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MORGAN HILL AQUATIC CENTER DECK RENOVATION
MORGAN HILL, CA

CITY OF MORGAN HILL
**MORGAN HILL AQUATIC CENTER
DECK RENOVATION**

16200 Condit Road
Morgan Hill, CA 95037

TECHNICAL SPECIFICATIONS
February 2017

PREPARED BY:

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MORGAN HILL AQUATIC CENTER DECK RENOVATION

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SECTION 01110

SUMMARY OF WORK

PART 1 - GENERAL

All applicable portions of Division 1, including the drawings and general provisions of the contract, the general and supplementary conditions and Division 1 specification sections which apply to work of this section as if printed herein.

1.02 DESCRIPTION

A. Section Includes:

1. Description of the Work (refer to 1.03).
2. Duties of the Contractor (refer to 1.04).
3. Permits and fees (refer to 1.06).
4. Layout of work (refer to 1.07).

1.03 WORK COVERED BY CONTRACT DOCUMENTS

A. This project consists of the preparation of portions of the existing swimming pool decks and other miscellaneous items. Installation of new swimming pool deck "FlexGround KoolFlex" Finish System and all other items as shown on plans to provide a completely operational aquatic facility. Project is located at Morgan Hill Aquatic Center, 16200 Condit Road, Morgan Hill, CA 95037.

B. Work of this contract generally consists of demolition, new construction and such other items not mentioned that are required by the Contract Documents, law and governmental codes and regulations.

C. For convenience, the Specifications are divided into sections as set forth in the Table of Contents, but such segregation shall not be considered as limiting the work of any subcontract or trade, and the Owner will not be responsible for any division of work by subcontracts. Unless otherwise provided, the Contractor shall be solely responsible for all subcontract arrangements of work regardless of the locations of provisions in the Specifications.

D. Compensation for bid items not specifically identified in these Special Provisions shall include all labor, materials, tools, equipment, safety measures, and supervision required to complete the work to grades and dimensions shown on the plans or staked in the field. There shall be no compensation except for bid items specified in the Bidder's Proposal. The cost of all work in the Contract Documents not specifically identified as a bid item or described within a bid item shall be included in related bid items, and no additional compensation shall become due the Contractor by nature of compliance with the Contract Documents except as provided for in the General Conditions of the Contract for Construction, under "Changes in the Work."

1.04 CONTRACTOR DUTIES

- A. Construct the work under a single prime contract in strict conformity with the Contract Documents.
- B. Accept the site and the character of the work as they exist on the first day of work under this Contract.
- C. Coordinate work of employees and subcontractors.
- D. Expedite the work to assure compliance with schedules.
- E. Coordinate the work with that of other contractors and work done by the Owner.
- F. Comply with orders and instructions of the Owner's Representative.

1.05 CONTRACTOR FURNISHED PRODUCTS

- A. Contractor Responsibilities:
 - 1. Designate needed submittals and delivery date for each product in progress schedule. Coordinate deliveries with Owner's Representative.
 - 2. Receive product(s) at site. Store until incorporated into the work.
 - 3. Inspect deliveries jointly with Owner's Representative, record shortages and damaged or defective items.
 - 4. Protect product(s) from damage, theft and from exposure to the elements.
 - 5. Assemble, install, connect, adjust and/or finish product(s) as required under provisions of the Contract Documents.
 - 6. Repair or replace products damaged or stolen subsequent to receipt, at no cost to the Owner.

1.06 PERMITS AND FEES

- A. The Owner shall obtain and pay for all permits, fees and licenses required by all government agencies and necessary for successful completion of the work.

1.07 LAYOUT OF WORK

- A. Field surveys for control of all grading and construction shall be the responsibility of the Contractor. All such surveys, including construction staking, shall be under the supervision of a California licensed surveyor or civil engineer. Staking shall be performed on all items ordinarily requiring grade and alignment at intervals normally accepted by the agencies and trades involved. Payment for construction survey staking shall be considered as included in the various items of work and no additional allowance will be made thereof. Bench marks shall be provided by the Owner as shown on Drawings.

PART 2 - PRODUCTS

NOT USED

PART 3 – EXECUTION

3.01 PROJECT PHASING

- A. In order to allow for community access to pools during construction, Contractor shall phase the work around the Competition Pool separately from the work around the Instructional Pool and Recreational Pool. The goal of the phasing is to enable access to either the Competition Pool or the Instructional Pool at all times during construction.

END OF SECTION

SECTION 01330

SUBMITTALS

PART 1 - GENERAL

All applicable portions of Division 1, including the drawings and general provisions of the contract, the general and supplementary conditions and Division 1 specification sections which apply to work of this section as if printed herein.

1.01 DESCRIPTION

A. Section Includes:

1. Submit to the Architect shop drawings, product data and samples required under the various Sections of these Specifications.
2. Prepare and submit with Construction Schedule, a separate schedule listing dates for submission and dates reviewed shop drawings, product data and samples will be needed for each product.

1.02 PRODUCT HANDLING

- A. **Make all submittals of Shop Drawings, Samples, and requests for substitution in accordance with the provisions of these Specifications.**

PART 2 - PRODUCTS

2.01 SCHEDULE OF SUBMITTALS

- A. Compile a complete schedule of all submittals required for the project, complete with major division and subdivision headings and broken into individual trades. Format shall be 8-1/2" x 11". The schedule shall be in such a form as to allow for notations next to each required submittal including, but not necessarily limited to, submission dates, action taken, approvals and re-submittals. Submit such a schedule to the Architect for his comments and approval. The approved Schedule of Submittals shall be kept current at all times and an updated copy shall be kept in the Project Field Office for review.

2.02 SHOP DRAWINGS AND PRODUCT INFORMATION SUBMITTALS

- A. Unless otherwise specifically directed by the Architect, make all Shop Drawings accurately to a scale sufficiently large to show all pertinent features of the item and its' method of connection and interface to the Work.
- B. Submit all Shop Drawings in the form of four (4) blue-line prints of each Shop Drawing. In the case of Product Information, submit no less than four (4) copies for review. Where contents of submitted product information include data not pertinent to the submittal, clearly indicate which portion is being submitted for review.

- C. Submittals are required on all items to ensure the latest and most complete manufacturer's data is available. The Contractor assumes full responsibility for problems which could have been noted on valid submittals not furnished.
- D. In the event that an item or items specified by the Architect will not be available in time for installation during orderly progress of the Work, so notify the Architect prior to receipt of bids. Verify that all items specified will be available. Costs of delays because of non-availability of materials will be back-charged as necessary and shall not be borne by the Owner.
- E. Of the four (4) bluesines required; two bluesines will be returned to the Contractor upon completion of the Architect's review, one will be sent to the Owner and the other will be kept on file in the Architect's office.

2.03 SAMPLES

- A. Unless otherwise specifically directed by the Architect, all Samples shall be of the precise article proposed to be furnished.
- B. Submit all Samples in the quantity which is required to be returned, plus one (1) which will be retained by the Architect.

