAD GROUT TUBING WITH ATTACHED VALVE INTO THREADED HOLE AT TOP OF ANCHOR.
 - 11.) VENT GROUT CAP USING 1/8" Ø HOLE AND SEAL WITH GOLF TEE.

GROUTING MAY NOW PROCEED

- 12.) AFTER GROUT HAS CURED, REMOVE GROUT CAPS FOR REUSE. CUT OFF GROUT TUBING FLUSH WITH ANCHOR FACE.

NOTES:

- 1.) FOR TENDON SIZES LESS THAN SYSTEM CAPACITY, ELIMINATE THE USE OF WEDGE HOLES CONCENTRICALLY FROM THE CENTER OF THE WEDGE PLATE OUTWARDS.
- 2.) THE MULTIPLANE ANCHORAGES MAY BE USED AS STRESSING OR DEAD-END ANCHORS.
- 3.) NOT ALL SYSTEMS SHOWN ON THIS SHEET MAY BE REQUIRED FOR THIS PROJECT.

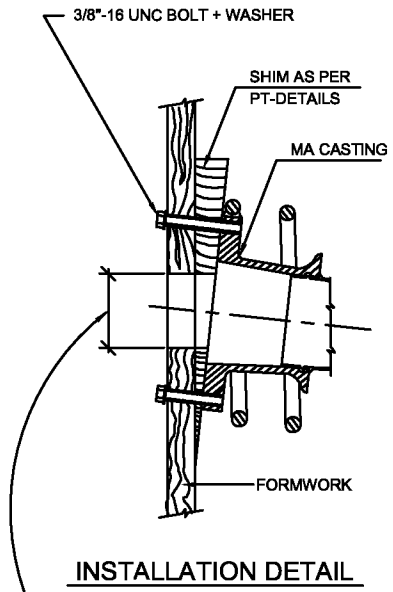
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED ON REQUEST.

DYWIDAG SYSTEMS INTERNATIONAL, USA INC. DOES NOT ASSUME ANY LIABILITY FOR THE DESIGN OF THIS STRUCTURE. THIS SHOP DRAWING IS INTENDED TO PROVIDE POST TENSIONING DETAILS ONLY

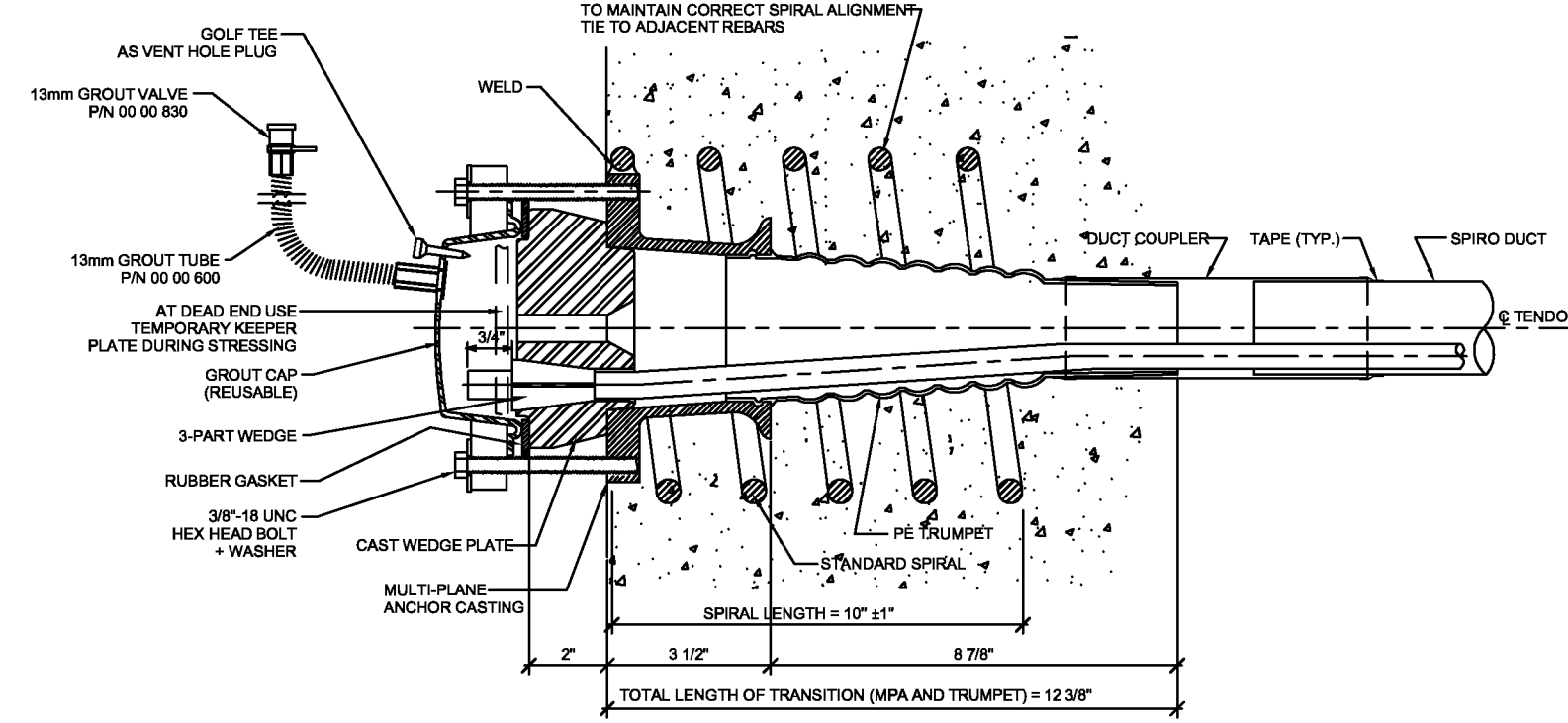
DIST.	COUNTY	ROUTE	KM POST	BRIDGE NO.	CONTRACT NO.:
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CONTRACTOR:

