

Technical Specifications

OXNARD HIGH SCHOOL SWIMMING POOL REPAIR

Oxnard Union High School District

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TABLE OF CONTENTS

DIVISION 1 - GENERAL REQUIREMENTS

01001	Basic Requirements	TS - 2
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DIVISION 2 - SITE CONSTRUCTION

02055	Selective Demolition	TS - 7
-------	----------------------	--------

DIVISION 3 - CONCRETE

03900	Concrete Resurfacing	TS - 9
-------	----------------------	--------

DIVISION 13 - SPECIAL CONSTRUCTION

13152	Pool Systems Start-Up	TS - 11
13153	Pool Finishes and Waterproofing	TS - 13
13154	Pool Deck Equipment	TS - 16

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. 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. 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.

3.3 SELECTIVE DEMOLITION

- A. Demolish and remove designated pool components in an orderly and careful manner.
- B. Chip and remove pool plaster and tile finish completely to expose pool concrete surface.
- C. 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 as necessary and protect the following materials and equipment for reuse:
 - 1. Stair handrails.
 - 2. Grab rails.
 - 3. Escutcheon plates.
 - 4. Main drain grates.

END OF SECTION

SECTION 03900

CONCRETE RESURFACING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes pool deck concrete coating.

1.2 SUBMITTALS

- A. Product Data: Submit technical data sheets and application guide with surface preparation and crack repair requirements for all products.
- B. Field Mock-Up: Provide 12 inch square sample of pool deck coating with slip-resistant finish for approval prior to starting work.

1.3 QUALITY ASSURANCE

- A. Contractor shall be approved by the manufacturer of the specified product and have completed a program of instruction in the use of the specified coating material.
- B. Install materials in accordance with all safety and weather conditions required by manufacturer. Consult Material Safety Data Sheets for complete handling recommendations.

1.4 DELIVERY, STORAGE AND HANDLING

- A. All materials must be delivered in original, unopened containers with the manufacturer's name, labels, product identification and batch numbers. Store all materials off the ground and protect from rain, freezing or excessive heat until ready for use.

PART 2 PRODUCTS

2.1 DECK COATING

- A. Multi-component coating consisting of concrete repair product, crack repair product, flexible resin modified cementitious coating, color sealer and slip resistant properties. All components to from a single manufacturer.
- B. Acceptable coating model and manufacturer:
 - 1. Enduro-Dek manufactured by Enduro Products Corporation.
 - i. Concrete Repair Product: EN70 Epoxy Primer.
 - ii. Color Sealer: Enduro Kote Pigmented Sealer.
 - iii. Surface Color: Sandy Tan.
 - iv. Surface Finish: Slip resistant knock down.
 - 2. Kretekote manufactured by Multicoat Corporation.
 - i. Concrete Repair Product: Speed Mix 2000 and Speed Bond.
 - ii. Color Sealer: Acrathane Color Seal.
 - iii. Surface Color: Tan.

- iv. Surface Finish: Slip resistant knock down.
- 3. Texture-Crete manufactured by Westcoat Specialty Coating Systems.
 - i. Concrete Repair Product: EC-72 Epoxy Patch Gel.
 - ii. Color Sealer: SC-10 Acrylic Top Coat.
 - iii. Surface Color: Tan.
 - iv. Surface Finish: Slip resistant knock down.

2.3 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 INSTALLATION OF DECK COATING

- A. Verify that surfaces and site conditions are ready to receive work. Surfaces must be structurally sound and free from grease, oil, paint, dust, sealers and other foreign materials.
- B. Prepare concrete surfaces for optimum bond by shot-blasting, water-blasting, or mechanically grinding.
- C. Repair concrete cracks and fill all voids with concrete repair material recommended by the manufacturer.
- D. Clean all control joints, slot drain joints and construction joints in accordance with manufacturer's directions.
- E. Install expansion joint sealant and protect from damage prior to installation of deck coating.
- F. Protect surfaces near work from damage or disfiguration.
- G. Clean concrete surfaces of loose and foreign matter using a 3,500 psi high pressure/velocity water jet spray. Wash surfaces with clean water and allow to dry.
- H. Apply primer coat, slurry coat, texture coat and top coat in accordance with manufacturer's instructions.

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 5 days, 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.
- G. At end of 5-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

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 tan 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.

2.2 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 manufactured by Pebble Technology International or Luna Quartz Polar White manufactured by WetEdge Technologies.

2.3 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 or Dal-Tile Corporation.

2.4 POOL TILE SCHEDULE

- A. Tile colors listed in this schedule are from the following manufacturers:
 - 1. Dal Tile (II).
- B. Deck:
 - 1. No Diving Graphic - Unglazed ceramic, 1 x 1 inch and 2 x 2 inch tile with white background and colors arranged to produce graphic as detailed.

PART 3 EXECUTION

3.1 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 DISABLED ACCESS LIFT

- A. Lift shall be completely portable with insert and bolt for securing to the deck. Assembly shall have a plastic housing, powder coated aluminum arms, powder coated stainless steel mast, stainless steel casters with polyurethane tread, 24 volt rechargeable battery pack, rigid plastic seat with 12 inch high back and belt, 2 rotating arm rests, foot rest, 240 degrees total rotation, and a 300 pound lifting capacity. Lift shall have a seat height between 17 and 19 inches above pool deck and lower the operator 18 inches below the water surface. Lift shall comply with all requirements of CBC Section 11B-1009.2.
- B. Model "PAL" manufactured by SR Smith.

2.2 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.

2.3 FLOOR INLET PLATE

- A. Threaded cycolac 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.

PART 3 EXECUTION

3.1 INSTALLATION OF FITTINGS

- A. Install fittings level and flush with adjacent plaster surface or tile surface as appropriate.

END OF SECTION