

ITEM	DESCRIPTION	MATERIAL	NOTES	MODEL/ PART No.	PRINT NO.	MARKING
1	WMS. 36mm (1 3/8" nom.) GRADE 150 TYPE II, KSI A.T.B.	ASTM A-722-97, AASHTO M275.		R71-11	1B-R7P-001-1	R71-11
2	WMS. 36mm (1 3/8" nom.) HEAVY DUTY HEX NUT	ASTM A-29-93a GRADE C-1045.		R73-11	1B-R7P-001-2	R73-11 SEE NOTE ④
3	WMS. 36mm (1 3/8" nom.) HARDENED WASHER	ASTM F-436-93, TYPE I, AASHTO M293		R9F-12-436	1B-R7P-001-3	F436-1 1/2"
4.1	WMS. STEEL BEARING PLATE 1.50 x 7 x 7.5 (w/ GROUT HOLES & VERTICAL TENDON INSPECTION HOLES) 3" nom.. Sch. 40 TRUMPET x 3" LONG	ASTM A-36-01, AASHTO M183 ASTM A-53	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④	S2K-120707514R G	1B-R7P-001-4 sheet 1 of 8	R7P S2K-1 (D) SEE NOTE ④
4.2	WMS. STEEL BEARING PLATE 1.50 x 7 x 7.5 (w/ GROUT HOLES & VERTICAL TENDON INSPECTION HOLES) 3.125"OD. x 2.875 ID. (.125 WALL) TUBE TRUMPET. x 3" LONG.	ASTM A-36-01, AASHTO M183 ASTM A-512	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④			SEE NOTE ④
4.3	WMS. STEEL BEARING PLATE 1.50 x 7 x 7.5 (w/ GROUT HOLES & HORIZONTAL TENDON INSPECTION HOLES) 3" nom.. Sch. 40 TRUMPET x 3" LONG	ASTM A-36-01, AASHTO M183 ASTM A-53	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④	S3K-120707514R G	1B-R7P-001-4 sheet 2 of 8	R7P S3K-2 (D) SEE NOTE ④
4.4	WMS. STEEL BEARING PLATE 1.50 x 7 x 7.5 (w/ GROUT HOLES & HORIZONTAL TENDON INSPECTION HOLES) 3.125"OD. x 2.875 ID. (.125 WALL) TUBE TRUMPET. x 3" LONG.	ASTM A-36-01, AASHTO M183 ASTM A-512	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④			SEE NOTE ④
4.5	WMS. STEEL BEARING PLATE 1.50 x 7 x 7.5 (w/ GROUT HOLES) 3" nom.. Sch. 40 TRUMPET x 3" LONG	ASTM A-36-01, AASHTO M183 ASTM A-53	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④	S4K-120707514R G	1B-R7P-001-4 sheet 3 of 8	R7P S4K-3 (D) SEE NOTE ④
4.6	WMS. STEEL BEARING PLATE 1.50 x 7 x 7.5 (w/ GROUT HOLES) 3.125"OD. x 2.875 ID. (.125 WALL) TUBE TRUMPET. x 3" LONG.	ASTM A-36-01, AASHTO M183 ASTM A-512	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④			SEE NOTE ④
4.7	WMS. STEEL BEARING PLATE (w/o GROUT HOLES) 1.50 x 7 x 7.5 3" nom.. Sch. 40 TRUMPET x 3" LONG	ASTM A-36-01, AASHTO M183 ASTM A-53	WITH 1 3/4" DIA. CENTER HOLE TRUMPET WELDED TO PLATE SEE NOTE ④	S5K-120707514R G	1B-R7P-001-4 sheet 4 of 8	R7P S5K-4 (D) SEE NOTE ④
4.8	WMS. STEEL BEARING PLATE (w/o GROUT HOLES) 1.50 x 7 x 7.5 3.125"OD. x 2.875 ID. (.125 WALL) TUBE TRUMPET. x 3" LONG.	ASTM A-36-01, AASHTO M183 ASTM A-512	WITH 1 3/4" DIA. CENTER HOLE TRUMPET WELDED TO PLATE SEE NOTE ④			SEE NOTE ④
4.9	WMS. STEEL BEARING PLATE 2.00 x 6.00 x 9.00 (w/ GROUT HOLES & VERTICAL TENDON INSPECTION HOLES) 3" nom.. Sch. 40 TRUMPET x 3" LONG	ASTM A-36-01, AASHTO M183 ASTM A-53	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④	S2K-1805092514R G	1B-R7P-001-4 sheet 5 of 8	R7P S2K-5 (D) SEE NOTE ④