2.04 CALCULATIONS

- A. **Where required, the Contractor shall retain a licensed Civil or Structural Engineer to provide structural calculations sufficient to show the adequacy of all members and connections to be reviewed.**

2.05 COLORS

- A. Unless the precise color and pattern is specifically described in the Contract Documents, whenever a choice of color or pattern is available in a specified product submit accurate color charts and pattern charts to the Architect for his review and selection.
- B. Unless all available colors and patterns have identical costs and identical wearing capabilities and are identically suitable for the installation, completely describe the relative costs and capabilities of each.

2.06 MANUALS

- A. Where manuals are required to be submitted upon completion of the installation, prepare all such manuals in durable plastic binders approximately 8-1/2" x 11" in size and with at least the following features:
 - 1. Identification readable through the outside of the cover, stating the general nature of the manual and the project to which it pertains.
 - 2. Neatly typewritten Index near the front of the manual, furnishing immediate information as to location in the manual of all data regarding the installation.

3. Complete instruction regarding operation and maintenance of all equipment involved.
 4. Complete nomenclature of all replaceable parts, their part numbers, current cost and name and address of the Vendors of the parts.
 5. Copy of all guarantees and warranties issued on the installation.
 6. Copy of the approved Shop Drawings with all data concerning changes made during construction.
- B. Where contents of manuals include manufacturer's catalog, clearly indicate the precise items included in this installation and delete, or otherwise clearly indicate, all manufacturer's data with which this installation is not concerned.
- C. Unless otherwise specifically directed by the Architect, deliver two (2) copies of the manual to the Owner and one (1) copy to the Architect.

2.07 RECORD DRAWINGS

- A. Where required by the Contract Documents or where changes to the Contract Documents have been made by change order, revision to clarification drawings, or where minor changes to the Contract were required because of unforeseen conditions or as may be required by the Architect, prepare accurate Record Drawings indicating all pertinent data and dimensions necessary to adequately describe the contract deviations to the Owner for his future use.
- B. Record drawings shall be completed, approved and submitted to Owner prior to retention being released to the Contractor.

2.08 SUBSTITUTIONS

- A. Reference in the Contract Documents to any material, product, or process by name, make or catalog number shall be interpreted as establishing a standard of quality and design intent and not construed as prohibiting substitutions of any other such material, product, or process, provided such substitution is specifically approved by the Architect prior to receipt of bids. Requests for substitutions shall be submitted no later than ten (10) working days prior to bid date.
- B. Acceptance of substitutions will not relieve the Contractor from responsibility for complying with the Contract Documents.
- C. At the discretion of the Architect, testing of samples of materials proposed for substitutions may be required. The testing shall be done by an independent testing laboratory selected by the Owner, the costs of which shall be borne by the Contractor.
- D. At the discretion of the Architect, the Contractor may be required to furnish a written guarantee, in addition to that already required, ensuring the satisfactory performance of the proposed substitutes.

- E. All additional labor and materials which may be required for the proper installation of any substitution, or required as a consequence of any substitution, will be provided at no additional cost to the Owner.
- F. Bids shall be based upon the data given in the Contract Documents, or upon previously approved items or techniques as "approved equals" by the Architect. Where calculations or shop drawings are required for approval, allowance shall be made for meeting the requirements of the Contract Documents and all applicable codes and ordinances.
- G. Bidders may, in addition, submit separate bids using materials and equipment of other manufacturers, providing the difference in cost is stated for each item proposed to be substituted.
- H. Provide to the Architect all information necessary and required to evaluate proposed substitutions. Do not base bid on the assumptions that a material will be approved as equal by the Architect unless the item has been specifically approved for this Work by the Architect prior to the receipt of bids.
- I. The Contractor assumes full responsibility that substituted items or procedures will meet the job requirements and is responsible for the cost of redesign and of modifications to this and all other parts of the work caused by substituted items.
- J. Submittals will be checked for general conformance with the design concept of the project, but acceptance does not guarantee quantities shown and does not supersede requirements to properly install work. Submittals for proposed alternatives will be judged not only for the acceptability of the items themselves, but of the items as they are used under the conditions of this particular project.

PART 3 - EXECUTION

3.01 IDENTIFICATION OF SUBMITTALS OR SUBSTITUTIONS

- A. Completely identify each submittal and re-submittal by showing at least the following information:
 - 1. Name and address of entity submitting information, plus name and telephone number of individual who may be contacted for further information.
 - 2. Name of project for this Work.
 - 3. Drawing number and Specification Section number to which the submittal applies.
 - 4. Number of all submittals sequentially, whether this is an original submittal or a re-submittal, and if a re-submittal, what number re-submittal.

3.02 COORDINATION

- A. Prior to submittal for Architect's review:
 - 1. Fully coordinate all submittals by determining and verifying all field

- dimensions and conditions, materials, catalog numbers, and similar data.
2. Coordinate as required with all other trades and with all public agencies involved.
 3. Secure all necessary prior approvals and signify by stamp, or other means, that they have been secured.
 4. Clearly indicate all deviations from Contract Documents.

3.03 TIMING OF SUBMITTALS

- A. Make all submittals within ten (10) days of the date of the award of the contract for the Work, and far enough in advance of scheduled dates of installation to provide adequate time for all required reviews, both by the Architect and his consultants, for securing necessary approvals, for possible revision and re-submittal, and for placing of orders and securing delivery. In scheduling, allow a minimum of ten (10) full working days for the Architect's review. Cost of delays occasioned by the tardiness of submittals will be back-charged as necessary.

3.04 ARCHITECT'S REVIEW

- A. The Architect's review will be only for conformance with the design concept and with the information given in the Contract Documents. The Architect's review and approval of Shop Drawings and Samples shall not relieve the Contractor of responsibility for deviation from the requirements of the Contract Documents unless the Contractor has informed the Architect in writing of such deviation at the time of submittal and the Architect has given written approval to the specific deviation, nor shall the Architect's approval relieve the Contractor from responsibility for errors and omissions in the Shop Drawings and Samples. Should the Architect be required to review any submittal more than three (3) separate times due to the inadequacy of the submittal and due to no fault of the Architect, the Contractor shall render to the Architect the Architect's direct cost for review of all subsequent re-submittals.

3.05 COMPLIANCE WITH APPROVALS

- A. Do not commence any portion of the Work requiring approval of Shop Drawings or Samples by the Architect until the submittal has been approved by the Architect. All such portions of the Work shall be in accordance with the approved Shop Drawings and Samples.

