

DESCRIPTION	OWNER / DEVELOPER	ARCHITECT	CRYSTAL FOUNTAINS / AQUATIC DESIGN	STRUCTURAL ENGINEER	MECHANICAL ENGINEER	ELECTRICAL ENGINEER	OTHER SPECIALISTS
<b>SCHEMATIC DESIGN</b>							
CONCEPT WORKSHOP							
SKETCHES OF CONCEPT							
PRESENTATION PACKAGE, IMAGES OF EFFECT AND FINISHES							
PRELIMINARY STORYBOARDS FOR ANIMATED EFFECTS							
VIDEO OF SIMILAR EFFECTS							
COMPUTER SIMULATIONS							
PRELIMINARY ARCHITECTURAL REQUIREMENTS							
FINAL CONCEPT PRESENTATION							
COORDINATION WITH DESIGN TEAM							
PRELIMINARY ELECTRICAL CONTROL SYSTEM SELECTION							
REVIEW OF DESIGN INTENT							
PRELIMINARY M&E ENGINEERING							
PRELIMINARY STRUCTURAL							
PRELIMINARY ARCHITECTURAL REQUIREMENTS							
PRESENTATION OF BUDGET COSTS FOR WATER FEATURE STRUCTURES, WATERPROOFING, FINISHES, BASIC SERVICES							
PRESENTATION OF BUDGET COSTS FOR SPECIALIST MECHANICAL & ELECTRICAL WORK							
BASIC SERVICE REQUIREMENTS TO PLANT ROOM							
OPERATIONAL PARAMETERS							
<b>DESIGN DEVELOPMENT</b>							
<b>PLANT ROOM</b>							
MAIN MECHANICAL ROOM STRUCTURE & SURGE TANK/RESERVOIR, SUMP PIT AND RECESSED CHAMBERS							
WATER SUPPLY & DISCONNECTION TO MAIN PLANT ROOM							
WATER SOFTENER (SUBJECT TO WATER ANALYSIS)							
ELECTRICAL POWER SUPPLY TO MAIN PLANT ROOM							
PLANT ROOM LIGHTING MAIN PLANT ROOM							
FLOOR DRAINAGE OF MAIN PLANT ROOM							
DRAINAGE CONNECTION POINT IN MAIN PLANT ROOM							
WATERPROOFING & SCREED LEVELING OF MAIN PLANT ROOM							
DATA COMMUNICATION TO MAIN PLANT ROOM							
VENTILATION TO MAIN PLANT ROOM							
BMS (BUILDING MANAGEMENT SYSTEM) TO MAIN PLANT ROOM							
SPRINKLER/ALARMS/LIFE SAFETY TO MAIN PLANT ROOM							
HOUSE KEEPING PADS TO MAIN PLANT ROOM (UNDER PUMPS & CONTROL PANELS)							
ANIMATION AND WATER TREATMENT PUMPS IN MAIN PLANT ROOM							
ANTI VIBRATION SLEEVES, VALVES, UNIONS & FLANGES (SEE PROCESS FLOW DIAGRAM)							
CHECK VALVES & PRESSURE GAUGES							
STRAINERS - SUCTION & FINE MESH DISCHARGE							
WATER TREATMENT SAND FILTER							
SCHEMATIC PIPE WORK DISTRIBUTION FOR FOUNTAIN ANIMATION & WATER TREATMENT IN PLANT MAIN ROOM							
MECHANICAL PIPE PENETRATION SEALS THROUGH RESERVOIR & PLANT ROOM WALLS							
SUCTION & INLET PIPE INTERCONNECTIONS FROM PLANT ROOM TO FEATURES (INTEGRATION TO SITE CONDITIONS)							
MAIN LOAD CENTER POWER PANEL IN MAIN PLANT ROOM							
FOUNTAIN SHOW CONTROL ANIMATION PANEL FOR MAIN PLANT ROOM							
MOTOR CONTROL CENTER + FREQUENCY DRIVES ON SPECIFIED FEATURE PUMPS IN MAIN PLANT ROOM							
WIRE TRAY, CONDUIT AND CABLES IN MAIN PLANT ROOM							
INTERCONNECTION CONDUIT & WIRES TO POOL (SCHEMATIC ROUTING)							
INTERCONNECTION CONDUIT & WIRES TO POOL (INTEGRATION INTO SITE CONDITIONS)							
SUBMERSIBLE LIGHT TRANSFORMATION IN PLANT ROOM							
WATER LEVEL CONTROLS IN SURGE TANK/RESERVOIR							
PNEUMATIC PUMPS, TANKS, FILTERS, VALVES, DISTRIBUTION PIPES AND MANIFOLDS (IF AIR SYSTEMS APPLICABLE)							
