

**100% CONSTRUCTION DOCUMENTS
ISSUED FOR BID**

PROJECT MANUAL

CENTRAL BEACH TRAIL RECONSTRUCTION
Treasure Island, Florida

Prepared for:

CITY OF TREASURE ISLAND

PUBLIC WORKS DEPARTMENT

TREASURE ISLAND, FLORIDA

Prepared by:



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August 11, 2017

CENTRAL BEACH TRAIL RECONSTRUCTION
Treasure Island, Florida

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THE CITY OF TREASURE ISLAND, FLORIDA

Invitation to Bid NO: ITB 1617-21 – August 11, 2017

CENTRAL BEACH TRAIL RENOVATIONS

Sealed Bids may be hand-delivered or mailed to City of Treasure Island City Hall, 120 – 108th Ave., Treasure Island, FL 33706 to the attention of the Purchasing Coordinator. All Bids, **with original signature, and three (3) additional copy's** must be received **no later than Friday, September 8, 2017 at 2:00 PM.** All bids shall be submitted on the City's official Bid Form. **All envelopes shall be clearly marked "CENTRAL BEACH TRAIL RENOVATIONS".**

Immediately thereafter, at the City of Treasure Island Public Works Conference Room, located at 152 – 108th Ave, Treasure Island, FL and immediately following the deadline for receipt of the bids, those bids received will be publicly opened and read aloud. Any Bids received after the specified date and time will not be considered. The public meeting will be held at the City of Treasure Island Public Works Conference Room, located at 152 – 108th Ave, Treasure Island, FL. Persons with disabilities requiring reasonable accommodations to participate in this proceeding/event should call (727) 547-4575, no later than seven (7) days prior to the proceeding.

A mandatory pre-bid meeting will be held at the Public Works Conference Room, 152-108th Avenue, Treasure Island on **Tuesday August 22, 2017 at 9:00AM.**

Any questions should be addressed to Hal Bruce at hbruce@mytreasureisland.org by **Friday, August 25, 2017 at 3:00 PM.** All questions will be answered and posted on the City's website and Vendor Registry by Tuesday, August 29, 2017.

Complete specifications and any additional information may be obtained from the City of Treasure Island's website at www.mytreasureisland.org and/or from the Vendor Registry.

All proposals must be accompanied by a certified check, bank draft, or bid bond in the amount of ten percent (10%) of the base bid made payable to the City of Treasure Island. The check, Bank draft or bid bond shall guarantee that should the bid be accepted, the bidder will, after the acceptance of his proposal by the City Commission, and issuance of the Florida Department of Environmental Protection permit, enter into a contract with the City of Treasure Island for the services proposed to be performed. A performance bond in the amount of 100 percent (100%) of the contract, made payable to the City of Treasure Island, Florida, will also be required which bond shall be adequate to guarantee the faithful performance of the contract. A payment bond will be required for Labor and Materials to ensure they payment of all indebtedness incurred for labor furnished materials, equipment or supplies used or consumed in connection with, or in or about, the construction of this project. All Bids may be withdrawn prior to the date of opening, but no bid may be withdrawn after the date of opening bids.

The City of Treasure Island reserves the right to accept or reject any or all quotes, to award quotes on a split-order basis by item number when applicable, to wave any quotes informalities and to re-advertise for quotes when deemed in the best interest of the City of Treasure Island.

SECTION 00100

INSTRUCTIONS TO BIDDERS

00100.01 DEFINED TERMS

Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions.

00100.02 PUBLIC RECORDS

All Bidding Documents and submissions by Bidders may be considered a public record under Florida's public records laws, Chapter 119, Florida Statutes. Accordingly, the Bidder understands and acknowledges that the Bidder's bidding documents may be inspected or copied by the public in accordance with applicable Florida law.

00100.03 QUALIFICATIONS OF BIDDERS

Bidders shall have successfully completed two (2) contracts for similar work in an amount not less than one hundred percent (100%) of the amount of the proposal contract during the past three years. The City, in its sole discretion, has the right to determine project equivalence.

Bidders shall have received Contract Documents from the Engineer. The City may make such investigations as it deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the City any additional information and financial data for this purpose as the City may require. The data shall include a detailed and up-to-date list of equipment the bidder proposes to use, indicating which portions he already possesses and a detailed description of the method and program of the work he proposes to follow.

If such an investigation fails to satisfy the Engineer or City that the bidder is properly qualified to complete the work described in the drawings and specifications or to meet the financial obligations of such a contract, the bid may be rejected. In the event the bidder fails, refuses, or neglects to submit the requested additional information with ten (10) days of the date of any request for submission, the bidder's proposal guarantee shall be forfeited to the use of the City, not as a penalty, but as liquidated damages.

A person or affiliate who has been placed on the discriminatory vendor list, may not submit a bid on a contract to provide goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, sub-contractor, or consultant under a contract with a public entity, and may not transact business with any public entity in excess of the threshold amount as provided in Section 287.017, Florida Statutes, for Category Two for a period of 36 months from the date of being placed on the discriminatory vendor list.

A person or affiliate who has been placed on the convicted vender list, following a conviction for a public entity crime, may not submit a bid on a contract to provide goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a Contractor, supplier, subcontractor, or consultant under a contract with a public entity, and may not transact business with any public entity in excess of the threshold amount as provided in Section 287.017, Florida Statutes, for a period of 36 months from the date of being placed on the convicted offender list.

No bid will be considered unless the bidder is properly qualified to submit a proposal for this construction in accordance with all applicable laws of the municipality, county, and the State of Florida.

00100.02 BIDDER'S RESPONSIBILITY

Each bidder shall familiarize himself with the Bidding Documents, as he will be held responsible to fully comply therewith. Each bidder must visit the site of the proposed work and thoroughly acquaint himself with conditions affecting the work, all utilities in existence to which connections are to be made, all other requirements of the contract, and obtain all information necessary for completion of the work on or before the date specified. Each bidder shall also make himself familiar with all Federal, State, Local and Municipal laws, ordinances, rules and regulations which in any manner affect the work, those engaged or employed in the work, or the materials or equipment used in or upon the work. If the bidder or Contractor shall discover any provision in the plan, specification, or other contract documents which is contrary to, or inconsistent with, any such law, ordinance, rule, or regulation, he shall immediately report it to the Engineer in writing. The Contractor shall not at any time after the execution of his contract set up any claims whatever based upon insufficient data or incorrectly assuming conditions, nor shall he claim any misunderstanding in regard to the nature, conditions or character of the work to be done under the contract, and he shall assume all risks resulting from any changes in the conditions which may occur during the progress of this work.

00100.03 SITE CONDITIONS

Any information on site or soil conditions made available to the prospective bidders through data collected by test borings and presented on the Engineer's drawings or available in preliminary reports prepared by the Engineer or obtained verbally from a representative of the City or the Engineer does not guarantee that such site or soil conditions will be as described, and are made available only upon waiver of all responsibility of the City and Engineer. It is the Contractor's sole risk and responsibility to verify such information in order that he may complete the project as specified and shown on the contract documents. Under no condition will a variation in the information obtained by the Engineer on site or soil conditions, including underground soil conditions at the job site, be accepted as a basis in any claim for extra compensation.

It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all laws and regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the General Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the General Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;
- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by City and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions of performance of the Work.

00100.04 OMISSIONS AND DISCREPANCIES

Should a bidder find discrepancies in, or omissions from the drawings or other Contract Documents, or should he be in doubt as to their meaning, he should at once notify the Engineer. All notice of omissions or discrepancies or request for clarification must be forwarded to the Engineer in writing not less than six (6) days before the advertised date of the opening of bids.

Such clarification and corrections as are necessary will be issued in the form of an Addendum to the Contract Documents and will be forwarded to all prospective bidders. Any addendum so prepared and forwarded shall be a part of the Contract Documents. Neither the Engineer nor the City will be responsible for any other explanation or clarification of the Contract Documents.

00100.05 BID ITEMS AND ESTIMATED QUANTITIES

The City may increase, decrease or omit the quantity of the work to be done under any item in the best interests of the project and the unit price as submitted in the proposal shall be the unit price which the Contractor will receive for any work specified to be done under that item.

All work herein specified or implied in anyway in the drawings or specifications shall be done regardless of whether or not the work is specifically defined in any bid item.

The Contractor agrees that the estimated quantities shown in the Bid Schedule are only for the purpose of comparing bids and that he/she is satisfied with, and will at no time dispute, the said estimates as means of comparing the aforesaid bids, that he/she will make no claim for loss of profits or anticipated profits because of any difference between the said estimated quantities and the quantities of various classes of work actually furnished or performed, that the City shall not be held responsible if any of the said estimated quantities should vary by any amount from those actually measured during performance of the work.

00100.06 APPROVED MATERIALS AND EQUIPMENT

Whenever a material, article or piece of equipment is identified on the plans or in the specifications by reference to manufacturers or vendors names, trade names, catalog numbers, etc., it is intended to establish a standard of quality and it will be presumed, unless specifically excepted by the bidder, that the base bid includes the materials or articles so named, and that the Contractor's proposal, if accepted, will constitute a contractual obligation to furnish the standard named materials or articles and no other. To assist the Engineer in making an adequate evaluation, the bidder shall submit with his proposal, at the time bids are received, detailed information and data on the items he proposes to furnish as equally acceptable to the named terms. The data furnished shall include as applicable and needed for evaluation, manufacturer's name, model identification, descriptive brochures, specifications, performance data, guaranteed efficiencies, and list of installations in similar service. Such alternate material, article or piece of equipment shall not be purchased or installed by the Contractor without the Engineer's written approval. Any revisions to the Drawings as a result of alternate equipment shall be at the expense of the Contractor.

00100.07 SAMPLE OF MATERIALS

Before any contract is awarded, the bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the work, together with samples, which samples may be subjected to the tests provided for in these specifications to determine their quality and conformity to the plans and specifications.

00100.08 PROPOSAL FORM

All bids must be submitted on photocopies of the proposal form bound within these specifications. No proposal will be considered which is submitted otherwise than on the prepared proposal form and in the designated manner. The blank spaces in the proposal shall be filled in correctly where indicated for each and every item for which a description is given, and the bidder must state the prices for which he proposes to do each part of the work contemplated, and the total amount for all parts included in any or all of the combinations of the work. In case of discrepancy, the written words or "Unit Price", where stated, shall be considered as being the bid price. The bidder shall sign his proposal correctly. If the proposal is made by an individual, in addition to his signature, his post office address must be shown; if made by a firm or partnership, the post office address of each member of the firm or partnership; if made by a corporation, the person signing the proposal must be President or Vice-President of the corporation. No proposal will be considered which is not based upon the complete plans and specifications, or which contains any qualifying letter or written memorandum not permitted in these specifications, or which is not properly made out and signed in writing by the bidder. The proposal shall be submitted in a sealed envelope bearing the name of the Contractor and describing the project for which the proposal is being submitted. Proposals will be accepted by registered mail, and then only if the proposal is enclosed in another sealed envelope contained within the mailing envelope and is delivered to the City prior to the time established for opening bids.

A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the corporate secretary or an assistant corporate secretary. The corporate address and state of incorporation shall be shown below the signature.

A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The partnership's address for receiving notices shall be shown below the signature.

A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the firm's address for receiving notices shall be shown below the signature.

A Bid by an individual shall show the Bidder's name and official address for receiving notices.

A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture's address for receiving notices shall be shown.

All names shall be typed or printed in ink below the signatures.

Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

More than one Bid received for the same work from an individual, firm, partnership, corporation or joint venture under the same name nor different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one Bid for the same work will cause the rejection of all Bids that the Bidder is interested. If there are reasonable grounds for believing collusion exists among Bidders, the Bids of participants will not be considered.

00100.09 WITHDRAWAL OF PROPOSALS

Bidders will be given permission to withdraw any proposal after it has been received by the City, provided the bidder, or his agent duly authorized to act for him, personally appears before the City with a written request prior to the time set for the opening of bids. At the time set for the opening of proposals the withdrawn proposal will be returned unopened to the bidder. No bids may be modified or withdrawn after the opening of the proposal.

00100.10 BID SECURITY

Each proposal must be accompanied by the bidder's bid bond or certified check made payable to the City in an amount of ten percent (10%) of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraph 100.27 of the this Section. The bid bond shall be issued by a company authorized to conduct business in the State of Florida and having a registered agent in the State of Florida. This sum will serve as bid security and will be forfeited to the City as liquidated damages in the event an award is made and the contract and bonds are not promptly and properly executed as required in the specifications.

