

City and Borough of Juneau

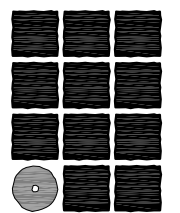
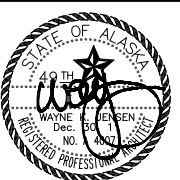
DIMOND PARK AQUATIC CENTER

WHIRLPOOL MECHANICAL

AND ELECTRICAL SYSTEMS

CBJ Contract Number E12-073

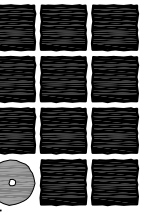
ARCHITECT JENSEN YORBA LOTT, INC <small>522 WEST 10TH STREET JUNEAU, ALASKA 99801 (907) 586-1070 FAX (907) 586-3959</small>	MECHANICAL ENGINEER MURRAY & ASSOCIATES, P.C. <small>P.O. BOX 21081 JUNEAU, AK 99802 (907) 780-6151 FAX (907) 780-6182</small>	ELECTRICAL ENGINEER HAIGHT & ASSOCIATES, INC. <small>526 MAIN STREET JUNEAU, ALASKA 99801 (907) 586-9788 FAX (907) 586-5774</small>	POOL CONSULTANT RICHARD C. SCOTT AIA <small>6311 TASAJILLO TRAIL AUSTIN, TEXAS 78739 (512) 809-7482 FAX (512) 697-8305</small>	
SHEET INDEX				
A001 COVER SHEET A101 SITE PLAN A201 FIRST FLOOR PLAN A601 REFLECTED CEILING PLAN	M1 SCHEDULES, SYMBOLS, DIAGRAMS M2 ENLARGE WHIRLPOOL AREA PLANS M3 DETAIL & CONTROLS M4 ENLARGED PLAN MECH ROOMS 304 & 306 & PIPING DIAGRAM	E100 LEGEND KEY PLANS E201 ENLARGED FLOOR PLANS DETAIL E301 SCHEDULES	PL403 WHIRLPOOL MECHANICAL ROOM, EQUIP LIST	



**Jensen
Yorba
Lott
Inc.**

522 West 10th Street
 Juneau, Alaska 99801
 phone 907-586-1070
 fax 907-586-3959
 jensenyorbalott.com
 FILE: 0725

A001



**Jensen
Yorba
Lott
Inc.**

522 West 10th Street
Juneau, Alaska 99801
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fax 907-586-3959
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CBJ Contract Number E12-073

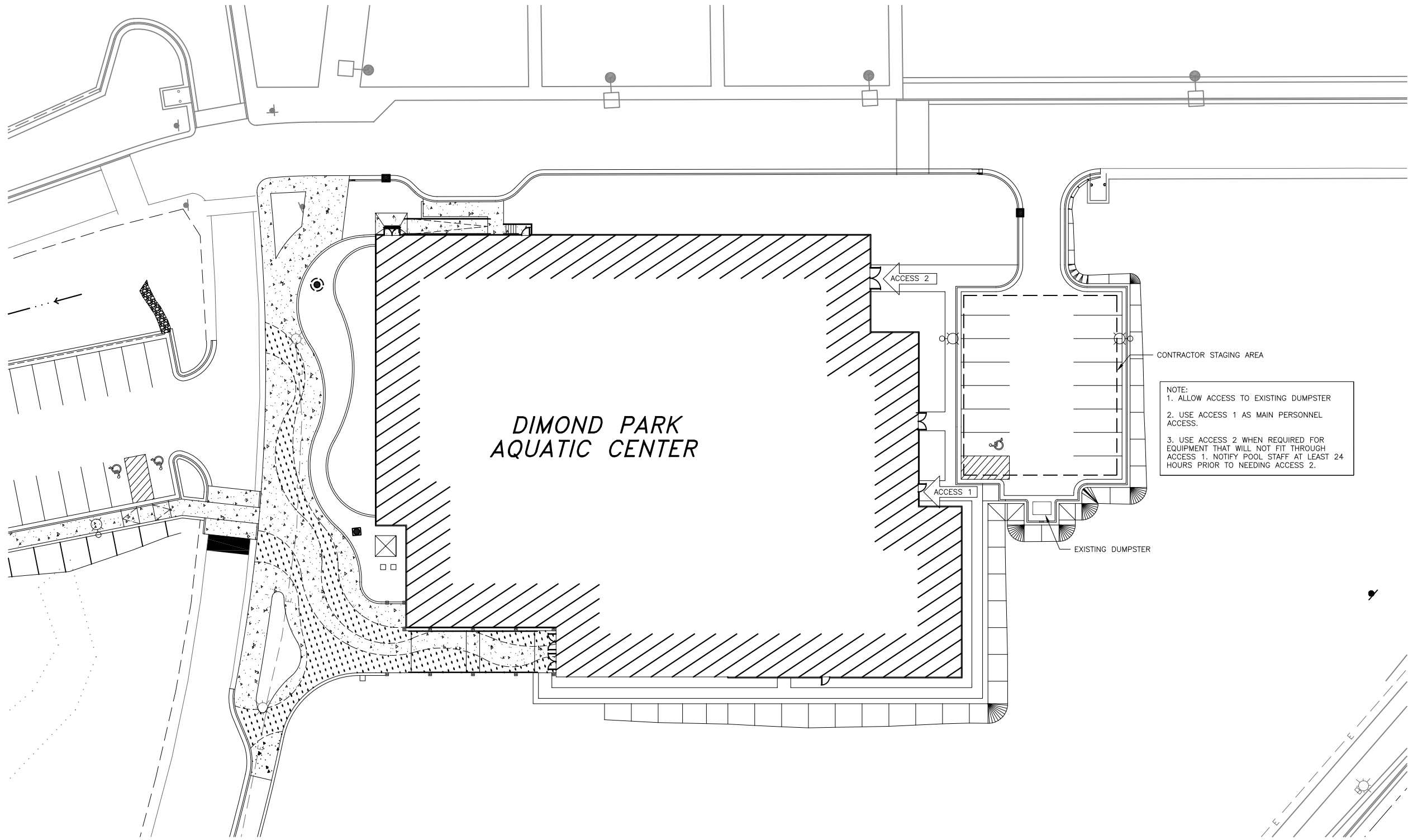
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SHEET TITLE
SITE PLAN

DATE: OCTOBER 2011
FILE: 0725

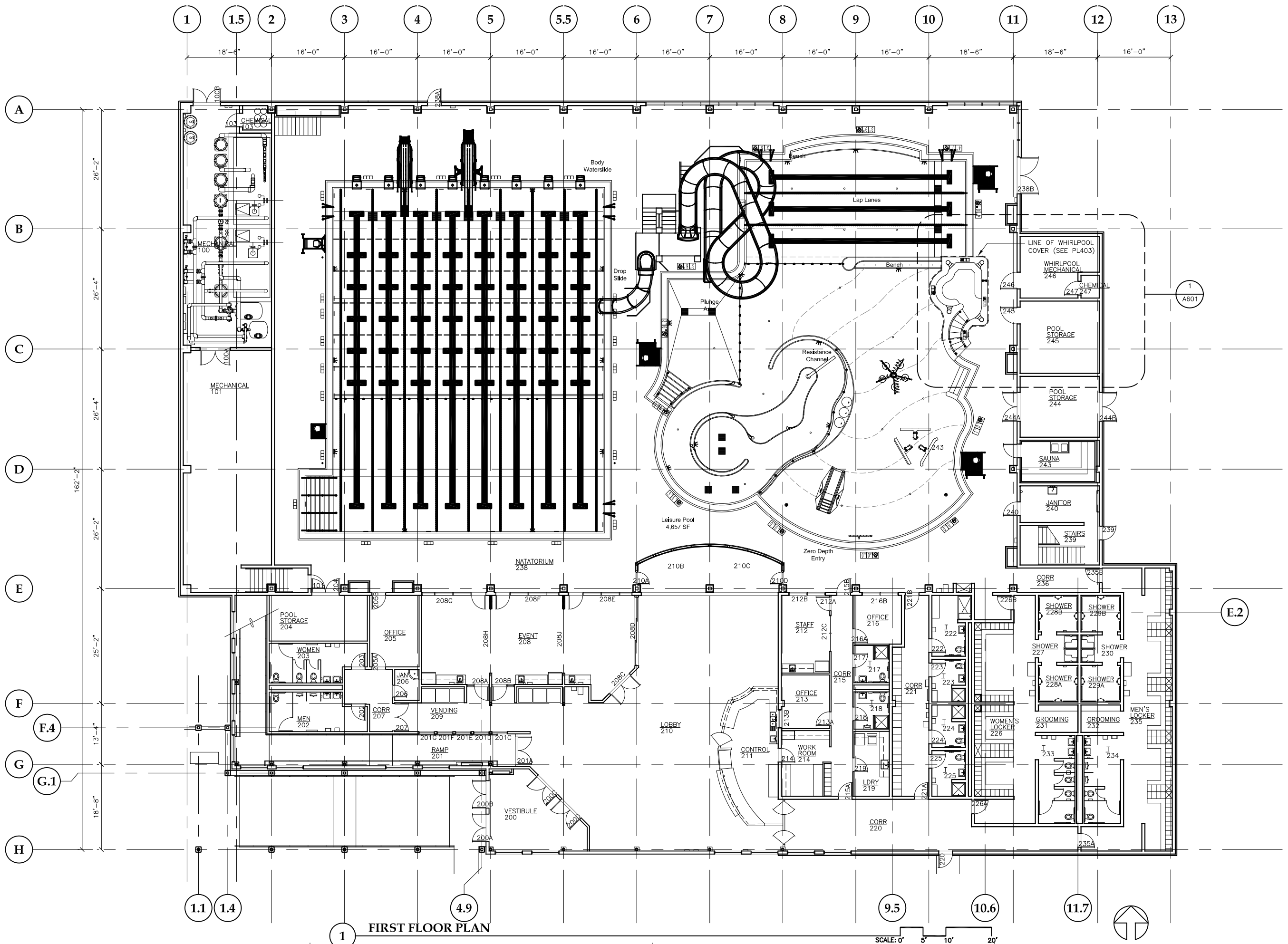
A101



1 SITE PLAN

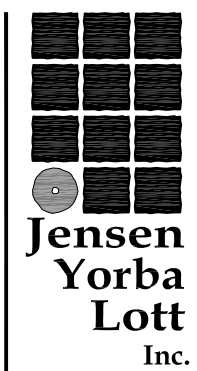
SCALE: 0" 10" 20" 40"





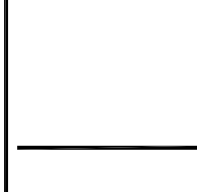
1 FIRST FLOOR PLAN

SCALE: 0' 5' 10' 20'