END OF SECTION

SECTION 01450

QUALITY CONTROL

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: This Section outlines requirements covering testing laboratory services and inspections required during the course of construction of the project. This Section is complementary to the General Conditions and supplementary General Conditions and nothing herein shall be considered to waive any requirements of the General Conditions or supplementary General Conditions.
- B. Testing Laboratory Services:
1. The respective Sections of these specifications contain detailed requirements for materials testing and inspections to be performed by an approved testing laboratory.
 2. All initial costs incurred for testing laboratory services shall be paid by the Owner. However, should re-testing be required due to contractor's failure to comply with these specifications requirements, the Contractor shall pay all costs of re-testing.
 3. Testing laboratory shall report the results of all tests, in writing, simultaneously to the following:

Architect	1 Copy
Owner	1 Copy
Contractor	1 Copy

1.02 QUALITY ASSURANCE

- A. Codes and Standards: Testing, when required, shall be in accordance with all pertinent codes and regulations and with selected standards of the American Society for Testing and Materials (ASTM).
- B. Qualifications of the Testing Laboratory: The testing laboratory will be qualified to the Owner's approval in accordance with ASTM E-239-70 "Recommended Practice for Inspection and Testing Agencies for Concrete and Steel Used in Construction."

1.03 OWNER'S RESPONSIBILITIES

- A. Owner will select and employ a pre-qualified, independent testing laboratory to perform inspections, sampling and testing of materials as specified in the individual Specifications Sections.
- B. Owner will pay per Section 01200 (Allowances), for all initial testing laboratory services as described within the Contract Documents or not normally required by codes and ordinances.

- C. When the initial tests indicate non-compliance with the Contract Documents, the costs all subsequent re-testing occasioned by the non-compliance shall be deducted by the Owner from the Contract Sum.

1.04 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel, provide access to work, arrange access to manufacturer's operations.
- B. Provide laboratory preliminary representative samples of materials to be tested, in required quantities.
- C. Furnish copies of mill test reports.
- D. Provide casual labor and facilities for access to work being tested; obtain and handle supplies at the site; facilitate inspections and tests; provide facilities for laboratory's exclusive use for storage and curing of test samples.
- E. Coordinate requests for testing by Owner-employed testing laboratory through the Owner's Representative. Notify Owner's Representative two (2) working days in advance of operations to allow for assignment of personnel and scheduling of tests.
- F. Pay for additional laboratory inspections, sampling and testing required for Contractor's convenience and when initial tests indicate that work does not comply with Contract Documents.
- G. **Pay for inspections and tests required by codes or ordinances or by a plan approval authority, and made by a legally constituted authority (i.e., municipal deputy inspector), unless otherwise provided for in the Contract Documents.**
- H. When required in individual Specifications Section, submit manufacturer's certificate, executed by responsible officer, certifying that products meet or exceed specified requirements. Provide certification in duplicate.

1.05 TESTING LABORATORY RESPONSIBILITIES

- A. **Perform specified inspections, sampling and testing of materials and methods of construction, comply with specified standards. Ascertain compliance with requirements of Contract Documents.**
- B. Provide prompt notification of irregularities or deficiencies of work observed during performance of services.
- C. Perform additional inspections and tests required by Owner's Representative.
- D. After each inspection and test, promptly submit copies of laboratory report to the Owner. Reports are to include: Date issued, project title and number, name of

inspector, date and time of sampling or inspection, identification of product and Specification Section(s), location in the project, type of inspection or test, date of test and results of test. When requested by Owner's Representative provide interpretation of test results.

- E. Testing Laboratory shall have no authority to: release, revoke, alter, or enlarge on requirements of Contract Documents; approve, accept or stop any portion of the work; perform any duties of the Contractor.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

All applicable portions of Division 1, including the drawings and general provisions of the contract, the general and supplementary conditions and Division 1 specification sections which apply to work of this section as if printed herein.

1.01 DESCRIPTION

- A. Section Includes: Temporary facilities and controls required for this work include, but are not limited to: temporary utilities such as water, electricity and telephone; field offices and sheds; haul roads; enclosures such as fences, barricades, and canopies; sanitary facilities; scaffolding and safety equipment. All such temporary facilities shall be located for convenience and safety and maintained in a safe and sanitary condition at all times until completion of the Contract, then removed from the site and disposed of as required or as directed.

1.02 COMPLIANCE WITH CODES AND REGULATIONS

- A. Compliance with all requirements of pertinent safety regulations is described in the General Conditions of the Contract for Construction and shall include, but not necessarily be limited to: Federal Occupational Health Administration (OSHA) and latest edition, Uniform Building Code (with California Amendments) and ADA (American Disability Act).

1.03 PRODUCT HANDLING

- A. Use all means necessary to maintain all temporary facilities and controls in proper and safe condition throughout progress of the work. In the event of damage or loss, immediately make all repairs and replacements necessary and at no additional cost to the Owner.

PART 2 - PRODUCTS

2.01 TEMPORARY UTILITIES

- A. General:
 - 1. Provide and pay all costs for all utilities required for performance of the work.
 - 2. Provide safe distribution of required utilities to the job areas for use of all trades.
- B. **Temporary Water: Furnish and install all necessary temporary piping and, upon completion of the work, remove all such temporary piping.**

- C. **Temporary Electricity:** Furnish and install all necessary temporary wiring; furnish and install distribution boxes within 100 feet of each portion of the work so located that the individual trades may use their own construction-type extension cords to obtain adequate power and lighting at all points where required by inspectors and for safety.
- D. Telephone: Maintain in the Contractor's field office or in a protected location on the job site for the use of the subcontractors; the telephone may be coin operated.

2.02 ACCESS FACILITIES

- A. The Contractor shall provide access facilities to the construction area as are necessary and required for carrying out the work and the same shall be kept passable at all times. Contractor shall be responsible for any damage to streets, curbs and sidewalks due to the use of such facilities, and such damaged portions shall be repaired as required to place them in the same condition as existed prior to the commencement of the work. Contractors shall comply in every respect with applicable Building Codes regarding the use of public streets and sidewalks and provide the proper barricading and lighting of public thoroughfares surrounding the construction activities.

2.03 ENCLOSURES, FENCES, BARRICADES AND CANOPIES

- A. Furnish, install, and maintain for the duration of construction, all required scaffolds, fences, barricades, canopies, warning signs, steps, bridges, platforms and other temporary construction necessary for proper completion of the work in compliance with all pertinent safety regulations. In addition, it is recommended that all existing improvements which are not to be altered or removed be protected by means of temporary barricades or other suitable means.

2.04 PUMPING

- A. Keep the site, excavations, and structures free of accumulation of water at all times, whether from underground seepage, rainfall, drainage, or broken utility lines.

2.05 SANITARY FACILITIES

- A. Furnish and install all required temporary toilet buildings with sanitary toilets for use of all workmen. Comply with all minimum requirements of the Health Department or other public agency having jurisdiction. Maintain in a sanitary condition at all times.

2.06 FIRE PROTECTION

- A. Temporary fire extinguishers shall be provided and available at the job site in accordance with the appropriate NFPA Bulletins and good practice.

PART 3 - EXECUTION

3.01 SPECIAL CONDITIONS OF THE SITE

- A. The area to be set aside for the use of the Contractor is indicated on the Drawings as "Limit of Work." Except for sub-surface utility work, curb and gutter, temporary roads and any other work specifically shown or noted, the Contractor shall confine his exterior operations within the limits-of-work so indicated.
- B. Work shall not proceed for the site or buildings until all temporary work such as utilities, barricades, field office and sanitary facilities are furnished and installed.
- C. Parking of vehicles by construction personnel shall be limited to areas outside the limits-of-work in locations as designated by the Owner's Representative.

