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GENERAL NOTES:

1. GENERAL CONDITIONS:

A. THE PLANS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS SHALL GOVERN THE WORK. THE PLANS AND SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS ARE INTENDED TO BE COMPLEMENTARY, TO DESCRIBE AND PROVIDE FOR A COMPLETE PROJECT.

B. BEFORE ENTERING INTO A CONTRACT FOR EXECUTION OF THE WORK, THE CONTRACTOR SHALL VERIFY ALL QUANTITIES, DIMENSIONS AND SHALL, UPON DISCOVERING ANY ERROR OR OMISSION OR DISCREPANCIES BETWEEN THE PLANS, SPECIFICATIONS AND ACTUAL CONDITIONS, IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER AND POOLS, SPAS AND WATER FEATURE ENGINEER. NO WORK SHALL BE DONE WHERE THERE IS A DISCREPANCY UNTIL APPROVAL HAS BEEN GIVEN BY THE OWNER AND THE WATER FEATURE ENGINEER.

C. THE CONTRACTOR SHALL PROVIDE NECESSARY SAFEGUARDS AND EXERCISE CAUTION AGAINST DAMAGE TO EXISTING SITE IMPROVEMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM THEIR OPERATIONS AND SHALL REPAIR OR REPLACE SUCH DAMAGE AT THEIR OWN EXPENSE.

D. THE CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE POOLS, SPAS AND WATER FEATURES AS DESCRIBED IN THE SCOPE OF WORK. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH PLANS, SPECIFICATIONS AND EXISTING CODES AND REGULATIONS.

E. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES TO AVOID CONFLICTS AND UNNECESSARY DELAYS.

F. CONTRACTOR SHALL COORDINATE ALL INGRESS/EGRESS POINTS, STAGING/STORAGE AREAS, STOCKPILING, ETC., WITH OWNER PRIOR TO CONSTRUCTION.

G. ALL INFORMATION PROVIDED HEREIN RELATING TO ARCHITECTURAL STRUCTURES HAS BEEN PROVIDED FOR REFERENCE ONLY. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR BUILDING INFORMATION. ALL DISCREPANCIES BETWEEN THESE PLANS AND ARCHITECTURAL PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND WATER FEATURE ENGINEER.

2. CODES/STANDARDS:

A. ALL WORK SHALL BE DONE IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES, ORDINANCES AND REGULATIONS.
B. ALL NATIONAL OR INTERNATIONAL CODES AS DEFINED BY THE PROJECT ARCHITECT.
C. NATIONAL SANITATION FOUNDATION NSF50 - EQUIPMENT FOR SWIMMING POOLS, SPAS, HOT TUBS AND OTHER RECREATIONAL WATER FACILITIES
D. VIRGINIA GRAEME BAKER ACT 2007
E. "WORLD WATERPARK ASSOCIATION CONSIDERATIONS FOR OPERATING SAFETY" - CURRENT EDITION
F. AMERICAN SOCIETY OF MECHANICAL ENGINEERS - ASME
G. AMERICAN SOCIETY OF TESTING AND MANUFACTURE - ASTM
H. AMERICAN NATIONAL STANDARDS INSTITUTE - ANSI
I. UNDERWRITERS LABORATORY INC.
J. MANUAL OF STEEL CONSTRUCTION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION
K. NATIONAL ELECTRIC CODE - CURRENT EDITION
L. MANUAL OF STANDARD PRACTICE, CONCRETE REINFORCING INSTITUTE.
M. "STRUCTURAL CONCRETE FOR BUILDINGS", PUBLICATION ACI 301 OF THE AMERICAN CONCRETE INSTITUTE AND PUBLICATIONS ACI 302 AND ACI 318.
N. AMERICAN CONCRETE INSTITUTE, ACI 506.2-95 "SPECIFICATION FOR SHOTCRETE" & ACI 506R-16 "GUIDE TO SHOTCRETE".
O. ASSOCIATION OF POOL & SPA PROFESSIONALS (APSP) - "STANDARDS FOR SPA, HOT TUBS, & POOLS".
P. INTERNATIONAL SWIMMING POOL & SPA CODE (ISPSC) - CURRENT EDITION.
Q. WORLD HEALTH ORGANIZATION (WHO) - "GUIDELINES FOR SAFE RECREATIONAL WATER ENVIRONMENTS, VOLUME 2 - SWIMMING POOLS & SIMILAR ENVIRONMENTS", 2006.
R. "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", PUBLICATION ACI 315-92 OF THE AMERICAN CONCRETE INSTITUTE.
S. "ASTM" REQUIREMENTS FOR ALL STEEL COMPONENTS OF THE AMERICAN SOCIETY OF TESTING MATERIALS.
T. "STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION"- ("GREENBOOK") - CURRENT EDITION.
U. OSHA CODE REGULATION (STANDARDS- 29CFR) .
V. LOCAL MUNICIPAL SAFETY CODES, ORDINANCES AND ORDERS.
W. ASTM A 312 - SPECIFICATION FOR SEAMLESS AND WELDED AUSTENITIC STAINLESS STEEL PIPE.
X. ASTM B 88 - SPECIFICATION FOR SEAMLESS COPPER WATER TUBE.
Y. ALL CONCRETE FOR WATER FEATURE BASINS SHALL CONFORM TO ACI STANDARDS FOR HYDRAULIC STRUCTURES, ACI 318.

3. PLAN INFORMATION:

A. WRITTEN DIMENSIONS SHALL PREVAIL OVER SCALED DIMENSIONS.
B. PIPING PLANS ARE SCHEMATIC UNLESS OTHERWISE NOTED AND SHALL NOT BE USED FOR STAKING THE WATER FEATURES.
C. ABBREVIATIONS:

A.F.F.	ABOVE FINISH FLOOR	FTN.	FOUNTAIN	O.C.	ON CENTER
A.F.S.	ABOVE FINISH SLAB	GA.	GAUGE	O.D.	OUTSIDE DIAMETER
A.P.	ACCESS PANEL	GAL.	GALLONS	O.W.S.	OPERATING WATER SURFACE
ARCH.	ARCHITECT	GALV.	GALVANIZED	PA	PLANTER AREA
AUTO	AUTOMATIC	GD	GRADE	PH	PHASE
A.V.	AIR VENT	G.F.I.	GROUND FAULT INTERRUPTER	PLCS	PLACES
&	AND	GPM	GALLONS PER MINUTE	PSI	POUNDS PER SQUARE INCH
BFV	BUTTERFLY VALVE	H.B.	HOSE BIBB	PVC	POLYVINYL CHLORIDE
BLDG	BUILDING	H.C.	HANDICAP CHAIR	R.B.	REDUCER BUSHING
BTU/HR	BRITISH THERMAL UNITS PER HOUR	HDPE	HIGH DENSITY POLYETHYLENE	REQ'D	REQUIRED
BV	BALL VALVE	H.E.	HEAT EXCHANGER	SCH	SCHEDULE
C.F.M.	CUBIC FEET PER MINUTE	HORIZ	HORIZONTAL	S.D.	STORM DRAIN
C.I.	CAST IRON	HP	HORSEPOWER	SHT	SHEET
C.J.	CONSTRUCTION JOINT	HR.	HOUR	SL	SLOPE
CNTL	CONTROL	HT	HEIGHT	SPEC	SPECIFICATION
C.O.	CLEAN OUT	Hz	HERTZ	SQ.	SQUARE
CONT.	CONTINUOUS	I.E.	INVERT ELEVATION	SQ.FT.	SQUARE FOOT
CPVC	CHLORINATED POLYVINYL CHLORIDE	IN	INCH	SQ.IN.	SQUARE INCH
CU.FT.	CUBIC FEET	INV.	INVERT	S.S.	STAINLESS STEEL
CU.IN.	CUBIC INCH	kPa	KILOPASCAL	STRUCT.	STRUCTURAL
CU.M.	CUBIC METER	kW	KILOWATT	S.W.S.	STATIC WATER SURFACE
CV	CHECK VALVE	L	LITERS	TDH	TOTAL DYNAMIC HEAD
DET.	DETAIL	LBS	POUNDS	T.O.C.	TOP OF CURB/COPING/CONCRETE
DIA	DIAMETER	LDPE	LOW DENSITY POLYETHYLENE	T.O.S.	TOP OF STAIR
DN.	DOWN	L.F.	LINEAR FEET	T.O.W.	TOP OF WALL
DWG	DRAWING	LPS	LITER PER SECOND	TYP.	TYPICAL
E.J.	EXPANSION JOINT	M	METER	U.O.N.	UNLESS OTHERWISE NOTED
EL.ELEV.	ELEVATION	M3/HR	CUBIC METER PER HOUR	V	VOLTS
ELEC.	ELECTRIC OR ELECTRICAL	MAX.	MAXIMUM	VENT.	VENTILATION
EQ.	EQUAL	MECH	MECHANICAL	VERT.	VERTICAL
EQUIP	EQUIPMENT	MEP	MECH/ELEC/PLUMBING	W/	WITH
F.F.E.	FINISH FLOOR ELEVATION	MFR	MANUFACTURER	W.L.	WATER LEVEL
FIX.	FIXTURE	MIN.	MINIMUM	W.S.	WATER SURFACE
FLR.	FLOOR	MPa	MEGAPASCAL	WP	WATERPROOFING
F.M.	FLOW METER	N.T.S.	NOT TO SCALE	W.W.M.	WELDED WIRE MESH
FT.	FOOT	N.W.S. O.A.E.	NORMAL WATER SURFACE OR APPROVED EQUAL		