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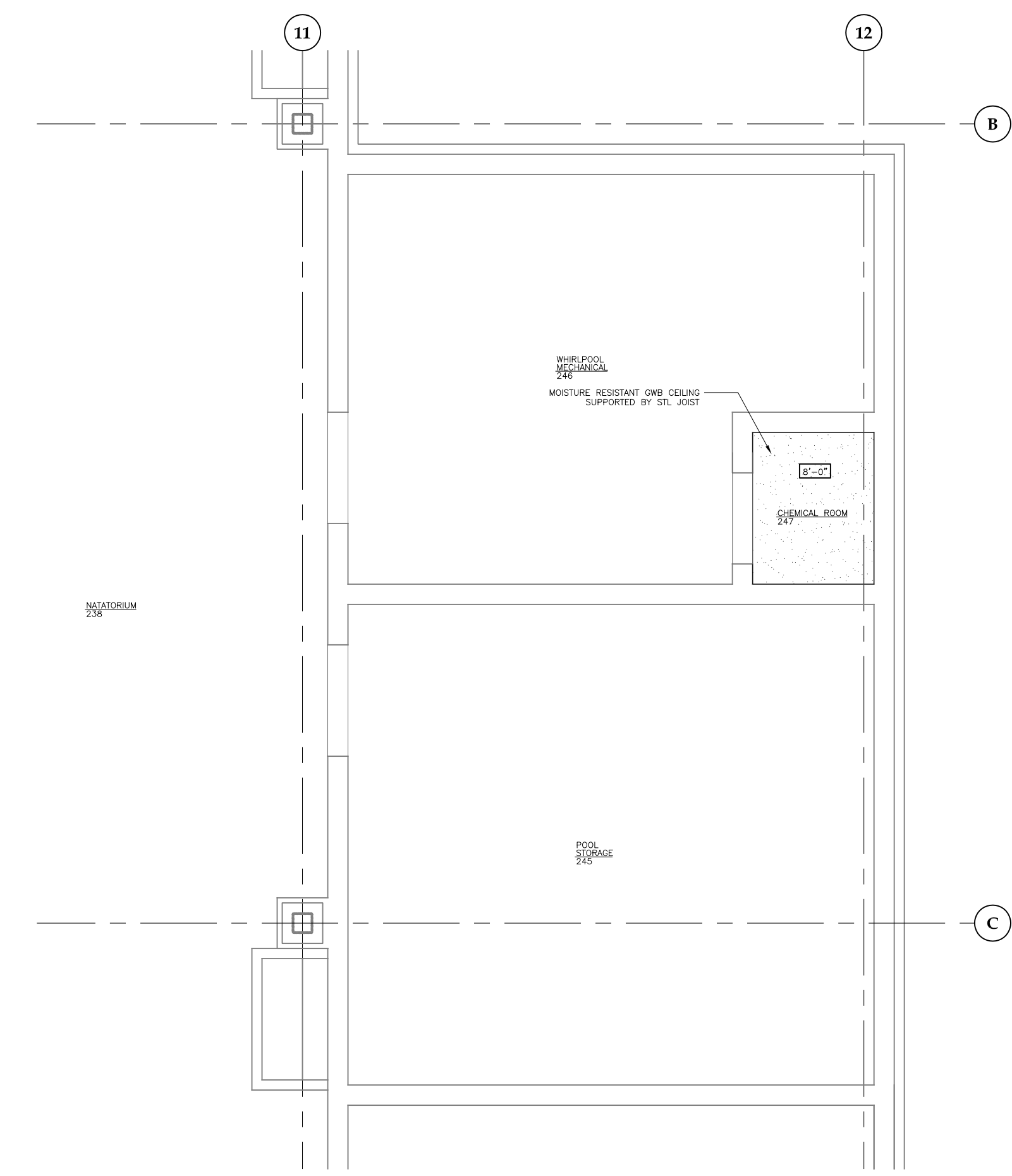
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DIMOND PARK AQUATIC CENTER
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CBJ Contract Number E12-073

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SHEET TITLE
**FIRST FLOOR
 PLAN**

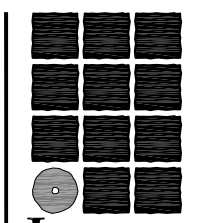
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A201



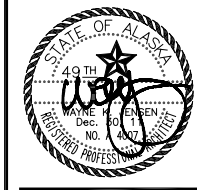
1 REFLECTED CEILING PLAN

SCALE: 0 1' 2' 4'



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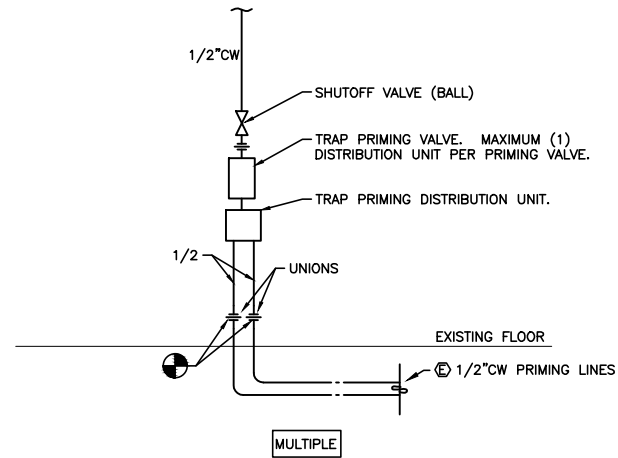
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**REFLECTED
 CEILING PLAN**

DATE: OCTOBER 2011
 FILE: 0725

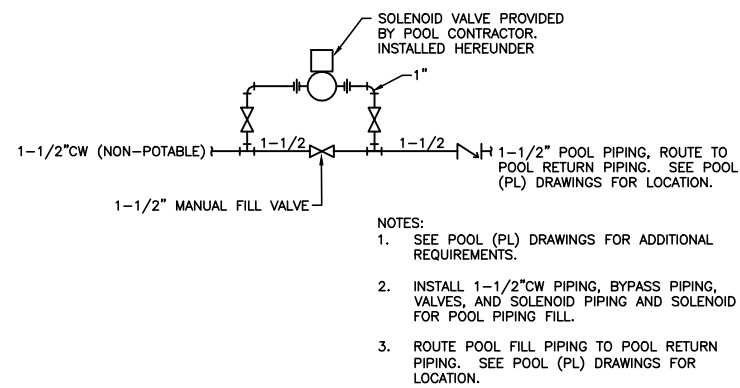
A601

MECHANICAL DRAWING INDEX

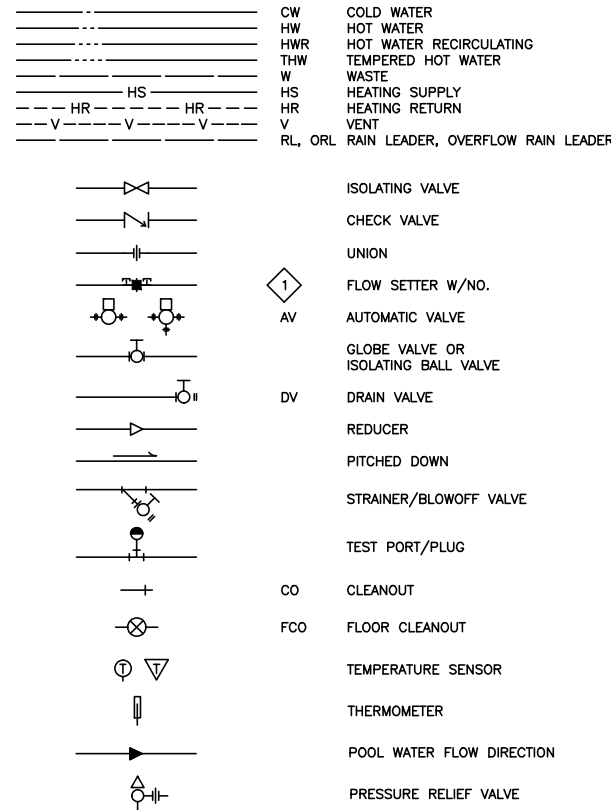
SHEET	TITLE
M100	SCHEDULES -- SYMBOLS -- DIAGRAMS
M200	ENLARGED WHIRLPOOL AREA PLANS
M300	DETAILS & CONTROLS
M400	ENLARGED PLAN MECH RMS 304 & 306 & PIPING DIAGRAM



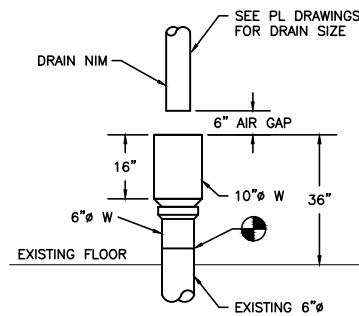
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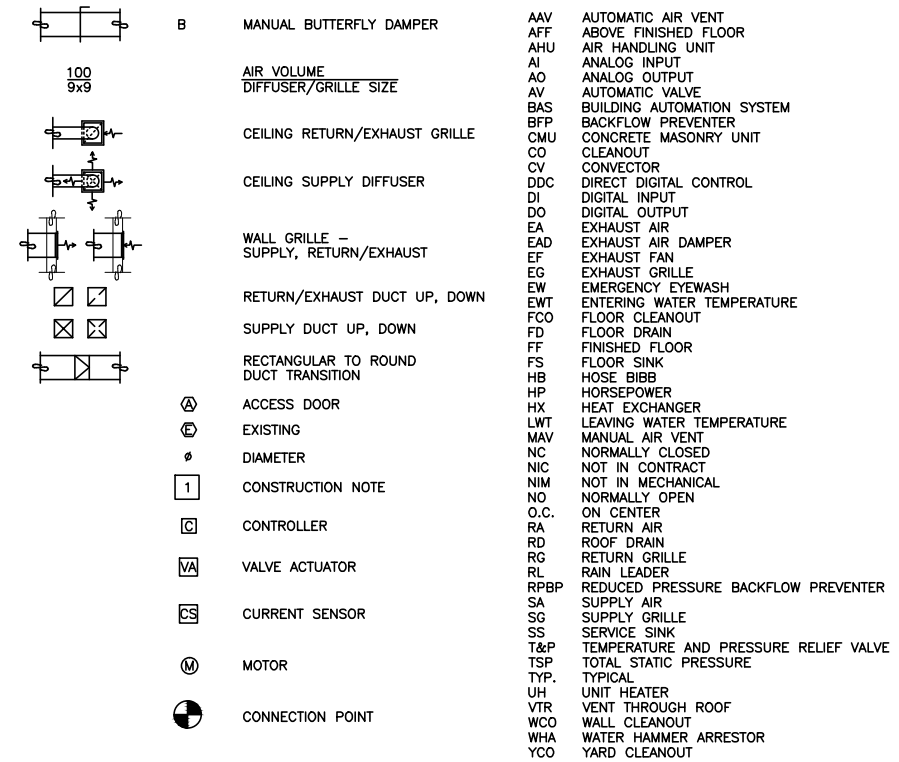
2 POOL FILL DIAGRAM-WHIRLPOOL
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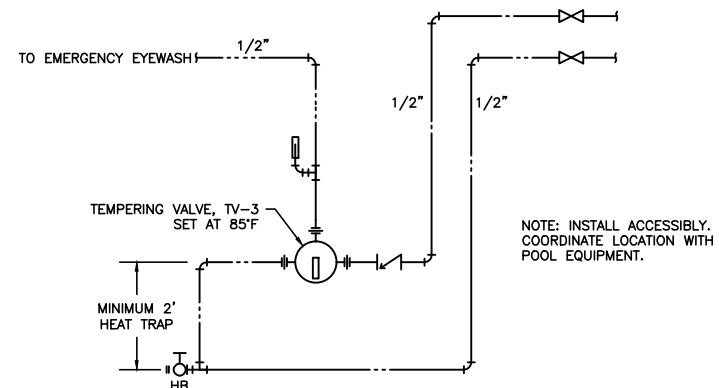
3 WHIRLPOOL DRAIN PIPING DIAGRAM
NO SCALE