		DYWIDAG Systems International, USA, Inc.			
		STRESSING ANCHORAGES 5-0.6" MA SYSTEM			
REV.	DATE	ISSUE DESCRIPTION	NAME	CHKD.	SCALE
					VARIES
					DATE
					APPD.
					APPD.
					JOB No.
					DWG. NO.
© 2010 DSI, USA, INC.					



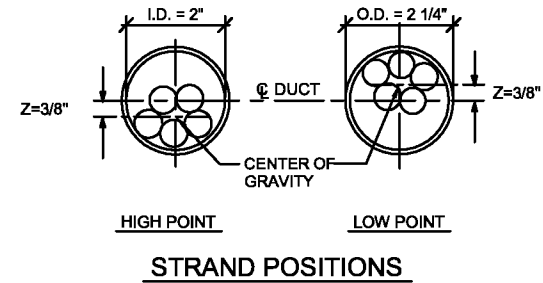
NOTE:
CONTRACTOR SHALL PROVIDE A HOLE (Ø3 1/2") IN FORMWORK FOR ACCESS TO THE INSIDE OF THE TENDON. THIS HOLE SHALL BE LOCATED AT THE CENTER OF THE ANCHORAGE. (SEE PT DETAILS FOR LOCATION).



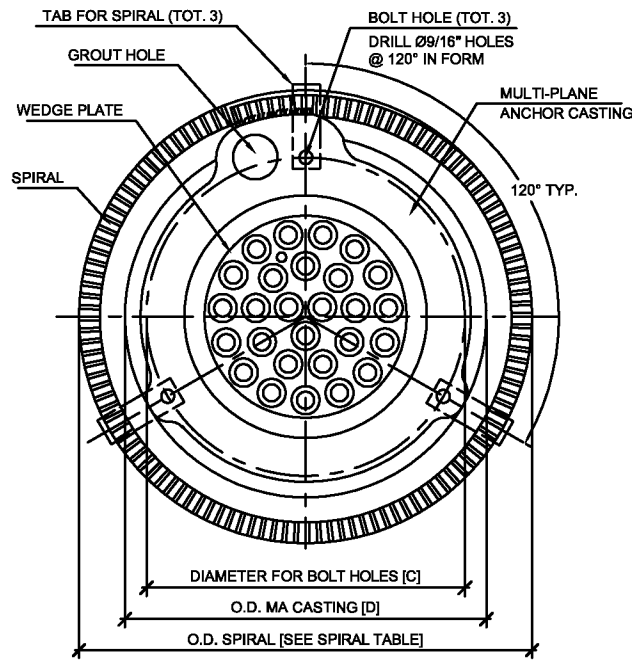
TYPICAL LONGITUDINAL SECTION OF DYWIDAG MA-ANCHORAGE

EMBEDDED MATERIALS		
PART DESCRIPTION	MATERIAL SPECIFICATION	PART NO. / ORDER NO.
3-PART WEDGE	AISI-C12L14 HEAT TREATED	68 00 0536
5-0.8" CAST WEDGE PLATE O.D. = 5 1/8"	DUCTILE IRON AISI A536, GR 80-55-06	68 05 144 (68 05 145)
5-0.8" MULTI-PLANE ANCHOR CASTING	DUCTILE IRON ASTM A536, GR 65-45-12	68 05 212
5-0.6" PE TRUMPET	HARD POLYETHYLENE	68 05 586
DUCT & DUCT COUPLER	GALVANIZED, CORRUGATED SHEET METAL, US STD. GAUGE 28	A.N.S.
5-0.6" STANDARD SPIRAL	#4 GR. 60, ASTM A615, 7 3/4" O.D. 1 7/8" PITCH, 5 FULL TURNS	68 05 214

(see DSI DWG. NO. 68 00 0536)