All certified checks, except those accompanying the two lowest bids, will be returned by certified mail to the unsuccessful bidders within seven (7) days after the date of the bid opening. (If the signing of the contract is to be deferred for a period exceeding two (2) weeks, and the second low bidder desires to substitute a bid bond for his certified check and the bid bond fully guarantees his bid, he shall be permitted to do so). The certified checks accompanying the two low bids will be returned within three (3) days after the City and the successful bidder have executed the contract. In the event no contract award is made within the time limit specified, each certified check or bid bond will be returned upon the demand of the bidder.

00100.11 OPENING OF PROPOSALS

All proposals will be publicly opened and read, on the date, at the place and commencing at the time stated in the advertisement. Bidders or their authorized agents should be present. The City reserves the right to reject any or all bids or parts thereof. Proposals may be rejected if they show any omissions, alterations of form, additions or deductions not called for, conditional or uninvited alternate bids, or irregularities of any kind. Proposals in which the prices are unbalanced may be rejected. The City reserves the right to accept the responsive responsible bid, which will serve its best interests. The owner reserves the right to reject any or all bids on the project. The City will reject a bid that the City finds, after reasonable inquiry and evaluation, to not be responsible. The City also reserves the right to waive all minor and formalities not involving price, time or changes in the work. Bidders are hereby notified that all bids on the project are likely to be rejected if the lowest responsive bid received exceeds the engineer's estimate by more than 10 percent.

00100.12 METHOD OF AWARD

Bids will be compared on the basis of the total costs of estimated quantities established in the proposal form, constructed at the unit or lump sum prices bid for the various items listed. The contract will be awarded to that response responsible bidder whose proposal totals the lowest number of dollars for a complete installation.

The City may conduct such investigations as the owner deems necessary to establish the responsibility, qualifications, and financial ability of the bidders and any proposed subcontractor suppliers and individuals or entities to perform the work in accordance with the contract documents.

The successful bidder will be officially notified in writing by the City of the acceptance of his proposal and award of contract. This notification will be made within the time limit set up in the contract documents.

Whenever two responsible bidders are found to have both submitted the lowest responsive bid, the owner shall give preference to the bidder that certifies it has implemented a drug free workplace program in determining which of the two responsible bidders shall be awarded the contract.

00100.13 EXECUTION OF CONTRACT

The bidder to whom the contract is awarded must, within ten (10) calendar days following Notice of Award, present himself to the place designated in the official Notice of Acceptance, for signing of the contract. All bonds and insurance shall be issued by companies authorized to transact business in the State of Florida.

If the lowest responsible bidder to whom the contract is awarded fails to give bonds or execute the contract within the time specified, the amount of the proposal guarantee shall be forfeited to the City, not as a penalty but as liquidated damages.

00100.14 TIME OF COMPLETION

The successful Contractor shall commence work under his contract on a date to be specified in a written order from the City or his authorized representative, which order will also establish the completion date in accordance with the total number of consecutive calendar days established as a working period in the proposal. The Contractor shall fully complete the work described in these plans and specifications on, or prior to, the completion date.

If the Contractor fails to commence work with seven (7) days of the announcement of the official starting date, this shall be just cause for the annulment of the contract.

00100.15 LIQUIDATED DAMAGES

Should the Contractor fail to complete the work on or before the expiration of the date set for completion or as provided in the Contract Documents covering extension of time, then the City may retain as liquidated damages the amount established in the proposal form, which amount is agreed upon as the costs which the City will sustain per diem by the failure of the Contractor to complete the work at the time stipulated and the sum is not to be construed in any sense as a penalty.

00100.16 EXTENSIONS OF TIME

If the Contractor shall be delayed at any time in the progress of the work by any cause beyond the Contractor's control and without his fault or negligence, including but not restricted to any act or neglect of the City, or of his employees, or by any other contractor employed by the City, or by changes ordered in the work, acts of God or of the public enemy, fires, floods, epidemics, quarantines, strikes, lockouts, riots, civil commotions or freight embargoes or by delay authorized by the City, or by any cause which the City shall decide to justify the delay, then the time of completion shall be extended for such reasonable time as the City shall decide.

No such extensions of time shall be deemed a waiver by the City of its right to terminate the contract for abandonment or delay by the Contractor as herein provided or relieve the Contractor from full responsibility for performance of his obligations hereunder.

00100.17 CERTIFICATE OF INSURANCE

The successful bidder shall submit certificates or other documentary evidence to the City for approval, covering Workmen's Compensation Insurance, Public Liability, Property Damage Insurance, and Special Hazard Insurance, in the amounts specified on the "Summary of Information to Bidders."

00100.18 DETAILED BREAKDOWN SHEET AND SCHEDULE OF PRICES

The successful bidder shall submit, in a mutually acceptable form, a detailed breakdown sheet and schedule of prices of the proposed construction work. Until the City approves the breakdown, the City will not be obligated to make any payments to the bidder.

00100.19 EXISTING MATERIALS AND EQUIPMENT

All existing materials and equipment not specified for the complete construction of the project, or shown on the plans to be retained or reused, shall remain the property of the City and shall be placed on the project site as the City may direct.

00100.20 STANDARDS

This project shall be completed in accordance with these specifications unless noted or otherwise directed by the City or its authorized representative. The decision of the City in interpreting these specifications shall be final.

00100.21 LICENSES AND PERMITS

The Contractor shall obtain and pay for all other federal, state, county, city permits, licenses, and other authorizations required for the prosecution of the Work, including the cost of all Work performed in compliance with the terms and conditions of such permits, licenses, and authorizations, whether by himself or others. No construction work shall commence until all applicable licenses and permits have been obtained and copies delivered to the Engineer.

00100.22 CONFLICT OF INTEREST

The bidder certifies that, to the best of his knowledge or belief, no elected/appointed official or employee of the City, a spouse thereof or other person residing in the same household, is financially interested, directly or indirectly, in providing the goods or services specified in this bid. Financial interest includes but is not limited to ownership of more than five percent of the total assets or capital stock or being an officer, director, manager, partner, proprietor, or agent of the business submitting the bid or of any subcontractor or supplier thereof providing goods or services in excess of ten percent of the total bid amount.

In addition, the bidder, on company letterhead, must divulge at the time of bid submittal, any relative, other than those already specified, of an elected/appointed official or employee of the City who has a financial interest, as defined herein, in providing the goods or services specified in the Bid.

The City, at its sole discretion, will determine whether a conflict exists and whether to accept or reject the bid.

00100.23 SUBCONTRACTORS, SUPPLIERS, AND OTHERS

A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.

Subsequent to the submittal of the Bid, City may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.

The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to City a list of the Subcontractors or Suppliers proposed for the Work: Each Bid must identify the names, and addresses of the Subcontractors. If requested by the City or Engineer, the Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to the City the following:

- A. If requested by City, an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity.
- B. If City or Engineer, after due investigation, finds any proposed Subcontractor or supplier is not licensed, qualified, or certified as required by state law City may, before the Start to Work Order is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and City may consider such price adjustment in evaluating Bids and making the Contract award.

If apparent Successful Bidder declines to make any such substitution, City may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which City or Engineer makes no written objection prior to the giving of the Start to Work Order will be deemed acceptable to City and Engineer subject to subsequent revocation of such acceptance.

00100.24 REQUIRED DISCLOSURE

With its bid submission bidder shall disclose all material facts pertaining to any felony conviction or any pending felony charges in the last three (3) years in this state or any other state of the United States against (i) bidder, (ii) any business entity related to or affiliated with bidder, or (iii) any present or former executive employee, officer, director, stockholder, partner or owner of bidder or of any such related or affiliated entity. This disclosure shall not apply to any person or entity which is only a stockholder, which person or entity owns 20 percent or less of the outstanding shares of a bidder whose stock is publicly owned and traded.

At its sole discretion the City may reject any bidder the City finds to lack, or whose present or former executive employees, officers, directors, stockholders, partners or owners are found by the City to lack honesty, integrity, or moral responsibility. The discretion of the City may be exercised based on the disclosure required herein. By submitting a Bid, Bidder recognizes and accepts that the City may reject the Bid based upon the exercise of its sole discretion and bidder waives any claim it might have for damages or other relief resulting from the rejection of its Bid based on these grounds.

00100.25 FLORIDA TRENCH SAFETY ACT

Bidders shall be solely responsible for complying with the Florida Trench Safety Act and Occupational Safety and Health Administration excavation safety standards, 29 CFR 1926.650 as amended. All costs associated with complying with these requirements shall be included in the Bid and shall be detailed in the Certificate of Compliance with the Florida Trench Safety Act (Section 330).

00100.26 RESERVED

00100.27 - BONDS AND INSURANCE

In order to be acceptable to the City, a surety company issuing the Bid Security, Performance and Payment Bonds called for in the Bid Documents shall meet and comply with the standards set forth in the General Conditions and the following:

- A. Surety must be licensed or authorized to do business in the State of Florida and shall comply with section 255.05 of the Florida Statutes.
- B. Surety shall have been in business and have a record of successful continuous operations for at least five (5) years.
- C. All bonds must be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, and the U.S. Treasury Department. Surety shall have an A.M. Best Rating of A or better and A.M. Best Financial Size Category of Class VII or greater.
- D. Surety must issue performance and payment bonds in accordance with section 255.05 of the Florida Statutes.

The City reserves the right to reject any Surety. If the Surety or any bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to do business terminates in any state where any part of the project is located or it ceases to meet the requirements of these Contract Documents, the Contractor shall within five (5) days after notice thereof substitute another bond and Surety, both of which must be acceptable to the City. The General Conditions sets forth City's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to City, it shall be accompanied by required bonds and insurance documentation.

END OF SECTION

SECTION 00140

SUMMARY OF INFORMATION TO BIDDERS

00140.01 OBTAINING PLANS AND SPECIFICATIONS

Specifications, Proposal Forms, Drawings, and other contract documents may be examined at the City of Treasure Island, 152 108th Avenue, Treasure Island, Florida 33706. A complete set of bidding documents may be obtained at the office of Advanced Engineering & Design, Inc. upon furnishing a \$50.00 payment (non-refundable). Advanced Engineering & Design, Inc.'s office is located at 3931 68th Avenue North, Pinellas Park, Florida 33781.

00140.02 OWNER

The Owner for this project is the City of Treasure Island (City”), 152 108th Avenue, Treasure Island, Florida 33706.

00140.03 CONTRACT

The contract is entitled **Implementation of BMPs within the Sunset Beach Watershed (Phase VI)**.

00140.04 BID SECURITY & PERFORMANCE BOND

Each Bidder must deposit with his bid a bid bond in the amount of ten percent (10%) of the bid total, made payable to the City of Treasure Island. All bids may be held for a period of 90 days after receipt.

Once awarded, the Contractor shall provide a performance bond for 100% of the contract amount to the City within ten (10) days of the Notice to Proceed date.

00140.05 TIME OF COMPLETION

The time of completion for this contract is **240** consecutive calendar days from date established in Start to Work Order.

00140.06 INSURANCE REQUIRED

1. Workers' Compensation Insurance

Provide Workers' Compensation Insurance in accordance with the laws of the State of Florida and in amounts sufficient to secure benefits of the Florida Workers' Compensation Law for all employees. If subletting any of the work, ensure that the employees of the subcontractors are covered by similar insurance.

2. Contractors' Public Liability and Property Damage Liability Insurance

Furnish evidence to the City that, with respect to the operations performed, regular Contractors' Public Liability Insurance providing for a limit of not less than \$1,000,000 for all damages arising out of bodily injuries to, or death of, one person and, subject to that limit for each person, a total limit of \$2,000,000 for all damages arising out of bodily injuries to, or death of, two or more persons in any one occurrence; and, regular Contractors' Property Damage Liability Insurance providing for a limit of not less than \$50,000 for all damages arising out of injury to, or destruction of, property in any one occurrence and, subject to that limit per occurrence, a total (or aggregate) limit of \$100,000 for all damages arising out of injury to, or destruction of, property during the policy period is carried.

Cause the City to be an additional insured party on the Contractors' Public Liability and Property Damage Liability Insurance policies that insure the Contractor for the described work that it performs under the Contract.

3. Submission and Approval of Policies; Termination

Furnish two copies of each required policy to the CITY. Provide all insurance policies in such form and with insurers that are acceptable to the City. Keep insurance in force until the City accepts that the Contractor has satisfactorily completed all work required under the Contract.

4. Contractors Commercial Automobile Liability Insurance

Contractors shall provide evidence of Commercial Automobile Liability coverage, with a minimum combined single limit of \$1,000,000. Contractors shall provide general liability with a minimum single limit of \$1,000,000. Coverage shall include owned, non-owned, hired, and rented vehicles.

5. Insurance on Contractors, Subcontractors, and Licensees

If, in connection with the Contract, the contractor, subcontractor, or licensee is to perform work by or on behalf of the Contractor, the Contractor shall require any such contractor, subcontractor, or licensee to provide insurance in the same manner as required by the Contractor.

