

[illegible]

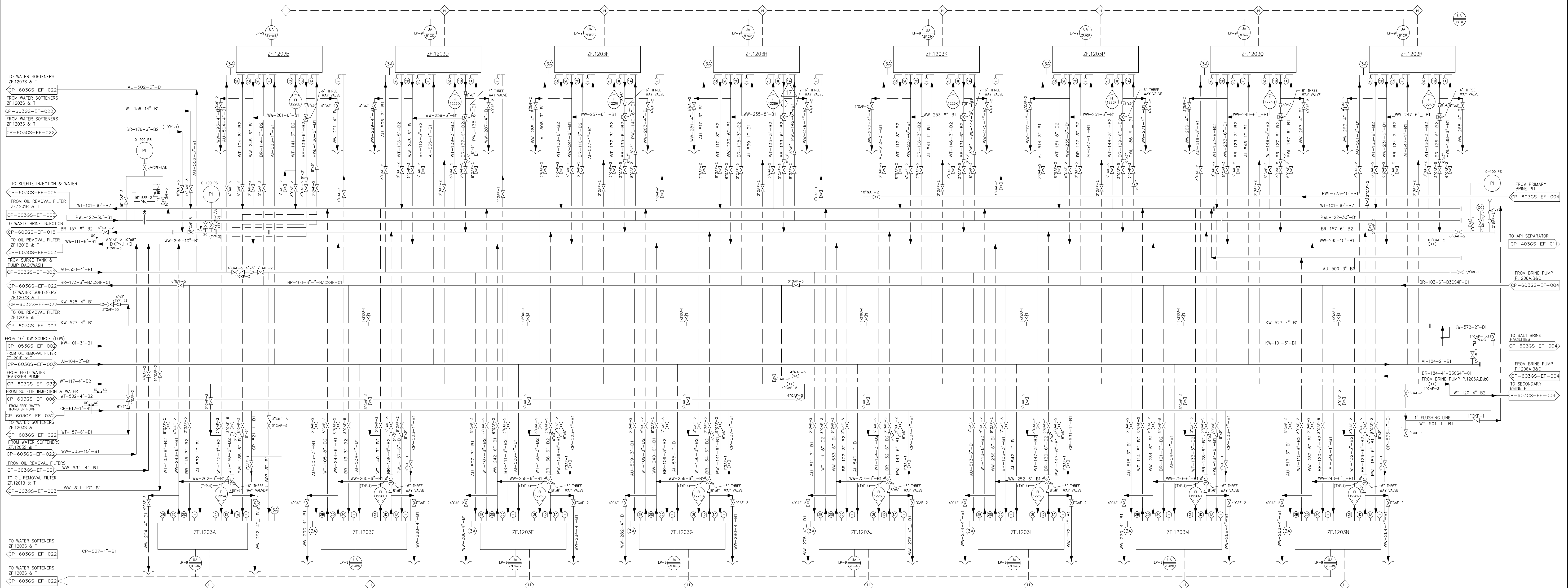
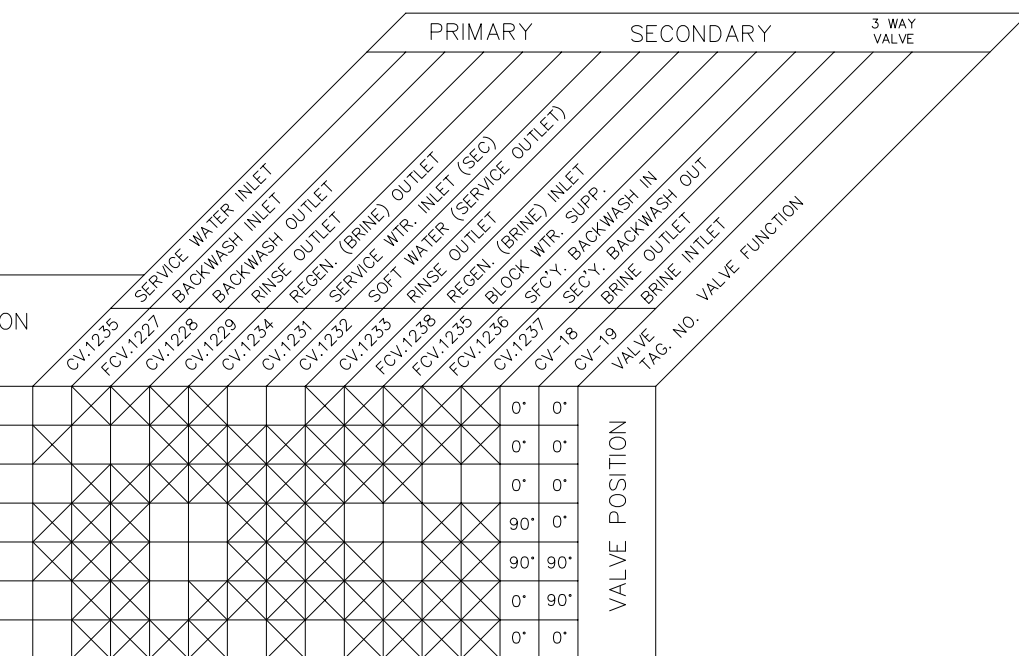
### SECONDARY SOFTENER

