

Technical Specifications

for Bid 602

OXNARD HIGH SCHOOL SWIMMING POOL REPAIR

Oxnard Union High School District

309 South K Street
Oxnard, California 93030

Jones & Madhavan
100 East Thousand Oaks Boulevard, Suite 211
Thousand Oaks, California 91360

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SECTION 01001

BASIC REQUIREMENTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including Supplemental General Provisions and Division 1 Specifications sections, apply to this section.

1.2 PROJECT DESCRIPTION

- A. The project consists of repairs to an existing swimming pool and pool deck.
- B. Work Included:
 - 1. Furnish all labor, equipment, appliances, materials, and perform operations required to complete work.
 - 2. Bring questionable or obscure items, apparent conflicts between plans, specifications, governing codes, or utilities regulations to the attention of the Owner during bidding period.
 - 3. By submitting a proposal, the Contractor represents that he has made a thorough examination of the site of the work and all existing conditions and limitations and that he has examined the contract documents in complete detail.

1.3 ACCESS ROADS

- A. Existing on-site roads may be used for construction traffic.

1.4 APPLICATION FOR PAYMENT

- A. In accordance with General Provisions.

1.5 BARRIERS AND FENCING

- A. Provide barriers and fencing as necessary to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage.

1.6 CHANGE PROCEDURE

- A. The Owner may advise Contractor of minor changes in the Work not involving an adjustment to Contract Sum or Contract Time by issuing Supplemental Instructions.
- B. The Owner may issue a Proposal Request which includes a detailed description of a proposed change with supplementary or revised Drawings and Specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. The Contractor shall prepare and submit an estimate within 7 days.
- C. The Owner may issue a Construction Change Directive, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum or Contract Time. The Contractor shall promptly execute the change.

- D. The Contractor may propose changes by submitting a request for change to the Owner, describing the proposed change and its full effect of the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum and contract Time with full documentation and a statement describing the effect on Work by separate or other contractors.
- E. The Owner will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

1.7 CONFERENCES AND MEETINGS

- A. In accordance with General Provisions.

1.8 CONSTRUCTION SCHEDULES

- A. In accordance with General Provisions.

1.9 CONTRACT CLOSE-OUT PROCEDURES

- A. In accordance with General Provisions.
- B. Submit all maintenance, operation, and warranty information with final Application for Payment.

1.10 CONTRACTOR USE OF PREMISES

- A. In accordance with General Provisions.

1.11 COORDINATION

- A. In accordance with General Provisions.

1.12 FIELD OFFICE

- A. Provide and maintain office to be weather tight, with lighting, electrical outlets, and ventilating equipment, and equipped with sturdy furniture and drawing display table.

1.13 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.14 INSPECTION AND TESTING LABORATORY SERVICES

- A. Owner will employ and pay for the services of an independent firm to perform required inspection and testing.
- B. Contractor shall pay for re-testing required because of non-conformance to specified requirements.

1.15 OPERATION AND MAINTENANCE DATA

- A. Submit four sets prior to final inspection, bound in 8-1/2 x 11 inch text pages, three side ring binders with durable plastic covers.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS" and title of project.

- C. Internally subdivide the binder contents with permanent page dividers, logically organized, with tab titles clearly printed under reinforced laminated plastic tabs.
 - D. Contents:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions, arranged by system.
 - 3. Part 3: Project documents and certificates.
- 1.16 PARKING
- A. Six existing on-site parking spaces may be used for construction personnel.
- 1.17 PROGRESS CLEANING
- A. Maintain construction area free of waste materials, debris, and rubbish.
- 1.18 PRODUCT OPTIONS
- A. In accordance with General Provisions.
- 1.19 PROTECTION OF INSTALLED WORK
- A. Protect installed Work and provide special protection when required.
- 1.20 QUALITY ASSURANCE/CONTROL OF INSTALLATION
- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship.
 - B. Comply with product manufacturers' instructions.
 - C. Comply with specified standards as a minimum quality except when more stringent tolerances or codes indicate higher standards.
- 1.21 RECORD DOCUMENTS
- A. In accordance with General Provisions.
- 1.22 REFERENCES
- A. Conform to reference standard by date of issue current as of the date of the Contract Documents.
 - B. Should specified reference standard conflict with the Contract Documents, the Contractor shall request clarification from Owner before proceeding.
- 1.23 SCHEDULE OF VALUES
- A. Submit Schedule of Values within 15 days after date of Owner-Contractor Agreement.
- 1.24 SECURITY
- A. Provide security and facilities as necessary to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

1.25 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide Products, spare parts, maintenance and extra materials in quantities specified in individual specification sections.
- B. Deliver to Project site and place in location as directed; obtain receipt prior to final payment.