6. Contractor's Insurance Primary

The insurance provided by the Contractor and its contractors or subcontractors, including that provided to the City as an insured, shall apply on a primary basis. Any insurance maintained by the City shall be excess of and shall not contribute with the insurance provided by the Contractor and its contractors, or subcontractors. Deductible

or self-insurance retention will be permitted in accordance with industry standards, provided that the Contractor has the financial wherewithal to cover the deductible or self-insured retention amounts.

7. Insurance is Additional Remedy

Compliance with these insurance requirements shall not limit the liability of the Contractor or its contractors or subcontractors. Any remedy provided to the City by the insurance provided by the Contractor and its contractors or subcontractors shall be in addition to and not in lieu of any other remedy (including, but not limited to, as an indemnitee of the Contractor) available to the City under contract or otherwise.

8. No Waiver

Neither approval nor failure to disapprove insurance furnished by the Contractor or its contractors or subcontractors shall relieve the Contractor, contractor or subcontractor from responsibility to prove insurance as required.

9. Indemnification Requirements

The Contractor will be required to agree to a provision requiring that it indemnify, defend, and hold harmless the City, any federal, county or municipal funding agency, and all of their officers, agents, and employees from any claim, loss, damage, cost, charge, or expense arising out of any act, error, omission, or negligent act by Contractor, its agents, or employees during the performance of the Contract.

10. City as Additional Insured

On all insurance required by this Section, the City shall be named as an additional insured.

00140.07 SCOPE OF WORK

The work to be performed under this contract shall consist of the furnishing of all labor, materials, and equipment necessary to satisfactorily complete the **Implementation of BMPs within the Sunset Beach Watershed (Phase VI)** including written logs and testing in accordance with these plans and specifications. All workmanship and materials shall be fully guaranteed for a period of one year after date of acceptance by the Owner. All Testing shall be paid by the Contractor. All Professional Surveying shall be paid by the Contractor.

00140.08 BID SUBMITTAL FORMS

Submission of the following forms shall constitute a complete proposal package:

- Proposal Form (w/ Addenda acknowledged)
- Bid Schedule
- Bid Bond
- Florida Trench Safety Act Acknowledgement
- Public Entity Crimes Statement
- Contractor's Affidavit
- Contractor's Release
- Statement of Surety Company
- Certification of Insurance
- Drug Free Workplace Form

END OF SECTION

SECTION 00310

PROPOSAL

To: City of Treasure Island

The following proposal is submitted in accordance with your advertisement inviting proposals to be received until **2:00 p.m. on Friday, September 8, 2017** for the construction of the **City of Treasure Island CENTRAL BEACH TRAIL RENOVATION**.

Having carefully examined the contract documents together with all addenda or bulletins, all as prepared by Master Consulting Engineers, Inc., 5523 West Cypress Street, Suite 200, Tampa, Florida, 33607 and being familiar with the various conditions of the work, the undersigned herein agrees to furnish all materials required and to perform all labor necessary to satisfactorily construct the **City of Treasure Island CENTRAL BEACH TRAIL RENOVATION** in accordance with the plans and specifications for the unit prices stated herein.

Accompanying this proposal is Certified or Cashier's Check or Bid Bond in the amount of ten percent (10%) of the bid total drawn upon the _____ BANK and made payable to the City of Treasure Island to serve as bid security. The undersigned Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

It is understood that this proposal shall be effective until 90 days after the bid opening and that the sum of \$200.00 per day may be retained by the City in the event the contract is not complete within **180** consecutive calendar days after the date established in the Start to Work Order.

The undersigned Bidder hereby certifies that this proposal is genuine and not sham or collusive, or made in the interest or in behalf of any person, firm, or corporation not herein named and that the undersigned has not directly or indirectly induced or solicited any other bidder to submit a sham bid, or any other person, firm or corporation to refrain from bidding, and that the undersigned has not in any manner sought by collusion to secure for himself an advantage over any other bidder.

The undersigned Bidder agrees to accept the unit prices as full compensation for work performed.

In submitting this Bid, Bidder makes all representations required by *Instructions to Bidder* and further warrants and represents:

- A. The Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda, if any:

Addendum#1 _____	Dated: _____
Addendum#2 _____	Dated: _____
Addendum#3 _____	Dated: _____

- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with, has considered, and has satisfied itself as to federal, state and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has obtained and carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the General Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the General Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by City and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

K. Bidder will submit written evidence of its authority to do business in the State of Florida not later than the date of its execution of the Agreement.

By affixing his signature to this Bid, Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph:
 - 1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 - 2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of City, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive City of the benefits of free and open competition;
 - 3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of City, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.
- E. All required sales and use taxes are included in the stated Bid prices for the Work unless provision is made herein for the Bidder to separately itemize the estimated amount of sales tax.
- F. If awarded a Contract, the Florida Trench Safety Act, (sections 553.60 through 553.64, of the Florida Statutes) and applicable trench safety standards shall be complied with..
- G. Bidder is not currently and has not been on the convicted vendor list within the last 36 months.

- H. Bidder is not currently and has not been on the discriminatory vendor list within the last 36 months.
- I. This Bid is made without previous understanding, agreement, or connection with any person, firm, or corporation making a bid for the same item(s) and is in all respects fair, without outside control, collusion, fraud, or other illegal actor.
- J. Bidder is and will comply with all local, state, federal directives, orders and laws as applicable to this Bid and subsequent contract(s) including but not limited to Equal Employment (EEO), Minority Business Enterprise (MBE), and OSHA as applicable to this Contract.
- K. Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work, within the Contract Time.

This Bid is submitted on ___ day of ____, 2017, by:

- L. If Bidder is an individual:

Name (*Typed or printed*) _____

By (*signature*) _____

Doing Business As: _____

- M. If Bidder is a partnership:

Partnership Name _____ (SEAL)

By (*signature*) _____

(Signature of general partner - attach evidence of authority to sign)

Name (*Typed or printed*): _____

- N. If Bidder is a corporation:

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (*General Business, Professional Service, Limited Liability*): _____

By _____

(Signature - attach evidence of authority to sign)

Name (*typed or printed*): _____

Title: _____ (CORPORATE SEAL)

Attest: _____

(Signature of Corporate Secretary)

Date of Qualification to do business is: _____

If Bidder is a Corporation, attach a certified copy of corporate resolutions of the Board of Directors of the Corporation authorizing an officer of the Corporation to execute the Agreement contained within this document on behalf of the Corporation.

O. If Bidder is a Joint Venture

Joint Venturer Name: _____ (SEAL)

By: _____

(Signature of joint venture partner - attach evidence of authority to sign)

Name *(typed or printed)*: _____

Title: _____

Name *(typed or printed)*: _____

Title: _____

Name *(typed or printed)*: _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

1.02 Bidders Particulars

Bidder's Business Address: _____

Phone No.: () _____ FAX No.: _____

Email: _____

Name(s) of Contractor: _____

Job Site Field Representative(s): _____

BID SUBMITTED on _____, 201__

Florida Contractor's License No.: _____

Contractor's License Class (where applicable): _____

END OF SECTION

and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SECTION 00520

CONTRACTOR'S AFFIDAVIT

STATE OF FLORIDA
PINELLAS COUNTY

Before me, the undersigned authority, personally appeared _____, who, being duly sworn, deposes and says of his or her personal knowledge that:

1. He or She is the _____ of _____, which does business in the State of Florida, hereinafter referred to as the Contractor.

2. Contractor, pursuant to contract with the **CITY OF TREASURE ISLAND**, hereinafter referred to as "City", has furnished or caused to be furnished labor, materials, and services for the construction of certain improvements to real property located in Pinellas County, Florida as more particularly set forth in said contract.

3. Said improvements have been fully completed and the Contract and General Conditions for Construction Services ("Construction Contract") entirely performed to the final stage of pay out as prescribed in the Construction Contract between Contractor and City, and that all lienors as defined by Chapter 713, Florida Statutes, have been paid all sums due them up to the date of this Affidavit except the following ones who are due the respective amounts set opposite their respective names:

Name

Amount

4. There is now due Contractor a Final Payment for the payout stage mentioned above under the Construction Contract in the amount of \$_____, leaving the amount of \$_____ to be paid upon completion of all punch list items; that Contractor has in no way assigned, pledged, or hypothecated the Construction Contract or any amount due or to become due thereunder; that payment to Contractor of said sum shall constitute a full release by Contractor of any and all claims arising out of the Construction Contract.

5. Contractor has not entered into any agreement by which any security interest under the Uniform Commercial Code has attached to the above described property.

6. Affiant is an officer of the Contractor having personal knowledge of the foregoing facts and duly authorized to execute this Affidavit.

7. This Affidavit is made for the purpose of inducing City to pay and disburse the Final Payment for the final stage of pay out of the Construction Contract hereinabove mentioned.

CONTRACTOR

BY: _____

FOR: _____

Sworn to and acknowledged before me this _____ day of _____, 20__, by _____ of _____, a Florida corporation, on behalf of the corporation. He/she is personally known to me or has produced a Florida driver's license as identification.

_____, Notary Public, Commission No. _____

_____, Name of Notary type, printed or stamped

SECTION 610

PAYMENT BOND

CONTRACTOR *(name, address, and telephone number)*:

SURETY *(name, address of principal place of business, and telephone number)*:

OWNER *(name, address, and telephone number)*:

City of Treasure Island ("City")

152 108th Avenue

Treasure Island, FL 33706

(727) 547-4575

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*: **CENTRAL BEACH TRAIL RENOVATIONS – ITB – 1617 - 21**

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

_____ *(seal)*

_____ *(seal)*

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____

By: _____

Signature

Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____

Attest: _____

Signature

Signature

Title

Title

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state of Florida.

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Authority, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page

on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and

8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

SECTION 610

PERFORMANCE BOND

CONTRACTOR *(name, address, and telephone number):*

SURETY *(name, address of principal place of business, and telephone number):*

OWNER *(name, address, and telephone number):*

City of Treasure Island ("City")
152 108th Avenue
Treasure Island, FL 33706
(727) 547-4575

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):* **CENTRAL BEACH TRAIL RENOVATIONS – ITB 1617-21**

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal *(seal)*

Surety's Name and Corporate Seal *(seal)*

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state of Florida.

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Authority, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of

the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted

within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

SECTION 710

NON-DISCRIMINATORY VENDOR STATEMENT

SWORN STATEMENT UNDER SECTION 287.134(3)(a) OF THE FLORIDA STATUTES REGARDING DISCRIMINATION

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to _____
(Print name of the public entity)
by _____
(Print individual's name and title)
for _____
(Print name of entity submitting sworn statement)

whose business address is _____

and (if applicable its Federal Employer Identification Number (FEIN) is _____

(if the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____).

2. I understand that "discrimination" as defined in Section 287.134(1)(b) of the Florida Statutes means a determination of liability by a state circuit court or federal district court for a violation of any state or federal law prohibiting discrimination on the basis of race, gender, national origin, disability, or religion by an entity; if an appeal is made, the determination of liability does not occur until the completion of any appeals to a higher tribunal.

3. I understand that an "affiliate" as defined in Section 287.134(1)(a) of the Florida Statutes means:
- 1. A predecessor or successor of an entity that discriminated; or
 - 2. An entity under the control of any natural person who is active in the management of the entity that discriminated. The term "affiliate" includes those officers, directors, executives' partners, shareholders employees, members and agents who are active in the management of an affiliate. The ownership by one entity of shares constituting a controlling interest in another entity, or a pooling equipment or income among entities when not for fair market value under an arm's length agreement, shall be a prima facie case that one entity controls another entity.

4. I understand that "entity" as defined in Section 287.134(1)(e) of the Florida Statutes means any natural person or any entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on

contracts let by a public entity, or which otherwise transacts or applies to transact business with a public entity.

- 5. Based on information and belief, the statements that I have marked below is true in relation to the entity submitting the sworn statement. (Please check all that apply)

____ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been placed on the discriminatory vendor list for any period during the last 36 months prior to submitting this bid.

____ The entity submitting this sworn statement is **not** under the same, or substantially the same control as an entity whose name appears on the discriminatory vendor list.

____ The entity submitting this sworn statement, or any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or any affiliate of the entity **have** been placed on the discriminatory vendor list for any period during the last 36 months prior to submitting this bid **but** that entity or affiliate has been removed from the list.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALANDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017 FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

(Signature)

Sworn to and subscribed before me this _____ day of _____, 20__.

Personally known _____

OR Produced Identification _____

Notary Public – State of Florida

(Type of identification)

My Commission Expires _____

(Printed, typed or stamped
commissioned name of notary public)

SECTION 715

PUBLIC ENTITY CRIMES STATEMENT

SWORN STATEMENT UNDER SECTION 287.133(3)(a) OF THE FLORIDA STATUTES ON PUBLIC ENTITY CRIMES.