4. DRAWING LEGEND:

- POOL SKIMMER
- FOUNTAIN SKIMMER
- LINEAR DRAIN
- SQUARE DRAIN
- ROUND DRAIN
- WALL INTAKE
- FLOOR INTAKE
- WALL INLET
- FLOOR INLET
- SPA HYDROTHERAPY JET
- WS — WATER SUPPLY LEVEL SENSOR/FLOAT
- OF — OVERFLOW
- WATERPROOFING RELIEF DRAIN
- UNDERWATER LIGHT
- UNDERWATER LIGHT
- UNDERWATER LIGHT
- UNDERWATER LIGHT
- DEPTH MARKER
- NO DIVING MARKER
- EMERGENCY SHUT-OFF SWITCH
- SPA JET TIMER BUTTON
- PS — POOL SIGNAGE
- HOSE BIBB
- DF — DRINKING FOUNTAIN
- EP — EMERGENCY PHONE
- LC — ELEVATED LIFEGUARD CHAIR
- LS — LIFEGUARD STATION
- LE — LIFESAVING EQUIPMENT
- WIND SENSOR
- FOUNTAIN JET
- FOUNTAIN JET
- FOUNTAIN JET
- FOUNTAIN JET
- DISCHARGE PIPING
- SUCTION PIPING
- UTILITY PIPING
- GRAVITY PIPING

5. SUBMITTALS:

A. PRODUCT DATA:
CONTRACTOR SHALL PROVIDE A CONSOLIDATED PACKAGE OF MANUFACTURER'S TECHNICAL LITERATURE FOR EACH ITEM SPECIFIED OR OTHERWISE REQUIRED. SUBMITTAL SHALL INCLUDE DESCRIPTIONS, DIMENSIONS, FINISHES AND INSTALLATION PROCEDURES. IDENTIFY EACH COMPONENT TO DESIGNATE THE APPLICATION OR LOCATION ON THE PROJECT.

B. SHOP DRAWINGS:
CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE FOLLOWING:
i. ELECTRICAL PANELS, ELECTRICAL CONDUIT RUNS, JUNCTION BOXES, GFCIs AND ELECTRICAL SWITCH LOCATIONS
ii. SPECIALTY ITEMS INCLUDING PRE-MANUFACTURED BASINS, SURGE TANKS, ETC.
iii. PIPE SUPPORTS, EQUIPMENT ANCHORAGE INCLUDING CALCULATIONS
iv. PIPE PENETRATIONS THAT REQUIRE CONCRETE CORING

CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL ITEMS THAT DEVIATE FROM THE CONTRACT DOCUMENTS. THIS INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
i. WATER FEATURE LAYOUTS AND PIPING PLANS
ii. EQUIPMENT ROOM PLANS
iii. EQUIPMENT DETAILS
iv. WATER FEATURE BASIN AND FITTING DETAILS

ALL SHOP DRAWINGS SHALL BE CLEARLY LEGIBLE AND DRAWN TO SCALE.

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Revision #	Revision Description	Date

Project No 1115-0060
Date: September 18, 2019
Sheet:

GENERAL NOTES & SHEET INDEX
W000

PRELIMINARY PRICING SET

GENERAL NOTES (CONTINUED) :

6. CONCRETE:

A. CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION FROM STRUCTURAL ENGINEER PRIOR TO PENETRATING ANY EXISTING WALL OR SLAB.

B. WATERSTOPS SHALL BE INSTALLED AT ALL CONCRETE COLD JOINTS, EXPANSION JOINTS AND PIPE PENETRATIONS UNLESS OTHERWISE NOTED. WATERSTOPS SHALL BE INSTALLED WITH MINIMUM CONCRETE COVERAGE AS REQUIRED BY MANUFACTURER'S SPECIFICATIONS.

C. CONTRACTOR SHALL NOTIFY WATER FEATURE ENGINEER MINIMUM OF ONE (1) WEEK PRIOR TO INSTALLATION OF ANY WATER FEATURE CONCRETE BASIN.

D. VERTICAL TOLERANCE FOR INFINITY WEIRS SHALL BE +/-0.025" UNLESS OTHERWISE NOTED.

E. ALL ELEVATED PAVERS SUBJECT TO PEDESTRIAN LOADING SHALL BE SUPPORTED TO PROVIDE A MINIMUM OF 300 PSF CAPACITY. PAVERS SHALL BE REINFORCED IF STRUCTURALLY INADEQUATE AS A STAND-ALONE MATERIAL. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.

F. ALL ELEVATED PAVERS SHALL BE SUPPORTED TO MAINTAIN UNIFORM SPACING. GAPS SHALL NOT EXCEED 1/2" IN ANY PEDESTRIAN ACCESS TRAVEL.

G. CONTRACTOR SHALL PROVIDE OWNER AND DESIGN TEAM A LIST OF SAMPLES & MOCK-UPS PRIOR TO INSTALLATION.

H. REFER TO LANDSCAPE ARCHITECT FOR FOUNTAIN BASIN CONCRETE DESIGN INCLUDING: CONCRETE MIX, REINFORCING, WATERPROOFING, FINISHES, ETC.

I. GAPS OR OPENINGS @ FOUNTAIN SHALL COMPLY WITH ADA AND NOT EXCEED 1/2" DIA.

7. WATERPROOFING:

A. ALL WATERPROOFING SYSTEMS SHALL BE FLOOD TESTED PER MANUFACTURER'S SPECIFICATIONS.

B. ALL PENETRATIONS THROUGH WATERPROOFING SYSTEMS SHALL BE SEALED WITH PIPE BOOTS, PIPE SEALS, OR OTHER APPROVED METHOD. ALL WORK SHALL COMPLY WITH MANUFACTURER'S SPECIFICATIONS.

C. ALL WATERPROOFING SYSTEMS SHALL BE PROTECTED FROM MECHANICAL IMPACT AND ULTRA VIOLET LIGHT EXPOSURE AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY MANUFACTURER'S SPECIFICATIONS.

D. ALL SEALANTS AND WATERSTOPS SHALL BE RATED FOR IMMERSION IN CHEMICALLY TREATED WATER FOR ALL SYSTEMS UNLESS OTHERWISE NOTED.

E. ALL PIPE PENETRATIONS THROUGH WATER FEATURE CONCRETE SHELLS SHALL HAVE A HYDROPHILIC TYPE WATERSTOP. PIPES 4" AND SMALL SHALL HAVE ADEKA P-201 PASTE, PIPES 6" AND LARGER SHALL HAVE ADEKA KBA 1510P WATERSTOP OR APPROVED EQUAL.

F. SLAB WATERPROOFING SHALL BE INSTALLED ON SOUND STRUCTURAL SUBSTRATES, PREPARED AND CURED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

G. WATERPROOFING SYSTEMS SHALL BE INSTALLED WITH ALL COMPONENTS REQUIRED BY MANUFACTURER AND CURED PER MANUFACTURER'S SPECIFICATIONS TO MAINTAIN WARRANTIES.

H. ALL STRUCTURAL SLAB WATERPROOFING SYSTEMS UNDER WATER FEATURE BASINS SHALL BE PROVIDED WITH RELIEF DRAINS OR OTHER APPROVED MEANS OF DRAINAGE.

8. PIPING:

A. ALL PIPING MATERIALS ARE SUBJECT TO APPROVAL BY PERMITTING AGENCY.

B. PIPING SHALL BE INSTALLED WITHOUT AIR ENTRAPPING HIGH POINTS OR REVERSE SLOPES, i.e. NO INVERTED "U" SHAPE CONFIGURATIONS.

C. PIPE LAYOUTS SHOWN ON PLANS REPRESENT DESIGNATED PIPE ROUTING, ALLOWING FOR MINOR REALIGNMENT NECESSITATED BY FIELD CONDITIONS. APPROVAL BY THE WATER FEATURE ENGINEER IS REQUIRED FOR MAJOR REROUTING OF PIPING. PIPE RUNS SHALL BE INSTALLED WITH THE LEAST NUMBER OF FITTINGS. UNLESS SHOWN ON PLANS, THERE SHALL BE NO PIPE INSTALLATION UNDERNEATH THE WATER FEATURES.

D. HORIZONTAL SEPARATION BETWEEN PIPES SHALL BE 4" MINIMUM; VERTICAL SEPARATION BETWEEN PIPES SHALL BE 6" MINIMUM. CONSIDERATION FOR TIGHTER SPACING WITH JETTED SAND OR SLURRY BACKFILL MAY BE GIVEN BY WATER FEATURE ENGINEER - CONTRACTOR SHALL SUBMIT SPACING AND BACKFILL METHOD PRIOR TO INSTALLATION.