1.26 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight enclosures.
- B. For exterior storage of fabricated products, place on sloped supports, above ground.
- C. Provide off-site storage and protection when site does not permit on-site storage or protection.

1.27 SUBMITTAL PROCEDURES

- A. In accordance with General Provisions.

1.28 SUBSTITUTIONS

- A. In accordance with General Provisions.

1.29 TEMPORARY ELECTRICITY

- A. Connect to existing power services. Power consumption shall not disrupt Owner's need for continuous service. The Owner will pay for power consumed.

1.30 TEMPORARY LIGHTING

- A. In accordance with General Provisions.

1.31 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain sanitary facilities as necessary. Maintain in a clean and sanitary condition.

1.32 TEMPORARY WATER SERVICE

- A. Connect to existing water source. Water consumption shall not disrupt the Owners need for continuous service. The Owner will pay for water consumed.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 02055
SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes removal of designated swimming pool components.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 PREPARATION

- A. Provide, erect and maintain temporary barriers and security devices as necessary.
- B. Notify and coordinate with owners of adjacent properties if work may affect their property, potential noise, utility outage, or disruption.
- C. Prevent movement or settlement of adjacent structures.
- D. Protect existing landscaping materials, structures, building components, and pool components which are not indicated to be demolished.

3.2 DEMOLITION REQUIREMENTS

- A. Conduct demolition to minimize interference with adjacent structures.
- B. Conduct operations with minimum interference to public or private accesses.
- C. Maintain protected egress and access at all times. Do not close or obstruct roadways and sidewalks without permits.
- D. Cease operations and notify Owner immediately if adjacent structures appear to be in danger.

3.3 SELECTIVE DEMOLITION

- A. Demolish and remove designated pool components in an orderly and careful manner.
- B. Protect concrete saw cut edges during construction and remove all chips prior to installing new work.
- C. Remove buried pool piping and conduit complete.
- D. When buried pool piping and conduit is located under slabs that are not demolished, cut and cap at edge of demolished slab.
- E. Backfill excavated areas caused as a result of demolition.

- F. Rough grade and compact areas affected by demolition to maintain existing grades and contours.
- G. Chip and remove pool plaster and tile finish completely to expose pool concrete surface.
- H. Protect existing tile surface indicated to remain in place.

3.4 CLEAN UP

- A. Remove demolished materials from site as work progresses.

3.5 SCHEDULE OF PRODUCTS TO BE REMOVED AND REUSED

- A. Remove, store, and protect the following materials and equipment for reuse:
 - 1. Stair handrails.
 - 2. Grab rails.
 - 3. Main drain grates.
 - 4. 1-Meter diving stand and board.
 - 5. 3-Meter diving stand and board.
 - 6. Starting platforms.

END OF SECTION

SECTION 02300

EARTHWORK

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes trenching, backfilling, and compacting.

1.2 REQUIREMENTS

- A. All work shall conform to the latest edition of the "Greenbook" Standard Specifications for Public Works Construction.

PART 2 PRODUCTS

2.1 SOIL MATERIALS

- A. Subsoil: Excavated material, graded free of lumps larger than 6 inches, rocks larger than 3 inches, organic material and debris.

2.2 FILL MATERIALS

- A. Aggregate Base: Crushed gravel conforming to Caltrans Standard Specifications for 3/4 inch Class 2 aggregate base material.
- B. Sand: Natural river or bank sand; free of silt, clay, loam, friable or soluble materials, and organic matter.
- C. Subsoil: Reused, free of rock larger than 3 inch size, and debris.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Notify Owner of unexpected subsurface conditions and discontinue affected work in area until notified to resume work.
- C. Identify and flag known utility locations. Notify utility company and Owner to remove and relocate utilities.
- D. Maintain and protect existing utilities to remain.
- E. Verify foundation or pit walls are braced to support surcharge forces imposed by backfilling operations.