SYMBOLS



4 EMERGENCY EYEWASH TV PIPING DIAGRAM
NO SCALE



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CONSULTING
ENGINEERS



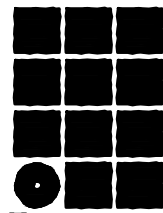
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CBJ Contract Number E12-073

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SHEET TITLE
SCHEDULES,
SYMBOLS,
DIAGRAMS
DATE: DECEMBER, 2011
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M100



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522 West 10th Street
Juneau, Alaska 99801
phone 907-586-1070
fax 907-586-3959
jensenyorbalo.com

MURRAY &
ASSOCIATES P.C.
CONSULTING
ENGINEERS

P.O. BOX 21081
JUNEAU, AK 99802
MURRAYPC.COM
TEL: 907 780-6151 FAX: 907 780-6182



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SHEET TITLE
ENLARGED
WHIRLPOOL
AREA PLANS

DATE: DECEMBER, 2011
FILE: 0725

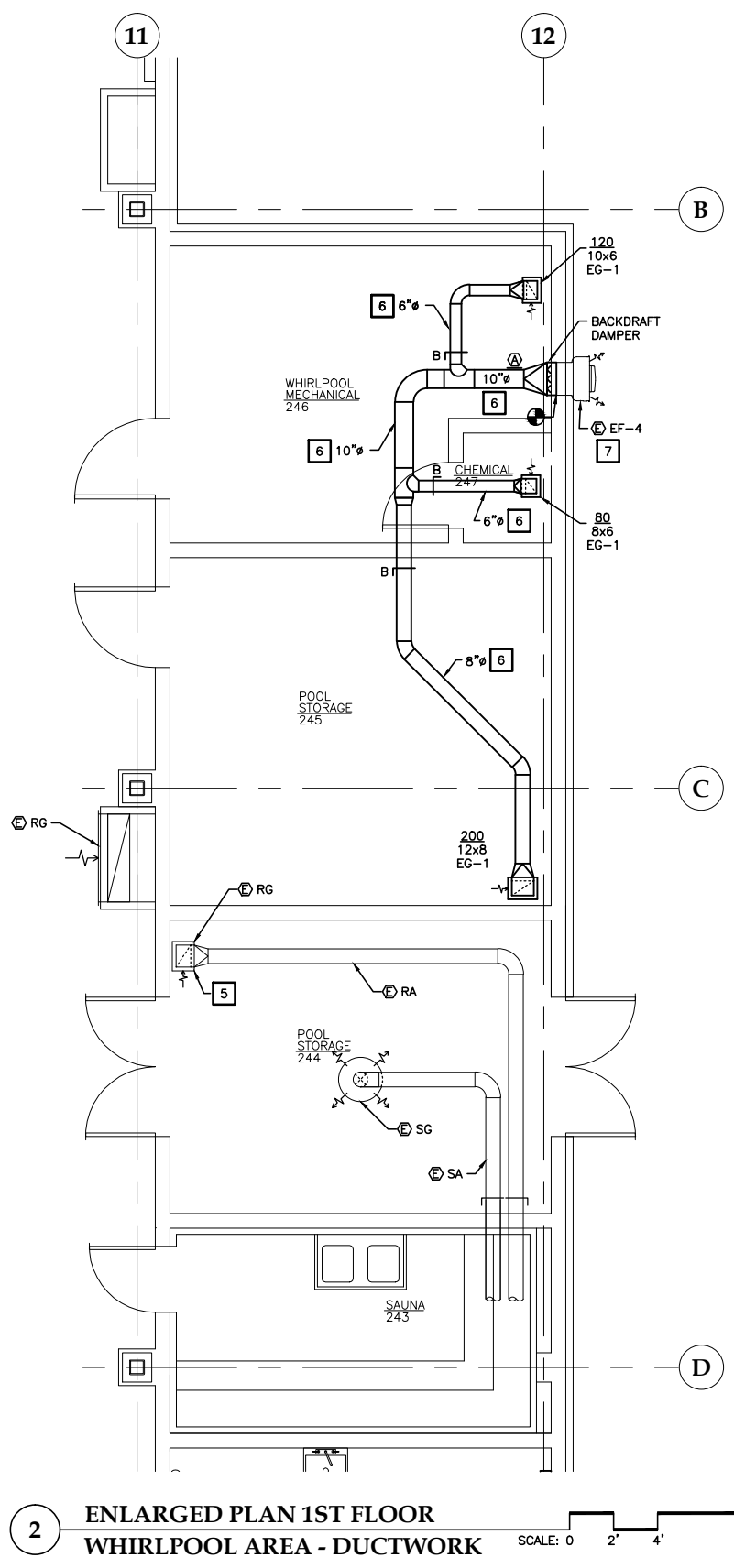
M200

SHEET NOTES:

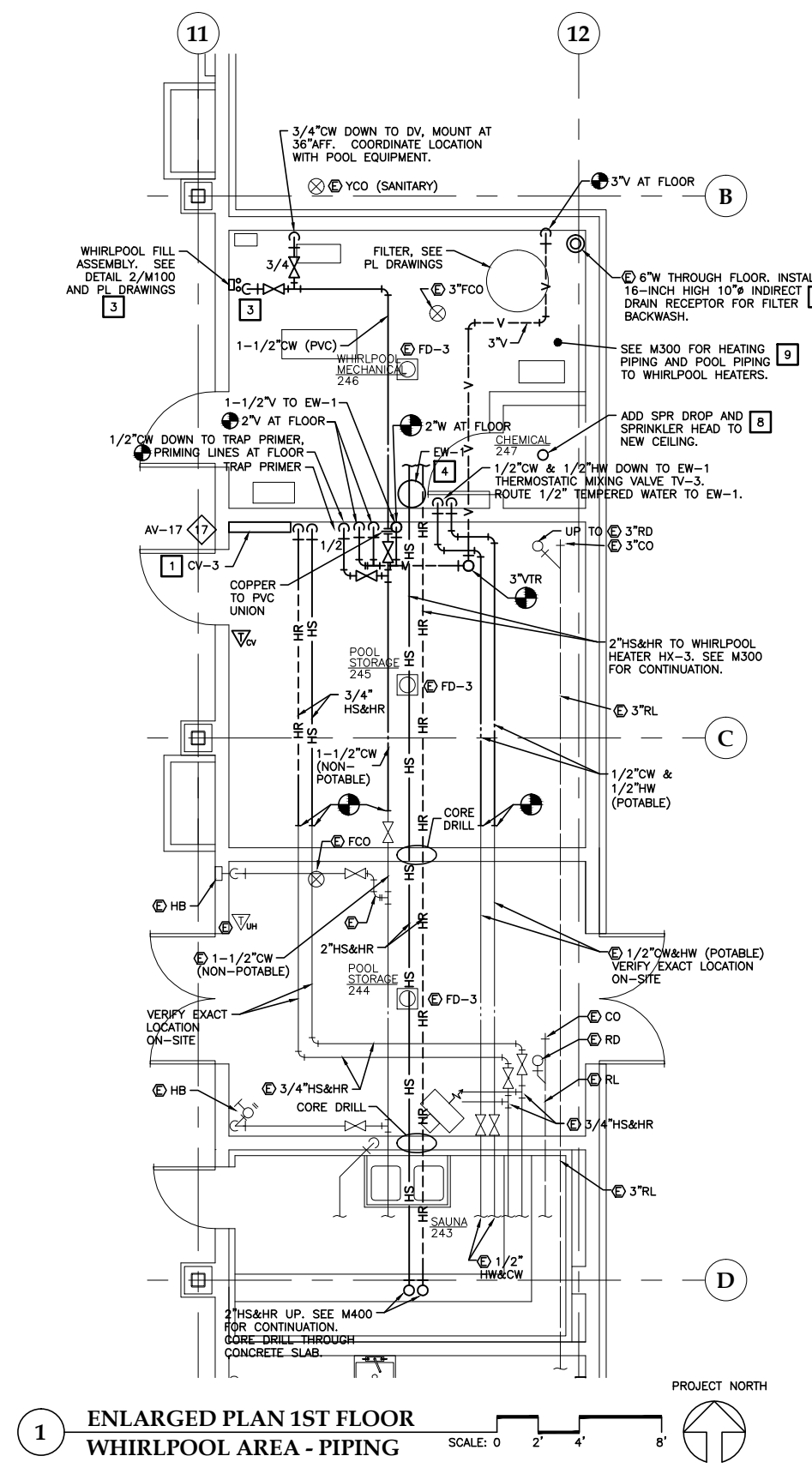
- SEE POOL (PL) DRAWINGS FOR CONNECTION LOCATIONS AND FOR REQUIREMENTS REGARDING INSTALLATION OF WHIRLPOOL FILL, BYPASS, AND SOLENOID VALVE INSTALLATION.
- CORE DRILL WHERE REQUIRED.
- SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

CONSTRUCTION NOTES:

- INSTALL AV, FLOWSETTER, VALVES, AND AIR VENTS INSIDE CONVECTOR CABINET. FEED 1/2"HS&HR BRANCH PIPING TO EACH CV. ENTIRE CV CABINET AND BACKPLATE PAINTED WITH EPOXY PAINT PRIOR TO INSTALLATION. ADJUST FLOW RATES TO GPM SHOWN IN SCHEDULE.
- TOP OF INDIRECT RISER SHALL BE INSTALLED 36" ABOVE FLOOR. SECURE PIPING IN CORNER TO WALL. PROVIDE 6" AIR GAP BETWEEN BACKWASH DRAIN AND INDIRECT DRAIN RISER. CONNECT TO EXISTING 6"W AT FLOOR. SEE DETAIL 3 ON SHEET M100.
- WHIRLPOOL FILL. INSTALL SOLENOID VALVE, 1-1/2 INCH BYPASS, AND VALVING. SOLENOID VALVE PROVIDED BY POOL CONTRACTOR. ROUTE 1-1/2 INCH POOL FILL PIPING TO POOL RETURN PIPING. SEE DETAIL 2/M100. SEE POOL DRAWINGS (PL) FOR SIZE, LOCATION, & INSTALLATION REQUIREMENTS.
- INSTALL EW-1 EMERGENCY EYEWASH. EW-1 SHALL BE WALL MOUNT TYPE WITH STAINLESS STEEL BOWL, SIMILAR TO HAWS 7360BT. THERMOSTATIC MIXING VALVE SHALL BE SIMILAR TO HAWS 9201EF. INSTALL SHUTOFF VALVES ON CW & HW SUPPLY AND PIPE MOUNTED THERMOMETER ON THE OUTLET. CONNECT 2"W FROM EW-1 TO EXISTING 2"W AT FLOOR IN POOL STORAGE 245. CORE DRILL THROUGH CMU WALL FOR WASTE PIPING.
- CHANGE POOL STORAGE 244 EA VOLUME FROM 240 CFM TO 190 CFM.
- COAT DUCTWORK WITH URETHANE CHEMICAL RESISTIVE COATING.
- TEST AND BALANCE EXISTING EF-4 FAN UNIT. ADJUST EXHAUST GRILLES TO VOLUMES SHOWN.
- PROVIDE PENDENT SPRINKLER HEAD IN NEW CEILING OF CHEM. 247. CONNECT DROP TO EXISTING 1"SPR.
- SEE M300 FOR ENLARGED PLAN DETAILING HEATING PIPING AND POOL PIPING TO ELECTRIC HEATER AND PLATE TYPE HEAT EXCHANGER.
- ADJUST FLOWSETTERS TO GPM SHOWN IN SCHEDULE.