3.02 MATERIAL STORAGE AND PROTECTION

- A. **During the progress of the work, products and materials shall be neatly stored in accordance with the appropriate manufacturer's recommendations and shall be properly cared for and protected from weather, vandalism and theft.**
- B. **Material storage areas shall be approved by the Owner prior to commencement of work and storage of materials.**
- C. All installed products and materials shall be adequately protected until such time as the Owner accepts the Project.

3.03 CONDITIONS AT THE SITE

- A. The Contractor shall make all necessary inspections of the job site and of the work to be fully aware of the conditions of all temporary facilities and controls at all times.
- B. The Contractor shall take all steps necessary to prohibit any part of the premises, the buildings, or structures to be overloaded by setting thereon any material or equipment, or performing thereon any of his work, which could cause any loss, damage, and/or injury to person or property.
- C. **The Contractor shall make a close inspection of all materials as delivered and shall promptly return all defective materials without waiting for their rejection by the Architect.**

3.04 REMOVAL

- A. Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the work. Remove all such temporary facilities and controls as rapidly as progress of the work will permit, or as directed by the Owner.

3.05 RESTORATION OF AREAS

- A. Upon completion of the project, all temporary facilities shall be removed from the site and all areas not otherwise improved but which were adversely affected by the Contractor's work shall be returned to their original condition to the satisfaction of the Owner.

3.06 FINAL SITE CLEAN-UP

- A. Prior to final inspection, thoroughly clean the entire site and restore to a neat, acceptable condition. Remove from the entire site all construction waste and unused materials, dunnage, loose rock and stones, excess earth, roots, weeds, and all debris of any description resulting from the work. Hose down and scrub where necessary all new concrete and asphalt pavement and paved walks, and all existing concrete and asphalt pavement and walks dirtied as a result of the work. Thoroughly remove mortar drippings from concrete walks and other pavements, where they occur.

END OF SECTION

SECTION 01770

CLOSEOUT PROCEDURES

PART 1 - GENERAL

NOT USED

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 02050

DEMOLITION

PART 1 - GENERAL

All applicable portions of Division 1, including the drawings and general provisions of the contract, the general and supplementary conditions and Division 1 specification sections which apply to work of this section as if printed herein.

1.01 DESCRIPTION

A. Section Includes:

1. Preparation of a portion of the existing swimming pool decks as indicated on the Drawings for the installation of FlexGround KoolFlex Finish System.

B. **Site Visitation: In preparing a proposal, visit the site, carefully examine the Drawings and Specifications, and determine that the work can be properly executed in accordance with the Contract Documents. No allowance will be made for any error through negligence in observing the site conditions.**

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.01 TREATMENT OF EXISTING FACILITIES

- A. **Protection: Use necessary procedures, caution and covering to protect from damage existing facilities, equipment and accessories not noted to be replaced or restored. Maintain active utilities traversing the project site in operating condition.**
- B. **Replacement: In the event of damage, immediately notify the Owner, and make all repairs and replacements necessary to the approval of the Engineer without change in contract amount or time.**

3.02 REMOVAL OF DEBRIS

- A. All items noted for demolition shall be immediately removed from the project site and hauled and dumped in compliance with all local codes and regulations, including payment of any associated fees.

3.03 SAFETY BARRICADES

- A. Provide substantial barricades around and at all areas and openings as soon as

such areas and openings are created. Barricades must be adequate to block access and give warning to the general public.

3.04 CLEAN-UP

- A. Upon completion of the work of this Section, immediately remove all broken concrete, debris and rubbish occasioned by this work to the approval of the Engineer.

END OF SECTION

SECTION 09613

FLEXGROUND KOOLFLEX

PART 1 – GENERAL

1.01 WORK INCLUDED

Provide all labor, materials, and tools necessary for the complete installation of a non-porous poured in place safety surfacing system as outlined in these specifications.

- A. Quality Assurance: Manufacturer shall have manufactured and installed playground poured in place safety surfaces for a minimum of 5 years. The installation of the poured in place product shall be completed by FLEXGROUND, LLC. Manufacturer's detailed installation procedures shall be submitted to the Architect and made part of the Bid Specifications.

1.02 SUBMITTALS

- A. The manufacturer must be experienced in the manufacturing of FlexGround KoolFlex poured in place surfacing system and provide references of five (5) specific installations in the last three (3) years.
- B. The installer must provide competent workmen skilled in this specific type of poured in place surfacing system installation. The designated supervisory personnel on the project must be competent in the installation of this material, including mixing of the materials, and spreading and compacting the materials correctly.
- C. Manufacturer shall provide written instructions for recommended maintenance practices.
- D. Manufacturer shall submit color samples for customer verification.

1.03 WARRANTY AND MAINTENANCE

- A. The poured in place surfacing manufacturer shall provide a warranty to the owner that covers defects in materials and workmanship of the rubber for a period of four (4) years from the date of Substantial Completion.
- B. The manufacturer's warranty shall include general wear and tear. The warranty shall specifically exclude vandalism, high heel punctures, acts of war or acts of nature beyond the control of the owner or the manufacturer.
- C. The bidder shall provide a warranty to the owner that covers defects in the installation workmanship, and further warrant the installation was done in accordance with the manufacturer's recommendations.

- D. All poured in place warranties shall be limited to repair or replacement of the affected areas and shall include all necessary materials, labor, transportation costs, etc. to complete said repairs. All warranties are contingent on the full payment by the owner of all pertinent invoices.
- E. The owner also agrees to do routine maintenance as outlined in the FLEXGROUND Maintenance manual.
- F. The installer shall clean the jobsite and remove excess materials.
- G. The manufacturer shall instruct the owner's personnel on proper maintenance and repair of the KOOLFLEX surface.

PART 2 – KOOLFLEX MATERIAL

2.01 The KOOLFLEX poured in place surfacing system shall be in accordance with the following:

- A. A dual durometer poured-in-place system with a base layer membrane and an aliphatic thermoplastic composite grout filling layer that renders the pad non-porous and sealed with a color seal.
- B. FLEXGROUND primer is a 100% solids urethane primer/sealer. It is designed with a low viscosity and penetrating abilities making this an ideal priming urethane.
- C. The KOOLFLEX SURFACING base surface shall be manufactured from .5-4mm EPDM and mixed with urethane binder (110 pounds of rubber to 22 pounds of binder).
- D. FlexGrout thermoplastic composite grout shall be a thixotropic aliphatic thermoplastic paste applied at 1 gallon per 35 square feet over wear coarse layer rendering it non-porous.
- E. FlexGrout thermoplastic composite grout was tested by QAI Laboratories for the following:
 - 1. ASTM D 2047-11 Coefficient of Friction: Polish Flooring Surface. (Test Report #QI1411123-4)
FlexGrout has been tested and certified at a friction of .588 dry standard, and .817 wet standard.
 - 2. ASTM D4 12-06ae2 ThermoPlastic Elastomers – Tension. (Test Report #QI1305148-2)
FlexGrout has been tested and certified at a Peak Tensile Strength of 163psi; chlorine soaked at 133psi; and a Tensile Elongation at Break of 132.2%; chlorine soaked at 112.2%.