DIMENSIONS	: 9'-0" DIA. X 6'-6" S,S
DESIGN PRESSURE	: 115 PSIG (BOT)/110 PSIG (TOP)
LINED WITH	: FNGARD 482
RESIN CAPACITY	: 243 FT3
DESIGN TEMP	: 250°F
CAPACITY	: 604 FT3

The diagram illustrates the electrical control system for a softener. At the top, a 'PACKAGE LIMIT' line runs horizontally, with a 'PSG (TOP)' connection point on the left. Below this, the 'SOFTENER MAIN PANEL' is the central hub. It contains three circular indicators labeled 'XI', 'QPAH', and 'QPAH', with 'SERVICE TIME W51&W52' written below them. Below these indicators are five 'VALVES OPEN/CLOSE INDICATOR LAMPS' (TYP. 12), represented by circles with 'R' inside. To the left of the main panel is the 'PRIMARY SOFTENER SOLENOID PANEL', which includes a '1A' input and a 'CV' (valve) symbol. To the right is the 'SECONDARY SOFTENER SOLENOID PANEL', which includes a 'RED : CLOSED' and 'GREEN : OPEN' indicator, and a 'CV' symbol. Below the main panel is the 'INTERLOCK PANEL', which is connected to the main panel and the solenoid panels. Further right are the 'BATCH PANEL' and 'BATCH PANEL', which are connected to the main panel and the solenoid panels. At the bottom, there are two 'VALVE OPEN POSITION SWITCH (TYPICAL)' units. The left unit is connected to the primary solenoid panel and the main panel. The right unit is connected to the secondary solenoid panel and the main panel. The diagram also shows 'S.S. PSG (TOP)' and 'S.S. PSG (TOP)' connections at the top and bottom left, and a 'PACKAGE LIMIT' connection at the bottom right. Various valve codes are listed: 'TYPICAL FOR VALVES CV1235A,B,C,D ETC' (FCV1227, CV1228, CV1229, CV1234) and 'TYPICAL FOR VALVES CV1231A,B,C,D ETC' (CV1230, FCV1236, CV1237, CV1233, FCV1232, FCV1250).

OPERATION STEP	SOFTENER FUNCTION MODE
6	NORMAL SERVICE
1	BACKWASH (PRIMARY)
REF	BACKWASH (SECONDARY)
2	REGENERATION (BRINE INTRO
3	BRINE DISPLACEMENT (PRIM
4	RINSE (PRIMARY)
5	RINSE (SECONDARY)