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to _____
(Print name of the public entity)
by _____
(Print individual's name and title)
for _____
(Print name of entity submitting sworn statement)

whose business address is _____

and (if applicable its Federal Employer Identification Number (FEIN) is _____

(if the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____).

2. I understand that a “public entity crime” as defined in Section 287.133(1)(g) of the Florida Statutes means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an *agency* or political subdivision of any other state or with the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
- 3 I understand that “convicted” or “conviction” as defined in Section 287.133(1)(b of the Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that an “affiliate” as defined in Paragraph 287.133.(1)(a) of the Florida Statutes, means:
1. A predecessor or successor of a person convicted of a public entity crime: or
 2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term ”affiliate” includes those officers, directors, executives’ partners, shareholders employees, members and

agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in paragraph 287.133(1)(e) of the Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract in which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members and agents who are active in management of an entity.
6. Based on information and belief, the statement that I have marked below is true in relation to the entity submitting the sworn statement. (Please indicate which statement(s) applies.)

____ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholder, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer and the State of Florida, Division of Administrative Hearings and the Final Order entered by the hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list (attach a copy of the final order).

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALANDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017 OF THE FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

(Signature)

Sworn to and subscribed before me this _____ day of _____, 20__.

Personally known _____

OR Produced Identification _____

Notary Public – State of Florida

(Type of identification)

My Commission Expires _____

(Printed, typed or stamped
commissioned name of notary public)

SECTION 00800
SUPPLEMENTARY CONDITIONS

00800.01 SUPPLEMENTARY CONDITIONS PREVAIL

The provisions of this section amplify, amend, change and/or to all other provisions of the Contract Documents. In the event of a conflict between the Supplementary Conditions, the plans, and any other Sections of the Contract Documents, the Supplementary Conditions shall apply.

00800.02 MATERIALS AND EQUIPMENT

A. All materials, equipment and supplies furnished and permanently incorporated into the project shall be of first quality in every respect and shall be constructed and finished to high standards of workmanship. Material shall be suitable for the service intended, shall reflect modern design and engineering and shall be fabricated in a first class workman like manner. All material, equipment and supplies shall be new and shall not have been in service at any time previous to installation except as required in tests incident to this installation.

B. Record Drawings:

The contractor shall provide six sets of certified record drawings, signed and sealed by a surveyor registered in the State of Florida. The record drawings shall show final grades, locations and elevations of utilities. All grades, locations, and elevations shall be determined by the surveyor.

C. The several unit or lump sum prices shall include the cost for all transportation, labor, equipment, verifying location of existing utilities (horizontal and vertical) trenching, backfilling, backfill material, tamping, testing, densities, dewatering, trench stabilization, record drawings, clean up, restoration, fittings, miscellaneous parts, and all appurtenances within to make complete and ready for operation the work as shown on the drawings and specified herein.

00800.03 NOTIFICATIONS

A. By the use of approved door hangers, the Contractor shall notify all businesses and residents within a 100-foot radius of the construction activities within 14 days of commencing work. As a minimum, the door hanger shall include dates of construction activities, the name and telephone number for questions or comments and a general description of work to be performed.

00800.04 RESERVED

00800.05 NPDES TRAINING

- A. All NPDES-related training identified in the plans shall be completed by the CONTRACTOR prior to the commencement of the work.

END OF SECTION

DRUG-FREE WORK PLACE CERTIFICATE

IDENTICAL TIE BIDS: Pursuant to Section 287.087, Florida Statutes, preference shall be given to businesses with Drug-Free Work Place Programs. Whenever two or more bids which are equal with respect to price, quality, and service are received for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a Drug-Free Work Place Program shall be given preference in the award process. Established procedures for processing tie bids will be followed in the event that none of the tied bidders have a Drug-Free Work Place Program. In order to have a Drug-Free Work Place Program, a business shall:

- 1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the work place and specifying the actions that will be taken against employees for violations of such prohibition.
- 2) Inform employees about the dangers of drug abuse in the work place, the company's policy of maintaining a Drug-Free Work Place, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- 3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
- 4) In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 of the Florida Statutes, or of any controlled substance law of the United States or any state, for a violation occurring in the work place no later than five (5) days after such conviction or plea.
- 5) Impose a sanction on, or require the satisfactory participation in, a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted or who has pled.
- 6) Make a good faith effort to continue to maintain a drug-free work place through implementation of this section.

AS THE PERSON AUTHORIZED TO SIGN THE STATEMENT, I CERTIFY THAT THIS FIRM COMPLIES FULLY WITH THE ABOVE REQUIREMENTS.

Signature

Printed Name

PROGRESSION OF WORK

Progression of Work and Maintaining Access: The Contractor shall be required to erect, maintain, and move as necessary, a restrictive barrier around the Work Area so as to:

1. Prevent the public from generally approaching from any direction closer than 25 feet,
2. Conduct the work in segments no greater than 200 feet, so as to maintain public access to portions of the walkway not under construction, and the beach, during construction. The public shall not be prevented from reasonable use of the adjacent beach access points and public beach.
3. A *Safety and Access Plan* is to be provided to, and approved by, the City prior to commencement of any work on the site.

The Contractor shall post signs in a conspicuous manner directing the public to the nearest temporary safe access point outside the zone of active construction. If the public does not heed warning signs and/or restrictive barriers, the Contractor shall contact the Engineer or City for assistance in maintaining the public at a safe distance from construction activities. Following acceptance of walkway segment by the Engineer and the City, the Contractor shall relocate temporary barriers to another 200 foot long segment within which he/she may proceed with construction in that segment.

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SECTION 017320 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Demolition and removal of selected portions of the structure.
 - 2. Demolition and removal of selected site elements.
 - 3. Repair procedures for selective demolition operation.
- B. Related Sections include the following:
 - 1. Division 1 Section "Summary" for use of the premises and phasing requirements.
 - 2. Division 1 Section "Work Restrictions" for restrictions on use of the premises due to Owner or tenant occupancy.
 - 3. Division 1 Section "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for selective demolition operations.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- C. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during selective demolition remain Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Owner.
- B. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

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1.5 SUBMITTALS

- A. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- B. Schedule of Selective Demolition Activities: Indicate the following: ·-
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
 - 2. Interruption of utility services.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
 - 4. Locations of temporary partitions and means of egress.
 - 5. Coordination of Owner's continuing occupancy of portions of existing walkway
- C. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.
- D. Predemolition Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.

1.6 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.

1.7 PROJECT CONDITIONS

- A. Owner will occupy the building during selective demolition. Conduct selective demolition so Owner's operations will not be disrupted. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- B. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
 - 1. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from authorities having jurisdiction.
- C. Hazardous Materials: Hazardous materials are present in building to be selectively demolished.

A report on the presence of hazardous materials is on file for review and use.
Examine report to become aware of locations where hazardous materials are present.
- D. Storage *or* sale of removed items or materials on-site will not be permitted.

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- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

PART 2- PRODUCTS (Not Used)

PART 3- EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
 - 1. Comply with requirements for existing services/systems interruptions specified in Division 1 Section "Summary."

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
 - 2. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
 - 3. Protect existing site improvements, appurtenances, and landscaping to remain.
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.

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- C. Temporary Shoring: Provide and maintain shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations.
- B. Reuse of Building Elements: Do not demolish building elements beyond what is indicated.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 PATCHING AND REPAIRS

- A. General: Promptly repair damage to adjacent construction caused by selective demolition operations.
- B. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
- C. Finishes: Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
 - 1. Do not allow demolished materials to accumulate on-site, all debris shall be removed from the site daily.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.8 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective

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demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 017320

CITY OF TREASURE ISLAND
CENTRAL BEACH TRAIL RECONSTRUCTION

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies cast-in place concrete, including formwork, reinforcing, mix design, placement procedures, and finishes.
- B. Integrally Colored Concrete; Section 033750

1.3 SUBMITTALS

- A. General - Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data for proprietary materials and items, including reinforcement and forming accessories, admixtures, patching compounds, joint systems, curing compounds and others as requested by engineer.
- C. Shop drawings for reinforcement, prepared by registered Professional Engineer for fabrication, bending, and placement of concrete reinforcement. Comply with ACI SP-66 (88), "ACI Detailing Manual," showing bar schedules, stirrup spacing, diagrams of bent bars, and arrangement of concrete reinforcement. Include special reinforcement required for openings through concrete structures.
- D. Shop drawings for formwork, prepared by a registered Professional Engineer for fabrication and erection of forms for specific finished concrete surfaces. Show form construction including jointing, special form joint or reveals, location and pattern of form tie placement, and other items that affect exposed concrete visually.
 - 1. Architect's review is for general architectural applications and features only. Design of formwork for structural stability and efficiency is Contractor's responsibility.
- E. Samples of materials as requested by Architect, including names, sources, and descriptions, as follows:
 - 1. Normal weight aggregates.
 - 2. Fibrous reinforcement.
 - 3. Reglets.
- F. Laboratory test reports for concrete materials and mix design test.
- G. Materials certificates in lieu of materials laboratory test reports when permitted by Architect. Materials certificates shall be signed by manufacturer and Contractor, certifying that each material

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item complies with or exceeds specified requirements. Provide certification from admixture manufacturers that chloride content complies with specification requirements.

- H. Provide certification for the recycled content of all materials used in cast in place concrete. Provide certification that all concrete is manufactured within 25 miles of the project.

1.4 QUALITY ASSURANCE

- A. Codes and Standards - Comply with provisions of following codes, specifications, and standards, except where more stringent requirements are shown or specified:
1. ACI 318, "Building Code Requirements for Reinforced Concrete."
 2. Concrete Reinforcing Steel Institute (CRSI), "Manual of Standard Practice."
- B. Concrete Testing Service - Engage a testing laboratory acceptable to to perform material evaluation tests and to design concrete mixes.
- C. Materials and installed work may require testing and retesting at any time during progress of work. Tests, including retesting of rejected materials for installed work, shall be done at Contractor's expense.

PART 2 - PRODUCTS

2.1 FORM MATERIALS

- A. Forms for Exposed Finish Concrete - Plywood, metal, metal-framed plywood faced, or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings.
1. Use overlaid plywood complying with U.S. Product Standard PS-1 "A-C or B-B High Density Overlaid Concrete Form," Class I.
 2. Use plywood complying with U.S. Product Standard PS-1 "B-B (Concrete Form) Plywood," Class I, Exterior Grade or better, mill-oiled and edge-sealed, with each piece bearing legible inspection trademark.
- B. Forms for Unexposed Finish Concrete - Plywood, lumber, metal, or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.
- C. Form Coatings - Provide commercial formulation form-coating compounds with a maximum VOC of 350 mg/l that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
- D. Form Ties - Factory-fabricated, adjustable-length, removable or snap-off metal form ties, designed to prevent form deflection and to prevent spalling concrete upon removal. Provide units that will leave no metal closer than 1-1/2 inches to exposed surface.
1. Provide ties that, when removed, will leave holes not larger than 1-inch diameter in

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concrete surface.

2.2 REINFORCING MATERIALS

- A. Reinforcing Bars - ASTM A 615, Grade 60, deformed.
- B. Galvanized Reinforcing Bars - ASTM A 767, Class II (2.0 oz. zinc psf) hot-dip galvanized, after fabrication and bending.
- C. Epoxy-Coated Reinforcing Bars - ASTM A 934.
- D. Steel Wire - ASTM A 82, plain, cold-drawn steel.
- E. Welded Deformed Steel Wire Fabric - ASTM A 497.
- F. Supports for Reinforcement - Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Use wire-bar-type supports complying with CRSI specifications.
 - 1. For slabs-on-grade, use supports with sand plates or horizontal runners where base material will not support chair legs.
 - 2. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with legs that are plastic protected (CRSI, Class 1) or stainless steel protected (CRSI, Class 2).

2.3 CONCRETE MATERIALS

- A. Portland Cement - ASTM C 150, Type I or Type II or ASTM C1157, Type LH or GU.
 - 1. Use one brand of cement throughout project unless otherwise acceptable to Architect.
- B. Supplementary Cementitious Materials:
 - 1. Fly Ash: not permitted.
 - 2. Ground Granulated Blast-Furnace Slag: not permitted.
- C. Normal Weight Aggregates - ASTM C 33 and as herein specified. Provide aggregates from a single source for exposed concrete.
 - 1. For exterior exposed surfaces, do not use fine or coarse aggregates containing spalling-causing deleterious substances.
 - 2. Local aggregates not complying with ASTM C 33 but that special tests or actual service have shown to produce concrete of adequate strength and durability may be used when acceptable to Architect.
 - 3. Combined aggregate gradation for slabs and other designated concrete shall be 8% - 18% for large top size aggregates (1½ in.) or 8% - 22% for smaller top size aggregates (1 in. or

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$\frac{3}{4}$ in.) retained on each sieve below the top size and above the No. 100.