2 ENLARGED PLAN 1ST FLOOR WHIRLPOOL AREA - DUCTWORK SCALE: 0 2' 4' 8' PROJECT NORTH



1 ENLARGED PLAN 1ST FLOOR WHIRLPOOL AREA - PIPING SCALE: 0 2' 4' 8' PROJECT NORTH

AUTOMATIC VALVE AND FLOWSETTER SCHEDULE 10

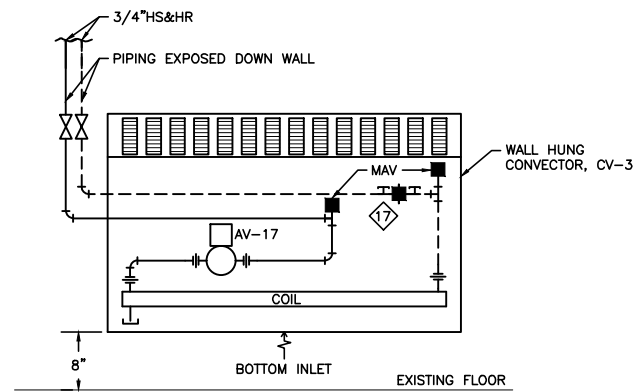
NUMBER	UNIT SERVED	AREA SERVED	LOCATION	DESIGN GPM	FLOW SETTER SIZE (INCHES)	AUTOMATIC VALVE PRESSURE DROP (PSI)	AUTOMATIC VALVE TYPE	AUTOMATIC VALVE OPERATION	CONTROL TYPE	NORMAL POSITION
17	CV-3	245 POOL STORAGE	245 POOL STORAGE	1.5	1/2	1-2 PSI	2-WAY	ON/OFF	DDC	NO
18	HX-3	WHIRLPOOL HEATING	246 WHIRLPOOL MECHANICAL	36	1-1/2	1-2 PSI	2-WAY	MODULATING	DDC	NO
19	HEAT BYPASS	HEATING	246 WHIRLPOOL MECHANICAL	1.5	1/2	-	-	-	-	-
POOL 1	POOL WATER	HEATING	246 WHIRLPOOL MECHANICAL	40	2	-	-	-	-	-

CONVECTOR SCHEDULE

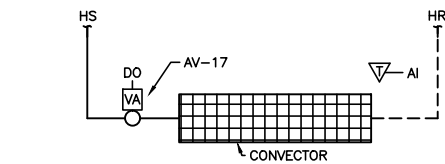
EQUIPMENT	DESIGN MANUFACTURER	MODEL	CONTROLS/OPTIONS
CONVECTOR, CV-3	RITTLING	TYPE SL	6.6 MBH @ 180°F AVE. WATER TEMP., 20' Δ T. WALL HUNG, SLOPING TOP. 36"L x 26"H x 6" DEEP. PRIME COAT FOR FIELD PAINTING.

EQUIPMENT SCHEDULE

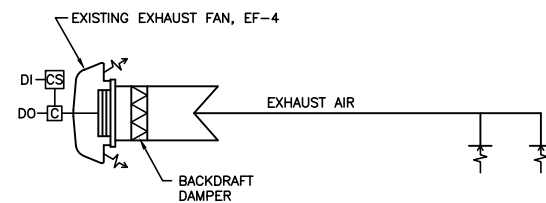
EQUIPMENT	DESIGN MANUFACTURER	MODEL	FEATURES
HEAT EXCHANGER, HX-3	APV	SR2 M10	PLATE AND FRAME TYPE HEAT EXCHANGER. TITANIUM PLATES.



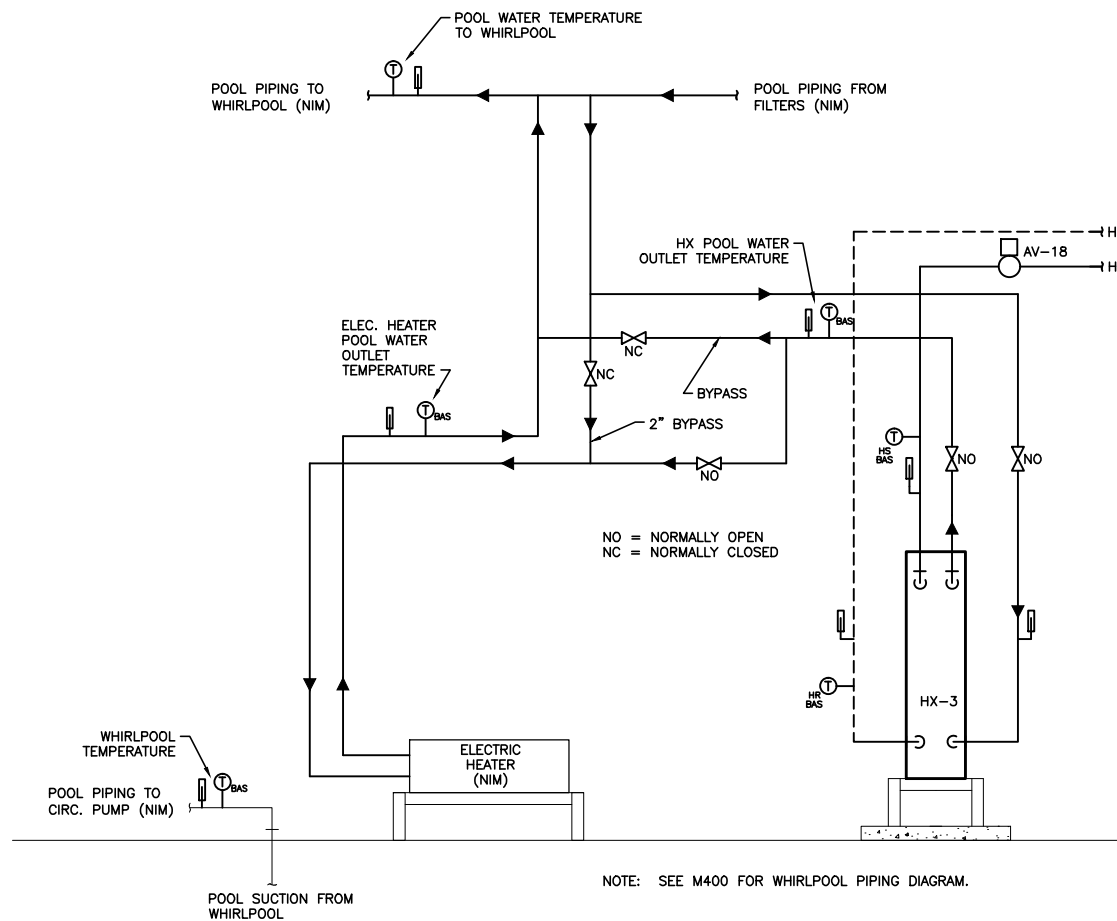
1 CONVECTOR DETAIL
NO SCALE



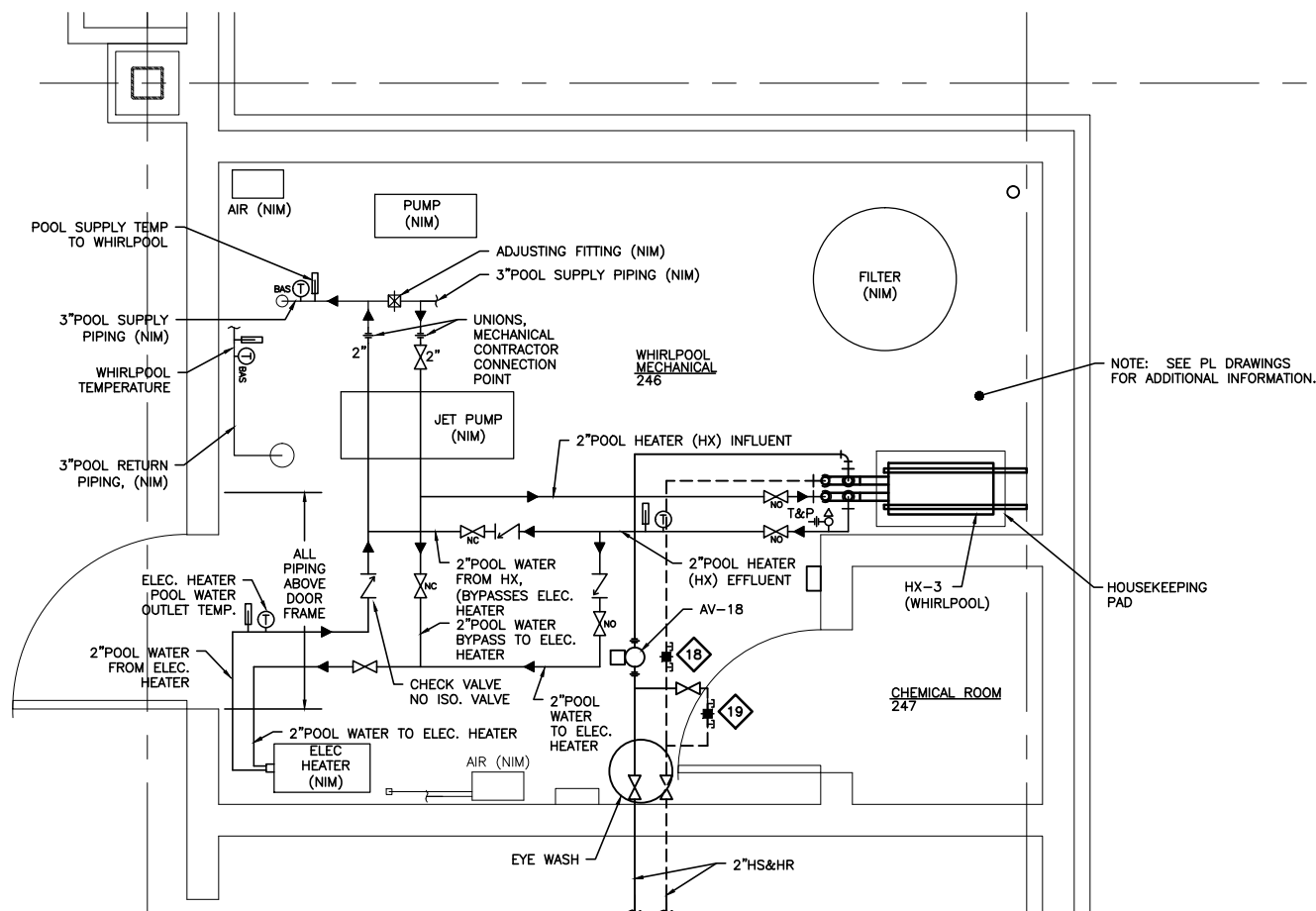
2 CV CONTROL DIAGRAM
NO SCALE



3 CONTROL SCHEMATIC FOR EXISTING EF-4
NO SCALE



5 CONTROL SCHEMATIC FOR HEAT EXCHANGER, HX-3
NO SCALE



4 WHIRLPOOL HEATING PLAN

SCALE: 0 1' 2' 4'