3. ASTM D624-00(2012) Tear Strength. (Test Report #QI1305148-2)
FlexGrout has been tested and certified with a median Maximum Tear Strength of 75.74lbs; chlorine soaked at 70.03lbs.
- F. A water-based aliphatic composite color seal shall be applied at 200 sq. ft. per gallon and spread evenly to cover entire surface. Acrylic and latex based coatings are not acceptable.
- G. The system color shall be selected from Manufacturer's Color Chart by owner prior to bid.

PART 3 – SITE PREPARATION AND BASE

3.01 The KOOLFLEX site preparation and base shall be in accordance with the following:

- A. Sub base shall be concrete.
- B. Ensure that concrete base has proper drainage prior to installation of KOOLFLEX.
- C. Slope of concrete base shall comply with local health department regulations.
- D. Hard Base Construction: Concrete surfaces shall be shot blast, acid etch or power scarify as required to obtain optimum bond of the cushion layer to the concrete. Remove sufficient material to provide a sound surface, free of glaze, efflorescence, or form release agents. Remove grease, oil, and other penetrating contaminants.

PART 4- EXECUTION AND INSTALLATION

The poured in place surfacing installer shall strictly adhere to the installations procedures outlined under these sections.

4.01 PERIMETER

- A. A urethane primer shall be applied to concrete surfaces at a rate of 200-250 square feet per gallon. The entire area does not need to be primed at once, instead, prime about 700 square feet at a time. This procedure shall be continued until all areas are complete.

4.02 BASE COURSE LAYER

- A. The base course layer shall be mixed with EPDM granules and aromatic urethane binder at a rate of 20% of the total weight of the materials so the granules are covered thoroughly and evenly.

- B. The base course layer mix shall be spread and troweled to a depth of 3/8" immediately after the application of primer.

4.03 GROUT SEALER

- A. The wear course layer shall be sealed with an aliphatic thermoplastic composite grout. FlexGrout shall be spread with a trowel at a rate of 1 gallon per 40 square feet. Pressure shall be applied to the trowel with enough force to push the grout into the wear course layer, rendering it impermeable. The finished texture shall be slip resistant, smooth and even.
- B. The poured in place surface shall be allowed to cure for 24-72 hours or until dry to the touch.

4.04 FLEXCOAT COLOR SEAL

- A. The color seal shall consist of a water based aliphatic thermoplastic composite liquid. Acrylic and latex based coatings are not acceptable. Color seal shall be roll applied to completely cover entire surface. The color seal shall be allowed to cure for 24-72 hours or until dry to touch.
- B. The finished texture shall be slip resistant, smooth and even.
- C. The poured in place surface shall be allowed to cure for 24-72 hours or until dry to the touch.

END OF SECTION

SECTION 13150

SWIMMING POOL DECK GENERAL REQUIREMENTS

PART 1 GENERAL

1.01 WORK INCLUDED

- A. The scope of the work included under this Section of the Specifications shall include swimming pool(s) as illustrated on the Drawings and specified herein. The General and Supplementary Conditions of the Specifications shall form a part and be included under this Section of the Specifications. The Contractor shall provide all supervision, labor, material, equipment, machinery, plant and any and all other items necessary to complete the work. **ALL OF THE WORK IN SECTIONS 13151-13156 IS TO BE THE RESPONSIBILITY OF ONE EXPERIENCED CONTRACTOR CONSISTENTLY ENGAGED IN THE CONSTRUCTION OF COMMERCIAL PUBLIC-USE SWIMMING POOLS AND/OR SWIMMING POOL DECKS.** Work shall include start-up, instruction of Owner's personnel, as-built drawings and warranties as required.

1.02 CODES, RULES, PERMITS, FEES

- A. The swimming pools shall be constructed in strict accordance with the applicable provisions set forth by authorities having jurisdiction over swimming pool construction and operation in the State of California.
- B. The Contractor shall give all necessary notices, obtain all permits, and pay all government sales taxes, fees, and other costs in connection with his work; file all necessary plans, prepare all documents and obtain all necessary approvals of governmental departments having jurisdiction; obtain all required certificates of inspection for his work and deliver same to the Designated Representative before request for acceptance and final payment for the work.
- C. The Contractor shall include in the work any labor, materials, services, apparatus, or drawings in order to comply with all applicable laws, ordinances, rules and regulations, whether or not shown on Drawings and/or specified.

1.03 DESCRIPTION OF WORK

- A. Furnish and install all swimming pool cantilever forming, pool decking, deck equipment and required anchors and inserts for the specified equipment as required by code, shown on the Drawings and specified herein.

1.04 ASSIGNED RESPONSIBILITIES AND RELATED WORK

- A. It is the intent of this section of the Specifications to clarify Work responsibilities of the trades directly and indirectly involved in construction of the pool systems. All labor, equipment, materials and supplies furnished by the Swimming Pool

Contractor and other Contractors shall be as directed by the Owner through his Designated Representative.

- B. **THE CONTRACTOR SHALL NOT SUBCONTRACT ANY PORTION OF THE SWIMMING POOL CONSTRUCTION OR SWIMMING POOL EQUIPMENT INSTALLATION TO ANYONE OTHER THAN A CONTRACTOR THAT SATISFIES THE REQUIREMENTS OF SECTION 13150.**
- C. References to “swimming pool systems” shall include the swimming pools, equipment, and accessories.
- D. The Owner will provide one complete water filling of the swimming pool(s), but will not assume any responsibility for the swimming pool system(s) until they have been proved fully operational, complete in every way and accepted by the Designated Representative.

1.05 RESPONSIBILITIES OF THE CONTRACTOR

- A. The Contractor shall grade the swimming pool site(s), establish benchmarks, cut and fill as necessary to provide new decking per plans. Field coordinate and record existing deck elevations and provide slopes and grades per plans.
- B. The Contractor shall be responsible for horizontal dimensions and grade elevations accurately from established lines and benchmarks (as indicated on the Drawings) and be responsible for those grades.
- C. The Contractor shall provide adequate temporary light, electric power, heat and ventilation per Federal and State OSHA requirements to construct the swimming pool system(s).
- D. The Contractor shall not permit any heavy equipment activity over any area or within five (5) feet of any area under which swimming pool piping is buried. There shall be no exceptions to this requirement.
- E. The Contractor shall protect the swimming pool(s) from damage caused by his construction equipment and /or workmen and Contractors.
- F. The Contractor shall provide a representative at time of swimming pool start-up to coordinate all trades related to swimming pool system(s).

1.06 INTENT

- A. It is the intention of these specifications and Drawings to call for finished work, tested and ready for operation. Wherever the work “provide” is used, it shall mean “furnish and install complete and ready for use.”
- B. Minor details not usually shown or specified, but necessary for proper installation and operation, shall be included in the work, the same as if herein specified or shown.

