

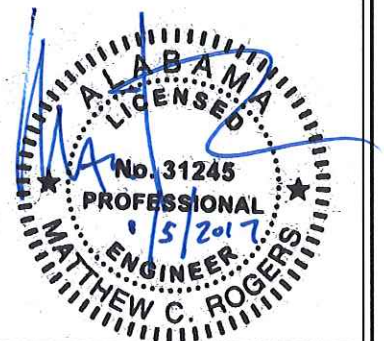
Contract Documents
&
Specifications
**Perdido Pass Parking Lot and Seawall Repairs –
Phase II**
For
The City of Orange Beach



January 2017

Prepared by

BKI **BURK-KLEINPETER, INC.**
ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS
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ITEM I



Perdido Pass Parking Lot and Seawall Repairs – Phase II Bid Proposal

INVITATION TO BID

Sealed bids will be received by the City of Orange Beach for Perdido Pass Parking Lot and Seawall Repairs – Phase II located in Orange Beach, Alabama. This project generally consists of the removal of existing asphalt pavement as well as broken concrete and rip rap. Also, constructing a wooden boardwalk along a portion of the existing seawall. Work will include demolition and grading work as outlined in the bid documents. The Contractor shall provide all labor, machinery and materials as per specifications to complete all work as listed in the bid documents. Bids will be received, opened and publicly read aloud at the City Hall Municipal Complex, located at 4099 Orange Beach Blvd., Highway 161, Orange Beach, Alabama at **11:00 a.m. on February 2, 2017.**

Bid specifications may be obtained from the Orange Beach City Hall, 4099 Orange Beach Blvd., Orange Beach, Alabama, Monday thru Friday from 8:00 a.m. til 5:00 p.m. or in digital format by contacting Renee Eberly by email at reberly@cityoforangebeach.com or by downloading from the City's website at www.cityoforangebeach.com.

A certified check or Bid Bond payable to the City of Orange Beach in an amount not less than five percent (5%) of the amount of the Bid, but in no event more than \$10,000 must accompany the Bidder's Proposal. Performance and statutory Labor and Material Payment Bonds may be required at the signing of the Contract when applicable.

All bidders must attend a mandatory pre-bid meeting on Wednesday, January 25, 2017 at 10:00 a.m. at the City Hall Municipal Complex located at 4099 Orange Beach Blvd, Orange Beach, Alabama.

Work may begin in accordance with the Notice to Proceed with work completed within **forty-five (45) calendar days** once commenced. Liquidated damages shall be assessed as per ALDOT standard specifications, section 108.

The envelope containing bid must be sealed, marked and addressed as follows, and delivered to the City of Orange Beach, Attention: City Clerk, 4099 Orange Beach Blvd, P.O. Box 458, Orange Beach, Alabama 36561:

Bids for City of Orange Beach Perdido Pass Parking Lot and Seawall Repairs – Phase II

Bids must be submitted on Proposal Forms furnished by the City of Orange Beach or copies thereof. All Bidders bidding in amounts exceeding \$50,000 must be licensed under the provision of Title 34, Chapter 8, Code of Alabama, 1975. Any contractor that desires to bid as a prime contractor must have at least one of the following major classifications of license per Section 230-X-.27 of the State of Alabama Licensing Board for General Contractors Administrative Code:

- a.) Highways and Streets
- b.) Municipal and Utility
- c.) Heavy and Railroad Construction

Out of state corporations shall furnish a certificate of authority to transact business in Alabama. Out of state limited liability companies shall provide proof of registration to transact business in this state.

Prior to the award of a competitively bid contract to a contractor having one or more employees in the State of Alabama, Alabama law requires that the contractor provide the County proof of enrollment in E-Verify (see www.uscis.gov/everify).

All license requirements for the city and state apply and must be met prior to bid opening.

FAXED BIDS WILL NOT BE ACCEPTED. Be advised that overnight delivery by express or courier to Orange Beach is not guaranteed. The City of Orange Beach reserves the right to reject any or all bids, to waive technical or legal deficiencies, to re-bid, and to accept any bid that it may deem to be in the best interest of the City.