8037.ZF. 1203 A  
WATER SOFTENERS



1. ALL EQUIPMENT, INSTRUMENT AND LINE NUMBERS ON THIS DRAWING HAVE THE PREFIX 80373 UNLESS OTHERWISE NOTED.	4. BACKWASH OF SECONDARY SFTENERS TO BE CARRIED OUT AUTOMATICALLY BY PUSH BUTTON FURNISHED ON THE PANEL.	6. THE PDI ON ZF-1203A HAS BEEN DEMOLISHED
2. THE LETTERS 'Y' & 'O' ARE NOT USED IN THE EQUIPMENT NUMBERING SYSTEM.	5. PSV'S FOR SOFTENING PACKAGE UNITS ZF-1203B THRU ZF-1203K TO BE TAGGED 1212B, 1212C, 1212D, 1212E, 1212F, 1212G, 1212H, 1212I, 1212J, 1212K, 1212L, 1212M, 1212N, 1212O, 1212P, 1212Q, 1212R, 1212S, 1212T, 1212U, 1212V, 1212W, 1212X, 1212Y, 1212Z, 1213A, 1213B, 1213C, 1213D, 1213E, 1213F, 1213G, 1213H, 1213I, 1213J, 1213K, 1213L, 1213M, 1213N, 1213O, 1213P, 1213Q, 1213R, 1213S, 1213T, 1213U, 1213V, 1213W, 1213X, 1213Y, 1213Z, 1214A, 1214B, 1214C, 1214D, 1214E, 1214F, 1214G, 1214H, 1214I, 1214J, 1214K, 1214L, 1214M, 1214N, 1214O, 1214P, 1214Q, 1214R, 1214S, 1214T, 1214U, 1214V, 1214W, 1214X, 1214Y, 1214Z, 1215A, 1215B, 1215C, 1215D, 1215E, 1215F, 1215G, 1215H, 1215I, 1215J, 1215K, 1215L, 1215M, 1215N, 1215O, 1215P, 1215Q, 1215R, 1215S, 1215T, 1215U, 1215V, 1215W, 1215X, 1215Y, 1215Z, 1216A, 1216B, 1216C, 1216D, 1216E, 1216F, 1216G, 1216H, 1216I, 1216J, 1216K, 1216L, 1216M, 1216N, 1216O, 1216P, 1216Q, 1216R, 1216S, 1216T, 1216U, 1216V, 1216W, 1216X, 1216Y, 1216Z, 1217A, 1217B, 1217C, 1217D, 1217E, 1217F, 1217G, 1217H, 1217I, 1217J, 1217K, 1217L, 1217M, 1217N, 1217O, 1217P, 1217Q, 1217R, 1217S, 1217T, 1217U, 1217V, 1217W, 1217X, 1217Y, 1217Z, 1218A, 1218B, 1218C, 1218D, 1218E, 1218F, 1218G, 1218H, 1218I, 1218J, 1218K, 1218L, 1218M, 1218N, 1218O, 1218P, 1218Q, 1218R, 1218S, 1218T, 1218U, 1218V, 1218W, 1218X, 1218Y, 1218Z, 1219A, 1219B, 1219C, 1219D, 1219E, 1219F, 1219G, 1219H, 1219I, 1219J, 1219K, 1219L, 1219M, 1219N, 1219O, 1219P, 1219Q, 1219R, 1219S, 1219T, 1219U, 1219V, 1219W, 1219X, 1219Y, 1219Z, 1220A, 1220B, 1220C, 1220D, 1220E, 1220F, 1220G, 1220H, 1220I, 1220J, 1220K, 1220L, 1220M, 1220N, 1220O, 1220P, 1220Q, 1220R, 1220S, 1220T, 1220U, 1220V, 1220W, 1220X, 1220Y, 1220Z, 1221A, 1221B, 1221C, 1221D, 1221E, 1221F, 1221G, 1221H, 1221I, 1221J, 1221K, 1221L, 1221M, 1221N, 1221O, 1221P, 1221Q, 1221R, 1221S, 1221T, 1221U, 1221V, 1221W, 1221X, 1221Y, 1221Z, 1222A, 1222B, 1222C, 1222D, 1222E, 1222F, 1222G, 1222H, 1222I, 1222J, 1222K, 1222L, 1222M, 1222N, 1222O, 1222P, 1222Q, 1222R, 1222S, 1222T, 1222U, 1222V, 1222W, 1222X, 1222Y, 1222Z, 1223A, 1223B, 1223C, 