E. PROVIDE MINIMUM 24" COVER OVER ALL PIPING USING APPROVED MATERIAL COMPACTED TO 90% MIN .RELATIVE DENSITY, PER ASTM D1557.

F. PIPE MATERIAL:

G. ALL PIPING IN NON-2HR RATED SPACES SHALL BE SCH. 80 CPVC OR SCH. 10 GR 316L S.S. WITH WRITTEN AUTHORIZATION FROM ENGINEER U.O.N.

i. ALL EXPOSED PVC/CPVC PIPING SHALL BE SCH. 80 U.O.N.

ii. ALL BURIED PVC/CPVC PIPING SHALL BE SCH. 40. U.O.N.

iii. ALL FOG LINES SHALL BE 316L S.S.

iv. ALL CONNECTIONS BETWEEN STEEL AND PVC SHALL BE MADE WITH FLANGES OR SPECIAL TRANSITION FITTINGS U.O.N.

H. HYDROSTATIC TESTING IS REQUIRED FOR ALL PIPING. DO NOT USE COMPRESSED AIR IN PVC PIPES. ALL PIPING SHALL BE PRESSURE TESTED TO 50PSI FOR A MINIMUM OF 4 HOURS. PIPES CONNECTED TO PRE-MANUFACTURED SKIMMERS AND DRAIN SUMPS SHALL BE TESTED TO 15PSI FOR A MINIMUM OF 8 HOURS.

I. PIPE WRAP REQUIRED ON ALL UNDERGROUND METALLIC PIPING.

J. THERMAL INSULATION SHALL BE REQUIRED AS DIRECTED ON DRAWINGS. ALL HEAT EXCHANGER HOT LOOP PIPING WITHIN POOL EQUIPMENT ROOM SHALL HAVE THERMAL PIPE WRAP PER MEP ENGINEER'S SPECIFICATIONS.

K. ALL PIPE AND EQUIPMENT SHALL BE SUPPORTED TO ELIMINATE VISIBLE MOVEMENT DURING NORMAL OPERATION.

L. PROVIDE DIELECTRIC SEPARATORS BETWEEN ALL DISSIMILAR METALS.

M. PROVIDE FLEX CONNECTORS ON PIPING BETWEEN POLYPROPYLENE/POLYETHYLENE AND FIBERGLASS STORAGE TANKS AND PUMPS.

N. ALL RECTANGULAR FIBERGLASS OR PLASTIC TANKS SHALL BE SUPPORTED WITH STRAP SYSTEM AS REQUIRED BY MANUFACTURER.

O. CONTRACTOR TO SUPPLY CHEMICAL FEED PUMP TUBING FROM CHEMICAL FEED PUMP MANUFACTURER OR TUBING THAT MEETS ALL THE REQUIREMENTS OF THE CHEMICAL FEED PUMP MANUFACTURER. TUBING SHALL HAVE A BURST RATING OF AT LEAST 150% ABOVE THE PUMP'S MAXIMUM PRESSURE OUTPUT.

P. CONTRACTOR SHALL PROVIDE DRAIN LINES AND VALVES ON EACH SYSTEM TO FACILITATE COMPLETE DRAINAGE FOR MAINTENANCE AND WINTERIZING.

9. EQUIPMENT:

A. ALL EQUIPMENT INCLUDING PUMPS, FILTERS, CHEMICAL FEED SYSTEMS, SKIMMERS, ETC., SHALL BE NSF LISTED WHEN USED ON POOLS, SPAS AND ALL OTHER INTERACTIVE WATER FEATURES.

B. ALL WETTED PUMP PARTS AND CAST IRON PIPES AND FITTINGS OF EACH PUMP SYSTEM SHALL BE FUSE COATED, INTERIOR ONLY. ALL EXTERIOR PARTS AND EXTERIOR OF CAST IRON PIPES AND FITTINGS SHALL BE COATED WITH A HIGH GRADE ENAMEL PAINT FOR CORROSION PROTECTION.

C. CONTRACTOR SHALL VERIFY ELECTRICAL FEED VOLTAGE AND PHASE PRIOR TO ORDERING ANY ELECTRICAL EQUIPMENT.

D. PUMP MOTORS FOR ALL PUMPS EQUIPPED WITH VARIABLE FREQUENCY DRIVES (VFD) SHALL BE PREMIUM EFFICIENT, INVERTER RATED SUITABLE FOR VFD OPERATION.

E. PRESSURE / VACUUM GAUGES (WITH LIQUID FILL DIALS) SHALL BE PROVIDED ON EFFLUENT / INFLUENT SIDES OF ALL PUMPS AND FILTERS. ALL PUMPS INSTALLED IN FLOODED SUCTION CONDITION SHALL HAVE COMPOUND VACUUM/PRESSURE GAUGES.

F. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

G. WHERE APPLICABLE, CONTRACTOR SHALL PROVIDE POOL AREA SAFETY EQUIPMENT IN ACCORDANCE WITH LOCAL HEALTH CODE.

10. ELECTRICAL:

A. ALL ELECTRICAL EQUIPMENT SHALL BE GROUNDED PER NEC.

B. BONDING IS REQUIRED ON POOLS, SPAS AND ALL OTHER INTERACTIVE WATER FEATURES TO ELIMINATE VOLTAGE GRADIENT IN THE WATER FEATURE AREA. BOND ALL COMPONENTS AND SURROUNDING DECK REINFORCING STEEL WITH #8 WIRE AND APPROVED CONNECTORS PER NEC. FOUNTAINS WITH METALLIC PIPING SYSTEMS SHALL BE BONDED.

C. REFER TO LIGHTING DESIGNER FOR ALL FOUNTAIN LIGHT INFORMATION INCLUDING: FIXTURES, WIRING, CONDUIT, J-BOXES, ETC.

D. CONTRACTOR SHALL FIELD LOCATE ALL ELECTRICAL JUNCTION BOXES, GFCIs, LED POWER SUPPLIES, CONDUIT RUNS AND ALL ASSOCIATED PENETRATIONS. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION.

E. ELECTRICAL PANELS SHALL BE CONFIGURED FOR INSTALLATION IN ALLOCATED LOCATIONS, TO COMPLY WITH REQUIRED CLEARANCES AND PROVIDE CONVENIENT ACCESS FOR INSPECTION AND MAINTENANCE.

11. WATER CHEMISTRY BALANCE:

A. WATER CHEMISTRY FOR ALL CHEMICALLY TREATED WATER FEATURES SHALL BE MAINTAINED AS FOLLOWS:

i.	FREE CHLORINE:	1.0 - 3.0 ppm
ii.	COMBINED CHLORINE:	NONE
iii.	BROMINE:	3.0 - 5.0 ppm (IF USED IN LIEU OF CHLORINE)
iv.	pH:	7.4 - 7.6
v.	TOTAL ALKALINITY:	80 - 100 ppm
vi.	TDS:	1000 - 2000 ppm
vii.	CALCIUM HARDNESS:	200 - 400 ppm
viii.	CYANURIC ACID:	20 ppm (MAX.) (0 ppm IN SPAS AND INDOOR FEATURES)
ix.	ORP / HHR:	700 - 780 mV

B. DOMESTIC WATER SUPPLYING THE WATER FEATURES SUITABLE FOR USE. ADJUST CHEMICAL PARAMETERS ACCORDINGLY AS REQUIRED TO ACHIEVE LEVELS INDICATED ABOVE.

C. CONTRACTOR SHALL PROVIDE ONE WATER CHEMISTRY TEST KIT IN EACH WATER FEATURE EQUIPMENT ROOM.

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Revision #	Revision Description	Date

Project No	1115-0060
Date:	September 18, 2019
Sheet:	

GENERAL NOTES

W001

PRELIMINARY PRICING SET

GENERAL NOTES (CONTINUED) :