3.2 PROTECTION OF ADJACENT WORK

- A. Underpin adjacent structures which may be damaged by excavation work, including service utilities and pipe chases.
- B. Grade excavation top perimeter to prevent surface water run-off into excavation or to adjacent properties.

3.3 SUBSOIL EXCAVATING

- A. Do not remove wet subsoil.
- B. If present, remove groundwater by pumping to keep excavations dry.
- C. Excavate subsoil as required for building foundations, swimming pool, construction operations, and other Work.
- D. Slope banks to angle of repose or less, until shored.
- E. Excavation shall not interfere with 45 degree bearing splay of any foundation.
- F. After removing existing concrete deck slab, exposed soil shall be scarified to a minimum depth of 12 inches and rolled with compaction equipment to 90% maximum density.
- G. Correct unauthorized excavation at no extra cost to Owner.
- H. Fill over-excavated areas under structure bearing surfaces in accordance with direction by Owner.
- I. Stockpile subsoil on site and remove excess subsoil not being reused from site.

3.4 TRENCHING

- A. Excavate for storm drain, water, and electrical conduit. Offset utility trenches horizontally and vertically as required by code.
- B. Excavate for swimming pool piping.
- C. Cut trenches sufficiently wide to enable installation of utilities and allow inspection.
- D. Hand trim excavation and leave free of loose matter.
- E. Support pipe and conduit during placement and compaction of bedding fill.
- F. Backfill trenches to required contours and elevations.
- G. Place and compact fill materials as for Backfilling.

3.5 BACKFILLING

- A. Backfill areas to contours and elevations. Use unfrozen and unsaturated materials.
- B. Backfill systematically, as early as possible, to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.

- C. Place and compact fill materials in continuous layers not exceeding 6 inch loose depth
- D. Employ a placement method so not to disturb or damage foundations, pool walls or utilities in trenches.
- E. Maintain optimum moisture content of backfill materials to attain required compaction density.
- F. Backfill against supported foundation walls. Backfill simultaneously on each side of unsupported foundation walls until supports are in place.
- G. Compact all areas to a minimum of 90 percent maximum density.
- H. Slope grade away from building and perimeter walls minimum 2 inches in 10 ft, unless noted otherwise.

3.6 TOLERANCES

- A. Top Surface of Exposed Subgrade: Plus or minus one inch.
- B. Top of Topsoil: Plus or minus 1/2 inch.

END OF SECTION

SECTION 03050

BASIC CONCRETE MATERIALS AND METHODS

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes formwork, reinforcement, accessories, cast-in place concrete, finishing and curing.
- B. Concrete work shall conform to ACI 301 except as modified below.

1.2 SUBMITTALS

- A. Product Data: Submit for admixtures, reinforcing steel, epoxy, non-shrink grout, and waterstops.
- B. Design Data: Submit mix design.
- C. Field Mock-Up: Provide 24 inch square minimum samples of pool deck slab with broom finish and tooled control joint for approval prior to beginning work.

1.3 QUALITY ASSURANCE

- A. Construct and erect concrete formwork in accordance with ACI 301 and 347.
- B. Perform concrete reinforcing work in accordance with ACI 301, ACI 318, and Manual of Practice.
- C. Perform cast-in-place concrete work in accordance with ACI 301.

PART 2 PRODUCTS

2.1 FORM MATERIALS AND ACCESSORIES

- A. Form Materials: At the discretion of the Contractor.
- B. Plywood: PS 1, MDO, Douglas Fir species; Structural 1 grade; sound undamaged sheets with clean true edges.
- C. Lumber: Douglas Fir species; #1 grade.
- D. Form Ties: Snap-off, glass fiber type of fixed length, or cone type.
- E. Form Release Agent: Colorless mineral oil which will not stain concrete or impair natural bonding characteristics of coating intended for use on concrete.
- F. Formed Construction Joints for Slab-on-Grade as shown on drawings.

2.2 REINFORCEMENT MATERIALS

- A. Reinforcing Steel: ASTM A615, 60 ksi yield grade; deformed billet steel bars, plain finish.
- B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for support of reinforcing.

- C. Fabricate concrete reinforcing in accordance with ACI 315.

