

SECTION 131100
SWIMMING POOLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes: The work specified in this Section includes, but shall not be limited to, the following:
 - 1. [_____]

1.3 ACTION SUBMITTALS

- A. Product Data: Submit product data showing material proposed. Submit sufficient information to determine compliance with the Drawings and Specifications. Product data shall include, but shall not be limited to, manufacturer's technical data and installation instructions for each piece of equipment.
- B. Shop Drawings: Submit shop drawings for each product and accessory required. Include information not fully detailed in manufacturer's standard product data, including, but not limited to, equipment and equipment layout.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: Submit qualification data for firms and persons specified in Quality Assurance Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names of architects and owners, and other information specified.
- B. Operation and Maintenance Data: Submit operation and maintenance data for swimming pools to include in operation and maintenance manuals specified in Division 01 "General Requirements."

1.5 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Manufacturer Qualifications: Manufacturer shall be a firm engaged in the manufacture of swimming pools of types and sizes required, and whose products have been in satisfactory use in similar service for a minimum of five years.
 - 2. Installer Qualifications: Installer shall be a firm that shall have a minimum of five years of successful installation experience with projects utilizing swimming pools similar in type and scope to that required for this Project, and shall be approved by the manufacturer.
- B. Regulatory Requirements: Comply with applicable requirements of the laws, codes, ordinances, and regulations of Federal, State, and local authorities having jurisdiction. Obtain necessary approvals from such authorities.
 - 1. Submit the Drawings and Specifications to the local and State Department of Health as required to obtain approval for construction and pay applicable fees for such review charged by those agencies.

- C. Single Source Responsibility: Obtain swimming pool components from a single source with resources to produce products of consistent quality in appearance and physical properties without delaying the work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the Project site in supplier's or manufacturer's original wrappings and containers, labeled with supplier's or manufacturer's name, material or product brand name, and lot number, if any.
- B. Store materials in their original, undamaged packages and containers, inside a well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Take field measurements prior to fabrication of the work and preparation of shop drawings, to ensure proper fitting of the work. Show recorded measurements on final shop drawings. Notify the Owner and the Architect, in writing, of any dimensions found which are not within specified dimensions and tolerances in the Contract Documents, prior to proceeding with the fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the work.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design: Items specified are to establish a standard of quality for design, function, materials, and appearance. Equivalent products by other manufacturers are acceptable. The Architect will be the sole judge of the basis of what is equivalent.

2.2 MATERIALS

- A. Concrete Formwork: See Section 031000 "Concrete Forming."
- B. Concrete Reinforcing: See Section 032000 "Concrete Reinforcing."
- C. Concrete: See Section 033000 "Cast-In-Place Concrete."
- D. Glazed Ceramic Tile: Provide frost proof glazed ceramic tile in selected colors, 2 inch by 2 inch by 1/4 inch size. Provide tiles of same type and size having white glaze with black fired-in numbers where required for depth markers. See Section 093000 "Tiling."
- E. Bronze Depth Marker: Provide cast bronze, 6 inch by 6 inch by 1/4 inch size, with deeply routed number and etched surface, and having concealed lugs for casting in mortar.

2.3 EQUIPMENT

- A. Fill Spout: Provide fresh water fill, to be plumbed directly into return line of filter system.
- B. Circulation System: Items shall be furnished by a single supplier. Filter shall be sand type sized to be capable of filtering entire body of water in a six hour period at a maximum filter rate of 16 gpm per square foot of filter area.
 - 1. Basis of Design: "Hi-Rate Filter", with 36 inches of sand, Baker Hydro.