12. WATER FEATURE START-UP, TESTING, COMMISSIONING AND OWNER TRAINING:

A. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO OWNER AND ENGINEER 2 WEEKS PRIOR TO STARTING SYSTEM.
B. ALL FINISHES SHALL BE INSTALLED AND PROPERLY CURED PRIOR TO FILLING BASIN WITH WATER.
C. THE ENTIRE SYSTEM SHALL BE THOROUGHLY FLUSHED PRIOR TO INSTALLING FINISHES
D. RECIRCULATION SYSTEM SHALL BE READY FOR START UP BEFORE BASIN IS FILLED WITH WATER.
E. SYSTEM SHALL BE FILLED USING CLEAN POTABLE WATER. WATER CHEMISTRY LEVELS SHALL BE VERIFIED, DOCUMENTED AND SUBMITTED TO OWNER AND ENGINEER FOR REVIEW PRIOR TO FILLING SYSTEM. THE FILL SUPPLY SHALL COMPLY WITH REQUIREMENTS SET FORTH BY THE FINISH MATERIAL MANUFACTURER.
F. CONTRACTOR SHALL SUPPLY CHEMICALS NECESSARY FOR PROPER WATER CHEMISTRY BALANCE DURING THE START UP AND MAINTENANCE PERIOD.
G. ALL WATER CHEMICAL LEVELS SHALL BE PROPERLY MAINTAINED. CONTRACTOR TO KEEP DAILY LOG AND SUBMIT TO OWNER AND ENGINEER FOR REVIEW.
H. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE CONTRACTOR SHALL PERFORM A HYDROSTATIC LEAK TEST OF THE BASIN.
I. CONTRACTOR SHALL MAINTAIN THE SYSTEM FOR A PERIOD AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
J. CONTRACTOR SHALL PROVIDE ONE (1) WEEK MINIMUM WRITTEN NOTIFICATION TO ENGINEER FOR FIELD REVIEW.
K. CONTRACTOR SHALL PROVIDE TO OWNER "OPERATIONS AND MAINTENANCE MANUALS" (O&M) FOR EACH SYSTEM COMPLETE WITH START UP, SHUT DOWN, CLEANING, WINTERIZING, WATER CHEMISTRY BALANCE AND GENERAL MAINTENANCE PROCEDURES, INCLUDING SCHEDULE OF FREQUENCY.
L. CONTRACTOR SHALL PROVIDE START UP SERVICES THAT INCLUDE COMMISSIONING, CALIBRATION, ADJUSTMENT OF ALL EQUIPMENT, CHEMICAL, ETC., AS NEEDED TO MAINTAIN EACH SYSTEM IN GOOD WORKING ORDER. CONTRACTOR SHALL SOLICIT THE SERVICES OF THE EQUIPMENT MANUFACTURER OR AUTHORIZED REPRESENTATIVE AS NEEDED TO ASSURE PROPER OPERATION OF EACH COMPONENT. CONTRACTOR SHALL PROVIDE COMPREHENSIVE TRAINING ON THE OPERATION AND MAINTENANCE OF EACH SYSTEM TO THE OWNER'S APPOINTED MAINTENANCE STAFF.

GENERAL:
PROJECT SPECIFICATIONS AND CONTRACTS SHALL PROVIDE ADEQUATE TESTING, COMMISSIONING, AND OPERATIONAL START-UP STEPS TO ENSURE A FULLY OPERATIONAL WATER FEATURE. THESE CRITERIA GENERALLY INCLUDE:
A. CONSTRUCTION TESTING FOR PROPER ASSEMBLY AND MATERIAL SOUNDNESS.
B. STARTING, TESTING, PROOFING, ADJUSTING AND BREAK-IN OF INDIVIDUAL COMPONENTS.
C. TESTING, ADJUSTING, CALIBRATING, CONTROLLER PROGRAMMING; RUNNING AND FINALIZING OPERATIONAL DISPLAYS AND ROUTINES PER THE WATER FEATURE NARRATIVE, WATER TREATMENT PROCESSES, INSTRUMENTATION AND MONITORING, AND SAFETY FEATURES OF THE ENTIRE FOUNTAIN.
D. VALIDATING O&M DOCUMENTATION, OPERATING DISPLAY PROGRAM DOCUMENTATION AND INSTRUMENTATION AND CONTROL DOCUMENTATION.
E. TRAINING MAINTENANCE STAFF IN THE START-UP AND OPERATIONS OF THE NEW SYSTEMS.

TESTING:
TESTING IS REQUIRED ON ALL WATER FEATURE COMPONENTS TO ENSURE ALL EQUIPMENT AND MATERIALS ARE INSTALLED AS SPECIFIED AND OPERATING CORRECTLY IN ORDER TO PROCEED WITH COMMISSIONING AND START-UP OF SYSTEMS. THE FOLLOWING ITEMS AND PROCEDURES WILL BE ADDRESSED BEFORE START-UP WITH SPECIFIC START-UP STEPS AND CHECKLISTS. ALL ACTIVITIES SHALL BE OBSERVED BY APPROPRIATE OWNER'S REPRESENTATIVES AND DESIGNEES. TEST RESULTS AND COMPONENT DOCUMENTATION SHALL BE PROVIDED TO OWNER WITH "AS-BUILT" DRAWINGS, O&M MANUALS AND OPERATIONAL DESCRIPTIONS. ASSURE THROUGH THE TESTING THAT THE PERFORMANCE AND APPEARANCE OF THE WATER FEATURE MEETS THE DESIGN INTENT.
A. PIPE TESTING: THIS TESTING WILL OCCUR DURING THE CONSTRUCTION PROCESS AND WILL BE COMPLETE PRIOR TO FUNCTIONAL TESTING OF THE FOUNTAIN.
   i. TEST ALL PIPING BEFORE CONCEALMENT, COATING, PAINTING, WRAPPING, OR INSULATING.
   ii. HYDROSTATICALLY TEST ALL PIPING WITH WATER. DO NOT TEST WITH AIR OR COMPRESSED GASES.
   iii. TEST ALL PIPING TO AT LEAST 1.5 TIMES THE DESIGN OPERATING PRESSURE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

B. PUMPS: THIS WILL INCLUDE OPERATIONAL TESTING OF THE PUMPS BUT MAY REQUIRE FURTHER TESTING WHEN THE ENTIRE SYSTEM IS RUN AS A WHOLE.
   i. CORRECT MOTOR ROTATION
   ii. OPERATIONAL PARAMETERS PER PUMP CURVES

C. VALVE AND VALVE CONTROLS:
   i. ACTUATORS WORKING CORRECTLY
   ii. REGULATORS WORKING CORRECTLY
   iii. MANUAL VALVES OPERABLE

D. WATER TREATMENT SYSTEMS INSTALLATION:
   i. LEAKAGE
   ii. REGULATING/PUMPING

E. FILTER SYSTEMS:
   i. FILTER MEDIA
   ii. PUMPING
   iii. LEAKAGE
   iv. AUTO/MANUAL BACKWASH
   v. OPERATING CHARACTERISTICS

F. ELECTRICAL SYSTEM:
   i. LIGHTING FOR THE FOUNTAIN FEATURES
   ii. LIGHTING FOR THE EQUIPMENT ROOM
   iii. POWER TO THE EQUIPMENT
   iv. GFCIs

G. INSTRUMENTATION AND CONTROLS:
   i. SENSOR AND MONITOR SIGNALS
   ii. FOUNTAIN DISPLAY AND CONTROLS STATUS
   iii. PROGRAMMABLE CONTROLLER
   iv. REMOTE MONITOR AND/OR CONTROL SYSTEM
   v. SAFETY ALARMS AND SIGNALS
   vi. SECURITY ALARMS AND SIGNALS

H. HYDROSTATIC LEAK TEST ON WATER FEATURE BASINS
CONTRACTOR SHALL CONDUCT A HYDROSTATIC TEST OF EACH BASIN MEASURING THE EVAPORATIVE LOSS TO DETERMINE NO SEEPAGE OCCURS. THE TEST SHALL CONSIST OF THE FOLLOWING STEPS:

PROCEDURE:
1. FILL A 5 GALLON BUCKET TO WITHIN 3/4" TO 1-1/2" FROM THE LIP. MARK THE WATER LEVEL IN THE BUCKET AND IN THE WATER FEATURE BASIN. THE STARTING WATER LEVEL IN THE BUCKET SHALL NOT ALLOW ANY SLOPPING FROM WIND. PLACE THE BUCKET ADJACENT TO THE WATER FEATURE BASIN IN A LOCATION THAT WILL NOT BE DISTURBED.

2. AFTER 12 HOURS LOG THE WATER LEVEL IN THE WATER FEATURE BASIN AND IN THE BUCKET. REPEAT EVERY 12 HOURS FOR A TOTAL OF 48 HOURS. LOG EACH MEASUREMENT (BUCKET AND BASIN) AND SUBMIT FOR REVIEW.