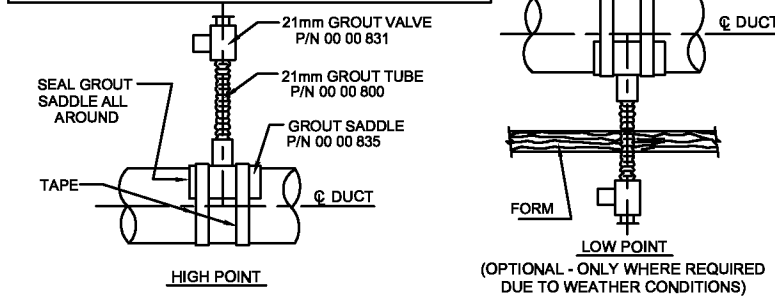


STRAND POSITIONS



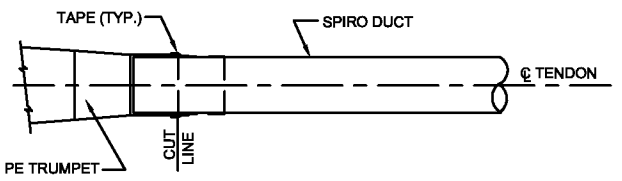
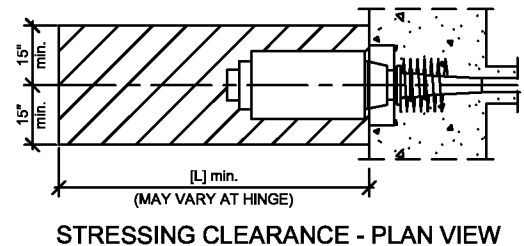
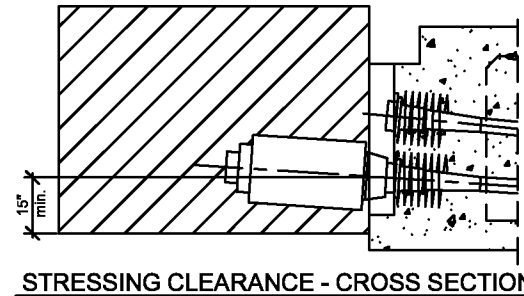
TYP. FRONT VIEW OF WEDGE PLATE AND MA ANCHORAGE
(27-0.6" WEDGE PLATE SHOWN - ALL OTHERS ARE SIMILAR)

HIGH POINT NOTE:
21mm GROUT TUBE IS TO BE PLUGGED WITH 21mm GROUT PLUG PRIOR TO STRESSING. REMOVE PLUG BEFORE GROUTING. EXTEND GROUT TUBE BY A MINIMUM OF 2 FT ABOVE THE DECK AND ATTACH 21mm GROUT VALVE.

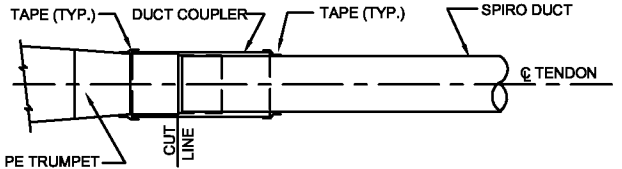


INTERMEDIATE VENT DETAILS

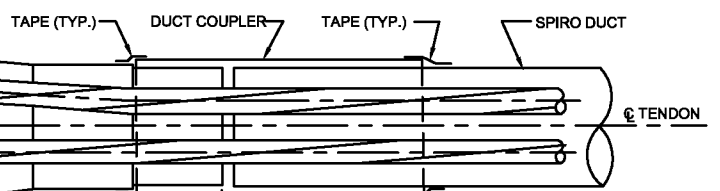
DIM.	9-0.6" SYSTEM	12-0.6" SYSTEM	15-0.6" SYSTEM	19-0.6" SYSTEM	27-0.6" SYSTEM
Z	1/2"	1/2"	5/8"	3/4"	3/4"
[A]	3 1/8"	3 1/2"	3 7/8"	3 7/8"	4 3/8"
[B]	3"	3 3/8"	3 3/4"	3 3/4"	4 1/4"
[C]	6 7/8"	7 7/8"	8 11/16"	9 7/16"	10 5/8"
[D]	7.480"±0.08"	8.661"±0.079"	9.843"±0.08"	11.024"±0.08"	12.402"±0.079"
[F]	1 3/4"	1 3/4"	2"	2 1/4"	3"
[G]	4 15/16"	7 1/8"	7 7/8"	8 11/16"	9 1/2"
[H]	10 5/8"	14"	14 3/4"	15"	16 5/8"
[J]	13 15/16"	16"	17 1/2"	16 1/2"	18 1/8"
[K]	18 7/8"	23 1/8"	25 3/8"	25 3/16"	27 5/8"
[L]	6'-0"	8'-0"	8'-0"	8'-0"	10'-0"
[M]	3 1/2"	4"	4"	4"	4 1/2"
[S]	5.512"	6.300"	7.078"	7.874"	9.449"
[T]	2.165"	2.560"	2.756"	3.425"	4.134"



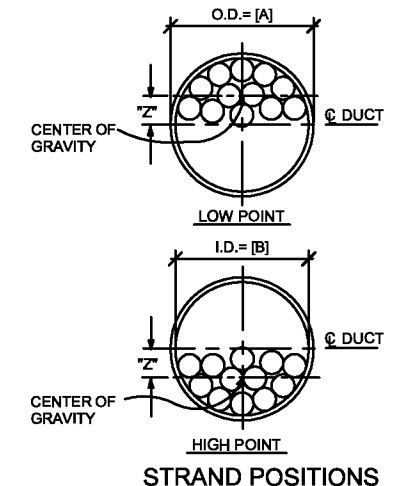
PE TRUMPET-DUCT CONNECTION FOR 27-0.6" SYSTEM