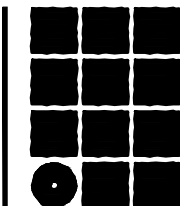


AUTOMATIC CONTROLS SEQUENCE OF OPERATIONS

1. EXHAUST FAN (EF-4): MAGNETIC STARTER WITH A HAND-OFF-AUTO SWITCH ON THE COVER. IN THE AUTO POSITION EXHAUST FAN TO OPERATE WHENEVER IN SCHEDULED OCCUPIED MODE. IN THE HAND POSITION, THE FAN OPERATES. ALARM IS TO BE SENT TO THE BAS FOR CONFIRMATION WHEN FAN DOES NOT OPERATE WHEN COMMANDED ON. CURRENT SENSOR IS ACCEPTABLE FOR STATUS INDICATION. EF-4 (WHIRLPOOL MECHANICAL 246): CHEMICAL EXHAUST FAN SHALL OPERATE CONTINUOUSLY. NO CHANGEABLE SCHEDULE.
2. CONVECTOR (CV): CONVECTOR 2-WAY NORMALLY OPEN CONTROL VALVE (DDC TYPE) SHALL OPEN ON CALL FOR HEATING FROM LOW VOLTAGE DDC THERMOSTAT INSTALLED ON WALL WHERE SHOWN. THERMOSTAT SHALL BE SET AT AN ADJUSTABLE 65F.
3. WHIRLPOOL HEATING (HX-3): HEAT EXCHANGER 2-WAY NORMALLY CLOSED CONTROL VALVE (DDC TYPE) AV-18 SHALL MODULATE OPEN ON CALL FOR HEATING. IMMERSION SENSOR IN WHIRLPOOL WATER RETURN PIPING (INITIALLY SET AT 102F) SHALL CONTROL 2-WAY NORMALLY CLOSED AUTOMATIC VALVE OPEN TO MAINTAIN WHIRLPOOL WATER SETPOINT. SETPOINT ADJUSTABLE ON DDC SYSTEM AND SOFTWARE GRAPHICS. HEAT EXCHANGER TO ONLY PROVIDE HEATING OF WHIRLPOOL WATER WHEN HEATING SUPPLY WATER TEMPERATURE IS GREATER THAN THE WHIRLPOOL WATER RETURN TEMPERATURE. IF THE HEATING WATER TEMPERATURE DROPS BELOW 102F FOR MORE THAN 5 MINUTES, THEN THE 2-WAY MODULATING VALVE SHALL CLOSE AND ALLOW THE ELECTRIC BOOSTER HEATER TO PROVIDE ALL HEATING OF THE WHIRLPOOL

CONTROLS NOTES:

1. AUTOMATIC CONTROLS WORK FOR CONVECTOR AND EF-4 FAN SYSTEMS SHALL BE DESIGNED AND INSTALLED BY SIEMENS AND INTEGRATED INTO BAS SYSTEM SPECIFIED AND INSTALLED FOR THE DIMOND PARK AQUATIC CENTER PROJECT (CJL CONTRACT NUMBER E09-193).
2. THE NOTES, DIAGRAMS, AND POINTS SHOWN HERE ARE SCHEMATIC ONLY. REFER TO SEQUENCE OF OPERATIONS, SPECIFICATION SECTIONS 15710, 15762, AND 15810, AND ALL CONTRACT DRAWINGS FOR COMPLETE REQUIREMENTS AND CONFIGURATION OF THE SYSTEMS. COORDINATE WITH ALL OTHER DISCIPLINES TO ACHIEVE RESULTS AS SHOWN AND INTENDED HEREUNDER IN THE DOCUMENTS. GENERAL NOTES APPLY TO ALL CONTROLS DRAWINGS HEREUNDER.
3. SEE FLOOR PLANS, AND PIPING DIAGRAMS FOR RESPECTIVE ROOM THERMOSTAT SENSOR LOCATIONS. SEE PLANS FOR OTHER CONTROL EQUIPMENT LOCATIONS. COORDINATE WITH DIVISION 15, 16, AND POOL DRAWINGS/SPECS FOR EQUIPMENT INTERFACE REQUIREMENTS, INCLUDING PIPING TEES AND WELLS, SENSOR LOCATIONS, AND INTERCONNECTIONS.
4. ALL SYSTEMS ABBREVIATIONS, FUNCTIONS, AND EQUIPMENT NAMES SHALL BE LISTED IN ALL SUBMITTAL DATA, O&M DATA, AND AS-BUILTS, AS SHOWN HEREUNDER.
5. SEE DIVISION 16 FOR ADDITIONAL REQUIREMENTS CONCERNING RACEWAYS AND BOXES.
6. PROVIDE BAS IMMERSION SENSORS FOR WHIRLPOOL WATER RETURN TEMPERATURE (FROM WHIRLPOOL), WHIRLPOOL WATER SUPPLY TEMPERATURE (TO WHIRLPOOL), ELECTRIC HEATER WHIRLPOOL WATER OUTLET TEMPERATURE, AND WHIRLPOOL WATER HX OUTLET TEMPERATURE. PROVIDE BAS HEATING WATER IMMERSION SENSORS FOR HX HEATING SUPPLY INLET AND HS HEATING RETURN OUTLET TEMPERATURES. SHOW TEMPERATURES ON GRAPHICS. SEE M400 FOR SENSOR LOCATIONS.

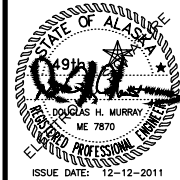


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fax 907-586-3959
jensenyorbalo.com

MURRAY & ASSOCIATES P.C.
CONSULTING ENGINEERS

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SHEET TITLE
DETAILS & CONTROLS

DATE: DECEMBER, 2011
FILE: 0725

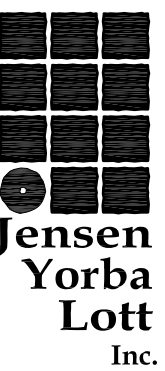
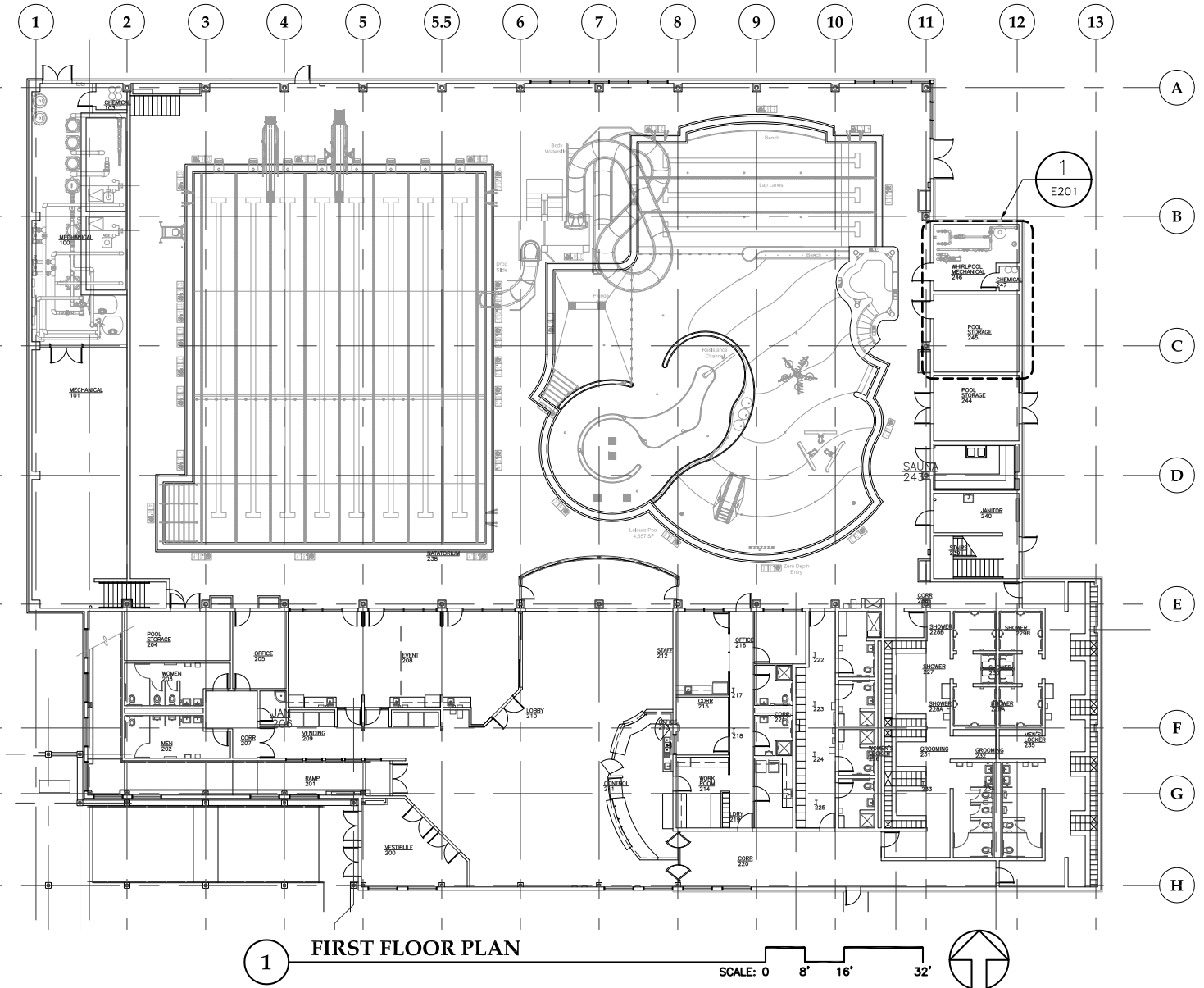
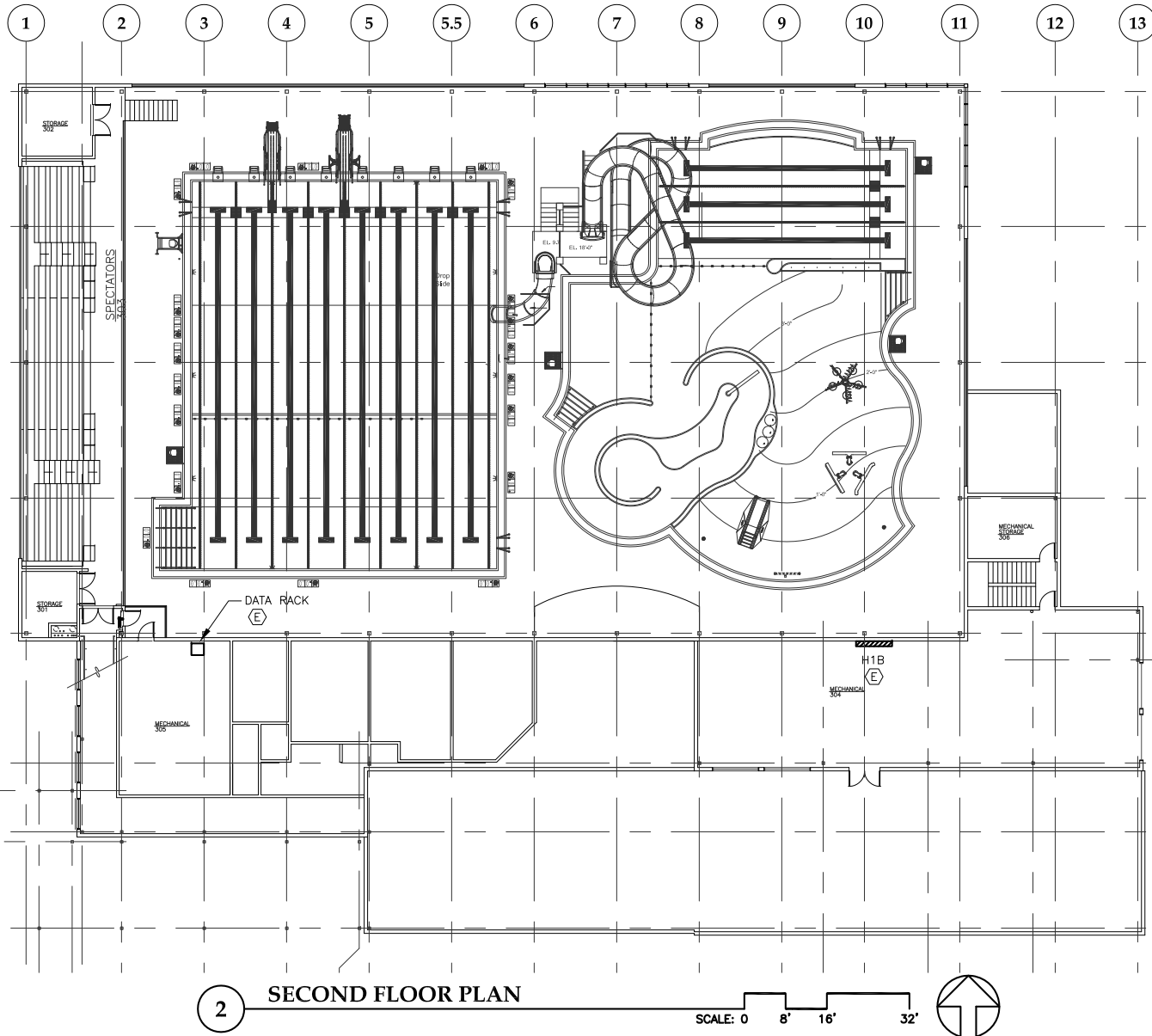
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LEGEND