2.3 CONCRETE MATERIALS

- A. Cement: ASTM C150, High Sulfate Resistant-Type V Portland type.
- B. Fine and Coarse Aggregates: Use 1 inch coarse aggregate conforming to ASTM C-33 Size #5 and comply with Title 24, Section 1903A.3.
- C. Water: Clean and not detrimental to concrete.
- D. Air Entrainment Admixture: ASTM C260.

2.4 CONCRETE MIX

- A. Mix and deliver concrete in accordance with ASTM C94.
- B. Provide concrete with 4,000 psi compressive strength with a maximum slump of 4 inches for all flatwork.
- C. Select mix design proportions for normal weight concrete in accordance with Title 24, Section 1905.2.

2.5 COMPOUNDS, HARDENERS AND SEALERS

- A. Curing Compound: ASTM C309.
- B. Absorptive Mats: ASTM C171.

2.6 EPOXY

- A. Cartridge type two-component 100% solids epoxy based system dispensed and mixed through a static mixing nozzle supplied by the manufacturer and meeting requirements of ASTM C-881 Type I and IV with 14,830 psi minimum compressive strength. The epoxy shall be tested for use in cracked and uncracked concrete per ICC-ES AC308.
- B. Model SET-XP manufactured by Simpson Strong -Tie.

2.7 NON-SHRINK GROUT

- A. Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents with minimum compressive strength of 9,000 psi at 28 days and suitable for applications from featheredge to 4-inch depth.
- B. Model Rapid Set Cement All manufactured by CTS Cement Manufacturing.

PART 3 EXECUTION

3.1 FORMWORK ERECTION

- A. Erect formwork, shoring and bracing to achieve design requirements.
- B. Provide bracing to ensure stability of formwork.

- C. Apply form release agent to formwork prior to placing form accessories and reinforcement.
- D. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings which are affected by agent.
- E. Clean forms as erection proceeds, to remove foreign matter.

3.2 INSERTS, EMBEDDED COMPONENTS, AND OPENINGS

- A. Provide formed openings where required for work to be embedded in and passing through concrete members.
- B. Coordinate work of other sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.
- C. Install concrete accessories straight, level, and plumb.
- D. Place formed construction joint device in floor slabs as shown on the plans.
- E. Place joint filler as shown on the plans.
- F. Install expanding rubber waterstop with minimum 1/4 x 1/2 inch bead size. Maintain minimum 2 inch concrete coverage. Cure 24 hours minimum before placing concrete.

3.3 REINFORCEMENT PLACEMENT

- A. Place reinforcement, supported and secured against displacement.
- B. Ensure reinforcing is clean, free of loose scale, dirt, or other foreign coatings.

3.4 PLACING CONCRETE

- A. Prepare previously placed concrete as indicated.
- B. Place concrete continuously between predetermined expansion, control and construction joints. Do not break or interrupt successive pours such that cold joints occur.
- C. Place pool deck slabs in every-other lane-placement or tooled pattern indicated.

3.5 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads. Comply with Title 24, Section 1906A.2.
- B. Remove formwork progressively and in accordance with code requirements.

3.6 FLOOR FINISHING

- A. Finish concrete floor surfaces in accordance with ACI 301 and ACI 302.
- B. Uniformly spread, screed, and float concrete.
- C. Provide straight coarse broom finish on pool deck.

- D. Maintain surface flatness, with maximum variation of 1/8 inch in 10 ft.
- E. In areas with floor drains, maintain floor level at walls and slope surfaces uniformly to drains.
- F. Apply surface finish as indicated.

3.7 CURING

- A. Apply curing compounds on floor surfaces.
- B. Immediately after placement, protect concrete from premature drying.
- C. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete for not less than 7 days. Comply with Title 24, Section 1905A.11.

3.8 FORMED SURFACES

- A. Provide concrete wall surfaces to be left exposed with as formed finish. Provide formed concrete surfaces on edge and bottom of pool deck cantilever with sacked finish.

3.9 FIELD QUALITY CONTROL

- A. Three (3) Concrete Test Cylinders: Taken for 50 cubic yards of each class of concrete placed.
- B. One (1) Slump Test: Taken for each set of test cylinders taken.

3.10 DEFECTIVE CONCRETE

- A. Modify or replace concrete not conforming to required lines, details and elevations, as directed by Owner.

END OF SECTION

SECTION 13152
POOL SYSTEMS START-UP

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes start-up procedures for pool systems.