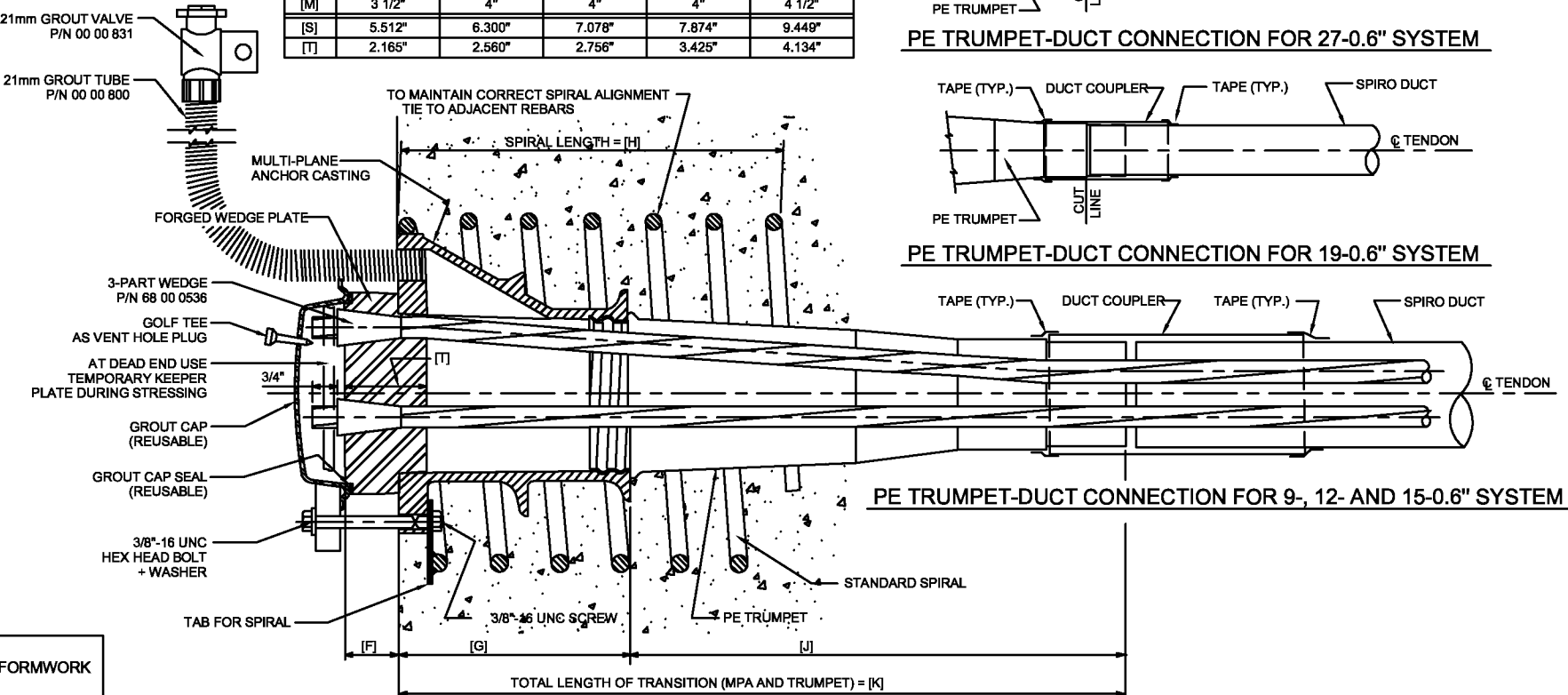
PE TRUMPET-DUCT CONNECTION FOR 19-0.6" SYSTEM



PE TRUMPET-DUCT CONNECTION FOR 9-, 12- AND 15-0.6" SYSTEM



STRAND POSITIONS



TYPICAL LONGITUDINAL SECTION OF DYWIDAG MA-ANCHORAGE

NOTE:
CONTRACTOR SHALL PROVIDE A HOLE (Ø[M]) IN FORMWORK FOR ACCESS TO THE INSIDE OF THE TENDON. THIS HOLE SHALL BE LOCATED AT THE CENTER OF THE ANCHORAGE. (SEE PT DETAILS FOR LOCATION).