ABBREVIATIONS:		POWER:	
AFF	ABOVE FINISHED FLOOR		DUPLEX RECEPTACLE, 18" AFF UON.
GFI	GROUND FAULT INTERRUPTED		JUNCTION BOX
M.B.	MOUNTING BOARD		TRANSFORMER
UON	UNLESS OTHERWISE NOTED		PANELBOARD
WP	WEATHERPROOF		MOTOR CONNECTION
XFMR	TRANSFORMER		COMBINATION STARTER/DISCONNECT
	EXISTING		DISCONNECT
	NEW		PUSHBUTTON
SWITCHING:			FIRE ALARM HORN/STROBE, 80" AFF TO BASE
S	SINGLE POLE SWITCH, 48" AFF		DATA OUTLET
	MANUAL STARTER	GENERAL:	
LIGHTING:			HOME RUN
	SURFACE OR SUSPENDED FLUORESCENT LUMINAIRE		CONDUIT: 1/2" UON.
	FLUORESCENT LUMINAIRE, EQUIP w/ SINGLE EMERGENCY BALLAST WHERE SHOWN. BODINE B50 F-48 OR APPROVED EQUAL.		UNGROUND CONDUCTORS
	WALL MOUNTED LUMINAIRE		NEUTRAL: #10 WITH DOT #12 OTHERWISE
			GROUND CONDUCTOR
			CONDUCTORS NOT SHOWN WHERE ONLY #12 NEUTRAL AND UNGROUNDED CONDUCTOR ARE REQUIRED
			FLEXIBLE CONDUIT

NOTE: ALL DEVICE HEIGHTS TO CENTER, UON.



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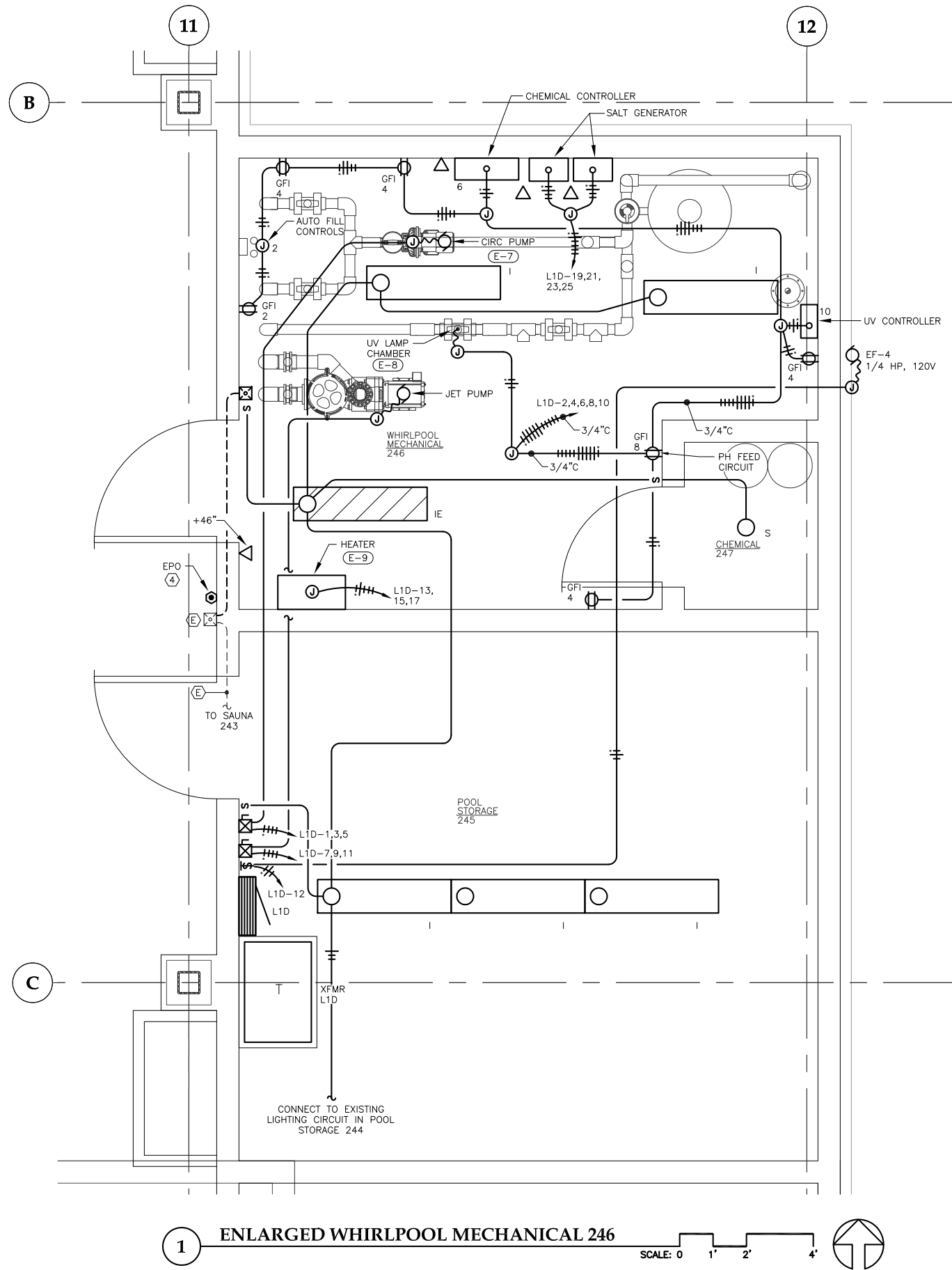
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SIGNATURE
Dec 30, 2011

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WHIRLPOOL MECHANICAL
AND ELECTRICAL SYSTEMS
CBJ Contract Number E12-073

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SHEET TITLE
LEGEND
KEY PLANS
DATE: DECEMBER 2011
FILE: 0725

E100

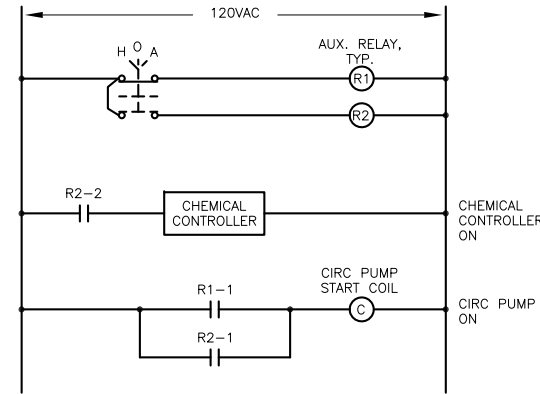
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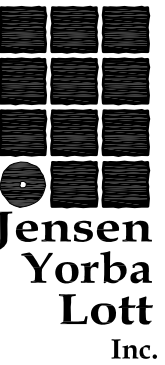
1 ENLARGED WHIRLPOOL MECHANICAL 246
SCALE: 0 1' 2' 4'

NOTES:

1. BUCK-BOOST TRANSFORMER FOR SALT GENERATOR PROVIDED BY POOL CONTRACTOR. UNIT RATED 240V.
2. INTERLOCK CHEMICAL CONTROLLER WITH CIRCULATION PUMP, SIMILAR TO DETAIL 2.
3. CONNECT WHIRLPOOL HEATER CONTROLS TO THE HEATER FLOW SWITCH. HEATER SHALL DE-ENERGIZE WITH LOW FLOW.
4. PROVIDE MUSHROOM HEAD EMERGENCY-POWER-OFF BUTTON. INTERFACE TO JET PUMP AND CIRC PUMP THROUGH AUXILIARY RELAY.
5. ROUTE DATA CABLES TO EXISTING PATCH PANEL IN EXISTING DATA RACK. SEE DETAIL 2, E100.
6. TYPE I LUMINAIRE: 4' CEILING OR CHAIN HUNG LINEAR FLUORESCENT PARABOLIC INDUSTRIAL, WITH ELECTRONIC BALLAST, FULL END CAPS, WIREGUARD, (2) 28W T8 (3500K, CRI 82) LAMPS. LITHONIA LIGHTING # PV 228 277 GEB10IS PCEP WGAFPV.
7. TYPE IE LUMINAIRE: SAME AS TYPE I, WITH EMERGENCY BATTERY PACK. LITHONIA LIGHTING # PV 228 277 GEB10IS EL PCEP WGAFPV.
8. TYPE S LUMINAIRE: CEILING MOUNT COMPACT FLUORESCENT, GASKETED, PRISMATIC POLYCARBONATE LENS, ELECTRONIC BALLAST, (1) 13W QUAD (3500K, CRI 82) LAMP. FAIL-SAFE # FB-P-13Q-277-EBT1.