- E. Water - Drinkable.
- F. Admixtures, General - Provide admixtures for concrete that contain not more than 0.1 percent chloride ions.
- G. Air-Entraining Admixture - ASTM C 260, certified by manufacturer to be compatible with other required admixtures.
 - 1. Available Products - Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Air-Mix" or "AEA-92," Euclid Chemical Co.
 - b. "Darex AEA" or "Daravair," W.R. Grace & Co.
 - c. "MB-VR" or "Micro-Air," Master Builders, Inc.
 - d. "Sika AER," Sika Corp.
- H. Water-Reducing Admixture - ASTM C 494, Type A.
 - 1. Available Products - Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Eucon WR-75" or "Eucon WR-91," Euclid Chemical Co.
 - b. "WRDA," W.R. Grace & Co.
 - c. "Pozzolith Normal" or "Polyheed," Master Builders, Inc.
 - d. "Plastocrete 161," Sika Corp.
- I. High-Range Water-Reducing Admixture (Superplasticizer) - ASTM C 494, Type F or Type G.
 - 1. Available Products - Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
 - 2. Products - Subject to compliance with requirements, provide one of the following:
 - a. "Eucon 37/1037" or "Plastol 341/5000," Euclid Chemical Co.
 - b. "WRDA 19" or "Daracem," W.R. Grace & Co.
 - c. "Rheobuild," Master Builders, Inc.
 - d. "Sikament 300," Sika Corp.
- J. Water-Reducing, Accelerating Admixture - ASTM C 494, Type E.
 - 1. Available Products - Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
 - 2. Products - Subject to compliance with requirements, provide one of the following:

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- a. "Accelguard 80", "Accelguard 90" or "NCA," Euclid Chemical Co.
 - b. "Daraset," W.R. Grace & Co.
 - c. "Pozzutec 20," Master Builders, Inc.
- K. Water-Reducing, Retarding Admixture - ASTM C 494, Type D.
1. Available Products - Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
 2. Products - Subject to compliance with requirements, provide one of the following:
 - a. "Eucon Retarder 75," Euclid Chemical Co.
 - b. "Daratard-17," W.R. Grace & Co.
 - c. "Pozzoloth 100XR," Master Builders, Inc.
 - d. "Plastiment," Sika Corporation.
- L. Fibrous Reinforcement - Engineered polypropylene fibers designed for secondary reinforcement of concrete slabs.
1. Structural Fibers: Structural fibers shall be a patented coarse monofilament, self-fibrillating, polypropylene/polyethylene blend in accordance with ASTM C1116, Paragraph 4.1.3, Type III. Structural fiber shall have a minimum tensile strength of 73 – 80 ksi, minimum length of 2 inches, thickness of 0.015 inches and width of 0.045 inches.
 - a. Available Products - Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
 - b. Products - Subject to compliance with requirements, provide one of the following:
 - 1) "Tuf-Strand SF," Euclid Chemical Co.
 2. Synthetic Fibers: Monofilament or fibrillated polypropylene fibers for secondary reinforcing of concrete slabs and members. The product shall have a UL rating.
 - a. Available Products - Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
 - b. Products - Subject to compliance with requirements, provide one of the following:
 - 1) "Fiberstrand 100," Euclid Chemical Co.
 - 2) "Fibermesh," Fibermesh, Inc.
 - 3) "Forta CR," Forta Corp.
 - 4) "Grace Fibers," W.R. Grace & Co.
- M. Corrosion Inhibitor: Corrosion inhibitor: 30% calcium nitrite (where called for in the specifications or on the drawings).
1. Available Products - Subject to compliance with requirements, products that may be

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incorporated in the work include, but are not limited to, the following:

2. Products - Subject to compliance with requirements, provide one of the following at 3 gal/cy:
 - a. "Eucon CIA," Euclid Chemical Co.
 - b. "DCI," W.R. Grace & Co.
- N. Shrinkage compensation admixture: Shrinkage Reducing and Compensating Admixture: For shrinkage reduction per ASTM C 157 or shrinkage compensation per ASTM C 878.
 1. Products - Subject to compliance with requirements, provide the following:
 - a. "CONEX," Euclid Chemical Co.

2.4 RELATED MATERIALS

- A. Reglets - Where resilient or elastomeric sheet flashing or bituminous membranes are terminated in reglets, provide reglets of not less than 0.0217 inch thick (26-gage) galvanized sheet steel. Fill reglet or cover face opening to prevent intrusion of concrete or debris.
- B. Waterstops - Provide flat, dumbbell-type or centerbulb-type waterstops at construction joints and other joints as indicated. Size to suit joints.
- C. Mineral Aggregate Hardener: The specified mineral aggregate hardener shall be formulated, processed and packaged under stringent quality control at the manufacturer's owned and controlled factory. The hardener shall be a factory-blended mixture of specially processed graded mineral aggregate, selected portland cement and necessary plasticizing agents. Product shall be "Surflex" by The Euclid Chemical Co. or "Mastercron" by Master Builders.
- D. Absorptive Cover - Burlap cloth made from jute or kenaf, weighing approximately 9 oz. per sq. yd., complying with AASHTO M 182, Class 2.
- E. Moisture-Retaining Cover - One of the following, complying with ASTM C 171.
 1. Waterproof paper.
 2. Polyethylene film.
 3. Polyethylene-coated burlap.
- F. Curing Compounds:
 1. Curing and Sealing Compound (VOC Compliant, 700 g/l): Liquid type membrane-forming curing compound, clear styrene acrylate type, complying with ASTM C1315, Type I, Class B, 25% solids content minimum. Moisture loss shall be not more than 0.30 Kg/m² when applied at 300 sq. ft./gal. Manufacturer's certification is required.
 - a. Available Products - Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:

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- b. Products - Subject to compliance with requirements, provide one of the following:
 - 1) "Super Rez Seal," The Euclid Chemical Company
 - 2) "Masterseal 30," Master Builders.
 - 3) "Kure N Seal 30," Sonneborn

- 2. Clear Curing and Sealing Compound (VOC Compliant, 350 g/l): Water based membrane-forming curing compound, clear styrene acrylate type, complying with ASTM C1315, Type I, Class A, 25% solids content minimum. Moisture loss shall be not more than 0.40 Kg/m² when applied at 300 sq. ft./gal. Manufacturer's certification is required.
 - a. Available Products - Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
 - b. Products - Subject to compliance with requirements, provide one of the following:
 - 1) "Super Diamond Clear VOX" or "Super Aqua Cure VOX," The Euclid Chemical Company
 - 2) "Masterkure 100W," Master Builders
 - 3) Curing Compound (Strippable): The compound shall conform to ASTM C309. For use on slabs receiving subsequent applied finishes and where noted on the drawings. Provide "Kurez DR VOX or Kurez W VOX" by The Euclid Chemical Company. Install in strict accordance with the manufacturer's recommendation and supervision.

- G. Epoxy Adhesive - ASTM C 881, two-component material suitable for use on dry or damp surfaces. Provide material "Type," "Grade," and "Class" to suit project requirements.
 - 1. Available Products - Subject to compliance with requirements, products that may be incorporated in the work include, but are not limited to, the following:
 - 2. Products - Subject to compliance with requirements, provide one of the following:
 - a. "Euco Epoxy System #452 or #620," Euclid Chemical Co.
 - b. "Concresive 1001," Master Builders, Inc.
 - c. "Sikadur 32 Hi-Mod," Sika Corp.

- H. Polymer Patching Mortar: "Thin Top Supreme or Concrete Top Supreme (horizontal repairs), "Verticoat or Verticoat Supreme" (vertical and overhead repairs) by The Euclid Chemical Co. or "Sikatop 121 or 122" (horizontal repairs), "Sikatop 123" (vertical and overhead repairs) by Sika Chemical Corp. These patching mortars may be used when color match of the adjacent concrete is not required. Prior approval by the Engineer is required

- I. High Strength Flowing Repair Mortar: For forming and pouring structural members, or large horizontal repairs, provide the flowable one-part, high strength microsilica modified repair mortar with 3/8" aggregate. The product shall achieve 9000 psi @ 28-days at a 9-inch slump. Provide "Euocrete" by The Euclid Chemical Co. or "Euco Speed MP" (Cold Weather) by The Euclid Chemical Co.

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J. Grout

1. Non-Shrink, Non-Metallic Grout: The non-shrink grout shall be a factory pre-mixed grout and shall conform to ASTM C1107, "Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Non-Shrink)." In addition, the grout manufacturer shall furnish test data from an independent laboratory indicating that the grout when placed at a fluid consistency shall achieve 95% bearing under a 4' x 4' base plate. Provide one of the following:
 - a. "NS Grout" by The Euclid Chemical Co.
 - b. "Five Star Grout" by U.S. Grout Corp.
 - j. "Masterflow 713" by Master Builders

2. High Flow Grout: Where high fluidity and/or increased placing time is required, use high flow grout. The factory pre-mixed grout shall conform to ASTM C1107, "Standard Specification for Packages Dry, Hydraulic-Cement Grout (Non-Shrink)." In addition, the grout manufacturer shall furnish test data from an independent laboratory indicating that the grout when placed at a fluid consistency shall achieve 95% bearing under a 18" x 36" base plate. Provide one of the following:
 - a. "Hi-Flow Grout" by The Euclid Chemical Co.
 - b. "Masterflow 928" by Master Builders

K. Liquid Sealer/Densifier: High performance, deeply penetrating concrete densifier; odorless, colorless, VOC - compliant, non-yellowing silicate based solution designed to harden, dustproof and protect concrete floors subjected to heavy vehicular traffic and to resist black rubber tire marks on concrete surfaces. The compound must contain a minimum solids content of 20% of which 50% is silicate. Provide Diamond Hard by The Euclid Chemical Company.

L. Semi-Rigid Joint Filler: The semi-rigid joint filler shall be a two (2) component, 100% solids compound with a minimum shore A hardness of 80. Products: Subject to compliance with requirements, provide one of the following: "Euco 700" or "QWIKjoint 200" by The Euclid Chemical Company.

2.5 PROPORTIONING AND DESIGN OF MIXES

- A. Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301, Section 4.2.3. If trial batch method used, use an independent testing facility acceptable to Architect for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing.
 1. Supplementary cementitious materials such as fly ash and blast furnace slag quantities are as shown in Paragraph 2.03. B.

- B. Submit written reports to Architect of each proposed mix for each class of concrete at least 15 days prior to start of work. Submit the mix design submittals on the Mix Design Submittal Form included at the end of this specification. Do not begin concrete production until proposed mix designs have been reviewed by Architect. Submit shrinkage test in accordance with ASTM C157 modified 7 day wet curing.

- C. Design mixes to provide normal weight concrete with the following properties, as indicated on

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drawings and schedules:

1. Self-Consolidating Concrete: Use where indicated on the plans. Minimum flow of 20" or as required by the successful test placement. All self-consolidating concrete shall contain the specified high-range water-reducing admixture and viscosity-modifying admixture as required. Required workability, pumpability, surface finish, and setting time must be verified with a successful test placement onsite.
2. "Quick Dry" Concrete: Maximum W/cm – 0.40, superplasticized, 3% maximum air content. The floor finish shall be as required by the manufacturer of the specified floor coating or covering.
3. 4000-psi, 28-day compressive strength; W/cm of 0.50 maximum.

- D. Adjustment to Concrete Mixes - Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant, as accepted by Architect. Laboratory test data for revised mix design and strength results must be submitted to and accepted by Architect before using in work.

2.6 ADMIXTURES

- A. Use water-reducing admixture or high-range water-reducing admixture (Superplasticizer) in concrete as required for placement and workability.
- B. Use nonchloride accelerating admixture in concrete slabs placed at ambient temperatures below 50 deg F (10 deg C).
- C. Use high-range water-reducing admixture (HRWR) in pumped concrete, concrete for industrial slabs, self-consolidating concrete, architectural concrete, concrete containing fibers, parking structure slabs, concrete required to be watertight, and concrete with water/cement ratios below 0.50.
- D. Use high-range water-reducing admixture (HRWR) and viscosity modifying admixture (VMA) as required in all self-consolidating concrete. Self-consolidating concrete shall be used for all architectural concrete, heavily reinforced concrete and concrete for structural repairs.
- E. Use air-entraining admixture in exterior exposed concrete unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content with a tolerance of plus or minus 1-1/2 percent within following limits:
 1. Concrete structures and slabs exposed to weather;
 - a. 1.5 percent, 1-1/2-inch max. aggregate.
 2. Use admixtures for water reduction and set control in strict compliance with manufacturer's directions.