INSTALLATION PROCEDURE

- 1.) PREASSEMBLE THE MULTIPLANE ANCHOR, BOLTED SPIRAL, AND PE TRUMPET. LIGHTLY GREASE MOUNTING STUDS TO FACILITATE REMOVAL.
 - 2.) BOLT THE MULTIPLANE ANCHOR ASSEMBLY TO THE FORMWORK AS SHOWN. THE ANCHOR MUST BE ORIENTED SUCH THAT THE GROUT HOLE IS AT THE TOP. TAPE THE GROUT HOLE TO PREVENT CONCRETE LEAKAGE.
 - 3.) INSTALL DUCT AS SHOWN ON SHOP DRAWINGS (TOLERANCE = ±1/4"). CONNECT DUCT TO TRANSITION TRUMPET AS SHOWN ON THIS DRAWING. TAPE ALL JOINTS TO ENSURE LEAK-TIGHT CONNECTIONS.
 - 4.) DUCTS MUST BE TIED AT MAXIMUM 4'-0" CENTERS TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.
- CONCRETE PLACEMENT MAY NOW PROCEED**
- 5.) AFTER INITIAL CURE AND REMOVAL OF FORMWORK, INSTALL STRANDS LEAVING SUFFICIENT LENGTH FOR STRESSING.
 - 6.) INSPECT HARDWARE FOR RUST, DIRT AND GRIT. DISCARD RUSTY WEDGES. IF NECESSARY, CLEAN WEDGE PLATE HOLES WITH WIRE BRUSH.
 - 7.) INSTALL WEDGE PLATE AND WEDGES. LOOSELY SEAT WEDGES INTO HOLES.
- STRESSING MAY NOW PROCEED PER PLANS**
- 8.) AFTER STRESSING, CUT OFF STRAND TAILS APPROXIMATELY 3/4" FROM WEDGE FACE.
 - 9.) LIGHTLY GREASE GROUT CAP AND INSTALL OVER WEDGE PLATE WITH SEAL.
 - 10.) THREAD GROUT TUBING WITH ATTACHED VALVE INTO THREADED HOLE AT TOP OF ANCHOR.
 - 11.) VENT GROUT CAP USING 1/8"Ø HOLE AND SEAL WITH GOLF TEE.

GROUTING MAY NOW PROCEED

- 12.) AFTER GROUT HAS CURED, REMOVE GROUT CAPS FOR REUSE. CUT OFF GROUT TUBING FLUSH WITH ANCHOR FACE.

NOTES:

- 1.) FOR TENDON SIZES LESS THAN SYSTEM CAPACITY, ELIMINATE THE USE OF WEDGE HOLES CONCENTRICALLY FROM THE CENTER OF THE WEDGE PLATE OUTWARDS.
- 2.) THE MULTIPLANE ANCHORAGES MAY BE USED AS STRESSING OR DEAD-END ANCHORS.
- 3.) NOT ALL SYSTEMS SHOWN ON THIS SHEET MAY BE REQUIRED FOR THIS PROJECT.

THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED ON REQUEST.

DYWIDAG SYSTEMS INTERNATIONAL, USA INC. DOES NOT ASSUME ANY LIABILITY FOR THE DESIGN OF THIS STRUCTURE. THIS SHOP DRAWING IS INTENDED TO PROVIDE POST TENSIONING DETAILS ONLY

DIST.	COUNTY	ROUTE	KM POST	BRIDGE NO.	CONTRACT NO.:
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CONTRACTOR:

DSI DYWIDAG Systems International, USA, Inc.
STRESSING ANCHORAGES
0.6" MA SYSTEM

REV.	DATE	ISSUE DESCRIPTION	NAME	CHKD.	SCALE	DRAWN
					VARIES	CHKD.
					DATE	APPD.
						APPD.
						JOB No.
						DWG. No.

PART DESCRIPTION	MATERIAL SPECIFICATION	PART NO. / ORDER NO.					STANDARD SPIRAL - ASTM A 615, GR 60		
		9-0.6" SYSTEM	12-0.6" SYSTEM	15-0.6" SYSTEM	19-0.6" SYSTEM	27-0.6" SYSTEM	MA-SYSTEM	PART NO./ORD. NO.	PART DESCRIPTION
		3-PART WEDGE	AISI-C12L14 HEAT TREATED	68 00 0536 (see DSI DWG. NO. 68 00 0536)					9-0.6"
FORGED WEDGE PLATE O.D. = [S]	STEEL FORGING, ASTM A-521-76, NORMALIZED, BHN = 180-220	68 09 142	68 12 142	68 15 142	68 19 142	68 27 142	12-0.6"	68 12 214	#5, 2 1/4" PITCH, 11 1/4" O.D., 6 FULL TURNS
MULTI-PLANE ANCHOR CASTING	DUCTILE IRON ASTM A536, GR 65-45-12	68 09 212	68 12 212	68 15 212	68 19 212	68 27 212	15-0.6"	68 15 214	#5, 2" PITCH, 12 1/2" O.D., 7 FULL TURNS
PE TRUMPET	HARD POLYETHYLENE	68 09 586	68 12 586	68 15 586	68 19 586	68 27 586	19-0.6"	68 19 214	#5, 1 7/8" PITCH, 14 1/2" O.D., 7 FULL TURNS
DUCT & DUCT COUPLER	GALVANIZED, CORRUGATED SHEET METAL, US STD. GAUGE 26	A.N.S.					27-0.6"	68 27 214	#6, 2 1/4" PITCH, 17" O.D., 7 FULL TURNS
GROUT SADDLE	HARD POLYETHYLENE	00 00 835							

POST TENSIONING GENERAL NOTES

PRESTRESSING STEEL

PRESTRESSING STEEL STRAND SUPPLIED FOR THE SDI PT SYSTEM SHALL BE CLEAN AND FREE FROM DELETERIOUS CORROSION. STRAND WILL BE SHIPPED IN REEL-LESS PACKS FOR FIELD FABRICATION AND PLACEMENT. STEEL SHALL CONFORM TO ASTM A416, GRADE 270 LOW RELAXATION TYPE.