COMMISSIONING:
COMMISSIONING IS THE PROCESS OF CORRECTING, ADJUSTING, CALIBRATING AND DEMONSTRATING THAT ALL THE SYSTEMS (I.E. MECHANICAL, PLUMBING, ELECTRICAL, SAFETY, SECURITY, TREATMENT) ARE OPERATING AND PERFORMING IN COMPLIANCE WITH THE DESIGN PERFORMANCE REQUIREMENTS AND AS DESIGNED. COMMISSIONING SHALL LAST A MINIMUM OF 30 DAYS AND IF ANY DEFECTS ARE FOUND IN THOSE 30 DAYS, THE 30-DAY PERIOD SHALL START OVER. THE 30-DAY PERIOD SHALL NOT START UNTIL THE JURISDICTIONAL AGENCY'S OPERATING PERMIT HAS BEEN ISSUED, REGARDLESS OF WHETHER OR NOT ALL OTHER COMMISSIONING REQUIREMENTS HAVE BEEN MET.THE FOLLOWING ITEMS AND PROCEDURES WILL BE ADDRESSED BEFORE COMMISSIONING WITH SPECIFIC COMMISSIONING STEPS AND CHECKLISTS. ALL ACTIVITIES SHALL BE OBSERVED BY APPROPRIATE OWNER'S REPRESENTATIVES AND DESIGNEES.
E. INITIAL COMMISSIONING:
   i. OBSERVATION OF ALL COMMISSIONING ACTIVITIES BY AUTHORIZED REPRESENTATIVE AND CONSTRUCTION STAFF IS REQUIRED
   ii. INITIAL START-UP PLAN AND PROCEDURES SHALL BE PERFORMED
   iii. COMPONENT INSTALLATION REVIEW - VERIFY EQUIPMENT HAS BEEN INSTALLED PER DRAWINGS, SPECIFICATIONS, AND STATE AND LOCAL CODES
   iv. EQUIPMENT TO BE COMMISSIONED BY EQUIPMENT MANUFACTURERS' TECHNICAL REPRESENTATIVE
   v. IDENTIFICATION TAGS WITH APPROPRIATE TEXT ARE HUNG ON APPROPRIATE EQUIPMENT. ALL PIPING HAS BEEN PERMANENTLY LABELED, INCLUDING FLOW DIRECTION ARROWS, IN ACCORDANCE WITH SPECIFICATIONS.
   vi. CONFIRM THAT INITIAL TRASH REMOVAL, CLEANING, AND CHECK FOR OBSTRUCTIONS AND SUBSEQUENT CHECKS AFTER INITIAL START-UP HAS BEEN PERFORMED
   vii. ELECTRICAL EQUIPMENT HAS BEEN CHECKED ACCORDING TO START-UP CHECKLIST
   viii. FILL AND AIR PURGING PERFORMED
   ix. VALVE, REGULATOR, AND FLOW SETTING AND ADJUSTMENTS AFTER INITIAL OPERATION HAVE BEEN CHECKED AND PERFORMED

B. NORMAL OPERATING PROCEDURES:
   i. DEMONSTRATE NORMAL START-UP PROCEDURES TO BE FOLLOWED WHEN THE WATER FEATURE IS ALREADY FILLED
   a. FILTER CIRCULATION OPERATION
   b. BACKWASH OPERATION
   c. WATER EFFECTS PUMPING OPERATION
   d. TREATMENT OPERATION
   e. SUMP PUMP OPERATION
   f. MOTOR TEMPERATURES
   g. WATER FEATURE PROGRAMMING
   h. ELECTRICAL START UP CHECKLIST
   ii. CHEMICALS TO BE PROVIDED BY CONTRACTOR DURING THE ENTIRE TESTING AND COMMISSIONING PERIOD

C. DEMONSTRATE PROCEDURES FOR ALARMS AND TROUBLESHOOTING

D. DEMONSTRATE NORMAL WATER FEATURE OPERATIONS INCLUDING:
   i. WATER FEATURE AND PUMP STRAINERS CLEANING PROCEDURES
   ii. WATER FEATURE DRAINING AND SHUTDOWN PROCEDURES
   iii. WATER FEATURE FILLING, TRASH REMOVAL, CLEANING AND AIR-PURGING PROCEDURES
   iv. OPERATION AND MAINTENANCE FOR ELECTRICAL EQUIPMENT
   v. WATER TREATMENT CHEMICAL REFILL PROCEDURES
   vi. ELECTRICAL SETTING TIME CLOCK PROCEDURE
   a. WATER FEATURE PROGRAMMING SETTING PROCEDURES
   b. GENERAL CLEANUP PROCEDURES AND REQUIREMENTS
   vii. PHYSICAL CLEAN UP OF THE DECK SURFACE, WETTED SURFACES, WATER FEATURE PERIMETER AREA AND FOUNTAIN POOL AREAS ARE ROUTINE MAINTENANCE WORK
   viii. GRAFFITI REMOVAL AND VANDALISM REPAIRS ESSENTIAL TO THE PRESERVATION OF THE AESTHETIC AND RECREATIONAL FUNCTION OF THE WATER FEATURE

OWNER TRAINING:
A. TRAINING FOR OWNER OPERATORS AND MAINTENANCE PERSONNEL TO OCCUR DURING COMMISSIONING PERIOD. ADDITIONALLY, MAINTENANCE PERSONNEL TO BE PROVIDED WITH A TOTAL OF TWO (2) SEPARATE FOUR (4) HOUR TRAINING SESSIONS.

B. VALIDATION OF THE OPERATIONS AND MAINTENANCE MANUALS, INCLUDING DOCUMENTATION ON ALL SETTINGS AND COMPONENTS, AND STARTUP/SHUTDOWN PROCEDURES.

13. MISCELLANEOUS:

A. CONTRACTOR SHALL OBTAIN AND REVIEW PLANS BY THE APPROPRIATE PROJECT DISCIPLINE DEVELOPED BY OTHERS FOR THE FOLLOWING INFORMATION:
   i. FINISH FLOOR ELEVATIONS
   ii. DECK ELEVATIONS, DECK DRAINAGE - SLOPE AWAY FROM FLOOR HATCHES, EXTERIOR VAULT HATCHES
   iii. ALL FINISHES INCLUDING TILE, STONE, COPING, PLASTER, GFRC AND ASSOCIATED COLOR REQUIREMENTS
   iv. STRUCTURAL SLAB WATERPROOFING INCLUDING RELIEF DRAINS
   v. SEWER LATERALS AND RECEPTACLES WITH ALL P TRAPS, VENTS, ETC., FROM SEWER MAIN TO POINT OF CONNECTION SUPPORTING WATER FEATURE
   vi. WATER SUPPLY WITH PRESSURE REDUCING BACKFLOW PREVENTER
   vii. GENERAL VENTILATION, COMBUSTION VENTILATION, CHEMICAL ROOM VENTILATION, ETC.
   viii. SHOWER, EYEWASH, UTILITY SINK

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Revision #	Revision Description	Date

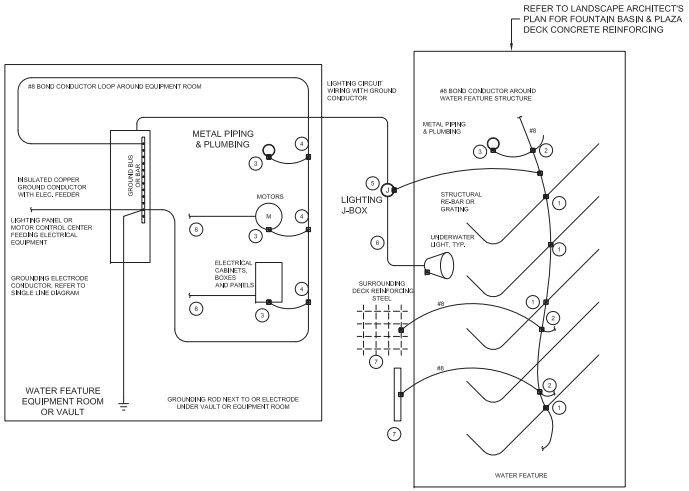
Project No 1115-0060
Date: September 18, 2019
Sheet:

GENERAL NOTES

W002

PRELIMINARY PRICING SET

BONDING/GROUNDING:



BONDING/GROUNDING COMPONENTS AND NOTES

REF: NATIONAL ELECTRICAL CODE (NEC)

1. BOND COPPER GROUND WIRE AND RE-BAR. UL LISTED FOR DIRECT BURIAL IN EARTH OR CONCRETE. BURNDY #C-11D (1/2"-3/4" RE-BAR) OR EQUAL. MAKE FOUR RE-BAR CONNECTIONS (MINIMUM) OF THE GROUND WIRE AROUND THE WATER FEATURE. FOR BONDING CONNECTIONS TO METAL SHELL LINED WATER FEATURES, SEE NOTE BELOW.
2. TAP CONNECTOR FOR SOLID TO SOLID GROUND WIRE, UL LISTED FOR DIRECT BURIAL IN EARTH OR CONCRETE. BURNDY #KS17-DB, OR EQUAL.
3. GROUND WIRE LUG CONNECTOR SUITABLE FOR PURPOSE TO CONNECT FRAMES OF MOTORS, METAL ELECTRICAL EQUIPMENT ENCLOSURES, AND METAL PIPING. GREAVES OR EQUAL.
4. GROUNDING CONNECTOR MAY BE THE SAME AS ITEM '2' OR OTHER WET LOCATION UL LISTED.
5. GROUNDING LUGS ON INTERIOR OF LIGHTING JUNCTION BOXES.
6. FLEXIBLE ELECTRICAL LIGHTING CORD WITH INTEGRAL #16 (MIN.) GREEN INSULATED CONDUCTOR IN RIGID CONDUIT. FOR RIGID NON-METALLIC CONDUIT FOR POOLS AND SPAS ADD GROUND WIRE TO CONDUIT INFRASTRUCTURE.
7. METALLIC OBJECTS IN OR WITHIN 5 FT (1.5 M) OF THE WATER FEATURE SHALL BE BONDED WITH A GROUND WIRE.
8. BRANCH CIRCUIT WIRING TO MOTORS, ELECTRICAL CABINETS, CONTROLLERS, BOXES AND PANELS SHALL INCLUDE AN INSULATED COPPER GROUNDING CONDUCTOR.