1.2 SUBMITTALS

- A. Reports: Submit results of water analysis.

1.3 POOL SYSTEMS START-UP

- A. Provide seven days notification prior to starting pool systems.
- B. Coordinate start up of existing mechanical equipment with Owner. Do not plaster and fill pool until all mechanical systems are operational.
- C. Fill pool slowly with domestic make-up water and protect finishes from damage. Add sufficient sequestering agent to pool water to reduce reaction of metal ions with chlorine. Follow manufacturer's instructions for product use.
- D. Provide complete domestic water analysis to determine quantities and types of chemicals necessary to maintain pool water within the following levels:
 - 1. pH: 7.2 to 7.6.
 - 2. Alkalinity: 80 to 100 ppm.
 - 3. Calcium hardness: 200 to 400 ppm.
 - 4. Chlorine: 1.5 to 2.0 ppm.
 - 5. Total dissolved solids: 300 to 1,000 ppm.
- E. Provide all chemicals and balance water immediately after initial pool filling and until project completion and acceptance by the Owner.
- F. Coordinate operation of existing pool mechanical systems with Owner and maintain pool for 14 days minimum, including the following:
 - 1. Periodically clean pump strainer until no further accumulation of debris occurs.
 - 2. Add chemicals as required for acceptable water quality.
 - 3. Clean gutter and surge chamber to remove all construction debris.
 - 4. Maintain log of daily pool water chemistry levels.
- G. At end of 14-day maintenance period, clean strainers, backwash filter media vacuum pool, and leave pool ready for use.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 13153

POOL FINISHES AND WATERPROOFING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes pool joint sealant, pool plaster, and pool tile.

1.2 SUBMITTALS

- A. Product Data: Submit for all products listed in this Section.
- B. Design Data: Submit plaster mix design.
- C. Samples: Submit for each type, size, and color of tile listed.
- D. Color Chart: Submit manufacturer's color chart for the following:
 - 1. Tile grout.
 - 2. Expansion joint sealant.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with TCA (Tile Council of America) Handbook and ANSI (American National Standards Institute) A108 Series/A118 Series.

PART 2 PRODUCTS

2.1 GUTTER AND TRENCH DRAIN FLUID APPLIED WATERPROOFING

- A. Cementitious crystalline waterproofing coating designed for concrete substrates with a blend of portland cement, fine treated silica sand and active chemicals. The active chemicals shall generate a non-soluble crystalline formation of dendritic fibers within the concrete to seal against water penetration. Coating shall be resistant to pool chemicals and certified to meet NSF (National Sanitation Foundation) Standard 61 for use with potable water.
- B. Xypex Concentrate manufactured by Xypex Chemical Corporation.

2.2 POOL JOINT SEALANT

- A. Two part, gun-grade, non-staining, polysulphide sealant, capable of continuous water immersion, 500 percent elongation capability, 80 pounds per square inch tensile strength, white color inside pool, and grey color on deck. Provide manufacturer's recommended primer, joint cleaner, joint filler, and bond breaker.
- B. Elasto-Seal 227 model manufactured by Pacific Polymers or Deck-O-Seal model manufactured by DFC Company.

2.3 POOL PLASTER

- A. Factory blended quartz aggregate with fortified white cement, additives and field mixed in accordance with manufacturer's instructions.

- B. Pebble Sheen “Arctic White” color manufactured by Pebble Technology International.

2.4 POOL TILE

- A. Porcelain body, square edges, 0 to 0.5 percent moisture absorption, and conforming to ANSI/TCA A137.1. Surface finish, size, and color as scheduled.
- B. Mortar: ANSI/ACI (American Concrete Institute) A118.1; Portland cement, sand, and water.
- C. Grout: Cementitious type, resistant to shrinking.
- D. Manufactured by American Olean Tile Company, Dal-Tile Corporation or Inlays Inc.