NOMINAL STRAND DIAMETER (GRADE 270 KSI)	0.6 IN
CROSS-SECTIONAL AREA (ASSUMED)	0.217 SQ IN
MODULUS OF ELASTICITY (ASSUMED)	28,500 KSI
GUARANTEED ULTIMATE TENSILE STRENGTH (GUTS)	58.6 KIPS
MAXIMUM STRESSING FORCE PER STRAND (75% GUTS)	44 KIPS
FINAL EFFECTIVE PRESTRESS FORCE	VARIES
WEDGE SEATING	0.375 IN
FRICITION COEFFICIENT	VARIES
WOBBLE COEFFICIENT	0.0002/FT

BEARING PLATES AND ANCHOR HEADS

MATERIAL FOR THE CASTING OF BEARING PLATES AND ANCHOR HEADS SHALL CONFORM TO ASTM A536 GR. 80-55-06

WEDGES

MATERIAL FOR ALL WEDGES SHALL CONFORM TO AISI 11L17 OR 12L14

DUCT

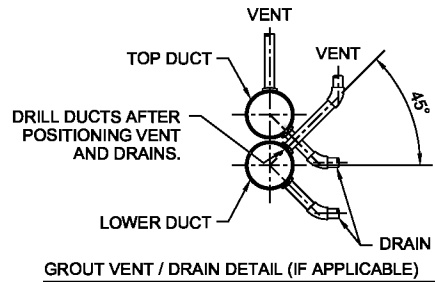
RIGID, SPIRO-TYPE GALVANIZED STEEL

INSTALLATION

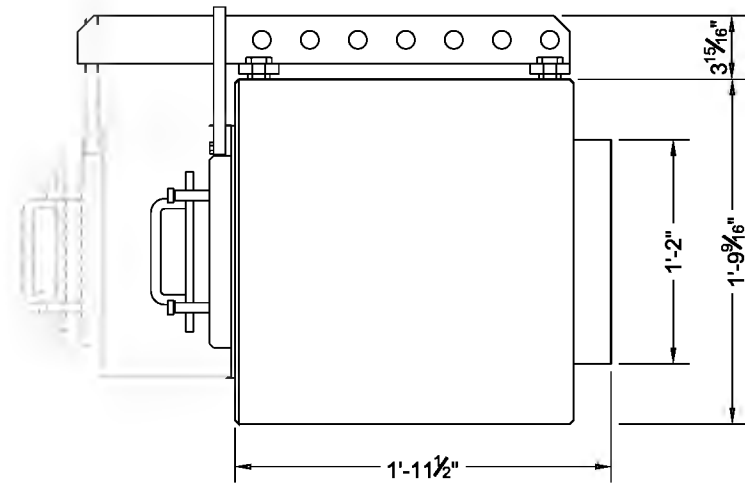
INSTALLATION AND GROUTING OF ALL POST-TENSIONING SHALL CONFORM TO THE STATE STANDARD SPECIFICATIONS ISSUED BY THE DEPARTMENT OF TRANSPORTATION AND AS MODIFIED BY THE PROJECT SPECIFIC SPECIAL PROVISIONS. ONLY TRAINED, QUALIFIED PERSONNEL ARE ALLOWED IN THE IMMEDIATE VICINITY OF EQUIPMENT DURING USE. PERSONNEL PERFORMING THE STRESSING AND INSPECTORS SHOULD REMAIN CLEAR OF THE TENDON BEING STRESSED AT ALL TIMES. NEVER PERMIT ANYONE TO STAND DIRECTLY BEHIND THE JACK OR DEAD END DURING STRESSING. IMPROPER CARE AND/OR USE OF STRESSING EQUIPMENT MAY RESULT IN PROPERTY DAMAGE AND/OR PERSONNEL INJURY. IN CASE OF CONFLICT BETWEEN REINFORCING STEEL AND POST-TENSIONING TENDONS, THE LOCATION OF THE TENDONS SHALL TAKE PRECEDENCE. THE GENERAL CONTRACTOR SHALL COORDINATE THE DETAILING AND PLACEMENT OF ALL REINFORCING STEEL TO ELIMINATE CONFLICT WITH PRESTRESSING STEEL OR STRESSING EQUIPMENT. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FORMWORK, BLOCKOUTS, POURBACKS AND THE COORDINATION AND ADJUSTMENT OF ALL MILD REINFORCING STEEL. SCHWAGER DAVIS, INC. ASSUMES NO LIABILITY FOR THE DESIGN OF THE STRUCTURE OR ANY FORCES INTRODUCED.

VENTING

GROUT VENTS SHALL BE PLACED ON TOP OF ALL ANCHORAGES AND WITHIN 3' OF ONE HIGH POINT ON ALL TENDONS EXCEEDING 400 FEET IN LENGTH. SEE DRAWINGS FOR LOCATIONS AND DETAILS.