For the City of Orange Beach,

Renee Eberly
City Clerk

***P.O. BOX 458 * ORANGE BEACH * ALABAMA * 36561
251-981-6979 * 251-981-1442 Fax***

City of Orange Beach

INVITATION TO BID DATE: January 8, 2017

FOR: Perdido Pass Parking Lot and Seawall Repairs – Phase II

PLACE OF BID OPENING: City of Orange Beach, City Hall, 4099 Orange Beach Blvd.

BIDS MUST BE RECEIVED BEFORE: February 2, 2017 @ 11:00 a.m. Central Time

BIDS WILL BE PUBLICLY OPENED: February 2, 2017 @ 11:00 a.m. Central Time

Sealed bids will be received by the City of Orange Beach at the Office of the City Clerk in Orange Beach until the above time and date at which time they will be opened as soon thereafter as practicable. All Bidders must use a Bid Form and show on the envelope **SEALED BID “FOR: Perdido Pass Parking Lot and Seawall Repairs – Phase II, February 2, 2017 at 11:00AM”**. **EACH BID MUST BE IN A SEPARATE ENVELOPE.**

NOTE: For this bid to be considered responsive, all information in this section should be supplied, as appropriate, or the entire bid may be disqualified. Bid response must be in ink or typed with original signature. If you are unable to furnish an item as specified and desire to offer a substitute, give full description of the item. No errors will be corrected after bids are opened. No prices shall include State or Federal Excise Taxes. The City of Orange Beach reserves the right to accept or reject all bids or any portion thereof.

1. Prices valid for acceptance within _____ days.
2. Vendor's quotation number if any: _____
3. Federal Employer ID NO. (if no FEIN, Enter SSN:) _____.
4. The number of pages comprising this bid is _____.

Contact: **Phillip West** at **251-981-6788** or **Tim Tucker** at **251-747-1599** on questions concerning technical specifications. Contact **Renee Eberly** at **251-981-6979** on questions concerning general bid process.

RETURN BID TO:

US Postal Service
CITY OF ORANGE BEACH
Att: Sealed Bid for Perdido Pass Parking
Lot and Seawall Repairs – Phase II
P.O. BOX 458
ORANGE BEACH, AL 36561

Courier (UPS, FEDEX, etc.)
CITY OF ORANGE BEACH
Att: Sealed Bid for Perdido Pass Parking
Lot and Seawall Repairs – Phase II
4099 Orange Beach Blvd.
ORANGE BEACH, AL 36561

FAXED BID WILL NOT BE ACCEPTED OR CONSIDERED FOR AWARDMENT!

I/we agree to furnish at the prices shown and guarantee that each offered will meet or exceed all specifications, terms and conditions, and requirements listed. This is the total price and includes all delivery or freight charges to the City of Orange Beach. Any attachment hereto is made and becomes a part of this inquiry and must be signed by bidder. I herein affirm I have not been in any agreement or collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding or otherwise.

SWORN TO AND SUBSCRIBED

BEFORE ME THIS

Company Name

Authorized Signature (INK)

DAY OF ,2017

Mail Address

Printed/Typed Authorized Name

Notary Public

City, State, Zip

Title

Commission Expires

Phone Including Area Code

Fax Number

ITEM II
INSTRUCTION TO BIDDERS
BIDDING REQUIREMENTS AND CONDITIONS

Special Notice to Bidders and Addenda

All bidders must attend a **mandatory pre-bid meeting on January 25th, 2017 at 10:00 a.m.** at the City Hall Municipal Complex located at 4099 Orange Beach Blvd, Orange Beach, Alabama.

The bidders must submit a statement of bidder's qualifications, if requested, subsequent to bid opening but prior to award.