2.5 POOL TILE SCHEDULE

- A. Tile colors listed in this schedule are from the following manufacturers:
 - 1. American Olean Tile Company (AO).
 - 2. Dal-Tile Corporation (DT).
 - 3. Inlays, Inc. (II).
- B. Deck:
 - 1. Deck Depth Markers - Unglazed porcelain, 8 x 8 inch, and white background with black 6-inch-high text (II #C8200xx FT Series).
 - 2. No Diving Graphic - Unglazed porcelain, 8 x 8 inch, and white background with black and red graphics (II #C821500 MG Series).
 - 3. Turn Target - Unglazed ceramic, 2 x 2 inch, and black (AO #A34 or DT #D311) color.
 - 4. Wall Depth Markers - Unglazed porcelain, 5 x 6 inch, and white background with black 4-inch-high text (II Custom FT Series).
 - 5. Water Polo Markings – Unglazed ceramic, 2 x 2 inch, white (AO #A25 or DT #D617), red (AO #R26 or DT #D017), and yellow (AO #R98 or DT #D620) colors.
- C. Pool:
 - 1. Step Edge - Unglazed ceramic, 2 x 2 inch, and black (AO #A34 or DT #D311) color.

PART 3 EXECUTION

3.1 INSTALLATION OF FLUID APPLIED WATERPROOFING

- A. Verify surfaces are solid, free of dirt, paint, loose particles, cracks, pits, rough projections, and foreign matter detrimental to adhesion and application of waterproofing.
- B. Do not apply waterproofing to dirty, dusty, or surfaces unacceptable to manufacturer.
- C. Verify items which penetrate surfaces to receive waterproofing are securely installed.
- D. Beginning of installation means acceptance of substrate.
- E. Clean, prepare and dampen surfaces to receive waterproofing, in accordance with manufacturer's instructions.
- F. Apply two coats of waterproofing in accordance with manufacturer's instructions.

- G. Cure final application in accordance with manufacturer's instructions.

3.2 INSTALLATION OF POOL JOINT SEALANT

- A. Verify that joint openings are ready to receive work, and that joint measurements and surface conditions are as recommended by sealant manufacturer.
- B. Remove loose materials and foreign matter which may impair adhesion of sealant.
- C. Verify that joint backing and release tapes are compatible with sealant.
- D. Perform preparation in accordance with ASTM C790 for latex base sealants.
- E. Install sealants in accordance with manufacturer's instructions.
- F. Install joint filler to achieve a neck thickness dimension no greater than the joint width.
- G. Install bond breaker where joint filler is not used.
- H. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- I. Tool joints flat.

3.3 INSTALLATION OF POOL PLASTER

- A. Verify that surfaces and site conditions are ready to receive work.
- B. Beginning of installation means acceptance of existing conditions.
- C. Protect surfaces near work from damage or disfiguration.
- D. Clean concrete/shotcrete surfaces of loose and foreign matter using a 2,500 psi high pressure/velocity water jet spray. Wash surfaces with clean water.
- E. Dampen concrete/shotcrete surfaces with clean water immediately prior to plastering.
- F. Apply plaster in accordance with ANSI/ASTM C926.
- G. Apply to surfaces for a total minimum thickness of ½ inch.
- H. Provide smooth and consistent steel trowel finish.
- I. After manufacturer's specified curing period, plaster shall be washed and detailed with an acid solution to remove excess residue. Fill swimming pool from the deep end and protect plaster from erosion cause by filling with water and marring from hoses.
- J. Maximum variation from flatness shall be 1/8 inch in 10 feet.

3.4 INSTALLATION OF POOL TILE

- A. Verify that surfaces are ready to receive work.
- B. Beginning of installation means installer accepts condition of existing surfaces.

- C. Protect surrounding work from damage or disfiguration.
- D. Vacuum clean existing surfaces and damp clean.
- E. Seal substrate surface cracks with filler.
- F. Install mortar bed, tile, and grout in accordance with manufacturer's instructions.
- G. Apply mortar bed over concrete surfaces to a minimum thickness of 1/4 inch.
- H. Lay tile to pattern indicated.
- I. Lay tile so upper surface is flush with adjacent finishes.
- J. Use trim finishes as indicated at corners.
- K. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight without voids, cracks, excess mortar, or excess grout. Smooth all cut edges.
- L. Sound tile after setting. Replace hollow sounding units.
- M. Allow tile to set for a minimum of 48 hours prior to grouting.
- N. Grout tile joints.

END OF SECTION

SECTION 13154
POOL DECK EQUIPMENT

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes pool deck equipment.

1.2 SUBMITTALS

- A. Product Data: Submit for all products listed in this Section.
- B. Operation and Maintenance Instructions: Submit for disabled access lift.

