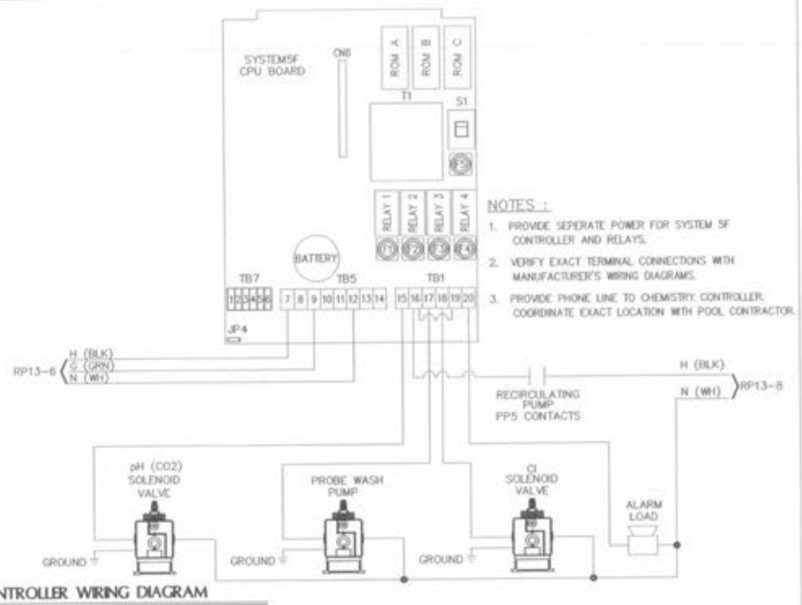


NOTES :

1. PROVIDE SEPERATE POWER FOR SYSTEM 5F CONTROLLER AND RELAYS.
2. VERIFY EXACT TERMINAL CONNECTIONS WITH MANUFACTURER'S WIRING DIAGRAMS.
3. PROVIDE PHONE LINE TO CHEMISTRY CONTROLLER. COORDINATE EXACT LOCATION WITH POOL CONTRACTOR.

17 SPE4.2 **CHEMISTRY CONTROLLER WIRING DIAGRAM**
NTS

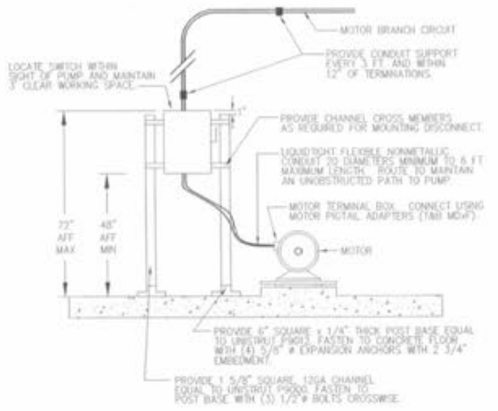
MOTOR CONTROL CENTER SCHEDULE

CIRCUIT	MARK	DESC.	CONNECTED HP	CONNECTED KW	STARTER FVNR	STARTER SIZE	FUSES AMPS	FUSES SIZE	WIRE SIZE #C	WIRE SIZE #G	CONDUIT	REMARKS
1	PP1	VORTEX	10	14	FVNR	1	30	3	20	3	10	3/4"	1,2,4
2	PP2	CURRENT RIVER	25	34	FVNR	2	60	3	45	3	6	1"	1,2,4
3	PP3	PLAY FEATURES	20	27	FVNR	2	60	3	40	3	8	3/4"	1,2,3
4	PP4	FLUME SLIDE	15	21	FVNR	2	30	3	30	3	10	3/4"	1,2,3
5	PP5	LEISURE RECIRC	20	27	FVNR	2	60	3	40	3	8	3/4"	1,2,3
6	PP7	BENCH BUBBLER	2	3.4	FVNR	0	30	3	4.5	3	12	3/4"	1,2,3
7	PP8	DRAIN DOWN PUMP	5	7.6	FVNR	0	30	3	10	3	12	3/4"	1,2,3
8	SPARE	SPARE	--	--	--	--	60	3	--	--	--	--	--