4.10	WMS. STEEL BEARING PLATE 2.00 x 6.00 x 9.00 (w/ GROUT HOLES & VERTICAL TENDON INSPECTION HOLES) 3.125"OD. x 2.875 ID. (.125 WALL) TUBE TRUMPET. x 3" LONG.	ASTM A-36-01, AASHTO M183 ASTM A-512	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④			SEE NOTE ④
4.11	WMS. STEEL BEARING PLATE 2.00 x 6.00 x 9.00 (w/ GROUT HOLES & HORIZONTAL TENDON INSPECTION HOLES) 3" nom.. Sch. 40 TRUMPET x 3" LONG	ASTM A-36-01, AASHTO M183 ASTM A-53	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④	S3K-1805092514R G	1B-R7P-001-4 sheet 6 of 8	R7P S3K-6 (D) SEE NOTE ④
4.12	WMS. STEEL BEARING PLATE 2.00 x 6.00 x 9.00 (w/ GROUT HOLES & HORIZONTAL TENDON INSPECTION HOLES) 3.125"OD. x 2.875 ID. (.125 WALL) TUBE TRUMPET. x 3" LONG.	ASTM A-36-01, AASHTO M183 ASTM A-512	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④			SEE NOTE ④
4.13	WMS. STEEL BEARING PLATE 2.00 x 6.00 x 9.00 (w/ GROUT HOLES) 3" nom.. Sch. 40 TRUMPET x 3" LONG	ASTM A-36-01, AASHTO M183 ASTM A-53	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④	S4K-1805092514R G	1B-R7P-001-4 sheet 7 of 8	R7P S4K-7 (D) SEE NOTE ④
4.14	WMS. STEEL BEARING PLATE 2.00 x 6.00 x 9.00 (w/ GROUT HOLES) 3.125"OD. x 2.875 ID. (.125 WALL) TUBE TRUMPET. x 3" LONG.	ASTM A-36-01, AASHTO M183 ASTM A-512	WITH 1 3/4" DIA. CENTER HOLE AND TWO 1/2" DIA. ANGLED GROUT HOLES TRUMPET WELDED TO PLATE SEE NOTE ④			SEE NOTE ④
4.15	WMS. STEEL BEARING PLATE (w/o GROUT HOLES) 2.00 x 6.00 x 9.00 3" nom.. Sch. 40 TRUMPET x 3" LONG	ASTM A-36-01, AASHTO M183 ASTM A-53	WITH 1 3/4" DIA. CENTER HOLE TRUMPET WELDED TO PLATE SEE NOTE ④	S5K-1805092514R G	1B-R7P-001-4 sheet 8 of 8	R7P S5K-8 (D) SEE NOTE ④
4.16	WMS. STEEL BEARING PLATE (w/o GROUT HOLES) 2.00 x 6.00 x 9.00 3.125"OD. x 2.875 ID. (.125 WALL) TUBE TRUMPET. x 3" LONG. WELDED TO PLATE.	ASTM A-36-01, AASHTO M183 ASTM A-512	WITH 1 3/4" DIA. CENTER HOLE TRUMPET WELDED TO PLATE SEE NOTE ④			SEE NOTE ④
5	WMS. NYLON REINFORCE END CAP	ASTM D-4066, S PA-0221 ASTM D-5989, S PA-0231	④ END CAP THREADED FOR 36MM 150 BAR.	R78K113207	1B-R7P-001-6	R78K-36
5A	WMS. NYLON REINFORCED END CAP O-RING	.70 DUROMETER BUNA-N	800347-002	PURCHASED ITEM	-----	NONE SEE NOTE ④
5B	WMS. POST-TENSIONING GREASE	ASTM B-117 AND D-1743	FIELD APPLIED GREASE TO O-RING	S3Z01	-----	NONE SEE NOTE ④
6	CANUSATUBE. HEAT SHRINKABLE TUBING WITH FUSION BONDED EPOXY ADHESIVE.	SEE CUT SHEET SEC 5.0, MATERIAL CERT'S.	PLA-63	K3CA4	-----	PLA-63
7	WMS. GTI DUCT COUPLING / TRUMPET SPACER	HIGH DENSITY- PE		R7619PE	1B-R7P-001-5(3-3)	R7619PE
8	WMS. GROUT SADDLE FOR 1" O.D. PE CORRUGATED TUBING	HIGH DENSITY- PE		R8701B	1B-R7P-001-9	R8701B
9	WMS. 1" O.D. CORRUGATED SHUT-OFF VALVE	POLYSTYRENE		R8704B	1B-R7P-001-10	R8704B
10	FINISH - GALVANIZED COATING AS REQUIRED PER DESIGNER (PLATE AND TRUMPET AFTER FABRICATION)	ASTM A-123, AASHTO M111	G-INDICATES GALVANIZED FINISH ON STEEL ITEMS.	G	-----	NONE SEE NOTE ④