GENERAL:
BONDING CONDUCTORS ARE BARE SOLID COPPER, UNLESS OTHERWISE NOTED. SPLICES SHALL BE EITHER WITH HIGH COMPRESSION CONNECTORS, EXOTHERMIC TYPE OR TWO (2) MECHANICAL CONNECTORS, ITEM "2". GROUND CONDUCTORS ACCOMPANYING CIRCUIT CONDUCTORS IN CONDUIT ARE STRANDED OR SOLID GREEN INSULATED COPPER BUILDING WIRE.

BONDING/GROUNDING CONNECTORS SHALL BE UL LISTED FOR THE PURPOSE INTENDED. INSTALL AND TORQUE BOLTS WITH A PROPER TOOL PER MFR. INSTRUCTIONS: CONNECTORS BURIED DIRECTLY IN EARTH OR CONCRETE SHALL BE U.L.–467 LISTED AND VERIFIED BY THE FIELD ELECTRICAL INSPECTOR BEFORE BACKFILL. UL LISTED COMPRESSION OR EXOTHERMIC TYPES OF CONNECTIONS ARE ACCEPTABLE ALTERNATES.

BONDING CONNECTORS TO METAL SHELL LINED WATER FEATURES SHALL BE BURNDY #GB4C (3/8" BOLT) OR EQUAL. (UL-467 LISTED FOR DIRECT BURIAL IN EARTH OR CONCRETE.) BOND A #8 BOND WIRE TO THE EXTERIOR OF THE METAL SHELL FLANGES IN AT LEAST THREE LOCATIONS.

NOTES:
1. REFER TO LIGHTING DESIGNER'S PLANS FOR FOUNTAIN LIGHTING.
2. REFER TO LANDSCAPE ARCHITECT'S PLANS FOR BASING INCLUDING BOUNDING INFO.

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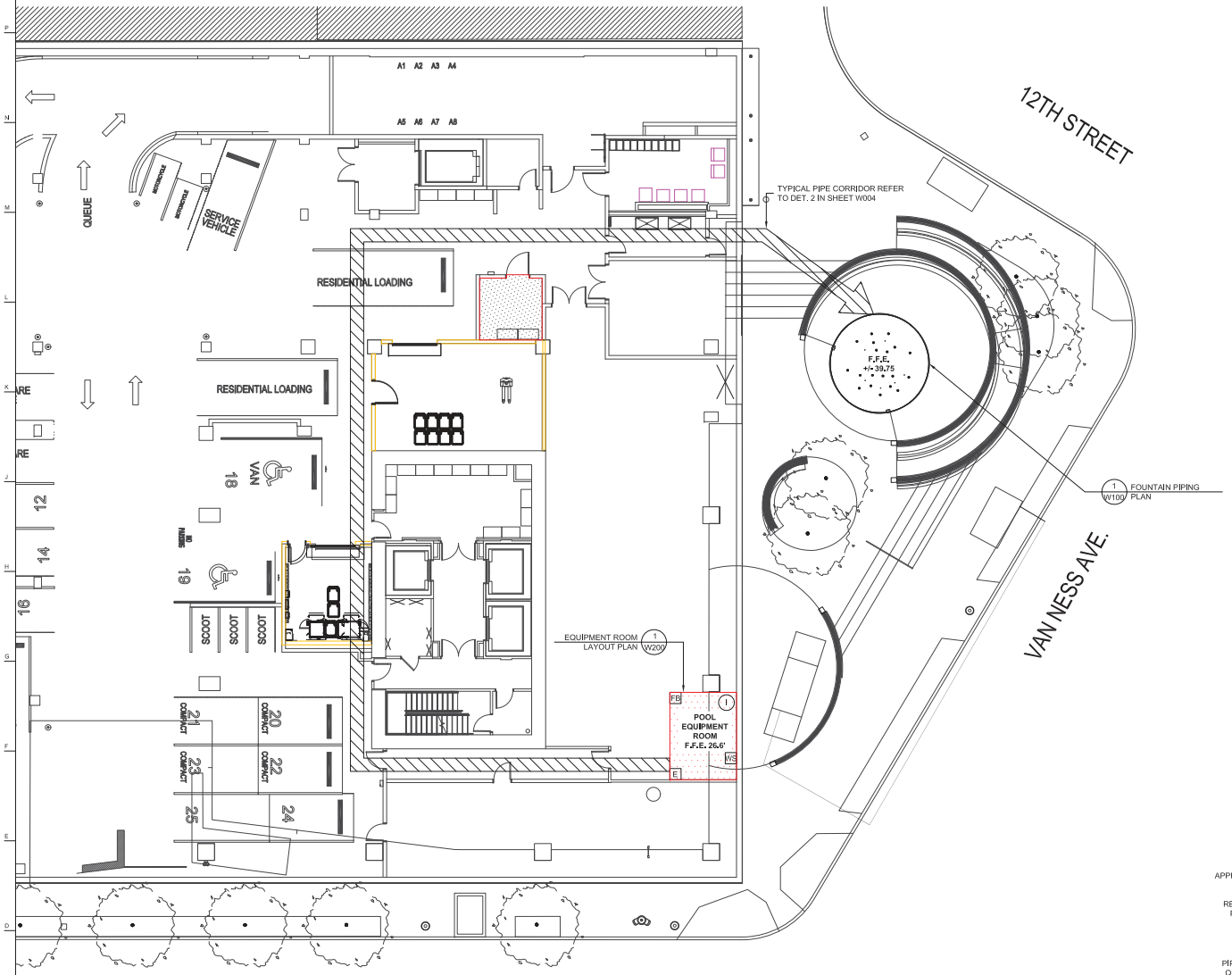
Revision #	Revision Description	Date

Project No 1115-0060
Date: September 18, 2019
Sheet:

GENERAL NOTES

W003

PRELIMINARY PRICING SET



OTIS STREET

1 OVERALL SITE PLAN
SCALE: 1/4" = 1'-0"

UTILITY LEGEND

I UTILITIES REQUIRED AT EQUIPMENT ROOM

A) ELECTRICAL : (208Y OR 480), 3 PHASE TOTAL= 2HP + MISC. ELEC. LOAD

B) WATER = 20GPM OF POTABLE WATER SUPPLY 75PSI FROM PRESSURE REDUCING BACKFLOW PREVENTER (BY MEP DISCIPLINE)

C) BACKWASH STANDPIPE WITH 140GPM CAPACITY FOR 5 MINUTE DURATION TO SANITARY SEWER

D) MISCELLANEOUS
- PROVIDE FLOOR DRAINS & FLOOR SINK
- PROVIDE ELECTRICAL CONVENIENCE RECEPTACLES
- PROVIDE WATER SUPPLY & SEWER CONNECTION FOR EMERGENCY SHOWER/EYEWASH & UTILITY SINK
- PROVIDE EQUIPMENT ROOM LIGHTING

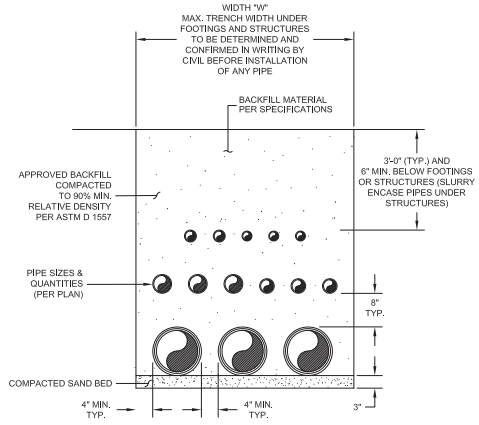
E) EQUIPMENT ROOM VENTING
- GENERAL VENTILATION PER MECH. ENGR. ROOM TEMP. RANGE 70° - 90° F.

WS WATER SUPPLY (BACKFLOW PROTECTED POTABLE SOURCE)