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5. Slump Limits - Proportion and design mixes to result in concrete slump at point of placement as follows:
 - a. Ramps, slabs, and sloping surfaces - Not more than 3 inches.
 - b. Reinforced foundation systems - Not less than 1 inch and not more than 3 inches.
 - c. Concrete containing HRWR admixture (Superplasticizer) - Not more than 8 inches after addition of HRWR to site-verified 2-inch to 3-inch slump concrete. Use 3-inch to 4-inch initial slump for lightweight concrete and concrete receiving a "dry-shake" hardener.
 - d. Other concrete - Not more than 4 inches.

2.7 CONCRETE MIXING

- A. Job-Site Mixing - Mix materials for concrete in appropriate drum-type batch machine mixer. For mixers of one cu. yd. or smaller capacity, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released. For mixers of capacity larger than one cu. yd., increase minimum 1-1/2 minutes of mixing time by 15 seconds for each additional cu. yd. or fraction thereof.
- B. Provide batch ticket for each batch discharged and used in work, indicating project identification name and number, date, mix type, mix time, quantity, and amount of water introduced.
- C. Ready-Mix Concrete - Comply with requirements of ASTM C 94, and as specified.
 1. When air temperature is between 85 deg F (30 deg C) and 90 deg F (32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

2.8 PRE CONCRETE CONFERENCE

- A. At least 35 calendar days prior to the start of the concrete construction schedule, the Contractor shall conduct a meeting to review the proposed mix designs and to discuss the required methods and procedures to achieve the required concrete construction. The Contractor shall send a pre-concrete conference agenda to all attendees 20 days prior to the scheduled date of the conference.
- B. The Contractor shall require responsible representatives of every party who is concerned with the concrete work to attend the conference, including but not limited to the following:
 1. Contractor's superintendent - Laboratory responsible for the concrete design mix - Laboratory responsible for field quality control - Concrete Subcontractor - Ready-mix concrete producer - Admixture manufacturer(s) - Concrete pumping equipment manufacturer.
- C. Minutes of the meeting shall be recorded, typed and printed by the Contractor and distributed by him to all parties concerned within 5 days of the meeting. One copy of the minutes shall also be transmitted to the following for information purposes: Owner's representative - Resident Engineer - Consultant Engineer.

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- C. The minutes shall include a statement by the concrete Contractor indicating that the proposed mix design and placing can produce the concrete quality required by these specifications.

PART 3 – EXECUTION

3.1 GENERAL

- A. Coordinate the installation of joint materials and vapor barriers with placement of forms and reinforcing steel.

3.2 FORMS

- A. General – Design, erect, support, brace, and maintain formwork to support vertical and lateral, static and dynamic loads that might be applied until concrete structure can support such loads. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation, and position. Maintain formwork construction tolerances complying with ACI 347.
- B. Construct forms to sizes, shapes, lines, and dimensions shown and to obtain accurate alignment, location, grades, level, and plumb work in finished structures. Provide for openings, offsets, sinkages, keyways, recesses, moldings, rustications, reglets, chamfers, blocking, screeds, bulkheads, anchorages and inserts, and other features required in work. Use selected materials to obtain required finishes. Solidly butt joints and provide backup at joints to prevent leakage of cement paste.
- C. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces where slope is too steep to place concrete with bottom forms only. Kerf wood inserts for forming keyways, reglets, recesses, and the like, for easy removal.
- D. Provide temporary openings where interior area of formwork is inaccessible for cleanout, for inspection before concrete placement, and for placement of concrete. Securely brace temporary openings and set tightly to forms to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- E. Chamfer exposed corners and edges as indicated, using wood, metal, PVC, or rubber chamfer strips fabricated to produce uniform smooth lines and tight edge joints.
- F. Provisions for Other Trades - Provide openings in concrete formwork to accommodate work of other trades. Determine size and location of openings, recesses, and chases from trades providing such items. Accurately place and securely support items built into forms.
- G. Cleaning and Tightening - Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, or other debris just before concrete is placed. Retighten forms and bracing before concrete placement as required to prevent mortar leaks and maintain proper alignment.

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3.3 PLACING REINFORCEMENT

- A. General - Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars," for details and methods of reinforcement placement and supports and as herein specified.
- B. Avoiding cutting or puncturing vapor retarder during reinforcement placement and concreting operations.
- C. Clean reinforcement of loose rust and mill scale, earth, ice, and other materials that reduce or destroy bond with concrete.
- D. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as approved by Architect.
- E. Place reinforcement to obtain at least minimum coverages for concrete protection. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.
- F. Install welded wire fabric in as long lengths as practicable. Lap adjoining pieces at least one full mesh and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

3.4 JOINTS

- A. Construction Joints - Locate and install construction joints as indicated or, if not indicated, locate so as not to impair strength and appearance of the structure, as acceptable to Architect.
- B. Provide keyways at least 1-1/2 inches deep in construction joints in walls and slabs and between walls and footings. Accepted bulkheads designed for this purpose may be used for slabs.
- C. Place construction joints perpendicular to main reinforcement. Continue reinforcement across construction joints except as otherwise indicated. Do not continue reinforcement through sides of strip placements.
- D. Use bonding agent on existing concrete surfaces that will be joined with fresh concrete.
- E. Isolation Joints in Slabs-on-Ground - Construct isolation joints in slabs-on-ground at points of contact between slabs-on-ground and vertical surfaces, such as column pedestals, foundation walls, grade beams, and elsewhere as indicated.
 - 1. Joint filler and sealant materials are specified in Division 7 Sections of these specifications.
- F. Contraction (Control) Joints in Slabs-on-Ground: Maximum joint spacing shall be 36 times the slab thickness unless otherwise noted on the drawings. The Soff-Cut saw shall be used

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immediately after final finishing and to a depth of 1-1/4". A conventional saw shall be used as soon as possible without dislodging aggregate and to a depth of 1/4 slab thickness.

1. Form contraction joints by inserting premolded plastic, hardboard, or fiberboard strip into fresh concrete until top surface of strip is flush with slab surface. Tool slab edges round on each side of insert. After concrete has cured, remove inserts and clean groove of loose debris.
 2. Contraction joints in unexposed floor slabs may be formed by saw cuts as soon as possible after slab finishing as may be safely done without dislodging aggregate.
 3. If joint pattern not shown, provide joints not exceeding 18 feet in either direction and located to conform to bay spacing wherever possible (at column centerlines, half bays, third bays).
- H. Semi-rigid joint filler is specified in Division 7 Sections of these specifications.

3.5 INSTALLATION OF EMBEDDED ITEMS

- A. General - Set and build into work anchorage devices and other embedded items required for other work that is attached to or supported by cast-in-place concrete. Use setting drawings, diagrams, instructions, and directions provided by suppliers of items to be attached thereto.
- B. Install reglets to receive top edge of foundation sheet waterproofing and to receive thru-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, relieving angles, and other conditions.
- C. Forms for Slabs - Set edge forms, bulkheads, and intermediate screed strips for slabs to obtain required elevations and contours in finished surfaces. Provide and secure units to support screed strips using strike-off templates or compacting-type screeds.

3.6 PREPARATION OF FORM SURFACES

- A. General - Coat contact surfaces of forms with an approved, nonresidual, low-VOC, form-coating compound before reinforcement is placed.
- B. Do not allow excess form-coating material to accumulate in forms or to come into contact with in-place concrete surfaces against which fresh concrete will be placed. Apply in compliance with manufacturer's instructions.
- C. Coat steel forms with a nonstaining, rust-preventative material. Rust-stained steel formwork is not acceptable.

3.7 CONCRETE PLACEMENT

- A. Inspection - Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast in. Notify other crafts to permit installation of their work; cooperate with other trades in setting such work.

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- B. General - Comply with ACI 304, "Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete," and as herein specified.
- C. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete that has hardened sufficiently to cause the formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete to avoid segregation at its final location.
- D. Placing Concrete in Forms - Deposit concrete in forms in horizontal layers not deeper than 24 inches and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.
 - 1. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI 309.
 - 2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than visible effectiveness of machine. Place vibrators to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each insertion limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing segregation of mix.
- E. Placing Concrete Slabs - Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of a panel or section is completed.
 - 1. Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 - 2. Bring slab surfaces to correct level with straightedge and strike off. Use highway bull floats or darbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations.
 - 3. Maintain reinforcing in proper position during concrete placement.
- F. Cold-Weather Placing - Comply with provisions of ACI 306 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
- G. When air temperature has fallen to or is expected to fall below 40 deg F (4 deg C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and not more than 80 deg F (27 deg C) at point of placement.
 - 1. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 - 2. Use only the specified non-corrosive accelerator. Calcium chloride, thiocyanates or admixtures containing more than 0.05 percent chloride ions are not permitted.

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- H. Hot-Weather Placing - When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.
1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 deg F (32 deg C). Mixing water may be chilled, or chopped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing water. Use of liquid nitrogen to cool concrete is Contractor's option.
 2. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.
 3. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed.
 4. Use water-reducing retarding admixture when required by high temperatures, low humidity, or other adverse placing conditions, when acceptable to Architect.
 5. The specified evaporation retarder shall be applied one or more times during the finishing operation when the evaporation rate is high and plastic shrinkage cracking can result. For use when concrete operations must be performed in direct sun, wind, high temperatures, and/or low humidity

3.8 FINISH OF FORMED SURFACES

- A. Rough Form Finish - For formed concrete surfaces not exposed to view in the finish work or concealed by other construction. This is the concrete surface having texture imparted by form-facing material used, with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/4 inch in height rubbed down or chipped off.
- B. Smooth Form Finish - For formed concrete surfaces exposed to view or to be covered with a coating material applied directly to concrete, or a covering material applied directly to concrete, such as waterproofing, dampproofing, veneer plaster, painting, or other similar system. This is an as-cast concrete surface obtained with selected form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch defective areas with fins and other projections completely removed and smoothed.
- C. Architectural Concrete (Smooth Form Surfaces): Provide smooth, glossy finish upon form removal with no patching, stoning, or other form of repair, except washing, permitted unless otherwise noted, for walls, columns, and other surfaces visible to view when the work is complete.
- D. Smooth Rubbed Finish - Provide smooth rubbed finish to scheduled concrete surfaces, which have received smooth form finish treatment, not later than one day after form removal.
 1. Moisten concrete surfaces and rub with carborundum brick or other abrasive until a uniform color and texture is produced. Do not apply cement grout other than that created by the rubbing process.
- E. Grout-Cleaned Finish - Provide grout-cleaned finish to scheduled concrete surfaces that have received smooth form finish treatment.

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1. Combine one part portland cement to 1-1/2 parts fine sand by volume, and a 50:50 mixture of acrylic or styrene butadiene-based bonding admixture and water to consistency of thick paint. Blend standard portland cement and white portland cement, amounts determined by trial patches, so that final color of dry grout will match adjacent surfaces.
 2. Thoroughly wet concrete surfaces, apply grout to coat surfaces, and fill small holes. Remove excess grout by scraping and rubbing with clean burlap. Keep damp by fog spray for at least 36 hours after rubbing.
- F. Related Unformed Surfaces - At tops of walls, horizontal offsets, and similar unformed surfaces occurring adjacent to formed surfaces, strike-off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.9 MONOLITHIC SLAB FINISHES

- A. Scratch Finish - Apply scratch finish to monolithic slab surfaces to receive concrete floor topping or mortar setting beds for tile, portland cement terrazzo, and other bonded applied cementitious finish flooring material, and as otherwise indicated.
1. After placing slabs, plane surface to tolerances for floor flatness (Ff) of 15 and floor levelness (Fl) of 13. Slope surfaces uniformly to drains where required. After leveling, roughen surface before final set with stiff brushes, brooms, or rakes.
- B. Float Finish - Apply float finish to monolithic slab surfaces to receive trowel finish and other finishes as hereinafter specified; slab surfaces to be covered with membrane or elastic waterproofing, membrane or elastic roofing, or sand-bed terrazzo; and as otherwise indicated.
1. After screening, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Begin floating, using float blades or float shoes only, when surface water has disappeared, when concrete has stiffened sufficiently to permit operation of power-driven floats, or both. Consolidate surface with power-driven floats or by hand-floating if area is small or inaccessible to power units. Check and level surface plane to tolerances of Ff 20 - Fl 17. Cut down high spots and fill low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat surface to a uniform, smooth, granular texture.
- D. Trowel and Fine Broom Finish - Where ceramic or quarry tile is to be installed with thin-set mortar, apply trowel finish as specified, then immediately follow with slightly scarifying surface by fine brooming. Texture shall be as approved by Architect from sample panel.
- E. Nonslip Broom Finish - Apply nonslip broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated.
1. Immediately after float finishing, slightly roughen concrete surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.
- F. Nonslip Finish - After completion of float finishing and before starting trowel finish, uniformly

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spread 25 lbs. of dampened nonslip aggregate per 100 sq. ft. of surface. Tamp aggregate flush with surface using a steel trowel, but do not force below surface. After broadcasting and tamping, apply trowel finishing as herein specified.