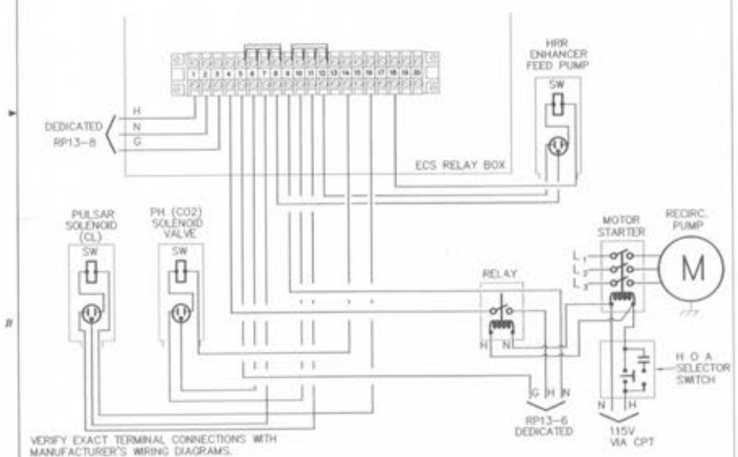
REMARKS

1. VERIFY EXACT EQUIPMENT SIZE WITH POOL CONTRACTOR PRIOR TO ORDERING EQUIPMENT.
2. PROVIDE GROUND CONDUCTORS PER NEC 250.
3. PROVIDE ALL STARTERS WITH START/STOP PUSHBUTTON PILOT DEVICES AND RED "ON" PILOT LIGHT ON FRONT COVER OF STARTER AND NEMA TYPE 1 FLUSH MOUNTED FLUSH HEAD START/STOP PUSHBUTTON PILOT DEVICES IN MANAGER'S OFFICE. INTERCONNECT CONTROL DEVICES SO THAT EACH PUMP CAN BE STARTED OR STOPPED FROM EITHER LOCATION.
4. PROVIDE START/STOP PUSHBUTTON PILOT DEVICES AS IN REMARK #3 EXCEPT THAT STOP BUTTON IN MANAGER'S OFFICE SHALL BE PROVIDED WITH A MUSHROOM HEAD.

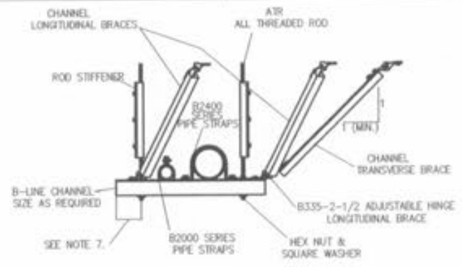
15 SPE4.2 **MOTOR CONTROL CENTER SCHEDULE**
NTS



6 SPE4.2 **TYPICAL MOTOR CONNECTION DETAIL**
NTS



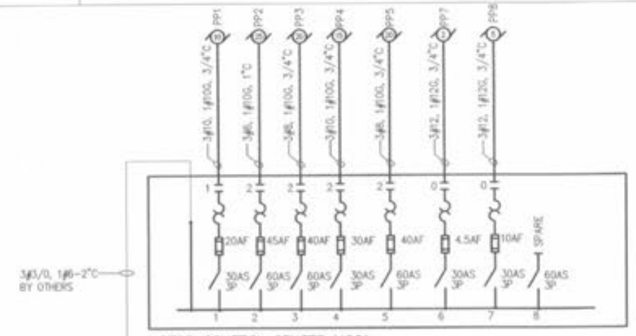
16 SPE4.2 **ECS WIRING DIAGRAM (ALTERNATE #2)**
NTS



NOTES:

1. B335-2 ADJUSTABLE HINGES FOR LONGITUDINAL BRACES MAY BE ATTACHED ON EITHER SIDE ADJACENT TO THE ALL THREAD ROD ITSELF.
2. B335-2 ADJUSTABLE HINGES FOR TRANSVERSE BRACES MAY BE ATTACHED TO THE ALL THREAD ROD.
3. TWO B335-2 ADJUSTABLE HINGES MAY BE ATTACHED TO THE STRUT TRAPEZE USING THE SAME BOLT OR ALL THREAD ROD.
4. IT IS NOT NECESSARY TO INSTALL BOTH TRANSVERSE BRACES AND LONGITUDINAL BRACES ON THE SAME TRAPEZE SUPPORT. EITHER SET OF BRACES MAY BE REMOVED TO FORM A LONGITUDINAL BRACE ONLY OR A TRANSVERSE BRACE ONLY IF DESIRED.
5. LONGITUDINAL BRACES, WHEN NEEDED, MUST BE INSTALLED AT BOTH ENDS OF TRAPEZE.
6. THE EQUIPMENT SHOWN ON THIS TRAPEZE SUPPORT IS GENERIC IN NATURE. ANY NUMBER OF PIPES, CONDUITS, DUCTWORK OR CABLE TRAY MAY BE SUPPORTED FOLLOWING THE SYSTEM WEIGHT AND SUPPORT SPANS LISTED BY THE MANUFACTURER (B-LINE SRS-00).
7. DETERMINE LENGTH OF TRAPEZE, MAKING SURE SUFFICIENT LENGTH IS ADDED TO ATTACH THE ALL THREAD ROD AND BRACING ATTACHMENTS.

9 SPE4.2 **TRAPEZE TRANSVERSE AND LONGITUDINAL BRACING**
NTS



MOTOR CONTROL CENTER MCC1
480V, 3ø, 3W, 600A BUS

NOTE:
EQUIPMENT SHOWN IN LIGHT LINE WEIGHT IS NOT IN DIVISION 13 SCOPE OF WORK. NEW EQUIPMENT TO BE PROVIDED BY THE DIVISION 13 ELC IS SHOWN IN HEAVY LINE WEIGHT.

8 SPE4.2 **ONE-LINE DIAGRAM**
NTS

GENERAL SEISMIC NOTES:

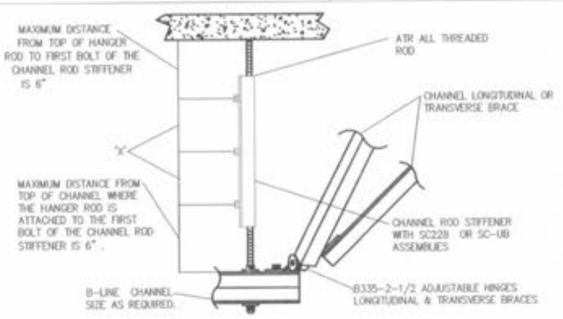
1. SEISMIC RESTRAINTS SHALL NOT BE REQUIRED FOR THE FOLLOWING INSTALLATIONS:

   CONDUIT LESS THAN 2-1/2" INSIDE DIAMETER, EXCEPT AS LISTED BELOW.

   CONDUIT LESS THAN 1-1/4" INSIDE DIAMETER IN BOILER AND MECHANICAL ROOMS.

   CONDUIT SUSPENDED BY INDIVIDUAL HANGERS 12" OR LESS IN LENGTH FROM THE TOP OF THE CONDUIT TO THE BOTTOM OF THE SUPPORT FOR THE HANGER.
2. REFER TO B-LINE SEISMIC RESTRAINTS HANDBOOK (SRS-00) FOR TABLES, CHARTS AND DATA FOR TRAPEZE BRACING (TABLE 2B PAGES 99-100), STRUCTURAL ATTACHMENTS (PAGES 26 AND 40), HANGER ROD ATTACHMENTS AND OTHER APPROVED COMPONENTS.
3. PROVIDE SEISMIC BRACING TO COMPLY WITH BOCA STANDARDS USING PEAK VELOCITY (Av) 0.11, PEAK ACCELERATION (Aa) 0.10, SEISMIC HAZARD EXPOSURE GROUP II AND PERFORMANCE CATEGORY C.