2 CIRCULATION PUMP/CHEMICAL CONTROLLER CONTROL DIAGRAM
SCALE: NONE



522 West 10th Street
Juneau, Alaska 99801
phone 907-586-1070
fax 907-586-3959
jensenyorbalott.com



ELECTRONIC
SIGNATURE
Dec 30, 2011

City and Borough of Juneau
DIMOND PARK AQUATIC CENTER
WHIRLPOOL MECHANICAL
AND ELECTRICAL SYSTEMS
CBJ Contract Number E12-073

REVISIONS

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SHEET TITLE
ENLARGED FLOOR PLANS DETAIL

DATE: DECEMBER 2011
FILE: 0725

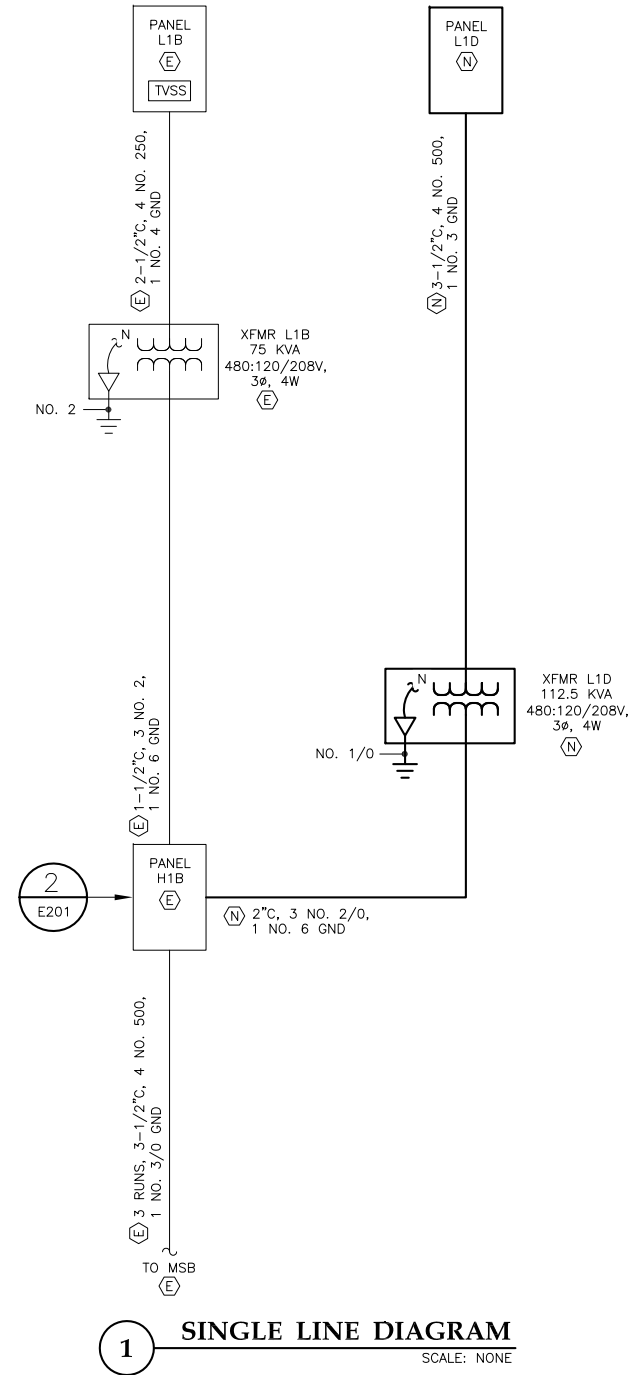
E201

SIEMENS TYPE P4

PANEL H1B (EXISTING)		SIZE	VOLTS/PHASE			MAIN	LOCATION	MOUNT		
		1200 AMPS	480Y/277V, 3 PH			MLO	MECHANICAL 304	SURFACE		
CKT NO	DESCRIPTION	BREAKER AMP/POLE	KVA			BREAKER AMP/POLE	DESCRIPTION	CKT NO		
			CKT	AØ	BØ	CØ				
1	AHP-1	15/31	1.3	61.3			60.0	300/3	EHW-1	2
3	----	---	1.3		61.3		60.0	---	----	4
5	----	---	1.3			61.3	60.0	---	----	6
7	AHU-2 SF	20/3	3.0	63.0			60.0	300/3	EHW-2	8
9	----	---	3.0			63.0	60.0	---	----	10
11	----	---	3.0			63.0	60.0	---	----	12
13	AHU-2 RF	15/3	2.1	20.1			18.0	100/3	AHU-1 SF	14
15	----	---	2.1			20.1	18.0	---	----	16
17	----	---	2.1			20.1	18.0	---	----	18
19	SPACE	---	0.0	14.4			14.4	90/3	AHU-1 RF	20
21	SPACE	---	0.0		14.4		14.4	---	----	22
23	SPACE	---	0.0			14.4	14.4	---	----	24
25	SPACE	---	0.0	19.0			19.0	150/3	SUBFEED H1B SECTION 2	26
27	SPACE	---	0.0		17.1		17.1	---	----	28
29	SPACE	---	0.0			15.3	15.3	---	----	30
31	SPACE	---	0.0	26.8			26.8	110/3	XFMR L1B	32
33	SPACE	---	0.0		25.8		25.8	---	----	34
35	SPACE	---	0.0			28.1	28.1	---	----	36
37	SPACE	---	0.0	26.2			26.2	175/3	SUBFEED XFMR L1D	38
39	SPACE	---	0.0		25.1		25.1	---	----	40
41	SPACE	---	0.0			22.6	22.6	---	----	42
BALANCED CONNECTED LOAD: 682.4 KVA / 822.2 AMPS			230.8	226.8	224.8					
MAXIMUM CONNECTED LOAD: 682.4 KVA / 854.8 AMPS										

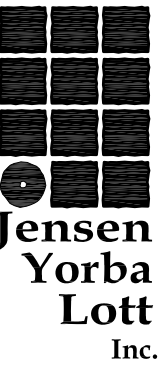
PANEL L1D		SIZE	VOLTS/PHASE			MAIN	LOCATION	MOUNT		
		400 AMPS	208Y/120V, 3 PH			400/3	STORAGE 245	SURFACE		
CKT NO	DESCRIPTION	BREAKER AMP/POLE	KVA			BREAKER AMP/POLE	DESCRIPTION	CKT NO		
			CKT	AØ	BØ	CØ				
1	CIRC PUMP	15/3	0.9	2.8			1.9	20/1	AUTO FILL CONTROLS	2
3	----	---	0.9		1.6		0.7	20/1	MECHANICAL 246	4
5	----	---	0.9			1.5	0.6	20/1	CHEMICAL CONTROLLER	6
7	JET PUMP	35/3	2.1	2.7			0.6	20/1	PH FEED CIRCUIT	8
9	----	---	2.1		3.3		1.2	20/1	UV CONTROLLER	10
11	----	---	2.1			2.8	0.7	15/1	EXHAUST FAN EF-4	12
13	HEATER	200/3	19.0	19.0			0.0	20/1	SPARE	14
15	----	---	19.0		19.0		0.0	20/1	SPARE	16
17	----	---	19.0			19.0	0.0	20/1	SPARE	18
19	SALT GENERATOR POWER SUPPLY	20/2	1.7	1.7			0.0	20/1	SPARE	20
21	----	---	1.7		1.7		0.0	20/1	SPARE	22
23	SALT GENERATOR POWER SUPPLY	20/2	1.7			1.7	0.0	20/1	SPARE	24
25	----	---	1.7	1.7			0.0	20/1	SPARE	26
27	SPACE	---	0.0		0.0		0.0	---	----	28
29	SPACE	---	0.0			0.0	0.0	---	----	30
31	SPACE	---	0.0	0.0			0.0	---	----	32
33	SPACE	---	0.0		0.0		0.0	---	----	34
35	SPACE	---	0.0			0.0	0.0	---	----	36
37	SPACE	---	0.0	0.0			0.0	---	----	38
39	SPACE	---	0.0		0.0		0.0	---	----	40
41	SPACE	---	0.0			0.0	0.0	---	----	42
BALANCED CONNECTED LOAD: 78.5 KVA / 218.1 AMPS			27.9	25.6	25.0					
MAXIMUM CONNECTED LOAD: 78.5 KVA / 232.5 AMPS										

Ⓝ CIRCUIT BREAKER



POOL EQUIPMENT SCHEDULE											
DESIGNATION			LOAD				CIRCUITING			CONTROL	
ITEM	DESCRIPTION	LOCATION	HP	KW	AMPS	VOLTS	PHASE	CONDUCTORS		DISCONNECT SWITCH	REMARKS
E-7	WHIRLPOOL CIRCULATION PUMP	WHIRLPOOL MECH. 246		2		208	3	1/2°C, 3 NO. 12, 1 NO. 12 GND	30/3		H-O-A
E-8	WHIRLPOOL JET PUMP	WHIRLPOOL MECH. 246		5		208	3	3/4°C, 3 NO. 8, 1 NO. 10 GND	60/3		
E-9	WHIRLPOOL HEATER	WHIRLPOOL MECH. 246		57		208	3	2°C, 3 NO. 3/0, 1 NO. 6 GND			

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522 West 10th Street
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fax 907-586-3959
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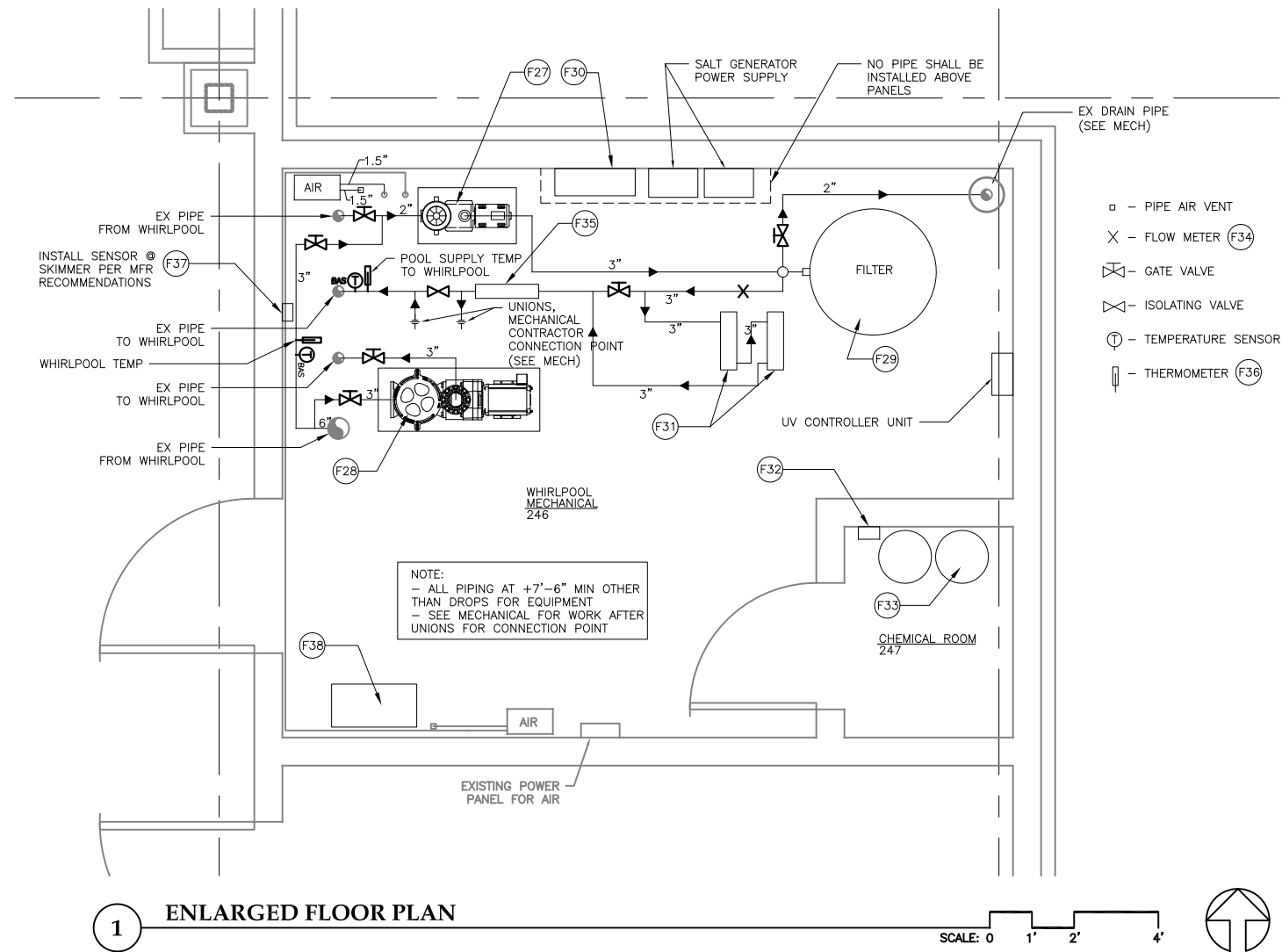
REVISIONS
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 SHEET TITLE
SCHEDULES
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 DATE: DECEMBER 2011
 FILE: 0725

E301

SCOPE OF WORK:
 1. PROVIDE ALL ABOVE GRADE PIPING AND EQUIPMENT FOR A FULLY FUNCTIONING SYSTEM.
 2. CONNECT TO EXISTING UNDERGROUND PIPING.
 3. COORDINATE ALL MECH & ELEC CONNECTIONS WITH ELECTRICAL CONTRACTOR.
 4. PROVIDE ALL ISOLATION VALVES TO ISOLATE EQUIPMENT FROM SYSTEM.