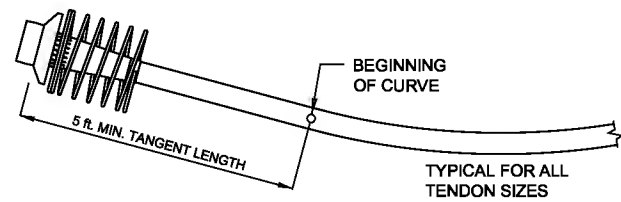


GROUT VENT / DRAIN DETAIL (IF APPLICABLE)

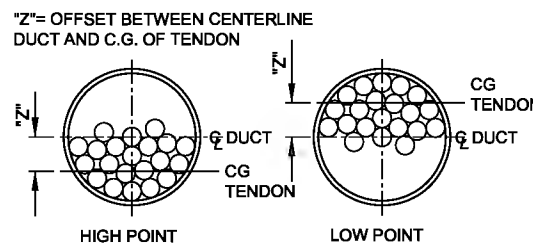


SDI 600 TON MULTI-STRAND RAM
 STROKE = 8"
 WEIGHT = 2,095 LBS
 TENDON SIZE = 12-0.6" - 27-0.6"

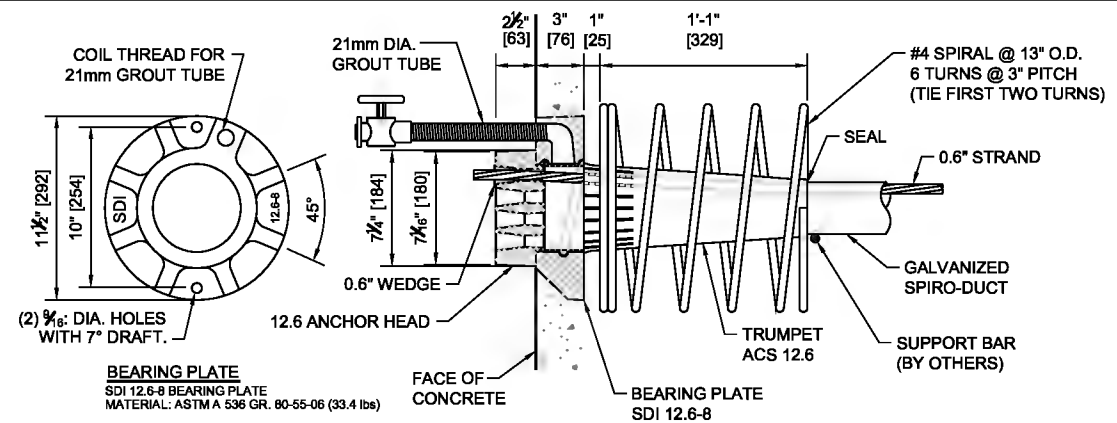
TENDON SIZE	ANCHORAGE	DUCT I.D.	"Z" VALUE	GAUGE	GROUT (94lb. BAG/100FT) PRE-MIX GROUT (50lb BAG/100FT)	LOCATION
-	-	-	-	-	-	-
-	-	-	-	-	-	-