1.07 SCHEDULE OF VALUES

- A. Provide a Schedule of Values for all work specified in each of the technical specifications listed in the table below, regardless of whether the work is performed by the swimming pool contractor or others. Values listed shall be fully burdened, with contractor general conditions, overhead, profit and bonds included. Payments for swimming pool work completed shall not be approved until Schedule of Values has been submitted to and approved by Architect.

SWIMMING POOL SCHEDULE OF VALUES			
No.	Section #	Description	Value
1.	13154	Swimming Pool Ceramic Tile	
2.	13156	Swimming Pool Equipment	
Total			

1.08 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals.
- B. Coordination: Coordinate preparation and processing of submittals with performance construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation" for list of submittals and time requirements for schedules performance of related construction activities.
- D. Processing Time: Allow enough time for submittal review, including time for re-submittals as follows. Time for review shall commence on Architect's receipt of submittal.
1. Initial Review: Allow fifteen (15) days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Concurrent Review: Where concurrent review of submittals by Architect's consultants, Owner, or other parties is required, allow twenty-one (21)

- days for initial review of each submittal.
3. Direct Transmittal to Consultant: Where the Contract Documents indicate that submittals may be transmitted directly to Architect's consultants, provide duplicate copy of transmittal to Architect. Submittal will be returned to Architect before being returned to Contractor.
 4. If intermediate submittal is necessary, process it in same manner as initial submittal.
 5. Allow fifteen (15) days for processing each submittal.
 6. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
- E. Identification: Place a title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on title block.
 2. Provide a space on title block to record Contractor's review and approval markings and action take by Architect.
 3. Include the following information on title block for processing and recording action taken: (See Attached Sample)
 - a. Project name.
 - b. Date.
 - c. Name and address of Contractor.
 - d. Name of Contractor.
 - e. Name of Supplier.
 - f. Name of Manufacturer.
 - g. Unique identifier, including revision number.
 - h. Number and title of appropriate Specification Section.
 - i. Drawing number and detail references, as appropriate.
 - j. Other necessary identification.

SUBMITTAL FOR:

SUBMITTAL TO:

CONTRACTOR:

Item Number: _____

Section Number: _____

Section Description: _____

Contractor: _____

Supplier: _____

Manufacturer: _____

Product Code: _____

Quantity: _____

Contractor Certification:

Contractor's Submittal Stamp:

It is hereby certified that the equipment or material designated in this submittal is proposed to be incorporated in the above named project and is in compliance with the contract drawings and / or specifications and is submitted for approval.

Certified by: _____

Date: _____

Job _____

Superintendent: _____

Revisions: _____

Architect's Review Stamp and Comments

- F. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract documents on submittal.
- G. On all catalogue or cut sheets identify which model or type is being submitted.
- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Product data and shop drawings shall be packaged within a three-ring binder and colored samples shall be packaged on a heavy cardboard. Transmit each submittal using a transmittal form.
 - 1. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, request for data, revisions other than those requested by Architect on previous submittals and deviations from requirements of the Contract documents, including minor variations and limitations. Include the same label information as the related submittal.
 - 2. Include Contractor's certification stating that information submitted complies with requires of the Contract Documents.
 - 3. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of Contractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Remarks.
- I. Distribution: Furnish copies of final submittals to manufacturers, Contractors, suppliers, fabricators, installers, authorities having jurisdiction and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- J. Use for Construction: Use only final submittals with mark indicating action taken by Architect in connection with construction.

1.09 SUBSTITUTIONS

- A. To obtain approval to use unspecified products, bidders shall submit requests for substitution at least ten (10) days prior to bid date. Requests shall only be considered if they clearly describe the product for which approval is asked, including all data necessary to demonstrate acceptability. All unspecified products and equipment will be considered on an "or equal" basis at the discretion of the Designated Representative. Requests for substitution received after the specified deadline will not be considered. Where a conflict exists between the requirements of the General Conditions / Special Conditions / Division 1 concerning substitutions and the requirements of this Article, this Article (Section 13150, Article 1.10) shall govern.
- B. Where the Contractor proposes to use an item of equipment other than that specified or detailed on the Drawings which requires any redesign of the

structure, partitions, foundations, piping, wiring, or any other part of the architectural, mechanical, or electrical layout, all such redesign and all new drawings (stamped by California Licensed Engineer) and detailing required shall be prepared by the Contractor, at his own expense, submitted for review and approval by the Designated Representative prior to bid.

- C. Where such approved deviation requires a different quantity and arrangement of piping, supports and anchors, wiring, conduit, and equipment from that specified or indicated on the Drawings, the Contractor shall furnish and install any such piping, structural supports, controllers, motors, starters, electrical wiring and conduit, and any other additional equipment required by the system, at no additional cost to the Owner.

1.10 SURVEYS AND MEASUREMENTS

- A. The Contractor shall base all measurements, both horizontal and vertical, from benchmarks established by the Contractor. All work shall agree with these established lines and levels. The mechanical Drawings do not give exact details as to elevations of piping, exact locations, etc. and do not show all offsets, control lines, pilot lines and other installation details. Verify all measurements at site and check the correctness of same as related to the work.

1.11 DRAWINGS

- A. Drawings are diagrammatic and indicate the general arrangement of the systems and work included by the Contractor. Drawings are not to be scaled. The architectural drawings and details shall be examined for exact dimensions. Where they are not definitely shown, this information shall be obtained from the Designated Representative.

1.12 CONTRACTOR

- A. The swimming pool deck construction work as herein described and specified in Division 13 of the Project Manual shall be the complete responsibility of a qualified and appropriately licensed (C-8, C-53, or other valid license classification within the State of California) Contractor with extensive experience in commercial public use swimming pool installations.
- B. Contractor certifies that it meets the qualifications and experience requirements established in Swimming Pool General Requirements, Section 13150, as follows:
 - 1. Contractor has, in the last three (3) years, constructed at least three (3) commercially designed pool decks on perimeter gutter swimming pools, each of which have incorporated a minimum size of 6,000 square feet of water surface area of the swimming pool.
 - 2. The following list of projects meet the requirements of section (b) above and the contact as reference by the Contractor, the Awarding Authority of their agent or designee.

POOL DECK CONTRACTOR

- a. Owner: _____
Scope of Project: _____
Contact Person: _____
Phone Number: _____
Architect for Project: _____
- b. Owner: _____
Scope of Project: _____
Contact Person: _____
Phone Number: _____
Architect for Project: _____
- c. Owner: _____
Scope of Project: _____
Contact Person: _____
Phone Number: _____
Architect for Project: _____
- d. Owner: _____
Scope of Project: _____
Contact Person: _____
Phone Number: _____
Architect for Project: _____
- e. Owner: _____
Scope of Project: _____
Contact Person: _____
Phone Number: _____
Architect for Project: _____

1.13 OPERATING INSTRUCTIONS

- A. The Contractor shall determine from actual samples of pool water supplied by the Owner, the proper water management program necessary for maximum operating efficiency and comfort. The Contractor shall provide the services of experienced personnel familiar with this type of pool system operation.