E ELECTRICAL FEED TO MCC PANEL IN POOL EQUIPMENT ROOM PER ELECTRICAL ENGINEER

FB FILTER BACKWASH STANDPIPE

PRIMARY PIPE CORRIDOR



SECTION SHOWN AS REFERENCE
- CONTRACTOR TO VERIFY ALL PIPING STUB OUTS

1 TYPICAL PIPE CORRIDOR
SCALE: 1" = 1'-0"

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OVERALL SITE PLAN

W004

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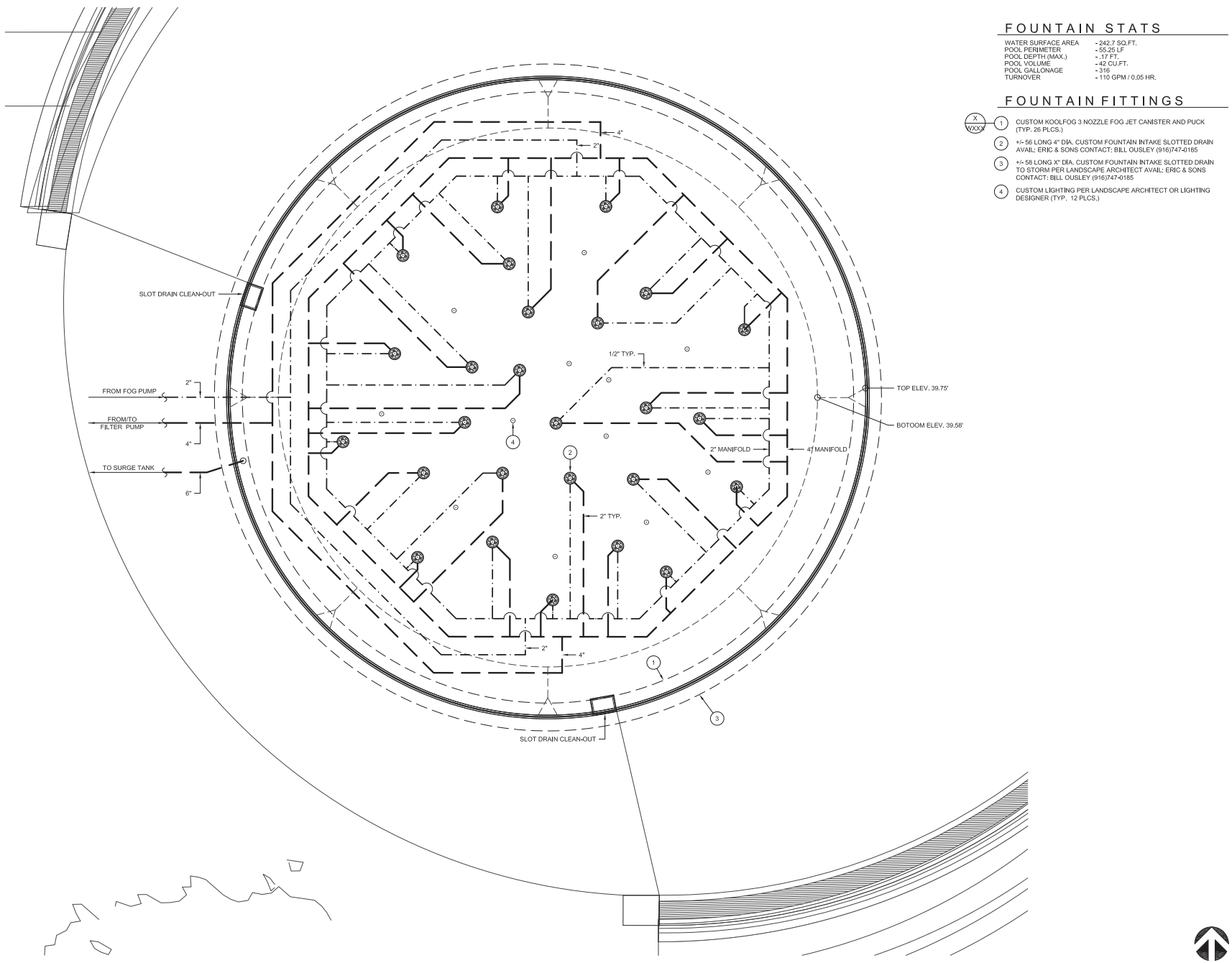

FOUNTAIN STATS

WATER SURFACE AREA	- 242.7 SQ.FT.
POOL PERIMETER	- 55.25 LF
POOL DEPTH (MAX.)	- .17 FT.
POOL VOLUME	- 42 CU.FT.
POOL GALLONAGE	- 316
TURNOVER	- 110 GPM / 0.05 HR.

FOUNTAIN FITTINGS

X WXXX

1. CUSTOM KOOLFOG 3 NOZZLE FOG JET CANISTER AND PUCK (TYP. 26 PLCS.)
2. +/- 56 LONG 4" DIA. CUSTOM FOUNTAIN INTAKE SLOTTED DRAIN AVAIL: ERIC & SONS CONTACT: BILL OUSLEY (916)747-0185
3. +/- 58 LONG X" DIA. CUSTOM FOUNTAIN INTAKE SLOTTED DRAIN TO STORM PER LANDSCAPE ARCHITECT AVAIL: ERIC & SONS CONTACT: BILL OUSLEY (916)747-0185
4. CUSTOM LIGHTING PER LANDSCAPE ARCHITECT OR LIGHTING DESIGNER (TYP. 12 PLCS.)

1 FOUNTAIN PIPING PLAN
SCALE: 1" = 1'-0"

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FOUNTAIN PIPING PLAN

W100

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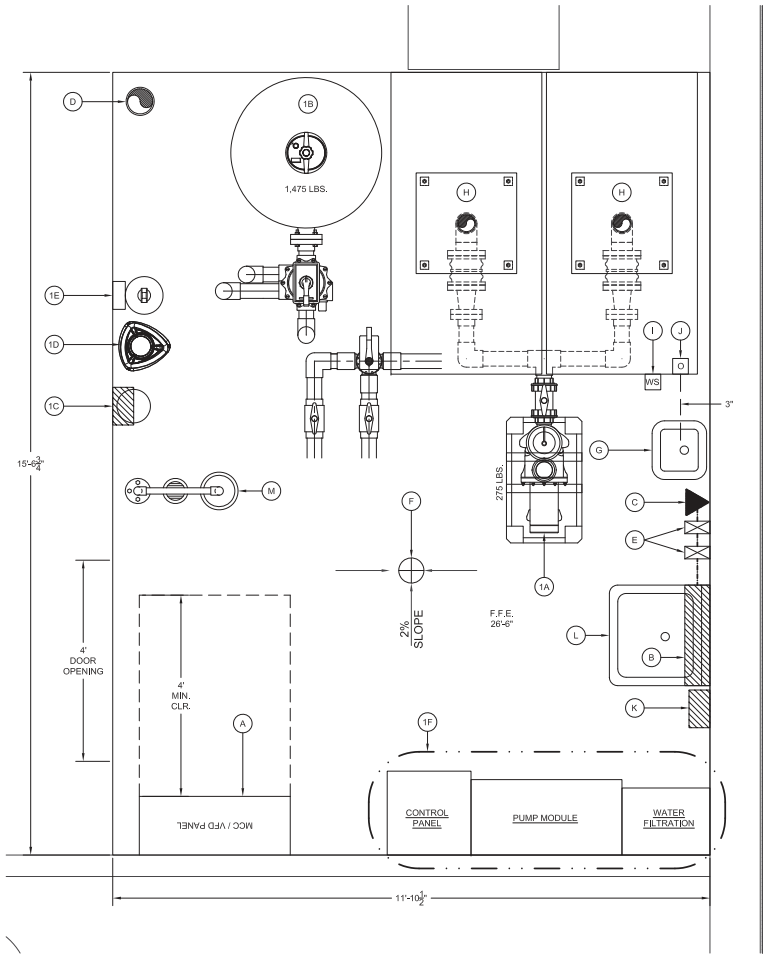

1 EQUIPMENT ROOM LAYOUT PLAN - LEVEL -1
SCALE: 1" = 1'-0"

FOUNTAIN

X WXXX	1A	BOOSTER PUMP - PENTAIR WHISPERFLOXF HIGH PERFORMANCE THERMOPLASTIC SELF-PRIMING PUMP MODEL #XFK-8, 2HP, 110GPM AT 63' TDH, 3450RPM, 3 PHASE, W/VFD
	1B	FILTER - PENTAIR TRITON SAND FILTER MODEL# TR-140C-3 WITH 7.06 SQ.FT. OF FILTER AREA W/ 3" MULTIPORT VALVE.
	1C	CHEMICAL CONTROLLER - BECSYS SYSTEM 3
	1D	CHLORINE SYSTEM - PULSAR INFINITY SYSTEM CHLORINATION SYSTEM MODEL #PS-1SD (MAX OUTPUT RATE OF 7 LBS/DAY)
	1E	CO2 FEED SYSTEM - EKO3 CO2 FEED SYSTEM 4-30 SCFH MODEL WITH ONE (1) 50LB CO2 TANK CHAINED TO WALL, SINGLE TANK REGULATOR, ONE (1) HEATER (100W, 120V, 60 Hz, 1PH)
	1F	MIST SYSTEM - KOOLFOG HIGH PRESSURE ATACAMA A5.0-DD FOG SYSTEM AVAIL: ROBERT @ KOOLFOG (760) 321-9203