- C. Pool Filter: Sand media shall be high rate pressure type. The filter plant, when operated at 20 gpm per square foot of filtering area, shall have a turnover time of 39 minutes. Filter plant shall consist of filter unit, form piping, filter control valve, injection-molded hydraulic distribution system, and lower collection manifold. The design shall permit reverse flow backwashing by simple manipulation of the control valve handle. The filter control valve shall be fully ported with positive sealing gasket and rotary plug. Provide stainless steel band clamps for connecting valve to tank so as to permit its easy removal.
 - 1. Basis of Design: "30 Inch Hi-Rate Sand", Baker Hydro.
- D. Sand Filter Media: Sand shall be practically pure silica, free from appreciable quantities of foreign material, and particles shall be round or angular and of flat or elongated shape, and shall have an effective size of 0.45 mm to 0.55 mm with uniformity coefficient of 1.6 maximum.
- E. Flow Meter: Provide impact type with clear plastic Rotameter tube, permanently etched in gallons per minute. Metering range shall be a minimum of 1.5 times respective filter rate.
- F. Swimming Pool Chlorinator: Provide as required to conform to applicable laws and regulations.
- G. Swimming Pool Circulating Pump: Provide 24 horsepower, 220 volt, single-phase unit with 110 cubic inch capacity hair and leaf strainer basket with 2 inch suction and discharge ports.
 - 1. Basis of Design: "Super Pump", Hayward.
- H. Main Drain: Provide 8 inch cycloc body with anti-vortex cover, and 2 inch bottom connection and plug.
 - 1. Basis of Design: "SP-1044AV", Hayward.
- I. Wall Type Return: Provide fully adjustable type.
 - 1. Basis of Design: "SP-1419 B, C, D, E Eye Hydro Stream", Hayward.
- J. Skimmer: Fabricate skimmer of cycloc, automatic floating weir type with lid, lid ring, and basket. Provide one for each 500 square feet of pool area or less.
 - 1. Basis of Design: "No. 50-252-1051", Baker Hydro.
- K. Main Pool Heater: Unit shall be gas-fired; of sufficient capacity to raise the pool water 3/4 °F per hour and maintain it at 80 °F.
 - 1. Basis of Design: As manufactured by Teledyne-Laars.
- L. Piping: Provide plastic polyvinyl chloride Type 1-220, Schedule 40 IPS, Class 135 with heavy weight Schedule 40 fittings of same material.
- M. Grab Rail: Provide Type 304 polished stainless steel 1-3/4 inch nominal outside diameter tube rails. Fasten to deck with wedge anchors.
 - 1. Basis of Design: "Fig. 4F4H-100", Swimquip, Inc.
- N. Handrail: Provide 2 inch diameter stainless steel. Provide custom type fabricated of Type 304 stainless steel tube 1.9 inch outside diameter with 0.065 inch wall thickness and polished finish.
 - 1. Basis of Design: As manufactured by Swam Manufacturing Corp.
- O. Underwater Light: Provide underwater light with heavy gage stainless steel shell, 3/4 inch conduit connection, and 115 volt 300 watt light.
 - 1. Basis of Design: "Starlite #SP-555", Hayward.
- P. Junction Box: Install code-approved J-box, with chrome cover if visible from pool area.
- Q. Test Kit: Provide duplex type for testing pool water to determine pH in range of 6.8 to 8.4 and residual chlorine content in range of 0.2 to 2.0. Provide at least four comparator color standards for colorimetric determination.
 - 1. Basis of Design: "Model H", Taylor.

- R. Vacuum Cleaner: Rated for 100 gpm using a 1/2 horsepower motor, with a 25 foot long suction hose and 12-1/2 foot long discharge hose; both of 1/2 inch diameter.
- S. Leaf Skimmer: Provide cast aluminum handle bracket with stainless steel tube frame and fiberglass mesh screen.
 - 1. Basis of Design: "12640", Swimquip, Inc.
- T. Pool Brush: Provide curved end type 18 inches long, having floprene plastic bristles.
 - 1. Basis of Design: "12512", Swimquip, Inc.
- U. Telescopic Handle: Provide 1-1/4 inch diameter anodized aluminum tube 16 feet long.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions under which the work is to be installed, and notify the Contractor in writing, with a copy to the Owner and the Architect, of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.
 - 1. Beginning of the work shall indicate acceptance of the areas and conditions as satisfactory by the Installer.

3.2 INSTALLATION

- A. Install equipment in accordance with the manufacturer's written instructions, reviewed product data, and final shop drawings.

3.3 ADJUSTING

- A. Adjust equipment for proper operation.

3.4 DEMONSTRATION

- A. Demonstrate operation of equipment to the Owner's personnel.

3.5 PROTECTION

- A. Provide final protection and maintain conditions in a manner acceptable to the Installer, that shall ensure that the swimming pools and spas shall be without damage at time of Substantial Completion.

END OF SECTION 131100