3 SPE4.2 **SEISMIC RESTRAINT REQUIREMENTS**
NTS



ROD STIFFENERS REQUIRED ONLY ON HANGER RODS THAT HAVE SEISMIC BRACING ATTACHED TO THE HANGER OR TRAPEZE.

2 SPE4.2 **ALL THREAD ROD DETAILS**
NTS

TABLE 5

ATR SIZE	ALLOWABLE LOAD LBS.	(KN)
3/8"-16	610	(2.71)
1/2"-13	1130	(5.02)
5/8"-11	1810	(8.05)
3/4"-10	2000	(8.89)
7/8"-9	2000	(8.89)

TABLE 7
ROD STIFFENER CHART

ATR SIZE	"X" MAX SPACING BETWEEN SC-228 OR SC-UB IN.
3/8"-16	13"
1/2"-13	19"
5/8"-11	23"
3/4"-10	28"
7/8"-9	33"

NOTE: MINIMUM OF (2)-SC228 OR SC-UB ARE REQUIRED PER ROD.

TABLE 6

ATR SIZE	MAX. ROD LENGTH WITHOUT ROD STIFFENER IN.	(MM)
3/8"-16	19"	(482.6)
1/2"-13	25"	(635.0)
5/8"-11	31"	(787.4)
3/4"-10	37"	(939.8)
7/8"-9	43"	(1092.2)

NOTE: IF ROD STIFFENER IS REQUIRED SEE TABLE 7

B-LINE CHANNEL BRACES

CHANNEL TYPE	MAXIMUM STRUCTURE CONNECTION TYPE	MAXIMUM BRACE LENGTH	(M)	CHANNEL HEIGHT	(MM)	CHANNEL WIDTH	(MM)	MATERIAL THICKNESS	(MM)
B54	IV	4'-10"	1.5	13/16"	21	1 5/8"	41	14 GA.	1.9
B52	IV	4'-8"	1.4	13/16"	21	1 5/8"	41	12 GA.	2.6
B42	V	5'-10"	1.8	1"	25	1 5/8"	41	12 GA.	2.6
B32	V	8'-0"	2.4	1 3/8"	35	1 5/8"	41	12 GA.	2.6
B24	IV	9'-7"	2.9	1 5/8"	41	1 5/8"	41	14 GA.	1.9
B22	V	9'-5"	2.7	1 5/8"	41	1 5/8"	41	12 GA.	2.6
B22A	V	10'-10"	3.3	3 1/4"	83	1 5/8"	41	12 GA.	2.6
B11	IV	11'-7"	3.5	3 1/4"	83	1 5/8"	41	12 GA.	2.6

NOTE: DO NOT EXCEED THE MAXIMUM BRACE LENGTH OR MAXIMUM STRUCTURE CONNECTION TYPE FOR THE CHANNELS LISTED.

1 SPE4.2 **CHANNEL BRACES**
NTS

JACOBS

501 North Broadway Saint Louis, Missouri 63102-2133

COUNSILMAN/HUNSAKER & ASSOC.

Revision

Date	By	Description
12/9/02		ISSUED FOR BID

STATE OF MISSOURI JEFFREY A. HUNSAKER NUMBER E-2001018755 12/12/02 PROFESSIONAL ENGINEER

RENAUD SPIRIT CENTER

For the City of O'Fallon - Missouri

Key Plan

Scales

Jacobs Project No.: F0W43600

Drawing Title
ELECTRICAL DETAIL SHEET

Date: DECEMBER 9, 2002

Designed By: JH
Drawn By: STO
Checked By: JH

Drawing No.: SPE4.2