1.14 MAINTENANCE MANUALS

- A. The Contractor shall provide six (6) bound sets for delivery to the Designated Representative of instructions for operating and maintaining all systems and equipment included in this Contract. Manufacturer's advertising literature or catalog pictures will not be acceptable for operating and maintenance instructions.
- B. Bound in ring binders shall be all parts lists, periodic maintenance instructions and troubleshooting guidelines for all pool equipment, including but not limited to

filters, pumps, controllers, water chemistry control equipment, etc.

1.15 SECURE FROM THE OWNER

- A. A complete Owner-furnished filling of the swimming pools.
- B. The Owner's assistance, as specified herein, from the time of start-up until final written acceptance of the swimming pool system(s).

1.16 WARRANTY

- A. The Contractor shall warrant all swimming pool decking and finishes against defects in material and workmanship for a period of one year after the date of acceptance by the Owner. Any repair or replacement required due to defective material or workmanship will be promptly corrected by the Contractor.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 13154

SWIMMING POOL CERAMIC TILE

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Swimming pool ceramic tile detailed on the Drawings, including, but not limited to, the following:
 - 1. Waterline Face Tile (deep gutter pool).
 - 2. Gutter Cap Tile (deep gutter pool).
 - 3. Waterline Tile / Depth Marker / Caution Marker Tile (skimmer pool).
 - 4. Target Tile.
 - 5. Depth Marker Tile (at cantilever deck).
 - 6. Depth / Caution Marker Tile (at deep gutter pool).
 - 7. Bond Beam Tile (Rim Flow Pool).
 - 8. Water Polo Markers

1.02 QUALITY ASSURANCE

- A. Qualifications of Workers:
 - 1. The entity performing the work of this Section shall have been successfully engaged in the respective trade for at least five (5) years immediately prior to commencement of the Work.
 - 2. For actual construction operations, use only trained and experienced workers with a minimum of three (3) years experience with the materials and methods specified.
 - 3. Provide at least one person who shall be present at all times during execution of the work of this Section, with a minimum of five (5) years experience with the type of materials being installed, the referenced standards, and who shall direct all Work performed under this Section.
- B. Standards: In addition to complying with all pertinent codes and regulations:
 - 1. Manufacture of all tile shall be in accordance with ANSI A-137.1.
 - 2. Install ceramic tile in accordance with the recommendations contained in the 2016 "Handbook for Ceramic Tile Installation" of the Tile Council of America, Inc.
- C. Tolerances: Install all swimming pool ceramic tile straight, true, plumb and square within a tolerance horizontally of one in 200 and a tolerance vertically of one in 500. Waterline and gutter bullnose tile shall be level to 1/8" (+/- 1/16") around entire perimeter of swimming pools.

1.03 SUBMITTALS AND SUBSTITUTIONS

- A. Provide submittals in conformance with the requirements of Section 01330.

- B. Samples: Submit samples of each color and pattern in the specified groups. Character samples can be representative for review prior to screening of actual tile.
- C. Master Grade Certificate: Prior to opening ceramic tile containers, submit a Master Grade Certificate, signed by the manufacturer of the tile used and issued when the shipment is made, stating the grade, kind of tile, identification marks for the tile containers, and the name and location of the Project.
- D. Specifications: Submit manufacturer's recommended installation specifications for the Work.
- E. Submit proof of qualifications as specified in Article 1.02.A of this Section.

1.04 PRODUCT HANDLING

- A. Delivery: Deliver all materials to the Project Site in the manufacturer's original unopened containers with all labels intact and legible.
- B. Storage: Store all materials under cover in a manner to prevent damage and contamination, and store only the specified materials at the Project site.
- C. Protection: Use all means necessary to protect swimming pool ceramic tile before, during and after installation and to protect the installed Work specified in other Sections.
- D. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Owner's Representative.

PART 2 PRODUCTS

2.01 TILE

- A. Waterline Face Tile at Deep Gutter Pool (Replace any damaged to match existing)
 - 1. Material: All waterline face tile shall be glazed ceramic tile (Group III standard) as manufactured by Dal-Tile or approved equal.
 - 2. Size: 6 x 6 inches (match existing).
 - 3. *Color: Dal-Tile #D129, 'Sky Blue'. Contact Scott Chouinard at scott.chouinard@daltile.com (951)757-4919 (match existing).
- B. Gutter Cap Tile at Deep Gutter Pool (Replace any damaged to match existing)
 - 1. Material: All gutter cap tile shall be glazed ceramic tile (Group III standard) as manufactured by Dal-Tile or approved equal.
 - 2. Size: 2-1/2 x 6 inches (#A-7250) (match existing).
 - 3. *Color: Dal-Tile #D129, 'Sky Blue' (match existing).
- C. Waterline Tile Depth Marker Tile: (Skimmer Pool) (Replaced any damaged waterline tile.)

1. Material: All waterline tile shall be glazed ceramic tile (Group III standard) as manufactured by Dal-Tile or approved equal.
 2. Size: 6 x 6 inches (match existing).
 3. *Color: Dal-Tile #D129, 'Sky Blue' field with 4" minimum Black silk screened numbers and letters. Provide non-slip sanded finish on deck surface. Provide 6 x 6 inches international 'No Diving' tiles 'Inlays' or approved equal. Contact Scott Chouinard at scott.chouinard@daltile.com (951)757-4919.
- D. Target Tile: (Replace cantilever deck target tile)
1. Material: Group 3 quality, frost proof unglazed ceramic mosaic tile with absorption rate of less than 1% as manufactured by Dal-Tile or approved equal.
 2. Size: 1 x 1 inches (match existing).
 3. *Color: Dal-Tile #D311, 'Ebony' in 25-yard direction (match existing).
- E. Depth Marker Tile (At Cantilever Deck Face):
1. Material: All depth marker tile shall be glazed ceramic tile as manufactured and/or distributed by Dal-Tile, Precision Tile Co., or approved equal.
 2. Size: 4-1/4 x 4-1/4.
 3. Color: Dal-Tile #X-114, 'Desert Gray', with Black silk screen numbers at deep gutter pool.
- F. Depth / Caution Marker Tile (at Deep Gutter and Skimmer Pool Deck):
1. Material: Group 3 quality, frost proof unglazed ceramic mosaic tile with absorption rate of less than 1% as manufactured by Dal-Tile or approved equal.
 2. Size: 1 x 1 inches.
 3. Color: Dal-Tile #D-311, 'Ebony' letters and numbers on #D-014, 'Light Gray' field.
- G. Bond Beam / Waterline Tile (Rim Flow Pool): (Remove and replace any damaged due to demolition)
1. Material: Group 4 quality, frost proof unglazed ceramic mosaic tile with absorption rate of less than 1% as manufactured by Dal-Tile or approved equal.
 2. Size: 1 x 1 inches (match existing).
 3. Color: Dal-Tile #D-023 Cobalt Blue #D-317 Biscuit (match existing).
- H. Water Polo Course Markers
1. Material: All water polo course marker tile shall be frost proof ceramic tile as manufacture red and/or distributed by Dal-Tile or approved equal.
 2. Size: 4-1/4 x 4-1/4 inches.
 3. Color: Dal-Tile #K101 White, #DH50 Sunflower, and #ODM1 Vermillion. Provide silica sand on top of deck.
 4. Trim: Furnish trim pieces as indicated on the drawings.