FIRE, PROPANE, NATURAL GAS CONNECTION AND DISTRIBUTION (IF FIRE EFFECTS APPLICABLE)							
AUDIO CONTROL AND NETWORK MANAGEMENT (IF MUSICAL FOUNTAIN APPLICABLE)							
PIPE WORK SUPPORT AND ROUTING STRUCTURES							
HATCH / DOOR ACCESS							
WIND SENSOR - DATA COMMUNICATION FROM SENSOR TO PLANT ROOM							
SUPPORT STRUCTURES, GRATING, RAILINGS IN PLANT ROOM							
<b>POOLS</b>							
POOL STRUCTURE & CORING							
WATERPROOFING & SCREED LEVELING							
POOL FINISHES, TILE, COPING, SURROUND RUN OUTS							
CONCEALMENT PAVERS OVER DISTRIBUTION INLETS							
POOL SUCTION/INLET FITTINGS IN POOLS							
POOL DRAINS & OVERFLOWS							
MANIFOLDING/PIPEWORK IN POOLS							
VALVES IN POOLS							
NOZZLES & SWIVELS IN POOLS LAYOUT							
SEQUENCE DEVICES IN POOLS							
ELECTRICAL PENETRATION FITTINGS							
EARTH GROUNDING ON ALL INSERT FITTINGS IN POOLS							
SUBMERSIBLE JUNCTION BOXES IN POOLS							
WATER LEVEL SENSORS IN POOL							
LIGHT FIXTURES IN POOL							
AUDIO SYSTEM SPEAKERS AND SUPPORT STRUCTURES AROUND POOLS (APPLICABLE TO MUSICAL FEATURES)							
ADJUSTABLE WEIRS, SUPPLY TROUGH, CUSTOM PRODUCTS							
AIR MANIFOLDS AND DISTRIBUTION TO ATMOSPHERIC PRESSURE (IF REQUIRED)							
CONCEALMENT OF REMOTE SENSORS							
REMOTE TRANSFORMERS							
FIRE, PROPANE, NATURAL GAS CONNECTION AND DISTRIBUTION (FOR FIRE EFFECTS)							
SUPPORT STRUCTURES OR SUSPENDED STRUCTURES AND DETAILS							
AREA DRAINS, GRADES, SURROUNDING ARCHITECTURE AND LANDSCAPE - RUN OUT OR SPLASH ZONES							
CATT FIVE, DEAD MAN SWITCH, REMOTE ACCESS POINT							
AQUATIC LIFE, BIOLOGICAL SYSTEMS							
PNEUMATIC DEVICE AND DISTRIBUTION SYSTEMS (IF AIR CONTROL SYSTEMS APPLICABLE)							
VACUUM LINES							
MAINTENANCE ACCESSORIES							
INTERACTIVE SENSORS							
REMOTE SENSORS - DATA COMMUNICATION TO PLANT ROOM							
WIND SENSOR - DATA COMMUNICATION TO PLANT ROOM							
SUPPORT STRUCTURES, GRATING, RAILINGS							
CUSTOM WATER SCULPTURAL ELEMENTS							
SPLASH SUPPRESSION DEVICES							
TECHNICAL REVIEW							
BUDGET CONFIRMATION OF M&E, STRUCTURAL, WATERPROOFING, ETC.							
LOCAL STAMPS AND CERTIFICATION							
<b>APPLICATIONS TESTING (REQUIRED FOR CUSTOM WATER EFFECTS)</b>							
APPLICATION TEST PARAMETERS - DESIGN INTENT							
MOCK UP STRUCTURES AND DETAILS FOR CONSTRUCTION							
MECHANICAL AND ELECTRICAL REQUIREMENTS							
MATERIALS FINISHES							
TESTING							
TEST REPORT							
TEST VIDEO AND PHOTO'S							
TEST DEMONSTRATIONS AND WORKSHOPS							
TEST RESULTS PRESENTATION							
<b>CHOREOGRAPHY &amp; PROGRAMMING &amp; COMMISSIONING FOR ANIMATED WATER FEATURES</b>							
STORYBOARDS AND ANIMATION BRIEF							
PRESENTATION OF ANIMATION BRIEF AND APPROVALS							
ANIMATION CONTROL SHOW PROGRAMMING							
MUSICAL INTERFACE - SONG SELECTION							
SPECIALTY INTERFACE - FIRE EFFECTS							
FINAL ADJUSTMENTS TO PROGRAMS ON SITE & APPROVAL OF SHOWS							