1. After curing, lightly work surface with a steel wire brush, or an abrasive stone, and water to expose nonslip aggregate.

3.11 CONCRETE CURING AND PROTECTION

- A. General - Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. In hot, dry, and windy weather, protect concrete from rapid moisture loss before and during finishing operations with an evaporation-control material. Apply in accordance with manufacturer's instructions after screeding and bull floating, but before power floating and troweling.
- B. Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Weather permitting, keep continuously moist for not less than 7 days.
- C. Curing Methods - Perform curing of concrete by curing and sealing compound, by moist curing, by moisture-retaining cover curing, and by combinations thereof, as herein specified.
- D. Provide moisture curing by following methods.
 1. Keep concrete surface continuously wet by covering with water.
 2. Use continuous water-fog spray.
 3. Cover concrete surface with specified absorptive cover, thoroughly saturate cover with water, and keep continuously wet. Place absorptive cover to provide coverage of concrete surfaces and edges, with 4-inch lap over adjacent absorptive covers.
- E. Provide moisture-cover curing as follows:
 1. Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width with sides and ends lapped at least 3 inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
- F. Provide curing and sealing compound to all exposed interior slabs, not receiving a liquid densifier, and troweled slabs receiving mastic applied adhesives or "shake-on" hardeners shall be cured with the specified curing and sealing compound. Exterior slabs, sidewalks, curbs, and architectural concrete, not receiving a penetrating sealer, shall be cured with the specified clear, non-yellowing curing and sealing compound. Maximum coverage shall be 400 ft²/gallon on steel troweled surfaces and 300 ft²/gallon on floated or broomed surfaces for the curing/sealing compound.
- G. Provide the specified strippable curing compound to other interior slabs.
- H. Curing Formed Surfaces - Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces, by moist curing with forms in place for full curing period or until forms are removed. If forms are removed, continue curing by methods specified

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above, as applicable.

- I. Curing Unformed Surfaces - Cure unformed surfaces, such as slabs, floor topping, and other flat surfaces, by application of appropriate curing method.
- J. Final cure concrete surfaces to receive liquid sealer/densifier or finish flooring by use of moisture-retaining cover or strippable curing compound, unless otherwise directed.

3.12 REMOVAL OF FORMS

- A. General - Formwork not supporting weight of concrete, such as sides of beams, walls, columns, and similar parts of the work, may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form-removal operations, and provided curing and protection operations are maintained.
- B. Formwork supporting weight of concrete, such as beam soffits, joists, slabs, and other structural elements, may not be removed in less than 14 days and until concrete has attained at least 75 percent of design minimum compressive strength at 28 days. Determine potential compressive strength of in-place concrete by testing field-cured specimens representative of concrete location or members.
- C. Form-facing material may be removed 4 days after placement only if shores and other vertical supports have been arranged to permit removal of form-facing material without loosening or disturbing shores and supports.

3.13 REUSE OF FORMS

- A. Clean and repair surfaces of forms to be reused in work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-coating compound as specified for new formwork.
- B. When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close joints. Align and secure joint to avoid offsets. Do not use "patched" forms for exposed concrete surfaces except as acceptable to Architect.

3.14 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In - Fill in holes and openings left in concrete structures for passage of work by other trades, unless otherwise shown or directed, after work of other trades is in place. Mix, place, and cure concrete as herein specified, to blend with in-place construction. Provide other miscellaneous concrete filling shown or required to complete work.
- B. Reinforced Masonry - Provide concrete grout for reinforced masonry lintels and bond beams where indicated on drawings and as scheduled. Maintain accurate location of reinforcing steel during concrete placement.

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- C. Grout base plates and foundations as indicated using specified non-shrink grout. Use non-metallic grout for exposed conditions, unless otherwise indicated. Where high fluidity and/or increased placing time is required use the specified high flow grout. This grout shall be used for all base plates larger than 10 square feet.

3.15 CONCRETE SURFACE REPAIRS

- A. Patching Defective Areas - Repair and patch defective areas with cement mortar immediately after removal of forms, when acceptable to Architect.
 - 1. Cut out honeycomb, rock pockets, voids over 1/4 inch in any dimension, and holes left by tie rods and bolts, down to solid concrete but in no case to a depth of less than 1 inch. Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water, and brush-coat the area to be patched with specified bonding agent. Place patching mortar before bonding compound has dried.
 - 2. For exposed-to-view surfaces, blend white portland cement and standard portland cement so that, when dry, patching mortar will match color surrounding. Provide test areas at inconspicuous location to verify mixture and color match before proceeding with patching. Compact mortar in place and strike-off slightly higher than surrounding surface.
- B. Repair of Formed Surfaces - Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of Architect. Surface defects, as such, include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets, fins and other projections on surface, and stains and other discolorations that cannot be removed by cleaning. Flush out form tie holes, fill with dry-pack mortar, or precast cement cone plugs secured in place with bonding agent.
 - 1. Repair concealed formed surfaces, where possible, that contain defects that affect the durability of concrete. If defects cannot be repaired, remove and replace concrete.
- C. Repair of Unformed Surfaces - Test unformed surfaces, such as monolithic slabs, for smoothness and verify surface plane to tolerances specified for each surface and finish. Correct low and high areas as herein specified. Test unformed surfaces sloped to drain for trueness of slope and smoothness by using a template having required slope.
 - 1. Repair finished unformed surfaces that contain defects that affect durability of concrete. Surface defects, as such, include crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through nonreinforced sections regardless of width, spalling, popouts, honeycomb, rock pockets, and other objectionable conditions.
 - 2. Correct high areas in unformed surfaces by grinding after concrete has cured at least 14 days.
 - 3. Correct low areas in unformed surfaces during or immediately after completion of surface finishing operations by cutting out low areas and replacing with patching compound. Finish repaired areas to blend into adjacent concrete. Use the specified underlayment or polymer repair compounds when acceptable to Architect.

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4. Repair defective areas, except random cracks and single holes not exceeding 1 inch in diameter, by cutting out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts and expose reinforcing steel with at least 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding compound. Mix patching concrete of same materials to provide concrete of same type or class as original concrete. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
- D. Repair isolated random cracks and single holes not over 1 inch in diameter by dry-pack method. Groove top of cracks and cut out holes to sound concrete and clean of dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding compound. Mix dry-pack, consisting of one part portland cement to 2-1/2 parts fine aggregate passing a No. 16 mesh sieve, using only enough water as required for handling and placing. Place dry-pack before bonding compound has dried. Compact dry-pack mixture in place and finish to match adjacent concrete. Keep patched area continuously moist for not less than 72 hours.
 - E. Perform structural repairs with prior approval of Architect for method and procedure, using specified epoxy adhesive and mortar.
 - F. Repair methods not specified above may be used, subject to acceptance of Architect.

3.16 QUALITY CONTROL TESTING DURING CONSTRUCTION

- A. General - The Contractor shall employ a testing laboratory to perform tests and to submit test reports.
- B. Sampling and testing for quality control during placement of concrete may include the following, as directed by Architect.
- C. Sampling Fresh Concrete - ASTM C 172, except modified for slump to comply with ASTM C 94.
 1. Slump - ASTM C 143; one test at point of discharge for each day's pour of each type of concrete; additional tests when concrete consistency seems to have changed.
 2. Air Content - ASTM C 173, volumetric method for lightweight or normal weight concrete; ASTM C 231 pressure method for normal weight concrete; one for each day's pour of each type of air-entrained concrete.
 3. Water Content: The water content of freshly mixed concrete will be tested each time cylinders are taken for designated concrete and as directed by the Engineer in accordance with AASHTO T318 Measurement of Water Content of Fresh Concrete Using the Microwave Oven.
 4. Concrete Temperature - Test hourly when air temperature is 40 deg F (4 deg C) and below, when 80 deg F (27 deg C) and above, and each time a set of compression test specimens is made.
 5. Compression Test Specimen - ASTM C 31; one set of 4 standard cylinders for each

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compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory-cured test specimens except when field-cure test specimens are required.

6. Compressive Strength Tests - ASTM C 39; one set for each day's pour exceeding 5 cu. yds. plus additional sets for each 50 cu. yds. more than the first 25 cu. yds. of each concrete class placed in any one day; one specimen tested at 7 days, two specimens tested at 28 days, and one specimen retained in reserve for later testing if required.
7. When frequency of testing will provide fewer than 5 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.
8. When total quantity of a given class of concrete is less than 50 cu. yds., Architect may waive strength test if adequate evidence of satisfactory strength is provided.
9. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.
10. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive strength test results equal or exceed specified compressive strength, and no individual strength test result falls below specified compressive strength by more than 500psi.
10. Test results will be reported in writing to Owner, Structural Engineer, Ready-Mix Producer, and Contractor within 24 hours after tests. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-day tests and 28-day tests.
11. Non-Compliant Test Reports: All test reports indicating non-compliance should be faxed immediately to all parties on the test report distribution list. Copies shall be on different colored paper.
12. Nondestructive Testing - Impact hammer, sonoscope, or other nondestructive device may be permitted but shall not be used as the sole basis for acceptance or rejection.
13. Additional Tests - The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by Architect. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with
 1. ASTM C 42, or by other methods as directed. Contractor shall pay for such tests when unacceptable concrete is verified.

END OF SECTION 033000

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SECTION 033750 INTEGRALLY COLORED CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to Work of this Section.
- B. Section Includes:
 - 1. Integrally colored concrete sidewalks and walls.
 - 2. Curing of integrally colored concrete.
- C. Related Sections:
 - 1. Division 3 Section "Cast-In-Place Concrete" for general applications of concrete and coordination of sample submittal and color selection.
 - 2. Division 7 Section "Joint Sealants" for colored sealant for joints.

1.2 REFERENCES

- A. American Concrete Institute (ACI):
 - 1. ACI 301 "Specification for Structural Concrete for Buildings."
 - 2. ACI 302 IR "Recommended Practice for Concrete Floor and Slab Construction."
 - 3. ACI 303.1 "Standard Specification for Cast-In-Place Architectural Concrete."
 - 4. ACI 304 "Recommended Practice for Measuring, Mixing, Transporting and Placing of Concrete."
 - 5. ACI 305R "Recommended Practice for Hot Weather Concreting."
 - 6. ACI 306R "Recommended Practice for Cold Weather Concreting."
- B. American Society for Testing and Materials (ASTM):
 - 1. ASTM C309 "Liquid Membrane-Forming Compounds for Curing Concrete."
 - 2. ASTM C494 "Standard Specification for Chemical Admixtures for Concrete."
 - 3. ASTM C979 "Standard Specification for Pigments for Integrally Colored Concrete."
- C. American Association of State Highway and Transportation Officials (AASHTO):
 - 1. AASHTO M194 "Chemical Admixtures."

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's complete technical data sheets for the following:
 - 1. Colored admixture.
 - 2. Curing compound.
- B. Design Mixes: For each type of integrally colored concrete.

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- C. Samples for Initial Selection: Manufacturer's color charts showing full range of colors available.
- D. Qualification Data: For firms indicated in "Quality Assurance" Article, including list of completed projects.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer with 10-years experience in the production of specified products.
- B. Installer Qualifications: An installer with 5 years' experience with work of similar scope and quality.
- C. Comply with the requirements of ACI 301.
- D. Obtain each specified material from same source and maintain high degree of consistency in workmanship throughout Project.
- E. Notification of manufacturer's authorized representative shall be given at least 1-week before start of Work.
- F. Integrally Colored Concrete Mockups:
 - 1. Provide under provisions of Division 1 Section "Quality Control."
 - 2. At location on Project selected by Engineer, place and finish 4 feet by 4 feet sidewalk area and 4 foot long wall. Match existing color of existing sidewalk and wall.
 - 3. For accurate color, the quantity of concrete mixed to produce the sample should not be less than 3 cubic yards (or not less than 1/3 the capacity of the mixing drum on the ready-mix truck) and should always be in full cubic yard increments. Excess material shall be discarded according to local regulations.
 - 4. Construct mockup using processes and techniques intended for use on permanent work, including curing procedures. Include samples of control, construction, and expansion joints in sample panels. Mockup shall be produced by the individual workers who will perform the work for the Project.
 - 5. Retain samples of cements, sands, aggregates and color additives used in mockup for comparison with materials used in remaining work.
 - 6. Accepted mockup provides visual standard for work of Section.
 - 7. Mockup shall remain through completion of work for use as a quality standard for finished work.
 - 8. Remove mockup when directed.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Colored Admixture: Comply with manufacturer's instructions. Deliver colored admixtures in original, unopened packaging. Store in dry conditions.