2.02 MORTAR

- A. Sand for Mortar: Comply with requirements of fine aggregate for concrete.
- B. Cement: Type I Portland Cement, conforming to ASTM C150.
- C. Hydrated Lime: Conforming to ASTM C206 or 207, Type S.
- D. Water: From a potable source.

2.03 GROUT

- A. All tile grout shall be waterproof grout complying with the recommendations of TCA and ANSI A118.6 (4) standards. Grout color shall be grey for dark backgrounds, white for light backgrounds (verify colors with Owner).

2.04 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of ceramic tile as indicated on the Drawings, shall be new, first quality of their respective kinds, and subject to the approval of the Owner's Representative.

PART 3 EXECUTION

3.01 SURFACE CONDITIONS

- A. Inspection:
 - 1. Prior to all Work of this Section, carefully inspect the installed Work of other trades and verify that all such Work is complete to the point where this installation may properly commence.
 - 2. Verify that ceramic tile can be installed in accordance with the original design and all referenced standards.
- B. Discrepancies:
 - 1. In the event of discrepancy, immediately notify the Owner's Representative.
 - 2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.
 - 3. Failure to notify the Owner's Representative and give written notice of discrepancies shall constitute acceptance by the Contractor of existing conditions as fit and proper to receive its Work.

3.02 INSTALLATION

- A. Method:
 - 1. Install all ceramic tile in strict accordance with installation method P601-90 of the 2016 Handbook for Ceramic Tile Installation of the Tile Council of America, Inc.
 - 2. Be certain to install all ceramic tiles perfectly level, flush, plumb, and to

the finish grades and elevations indicated on the Drawings.

- B. Interface:
 - 1. Carefully establish and follow the required horizontal and vertical elevations to insure proper and adequate space for the work and materials of other trades.
 - 2. Coordinate and cooperate as required with other trades to insure proper and adequate interface of ceramic tile Work with the Work of other trades.

3.03 GROUTING

- A. Follow grout manufacturer's recommendations as to grouting procedures and precautions.
- B. Remove all grout haze, observing grout manufacturer's recommendations as to use of acid and chemical cleaners.

3.04 EXTRA STOCK

- A. Provide one (1) unopened box of extra tile for 2.01A for Owner's use at a future time.

3.05 CLEAN-UP

- A. Upon completion of the swimming pool ceramic tile installation, thoroughly clean and polish the exposed surfaces of tile work. Completely clean work area of debris and rubbish occasioned by this Work and dispose of to the approval of the Owner's Representative.

END OF SECTION

SECTION 13156

SWIMMING POOL EQUIPMENT

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Swimming pool equipment items required for this Work as indicated on the Drawings and specified herein.

1.02 QUALITY ASSURANCE

- A. Qualifications of Workers:
 - 1. The entity performing the work of this Section shall have been successfully engaged in the respective trade for at least five (5) years immediately prior to commencement of the Work.
 - 2. For actual construction operations, use only trained and experienced workers with a minimum of three (3) years experience with the materials and methods specified.
 - 3. Provide at least one person who shall be present at all times during execution of the work of this Section, with a minimum of five (5) years experience with the type of materials being installed, the referenced standards, and who shall direct all Work performed under this Section.
- B. All equipment supplied or work performed shall comply with regulations governing public swimming pools and spas as contained within Chapter 31 of California Building Code, latest edition.

1.03 SUBMITTALS AND SUBSTITUTIONS

- A. Provide submittals in conformance with the requirements of Section 01330.
- B. Required submittals include:
 - 1. Swimming Pool Deck Equipment as specified in Article 2.01 of this Section.
- C. Submit proof of qualifications as specified in Article 1.02.A of this Section.
- D. The equipment shown on the plans represent the first listed items in the technical specifications. The Contractor shall be responsible for all required field coordination and installation of any approved equal product to provide a fully working and warranted system. The Contractor shall submit detailed shop drawings for any products used other than the first listed specified items. Contractor provided shop drawings shall include details and quality equal to the original plans and construction documents. The Contractor shall provide any and all required engineering including but not limited to structural and anchorage requirements for any proposed equipment other than the first listed specified equipment. The Contractor is responsible to provide a factory certified representative(s) to start-up and provide on-site training for all swimming pool

mechanical equipment provided.

1.04 PRODUCT HANDLING

- A. Protection: Use all means necessary to protect swimming pool equipment items before, during and after installation and to protect the installed work specified in other Sections.
- B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Owner's Representative.

PART 2 – PRODUCTS

2.01 DECK EQUIPMENT

- A. Stainless steel Escutcheon Plates for Grab Rails & Hand Rails: Spectrum Model #35214, no known equal. Thirty-nine (39) required.

PART 3 EXECUTION

3.01 SURFACE CONDITIONS

- A. Inspection:
 - 1. Prior to installing the items of this Section, carefully inspect the installed Work of other trades and verify that all such Work is complete to the point where this installation may properly commence.
 - 2. Verify that the swimming pool equipment items may be installed in strict accordance with original design, pertinent codes and regulations, and the manufacturers' recommendations.
- B. Discrepancies:
 - 1. In the event of discrepancy, immediately notify the Owner's Representative.
 - 2. Do not proceed with installation in areas of discrepancy until all such discrepancies are fully resolved.
 - 3. Failure to notify the Owner's Representative and give written notice of discrepancies shall constitute acceptance by the Installer of existing conditions as fit and proper to receive its Work.

3.02 INSTALLATION

- A. Supply and install items of swimming pool equipment in strict accordance with applicable codes and regulations, the original design, and the manufacturer's published recommendations, anchoring firmly and securely for long life under hard use.
- B. Coordinate with other trades to insure all imbedded items are set plumb and flush. Railing ends must have anchor sockets and escutcheon plates. Be certain that deck equipment and railings are properly bonded prior to imbedding.

- C. All equipment shall be braced and/or anchored to resist a horizontal force acting in any direction using the criteria shown on the Drawings.

3.03 EQUIPMENT ACTIVATION

- A. All water chemistry and filtration mechanical equipment shall be operational during the project. Chemicals and other related support items as supplied by Contractor, shall be in supply at start-up.
- B. For the first three (3) calendar days after completion of the project, brush all pool surfaces at least twice a day and coordinate with General Contractor to ensure that the plaster is carefully maintained.

3.04 CLEAN-UP

- A. Upon completion of swimming pool equipment, remove all debris, materials and equipment occasioned by this Work to the approval of the Owner's Representative.

END OF SECTION