PART 2 PRODUCTS

2.1 1 & 3 METER DIVING STAND AND BOARD

- A. Stand: Reuse existing.
- B. Board: Reuse existing.
- C. Anchor: Cast bronze body.
- D. Model #70-231-900 manufactured by Duraflex International Corporation.

2.2 DISABLED ACCESS LIFT

- A. Lift: Assembly shall have powder coated stainless steel and aluminum construction, 24 volt rechargeable battery pack, plastic seat with seat belt, 344 degrees total rotation, and a 300 pound lifting capacity. Supply with optional foot rest, 2 rotating arm rests, caddie, stainless steel anchor socket with cover, and spanner key. Lift shall accommodate anchor set back of 24 inches from pool wall and comply with all requirements of CBC 11B-1009.2.
- A. Model #390-2000 "Splash Extended Reach" manufactured by SR Smith.

2.3 GRAB RAIL

- A. Reuse existing.

2.4 HANDRAIL

- A. Reuse existing.

2.5 RECESSED STEP

- A. Molded foam white cycolac body with 16-1/2 by 5-1/2 by 6-inch opening.
- B. Model #32102 manufactured by Paragon Aquatics or model #23450 manufactured by Spectrum Products.

2.6 STANCHION POST SOCKET

- A. Minimum 6-inch-high cast bronze body to accept 1.9 inch outside diameter pipe tube and internal threading for bronze closure cap. Provide one opening device for each socket.
- B. Model #38201-TC manufactured by Paragon Aquatics or model #23638 manufactured by Spectrum Products.

2.7 STARTING PLATFORM AND ANCHOR

- A. Platform: Reuse existing.
- B. Anchor: Two dual wedge anchors for each platform welded to a stainless steel angle for proper spacing. Anchor body shall be 6-inch-deep welded stainless steel with taper lock fit, bronze locking wedge and stainless steel cover. Anchor spacing must match leg spacing of existing starting platform.
- C. Model #23103DW manufactured by Paragon Aquatics.

2.8 WATER POLO ROPE ANCHOR

- A. Machined brass insert with chrome plated bronze eyebolt having 3/4-inch diameter opening.
- B. Model #70317 and #70318 manufactured by Paragon Aquatics.

2.9 WEDGE ANCHOR

- A. Minimum 4.25-inch-long cast bronze body to accept 1.9 inch outside diameter pipe tube with bronze locking wedge and stainless steel set bolt and washer.
- B. Model #28102 manufactured by Paragon Aquatics or model #24010 manufactured by Spectrum Products.

2.10 WEDGE ANCHOR ESCUTCHEON PLATE

- A. Stainless steel body with stainless steel set screw and designed to fit over wedge anchor.
- B. Model #28301SS manufactured by Paragon Aquatics or model #35214 manufactured by Spectrum Products.

2.11 DECK DRAIN

- A. Lacquered cast iron two piece body with double drainage flange, weep holes, reversible clamping collar, and 6 inch diameter round, adjustable stainless steel strainer.
- B. Model #F1000 by Mifab.

2.12 DECK TRENCH DRAIN GRATING

- A. Modular interlocking PVC grating constructed of molded "T" bars 0.625-inch-wide with 1 inch depth, spaced with 0.375 inch openings. Grating shall have cross rods spaced 5 inches on center and diamond ridged anti-skid top surface. PVC shall be UV stabilized and gray color. Grate deflection shall be 0.076 inch maximum with a 200 pound load and an ultimate load capacity of 1,400 pounds. Provide recessed stainless steel hold down clips with stainless steel expansion anchor bolts for 24 inch maximum anchor spacing on each side of grating.

- B. Model "T" Bar manufactured by Lawson Aquatics.

2.13 FLOOR INLET PLATE

- A. Threaded cyclac adjustable cover plate, 4.5-inch diameter with stainless steel locking screw. Provide spanner wrench for flow adjustment.
- B. Model #8417-0000 manufactured by Sta-Rite Industries.

2.14 STORM DRAIN PIPING

- A. PVC Pipe: ASTM D2665, Schedule 40 DWV with solvent weld joints.

PART 3 EXECUTION

3.1 INSTALLATION OF ANCHORS AND SOCKETS

- A. Install anchors and sockets level and plumb.
- B. Install anchors and sockets flush with adjacent concrete deck, plaster surface, or tile surface as appropriate.

END OF SECTION