1223D, 1223E, 1223F, 1223G, 1223H, 1223I, 1223J, 1223K, 1223L, 1223M, 1223N, 1223O, 1223P, 1223Q, 1223R, 1223S, 1223T, 1223U, 1223V, 1223W, 1223X, 1223Y, 1223Z, 1224A, 1224B, 1224C, 1224D, 1224E, 1224F, 1224G, 1224H, 1224I, 1224J, 1224K, 1224L, 1224M, 1224N, 1224O, 1224P, 1224Q, 1224R, 1224S, 1224T, 1224U, 1224V, 1224W, 1224X, 1224Y, 1224Z, 1225A, 1225B, 1225C, 1225D, 1225E, 1225F, 1225G, 1225H, 1225I, 1225J, 1225K, 1225L, 1225M, 1225N, 1225O, 1225P, 1225Q, 1225R, 1225S, 1225T, 1225U, 1225V, 1225W, 1225X, 1225Y, 1225Z, 1226A, 1226B, 1226C, 1226D, 1226E, 1226F, 1226G, 1226H, 1226I, 1226J, 1226K, 1226L, 1226M, 1226N, 1226O, 1226P, 1226Q, 1226R, 1226S, 1226T, 1226U, 1226V, 1226W, 1226X, 1226Y, 1226Z, 1227A, 1227B, 1227C, 1227D, 1227E, 1227F, 1227G, 1227H, 1227I, 1227J, 1227K, 1227L, 1227M, 1227N, 1227O, 1227P, 1227Q, 1227R, 1227S, 1227T, 1227U, 1227V, 1227W, 1227X, 1227Y, 1227Z, 1228A, 1228B, 1228C, 1228D, 1228E, 1228F, 1228G, 1228H, 1228I, 1228J, 1228K, 1228L, 1228M, 1228N, 1228O, 1228P, 1228Q, 1228R, 1228S, 1228T, 1228U, 1228V, 1228W, 1228X, 1228Y, 1228Z, 1229A, 1229B, 1229C, 1229D, 1229E, 1229F, 1229G, 1229H, 1229I, 1229J, 1229K, 1229L, 1229M, 1229N, 1229O, 1229P, 1229Q, 1229R, 1229S, 1229T, 1229U, 1229V, 1229W, 1229X, 1229Y, 1229Z, 1230A, 1230B, 1230C, 1230D, 1230E, 1230F, 1230G, 1230H, 1230I, 1230J, 1230K, 1230L, 1230M, 1230N, 1230O, 1230P, 1230Q, 1230R, 1230S, 1230T, 1230U, 1230V, 1230W, 1230X, 1230Y, 1230Z, 1231A, 1231B, 1231C, 1231D, 1231E, 1231F, 1231G, 1231H, 1231I, 1231J, 1231K, 1231L, 1231M, 1231N, 1231O, 1231P, 1231Q, 1231R, 1231S, 1231T, 1231U, 1231V, 1231W, 1231X, 1231Y, 1231Z, 1232A, 1232B, 1232C, 1232D, 1232E, 1232F, 1232G, 1232H, 1232I, 1232J, 1232K, 1232L, 1232M, 1232N, 1232O, 1232P, 1232Q, 1232R, 1232S, 1232T, 1232U, 1232V, 1232W, 1232X, 1232Y, 1232Z, 1233A, 1233B, 1233C, 1233D, 1233E, 1233F, 1233G, 1233H, 1233I, 1233J, 1233K, 1233L, 1233M, 1233N, 1	

1. ONLY 2 PACKAGED SOFTENER UNITS ARE TO BE IN "REGENERATION" AT A TIME

[illegible]

### REFERENCE DRAWINGS

DRAWN	MST. 06/09/86
CHECKED	WW. 31/10/86
DESIGN ENG'R.	INP. 13/09/86
DESIGN TEAM LEADER	
PROJECT ENG'R.	IHR. 22/10/86 OK 23/10/86
OPR'G DEPT.	

DRAWING TITLE

PIPING & INSTRUMENT DIAGRAM  
WATER SOFTENERS  
WATER TREATMENT PLANT  
CENTRAL GATHERING STATION  
DURI AREA-3

DRAWING TITLE

ITC NO.	21/0E-PMF/RP/2011 21/0E-PMF/2011
SCALE : NTS	
SIZE :	
DRAWING NO.	CP-603

DRAWN WITH CAD  
NEVER CHANGE THIS  
DRAWING BY HAND

CP-603GS-EF-005-18