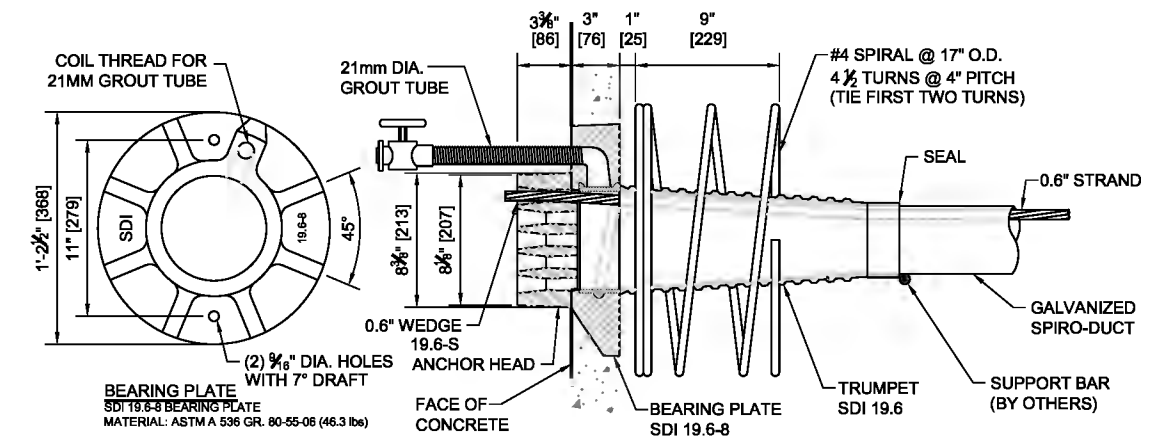
TYPICAL FOR ALL TENDON SIZES



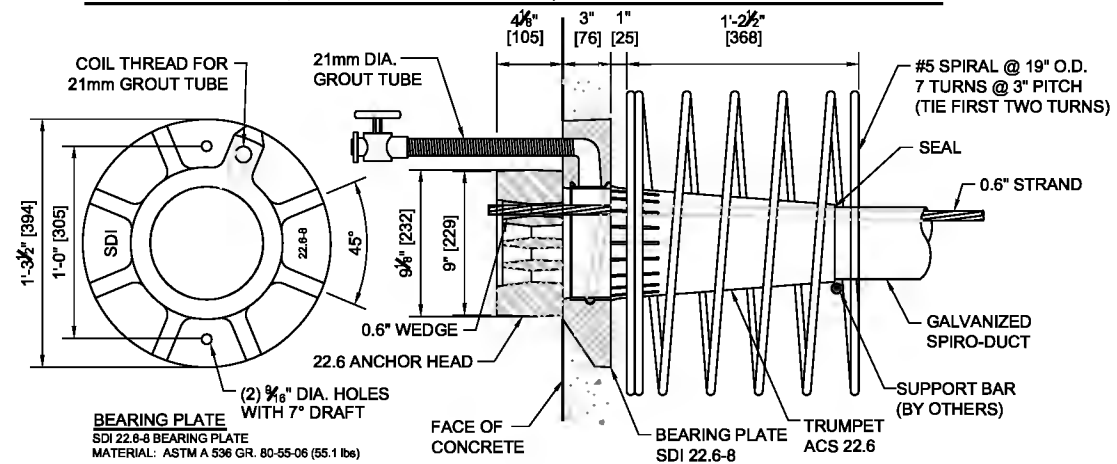
THESE DRAWINGS CONTAIN PROPRIETARY INFORMATION RESTRICTED SOLELY FOR USE ON THIS PROJECT. THESE DRAWINGS MAY NOT BE REPRODUCED IN WHOLE OR IN PART, FOR ANY OTHER USE WITHOUT THE EXPRESSED WRITTEN PERMISSION OF SCHWAGER DAVIS INC. (SDI). SDI DOES NOT MAKE ANY JUDGMENT NOR WARRANTY, EXPRESSED OR IMPLIED, AS TO THE ADEQUACY OF THE STRUCTURAL DESIGN BY OTHERS AND HEREBY DISCLAIMS ANY LIABILITY FOR DESIGNS OF OTHERS.



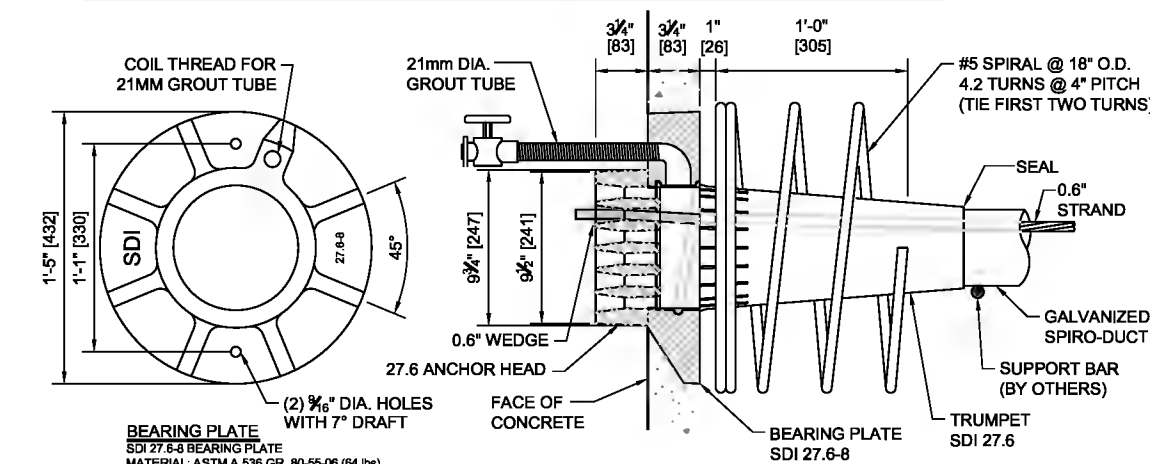
SDI 12.6-8 ANCHORAGE (APPROVED FOR 3500 PSI LT.WT. CONC.)



SDI 19.6-S ANCHORAGE (APPROVED FOR 3500 PSI CONC.)



SDI 22.6-8 ANCHORAGE (APPROVED FOR 3500 PSI LT. WT. CONC.)



SDI 27.6 ANCHORAGE (APPROVED FOR 3500 PSI CONC.)

DRAWING No: 0000000-

SCHWAGER DAVIS, INC.

DESIGN-BUILD CONTRACTOR
 186 HILLSDALE AVENUE
 SAN JOSE, CA 95136
 PHONE: 408.281.9300
 FAX: 408.281.9301
 www.schwagerdavis.com



GENERAL NOTES

X BRIDGE No. 00-000000
 CONTRACT No. 00-000000, DISTRICT: 00,
 COUNTY: 00, ROUTE: 0, KM POST: 00/00

DATE	APPROVED	CHECKED	DRAWN	REVISIONS	#