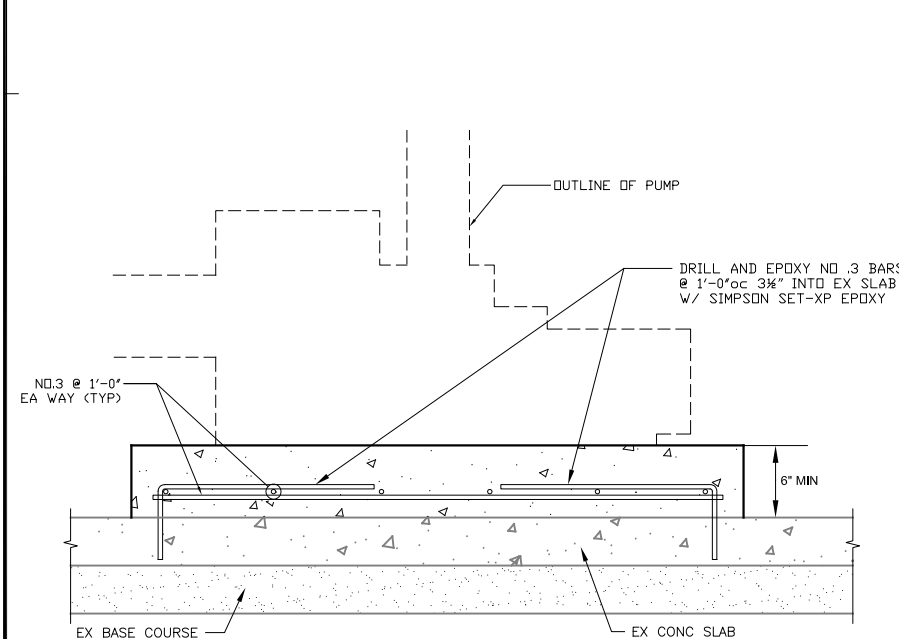
WHIRLPOOL DESIGN DATA	
DESCRIPTION	QUANTITY
PERIMETER	50 LF
WATER SURFACE AREA	108 SF
POOL CAPACITY	8 BATHERS
WHIRLPOOL VOLUME	1614 GALLONS
TURNOVER RATES	15 MINUTES
AVERAGE POOL DEPTH	3'-0"
FLOW RATE	108 GPM
FILTER AREA	7.06 SF
FILTER RATE PER SQ. FT. OF FILTER AREA	15.3 GPM/SF
REQUIRED SEWER CAPACITY	GPM X FILTER AREA

WHIRLPOOL FILTRATION EQUIPMENT					
NO.	QTY.	MFG.	CAT. NO.	DETAIL	DESCRIPTION
F27	1	PENTAIR	WFK-8	3/PL403	CIRCULATION PUMP - 108 GPM @ 70 TDH, 2 HP, 208/230/460 V, 3 PHASE, 3450 RPM. PROVIDE WITH EXTRA STRAINER
F28	1	PENTAIR	EQK500	4/PL403	JET PUMP - 5 HP, 208/230/460 V, 3 PHASE, 3450 RPM. PROVIDE WITH EXTRA STRAINER
F29	1	PENTAIR	TR140C	N/A	FILTER - PRESSURE SAND FILTER, 7.06 SQ. FT. OF TOTAL FILTER AREA. 15.3 GPM/SQ. FT. FILTRATION RATE. PROVIDE SILICA SAND MEDIA.
F30	1	TMI SALT PURE CORP.	SCC	N/A	CHEMICAL CONTROLLER- SINGLE POOL CHEMICAL CONTROLLER. PROVIDE WITH FLOW SWITCH. PROVIDE WITH BUCK-BOOST TRANSFORMER AS REQUIRED.
F31	2	TMI SALT PURE CORP.	XMCG	N/A	CHLORINE FEEDER. PROVIDE WITH BUCK-BOOST TRANSFORMER AS REQUIRED. PROVIDE WITH ALL PIPING, FITTINGS, VALVES AND FLOW METER AS REQ BY MANUFACTURER.
F32	1	PENTAIR	CO2 30SCFH	N/A	CO2 REGULATOR. PROVIDE FULLY FUNCTIONAL SYSTEM AND CONNECTION TO CHEMICAL CONTROLLER AS REQ BY MFR.
F33	N/A	BY OWNER	N/A	N/A	CO2 TANK
F34	1	SIGNET	8550-1	N/A	FLOW METER - FOR 3" PIPE. VERIFY PIPE LENGTHS. PIPE, TANK, WALL MOUNT. PROVIDE WITH SPLASHPROOF REAR COVER. PROVIDE WITH MODEL 2551 MAGMETER FLOW SENSOR. COORDINATE INTERLOCK WITH VFD PROVIDED BY ELECTRICAL CONTRACTOR.
F35	1	DELTA UV	EM130 1KW	N/A	UV STERILIZER - COMPLETE UV STERILIZATION SYSTEM INCLUDING SYSTEM CONTROLLERS, LAMP CHAMBERS, LAMPS AND ALL PIPING AND VALVES REQUIRED. PROVIDE WITH STAINLESS STEEL CABINET. (SIEMENS MODEL BARRIER M525 IS CONSIDERED AN EQUAL)
F36	3	TRERICE	N/A	N/A	THERMOMETER - ADJUSTABLE ANGLE, 9" SCALE, 30 TO 130 DEGREES FAHRENHEIT RANGE. INSERTION LENGTH TO ACCOMMODATE PIPE SIZE.
F37	1	LEVOLOR	K-1100	N/A	AUTOFILL K-1100 UNIT. PROVIDE WITH SENSOR, SOLENOID VALVE AND ALL REQUIRED PIPING AND VALVES.
F38	1	COATES HEATER CO. INC.	32057PHS	N/A	SPA HEATER
F39	1	AQUATIC COMMERCIAL INDUSTRIES	VS/1/2"	N/A	VAPOR-SHIELD
F40	1	HOT TUB WORKS	N/A	N/A	CUSTOM SHAPE SPA COVER - TAPERED INSULATED, GALV STL BRACES, COVERED IN MARINE GRADE VINYL



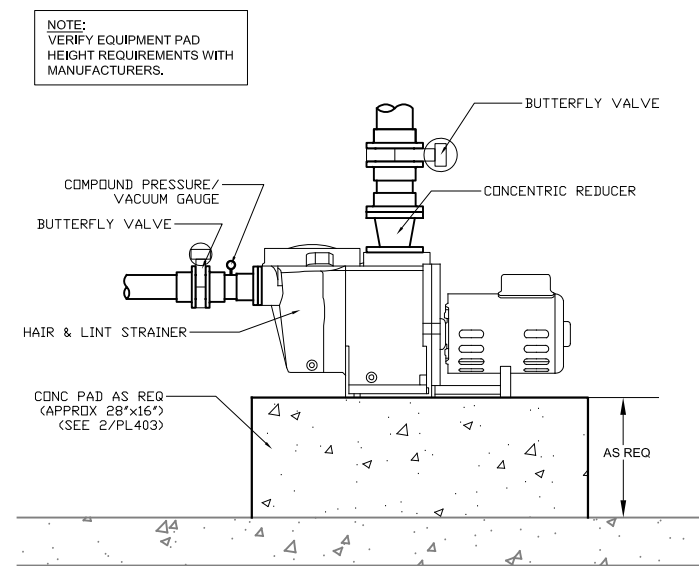
1 ENLARGED FLOOR PLAN

SCALE: 0 1' 2' 4'



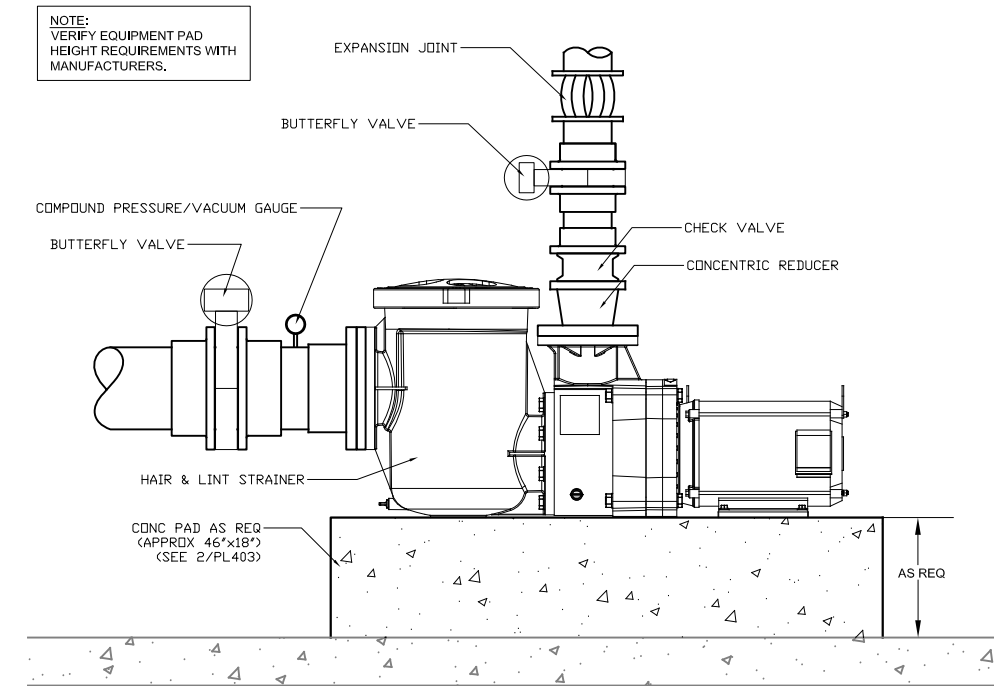
2 PUMP PAD DETAIL

SCALE: 0 6" 1' 2'



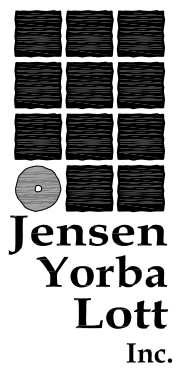
3 FILTRATION PUMP INSTALLATION DETAIL

SCALE: 0 6" 1' 2'



4 JET PUMP INSTALLATION DETAIL

SCALE: 0 6" 1' 2'



Jensen Yorba Lott Inc.
 522 West 10th Street
 Juneau, Alaska 99801
 phone 907-586-1070
 fax 907-586-3959
 jensenyorbaltott.com



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REVISIONS
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SHEET TITLE
WHIRLPOOL MECHANICAL RM & EQUIPMENT LIST
 DATE: OCTOBER 2011
 FILE: 0725

PL403