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1.6 PROJECT CONDITIONS

- A. Integrally Colored Concrete Environmental Requirements:
 - 1. Schedule placement to minimize exposure to wind and hot sun before curing materials are applied.
 - 2. Avoid placing concrete if rain, snow, or frost is forecast within 24-hours. Protect fresh concrete from moisture and freezing.
 - 3. Comply with professional practices described in ACI 305R and ACI 306R.
- B. Schedule delivery of concrete to provide consistent mix times from batching until discharge. Mix times shall meet manufacturer's written recommendations.

1.7 PRE-JOB CONFERENCE

- A. One week prior to placement of integrally colored concrete a meeting will be held to discuss the Project and application materials.
- B. It is suggested that the Engineer, General Contractor, Subcontractor, Ready-Mix Concrete Representative, and a Manufacturer's Representative be present.

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PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

- A. L. M. SCOFIELD COMPANY, Douglasville, Georgia and Los Angeles, California (800) 800-9900 or the appropriate local contact: Eastern Division – 201-672-9050; Western Division – 323-720-3055; Central Division Office – 630-377-5959.

2.2 MATERIALS

- A. Colored Admixture for Integrally Colored Concrete: CHROMIX P[®] Admixture and CHROMIX ML[®]; L. M. SCOFIELD COMPANY.
1. Admixture shall be a colored, water-reducing, admixture containing no calcium chloride with coloring agents that are limeproof and ultra-violet resistant.
 2. Colored admixture shall conform to the requirements of ACI 303.1, ASTM C979, ASTM C494 and ASSHTO M194.
- B. Curing Compound for Integrally Colored Concrete: Curing compound shall comply with ASTM C309 and be of same manufacturer as colored admixture, for use with integrally colored concrete.
1. Exterior Integrally Colored Concrete: LITHOCHROME[®] COLORWAX; L. M. SCOFIELD COMPANY. Use to cure exterior flatwork that will be allowed to cure naturally with only occasional maintenance.
- C. Curing and Sealing Compound: Cureseal-S[™] Matte; L. M. SCOFIELD COMPANY. Curing and sealing compound shall comply with ASTM C309 and be of same manufacturer as colored admixture, for use with integrally colored concrete.
- D. SUBSTITUTIONS: The use of products other than those specified will be considered providing that the Contractor requests its use in writing within 14-days prior to bid date. This request shall be accompanied by the following:
1. A certificate of compliance from material manufacturer stating that proposed products meet or exceed requirements of this Section, including standards ACI 303.1, ASTM C979, ASTM C494 and AASHTO M194.
 2. Documented proof that proposed materials have a 10-year proven record of performance, confirmed by at least 5 local projects that Engineer can examine.

2.3 COLORS

- A. Concrete Colors:
1. Cement: Color shall be gray or white based on color selection.
 2. Sand: Color shall be locally available natural sand.
 3. Aggregate: Concrete producer's standard aggregate complying with specifications.
 4. Colored Admixture: As selected by Engineer from Scofield Color Chart A-312.
- B. Concrete Colors: Provide cement, sand, aggregate and colored admixture as required to match existing sidewalk and walls.

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C. Curing Compound: Color to match integrally colored concrete.

2.4 CONCRETE MIX DESIGN

- A. Minimum Cement Content: 6.5 sacks per cubic yard of concrete.
- B. Slump of concrete shall be consistent throughout Project at 4-inches or less. Super plasticizers or mid-range water reducers shall be used, slump shall not exceed 8-inches.
- C. Do not add calcium chloride to mix as it causes mottling and surface discoloration.
- D. Supplemental admixtures shall not be used unless approved by manufacturer.
- E. Do not add water to the mix in the field.
- F. Add colored admixture to concrete mix according to manufacturer's written instructions.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install concrete according to requirements of Division 3 Section "Cast-In-Place Concrete."
- B. Do not add water to concrete mix in the field.
- C. Surfaces shall be finished uniformly with the following finish:
 - 1. Broomed: Pull broom across freshly floated concrete to produce texture that matches exiting. Do not dampen brooms.

3.2 CURING

- A. Integrally Colored Concrete: Apply curing compound for integrally colored concrete according to manufacturer's instructions using manufacturer's recommended application techniques. Apply curing compound at consistent time for each pour to maintain close color consistency.
- B. Curing compound shall be same color as the colored concrete and supplied by same manufacturer of the colored admixture.
- C. Precautions shall be taken in hot weather to prevent plastic cracking resulting from excessively rapid drying at surface as described in CIP 5 *Plastic Shrinkage Cracking* published by the National Ready Mixed Concrete Association.
- D. Do not cover concrete with plastic sheeting.

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3.3 TOLERANCES

- A. Minor variations in appearance of integrally colored concrete, which are similar to natural variations in color and appearance of uncolored concrete, are acceptable.

3.4 APPLICATORS

- A. For a list of qualified contractors, contact your local Scofield representative or the appropriate Division Office: Eastern Division – 201-672-9050; Western Division – 323-720-3055; Central Division Office – 630-377-5959.

END OF SECTION 033750

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SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 QUALITY ASSURANCE

- A. Manufacturing Qualifications: The manufacturer of the specified product shall have in existence, for a minimum of 10 years, a program of training, certifying, and technically supporting a nationally organized Approved Contractor Program with annual re-certification of its participants.
- B. Contractor Qualifications: Contractors shall be an Approved Contractor of the manufacturer of the specified product, who has completed a program of instruction in the use of the specified joint filler, and provide a notarized certification from the manufacturer attesting to their Approved Contractor status.
- C. Guarantee: The Approved Contractor of the manufacturer of the specified product and manufacturer shall provide the Owner with a joint and several guarantee on the application and product covered in this specification.
- D. Provide a notarized certificate stating that repair material meets the specified requirements and have the manufacturer's current printed literature on the specified product.

1.03 DELIVERY, STORAGE AND HANDLING

- A. Deliver the specified product in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers.
- B. Store and condition the specified product as recommended by the manufacturer.

1.04 JOB CONDITIONS

- A. Environmental Conditions: Do not apply material if it is raining or snowing or if they appear to be imminent.
- B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the specified repair material.

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PART 2 - SURFACE PREPARATION

2.01

A. The joint and adjacent substrate must be clean, sound, dry and free of frost. Remove all traces of the old sealant, dust, grease, curing compounds, waxes, impregnations, foreign particles, efflorescence and other bond inhibiting materials from the surface by mechanical means, i.e. - sandblasting, etc., as approved by the Architect. Blow joint free of dust using compressed air line equipped with an oil trap.

1. Polyurethane sealant (Fig. 1a) Install backer rod (closed cell is preferred to open cell) to prevent 3-sided adhesion, control sealant depth and provide a tooling base.

Reference: ACI 504R-77 "Guide to Joint Sealants for Concrete Structures"
Sealant Waterproofing Restoration Institute, Applicator Training
Manual "Applying Sealants"

PART 3 - SCOPE - PRODUCT AND APPLICATION

3.01 ACCEPTABLE MANUFACTURERS

A. Sikaflex 2c, as manufactured by Sika Corporation, Lyndhurst, New Jersey, is considered to conform to the requirements of this specification and has performed satisfactorily for joint sealing for a minimum of three years.

B. Sikaflex Primer 429, as manufactured by Sika Corporation, Lyndhurst, New Jersey, is considered to conform to the requirements of this specification and has performed satisfactorily for joint sealing for a minimum of fifty years.

C. Substitutions: The use of other than the specified product will be considered providing the Contractor requests its use in writing to the Architect. This request shall be accompanied by (a) A certificate of compliance from an approved independent testing laboratory that the proposed substitute product meets or exceeds the specified performance criteria, tested in accordance with the specified test standards; (b) Documented proof that the proposed substitute product has a fifteen year proven record of performance of joint sealing confirmed by actual field tests and five successful installations that the Architect can investigate.

1. The following manufacturers are equal:

- a. Euclid Chemical Company
- b. Sonoborn
- c. Scofield

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3.02 PERFORMANCE CRITERIA

I. Sikaflex-2c

A. Properties of the mixed Polyurethane sealant:

1. Pot Life: 3-4 hours
2. Initial Cure (Tack-Free Time): 6-8 hours
3. Consistency: Non-sag/self-leveling
4. Color: 43 Architectural colors standard via color pack system

B. Properties of the Cured Polyurethane Sealant:

1. Tensile Properties (ASTM D-412) at 14 days
 - a. Tensile Strength: 175 psi min
 - b. Elongation at Break: 650% min
 - c. Tensile Stress at 100% Elongation: Non-sag 75 psi, self-leveling 100 psi
2. Hardness (ASTM D-2240) at 14 days: (Shore A)
 - a. Non-Sag: 30 max.
 - b. Self-Leveling: 45 max.
3. Tear Strength (ASTM D-624) at 14 days - non-sag 75 lbs/in, self-leveling 100 lbs/in
4. Adhesion in Peel (TT-S-00227E) at 21 days
 - a. Concrete: 20 lb min.
 - b. Aluminum: 25lb min.
 - c. Glass: 25lb. min.
5. Service Range: 40 to 170 F
6. The sealant shall conform to Specification TT-S-0227E, Type I and II, Class A.

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7. The sealant shall conform to ASTM C-920, Type M, Grade P or NS, Class 25.
8. The sealant shall be capable of + of the average joint width when tested in accordance of the durability bond test of Federal Specification TT-S-00227E.
9. The sealant shall be non-staining.
10. Final Cure: 3 days max.

II. SIKAFLEX PRIMER 429

A. Properties of the Uncured Primer:

1. Dry time prior to sealant installation: >1<8 hr.
2. Consistency: Brush-, dauber- or spray-applied liquid
3. Color: Clear

B. Properties of the Cured Primer:

1. Promotes adhesion to the following substrates:
 - a. Concrete Block
 - b. Placed Concrete
 - c. Precast Concrete
 - d. Mortar
 - e. Grout
 - f. Brick
 - g. Granite
 - h. Unfinished Woods
2. The sealant shall be non-staining.
3. Service Range: 40F to 170F max.
4. The primer shall be capable of being reapplied if necessary.
5. The primer shall be acceptable for use in joints which will be subjected to total water immersion.

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3.03 MATERIALS

A. Polyurethane Sealant

1. The joint sealant shall be a two-component, non-sag, Polyurethane-base material. It shall be applicable in horizontal, vertical, and overhead joints. The sealant shall be principally a chemical cure to form an elastomeric substance. The color shall be introduced through a color-pak system.

B. Primers, as specified, approved by the Architect.

C. Backer rod or bond breaker tape, as approved by the Architect.

3.04 MIXING & APPLICATION

- A. Mixing of the Polyurethane Sealant: Pour out entire contents of Component B into pail of Component A. Now add entire contents of color-pak into pail and mix with low-speed drill (400-600 rpm) and approved paddle. Mix for 5-7 minutes to achieve a uniform color and consistency. Avoid entrapment of air during mixing.

B. Joints

1. Placement Procedure: Prime all substrates only as required based upon the recommendations of the manufacturer of the specified product, when field testing indicates need, and when the joints will be subject to immersion after cure, as approved by the Architect.
2. Install approved backer rod or bond breaker tape in all joints subject to thermal movement to prevent three-sided bonding and to set the depth of the sealant. Approval of the backer rod or bond breaker tape shall be made by the Architect.
3. Joints shall be masked to prevent discoloration or application on unwanted areas, as directed by the Architect. If masking tape is used, it shall not be removed before tooling, yet must be removed before the initial cure of the sealant. Do not apply the masking tape until just prior to the sealant application.
4. Install sealant into the prepared joints when the joint is at mid-point of its designed expansion contraction.
 - a. Non-Sag Sealant: Load the sealant into a caulking gun. Place the nozzle of the gun, either hand or air or electric powered, into the bottom of the joint and fill entire joint. Keep the tip of the nozzle in the sealant, continue on with a steady flow of sealant proceeding the nozzle to avoid air entrapment. Avoid overlapping the sealant to eliminate the entrapment of air. Tool, as required, to properly fill the joint.
5. Adhere to all limitation and cautions for the polyurethane sealant as stated in the manufacturers printed literature.

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3.05 CLEANING

- A. The uncured polyurethane sealant can be cleaned from tools with an approved solvent. The cured polyurethane sealant can only be removed mechanically.
- B. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

3.06 MATERIALS

- A. Primer
 - 1. The primer shall be a one-component, brush, dauber, spray applied material. It shall be applicable in horizontal, vertical, and overhead joints. The primer shall cure under the influence of atmospheric moisture.

3.07 MIXING AND APPLICATION

- A. Shake or stir primer well before using.
- B. Brush, daub or spray onto the substrate covering the entire joint surfaces.
- C. Adhere to all limitations and cautions for the primer as stated in the manufacturers printed literature.

3.08 CLEANING

- A. The uncured primer can be cleaned from tools with an approved solvent. The cured primer can only be removed mechanically.
- B. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

END OF SECTION 079200