11	NYLON GAS PLUMBERS TAPE - FOR ALL THREAD FIT SEALS	NYLON	USE TRUMPET SPACER WITH PIPE TRUMPET.	PURCHASED ITEM STD. PLUMMING PART.	-----	NONE SEE NOTE ④
12	WMS. 1" CORRUGATED GROUT TUBE PLUG.	HIGH DENSITY- PE		R8704C-PP	1B-R7P-001-11	R8704C-PP
13	WMS. 59MM (2 3/8" I.D.) PP CORRUGATED DUCT. (INTERNAL)	GTI - PP7032 E2, COPOLYMER FOR INJECTION MOLDING.		R7519PP	1B-R7P-001-5 (1-2)	220200
14	WMS. 1" O.D. CORRUGATED GROUT TUBING	HIGH DENSITY- PE		T3P-08-007-COR	1B-R7P-001-12	T3P-08
15	STD. 3/8" -18 N.P.T PIPE PLUG	316SS		PURCHASED ITEM STD. PLUMMING PART.	1B-R7P-001-13	NONE SEE NOTE ④
16	STD. 3/8" -16UNC HEX SCREW x 1.00" LONG	316SS		PURCHASED ITEM STD. PLUMMING PART.	1B-R7P-001-13	NONE SEE NOTE ④
17	STD. 1/2"-18 N.P.T PIPE COUPLING, SS316	316SS		PURCHASED ITEM STD. PLUMMING PART.	1B-R7P-001-13	NONE SEE NOTE ④
18	STD. 1/2"-18 NPT PIPE PLUG, SS316, W/HEX SOCKET.	316SS		PURCHASED ITEM STD. PLUMMING PART.	1B-R7P-001-13	NONE SEE NOTE ④
19	WMS. POCKET FORMER ASSEMBLY, WITH NEOPRENE SEAL AND PLASTIC NUT.	HIGH DENSITY- PE		R85K	1B-R7P-001-8	R85K
20	WMS. TEMPLATE BOLT / INSPECTION PORT.	CRS		C6-T08	1B-R7P-001-7	C6-T08
21	WMS. 36mm (1 3/8" nom.) SPHERICAL HEX NUT	ASTM A-536, 100-70-03, DUCTILE IRON.		R88-11	1B-R7P-001-14	R88-11

NOTES

- ④ PURCHASED STANDARD PARTS MARKED BY COMMON MANUFACTURER AND MAY VARY.
- ② PLATE ASSEMBLIES ARE MARKED AS INDICATED FOR THE STANDARD WFEC R7P SYSTEM. IF PLATE ASSEMBLY VARIES, PLATE MUST EXCEED THE STRENGTH REQUIREMENTS OF PLATE SHOWN. ALL PLATE DESIGNS ALTERNATES MUST BE SUBMITTED AND APPROVED BY FLORIDA DOT AND PROJECT ENGINEERS.
- ③ HEX NUT MARKINGS WILL VARY PER PROJECT, ALL HEX NUTS ARE MARKED WITH A HEAT CODE WHICH IS INDICATED ON JOB ITEM MARKING LIST.
- 4. BAR COUPLINGS ARE NOT USED THE R7P INTERNAL SYSTEM.
- ⑤ DRILL AND TAP FOR EXTERNAL GROUT/DE-AIR PORTS, AS REQUIRED.
- ⑥ INSPECTION PORT PIPE WELDED TO PLATE.
- ⑦ INSPECTION PORT PIPE WELD TO TUBING.
- ⑧ ALL DISHED CENTER HOLE PLATES ARE MARKED WITH ADDITIONAL "D"
ALL ALTERNATED PLATE DESIGNS MUST BE SUBMITTED TO STATE OF FLORIDA, AND INCLUDE CALCULATIONS FOR REQUIRED STRUCTURE PARAMETERS BY WFEC.
ALTERNATE PLATE DESIGN SUBMITTAL DRAWINGS WILL INDICATE MARKINGS AND PART NUMBERS.

1-R7P-001 PRINT NO. 3 OF 6 SHEET NO.	WMS. R7P SYSTEM MASTER ITEM COMPONENT PARTS WMS. 1 3/8" 150 KSI COMPONENT PARTS SHOWN.	 <p>280 ANN ST. N.W., GRAND RAPIDS, MI 49504, PH: 616.365.9220 - FX: 616.365.2668</p>	CUSTOMER _____ PROJECT WMS. R7P SYSTEM MASTER ITEM COMPONENT PARTS WMS. 1 3/8" 150 KSI COMPONENT PARTS SHOWN.
THIS DRAWING IS THE PROPERTY OF WILLIAMS FORM ENGINEERING CORPORATION AND IS SUBMITTED TO THE CONTRACTOR SOLELY AS A SUGGESTED DESIGN FOR APPROVAL BY HIS JOB DESIGN AGENCY. IT IS SUBJECT TO RECALL AND MUST NOT BE REPRODUCED OR ITS CONTENTS DIVULGED WITHOUT WRITTEN PERMISSION. ALL WILLIAMS PRODUCTS ARE PATENTED OR HAVE PATENTS APPLIED FOR.			