MISCELLANEOUS EQUIPMENT LIST

SEE ELEC. DWGS.	A	MOTOR CONTROL PANEL COMPLETE WITH TIME CLOCKS, TRANSFORMERS, ETC.
	B	APPROVED PRESSURE REDUCING BACKFLOW PREVENTER PER MEP
	C	HOSE BIB (DOWNSTREAM OF BACKFLOW PREVENTER) PER MEP
	D	BACKWASH STANDPIPE WITH 140GPM x 5MIN. CAPACITY PER MEP
	E	WATER SUPPLY SOLENOID CONTROL VALVE (TYP. 2 PLCS.)
	F	FLOOR DRAINS PER MEP (NOT SHOWN REFER TO MEP DRAWINGS)
	G	FLOOR SINK PER MEP
	H	CHEM-TAINER 670 GAL. RECTANGULAR POLYETHYLENE SURGE TANK MODEL#R367260, 72"Lx36"Wx60"H, W/ 670 GAL. CHEM-TAINER TANK S.S. FRAME MODEL #R367248L (TYP. 2 PLCS.)
	I	WATER LEVEL SENSOR-WARRICK 3F4C ELECTRODE FITTING WITH FOUR(4) 3Z1B ADAPTER KITS FOUR(4) 3Z1A SUSPENSION WIRES (LENGTH AS REQUIRED) AND FOUR(4) 3W2 303SS ELECTRODES
	J	3" OVERFLOW STANDPIPE ROUTED TO FLOOR SINK
	K	WATER CHEMISTRY TEST KIT - TALOR PROFESSIONAL MODEL #1741-STR TO MEASURE A MIN. OF FREE CHLORINE, pH AND CYANURIC ACID AND BASE DEMAND.
	L	CALIFORNIA COMPLIANT UTILITY SINK- ELKAY SSP 10" BUDGET SERIES SINK WITH FAUCET (MODEL #LK940AT08L2H) W/ 24"L x 24"W x 12" DEEP BOWL SIZE & 3-1/2" DRAIN OPENING MODEL #B1C24X24X, AVAIL: ELKAY (800) 726-0553
	M	EMERGENCY SHOWER/EYEWASH

ROOM / EQUIPMENT NOTES

1) ALL EXTERIOR CAST IRON FITTINGS SHALL BE COATED WITH A HIGH GRADE ENAMEL PAINT FOR CORROSION PROTECTION.
2) PUMP SHALL BE CLOSE COUPLED, WITH MECHANICAL SEALS AND SEAL FLUSH LINE.
3) SUPPORT ALL PIPE TO ELIMINATE VISIBLE MOVEMENT DURING SYSTEM OPERATION.
4) VERIFY VOLTAGE AND PHASE PRIOR TO CONSTRUCTION, INSTALLATION AND PURCHASE OF EQUIPMENT.
5) REFER TO ELECTRICAL ENGINEER'S PLANS FOR EQUIPMENT SPACE LIGHTING.
6) DIELECTRIC SEPARATORS SHALL BE MADE TO MITIGATE CORROSION BETWEEN DISSIMILAR METALS.
7) INSTALL SYSTEM FLOW METERS IN A READILY VISIBLE LOCATION ON A RUN OF STRAIGHT PIPE IN EQUIPMENT ROOM (I.E. UNINTERRUPTED BY ANY FITTINGS), MINIMUM FIFTEEN (15) PIPE DIAMETERS, WITH 10 PIPE DIAMETERS CLEAR UPSTREAM AND 5 PIPE DIAMETERS DOWNSTREAM.
8) ALL PIPING WITHIN BUILDING STRUCTURE SHALL MEET ALL APPLICABLE CODES.
9) EQUIPMENT ROOM STRUCTURAL DESIGN BY OTHERS
10) REFER TO ACOUSTICAL ENGINEER NOTES FOR ALL VIBRATION ISOLATION/ NOISE REDUCTION REQUIREMENTS AND/OR PIPE WRAPPING .

EQUIPMENT ROOM DEMANDS

ELECTRICAL SUPPLY (208V OR 480V), 3 PHASE
TOTAL= 2HP + MISC. ELECT. LOAD

1) WATER = 20GPM OF POTABLE WATER SUPPLY @ 75 PSI
2) BACKWASH STANDPIPE WITH 140GPM CAPACITY FOR 5 MINUTE DURATION TO SANITARY SEWER
3) EQUIPMENT ROOM VENTING
   I) GENERAL VENTILATION PER MECH. ENGR. ROOM TEMP. RANGE 70° - 90° F.

   REQUIREMENTS:
   1. ROOM EXHAUST DUCTS SHALL BE SEPARATE; NO TIE-INS TO DAYLIGHT POINT) TERMINATION OF EACH DUCT SHALL BE SEPARATED BY 6 FT.
   2. DUCT MATERIAL SHALL BE CORROSION RESISTANT AGAINST CHEMICALS IN SPACE BEING VENTED
6) MISCELLANEOUS
   - PROVIDE FLOOR DRAINS & FLOOR SINK
   - PROVIDE ELECTRICAL CONVENIENCE RECEPTACLES
   - PROVIDE WATER SUPPLY & SEWER CONNECTION FOR EMERGENCY SHOWER/EYEWASH, UTILITY SINK & FLOOR SINK
   - PROVIDE EQUIPMENT ROOM LIGHTING

EQUIPMENT AVAILABILITY

1) PUMPS FILTRATION EQUIPMENT - KSI (714) 754-4044
2) MCC CONTROL PANEL - RSD TOTAL CONTROLS (949) 380-7878 CONTACT: ALLAN PEARSON

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Revision #	Revision Description	Date

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Date: September 18, 2019
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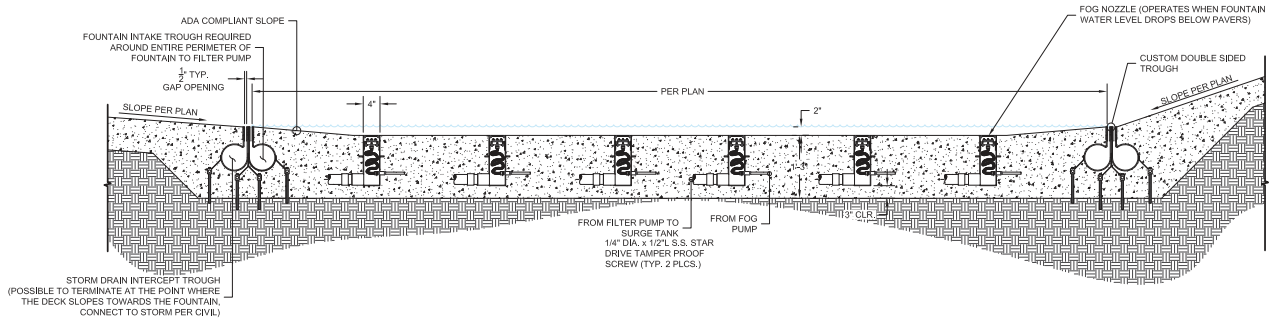
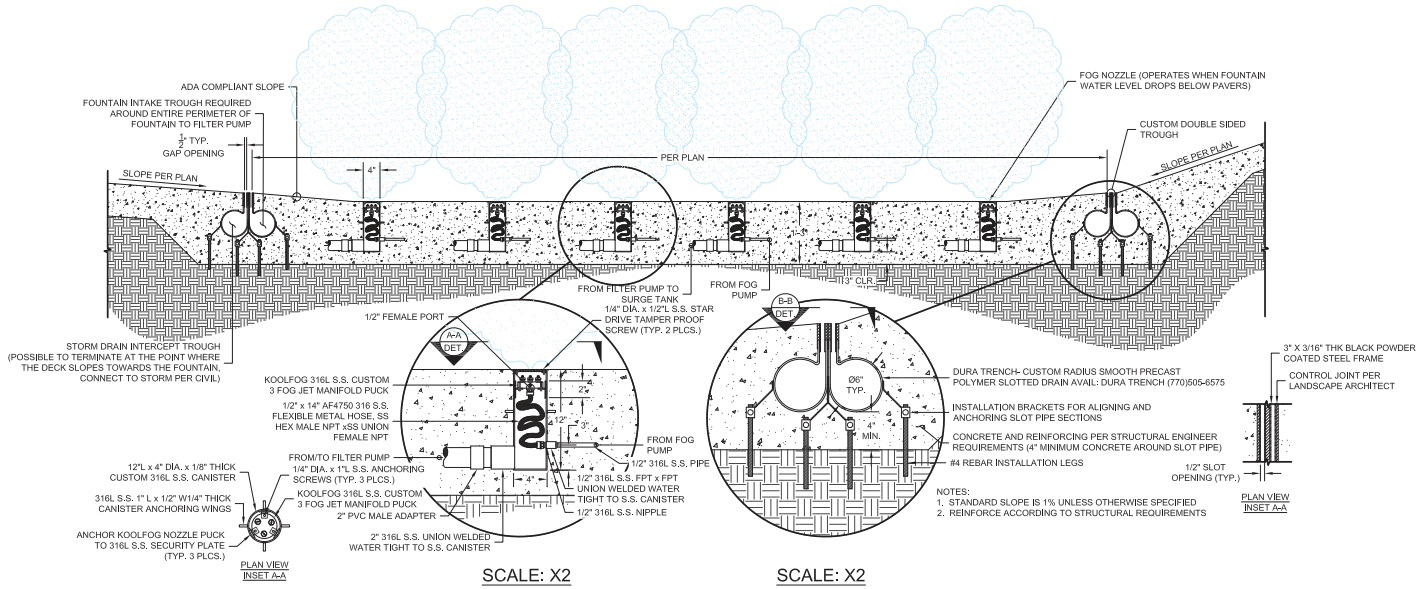
EQUIPMENT ROOM LAYOUT PLAN
W200

PRELIMINARY PRICING SET



2 OVERALL CROSS SECTION - FLOOD MODE
SCALE: 1" = 1'-0"



1 OVERALL CROSS SECTION - FOG MODE
SCALE: 1" = 1'-0"

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OVERALL CROSS SECTIONS
W400

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