Addenda to this bid document, if any, including written answers to questions, will be posted on the City of Orange Beach website at <http://www.cityoforangebeach.com> under the tab BIDS. Addenda and updates may not be sent directly to firms. Contractors submitting a bid should check the web site daily for addenda and updates after the release date. Firms should print out, sign and return addenda with the proposal. Failure to do so may result in disqualification.

Examination of Plans, Specifications and Site Work

The bidder is expected to examine carefully the site of the proposed work, the plans, specifications, special provisions and contract forms before submitting a proposal. The submission of a bid shall be considered conclusive evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the contract. It will be conclusive evidence that the bidder has also investigated and is satisfied with the sources of supply for all materials.

Plans, surveys, measurements, dimensions, calculations, estimates and statements as to the condition under which the work is to be performed are believed to be correct, but the contractors must examine for themselves, as no allowance will be made for any errors or inaccuracies that maybe found therein.

Familiarity with Laws

The bidder is assumed to have made himself or herself familiar with all federal and state laws and all local bylaws, ordinances and regulations which in any manner affect those engaged or employed on the work or affect the materials or equipment used in the work or affect the conduct of the work, and the bidder, if awarded the contract, shall be obligated to perform the work in conformity with said laws, by-laws, ordinances and regulations notwithstanding its ignorance thereof. If the bidder shall discover any provision in the plans or specifications which is in conflict with any such law, by-law, ordinance or regulation the bidder shall forthwith report it to the engineer in writing.

If one acre or more of land is disturbed during the process, including equipment storage and material storage, a construction storm water permit along with a construction storm water best management practices plan (erosion and sediment control plan) is required. See the following website for additional information:

<http://adem.alabama.gov/programs/water/constructionstormwater.cnt>.

The permit can be obtained by filing the application electronically which is the preferred method. There is a permit fee regardless of the application method and cost to secure permit shall be borne by the contractor. See <https://app.adem.alabama.gov/eNOI/>.

If you don't file electronically see form 024 Notice of Intent - General Permit ALR100000 <http://adem.alabama.gov/DeptForms/default.cnt>, form 023 for inspections, and form 021 to terminate the permit once the site is stabilized.

Preparation of Proposal

The bidder shall submit its proposal upon the forms furnished by the City. The bidder shall specify all unit prices. All words and figures shall be in ink or typed. If a unit price or a lump sum bid already entered by the bidder on the proposal form is to be altered it should be crossed out with ink, the new unit price or lump sum bid entered above or below it and initialed by the bidder, also with ink.

The bidder's proposal must be signed with ink by the individual, by a general partner of a partnership, by a member or officer of the firm representing a joint venture; by an officer of a corporation, by a manager of a limited liability company, or by an agent of the contractor legally qualified and acceptable to the City.

Nonconforming Proposals

Proposals will be considered nonconforming and may be rejected in the City's sole discretion for any of the following reasons:

- If the proposal is on a form other than that furnished by the City, or if the form is altered or any portion thereof is detached;
- If there are unauthorized additions, conditional or altered bids, or irregularities of any kind which may tend to make the proposal or any portion thereof incomplete, indefinite or ambiguous as to its meaning; or
- If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.

Proposal Guaranty

No proposal will be considered unless accompanied by a bid bond, surety, or similar guaranty of the types and in an amount not less than the amount indicated in the Invitation to Bid. All sureties shall be made payable to the "City of Orange Beach, Alabama ". If a bid bond is used by the bidder it shall be:

- In a form satisfactory to the City;
- With a surety company licensed, authorized to do business in, and subject to the jurisdiction of the courts of the State of Alabama; and
- Conditioned upon the faithful performance by the principal of the agreements contained in the sub-bid or the general bid.

Delivery of Proposals

When sent by mail, the sealed proposal shall be addressed to the City at the address and in the care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the invitation for bids. Proposals received after the time for opening of the bids will be returned to the bidder, unopened.

Withdrawal of Proposals

No bidder will be permitted to withdraw his or her proposal unopened after it has been submitted.

Public Opening of Proposals

Proposals will be opened and read publicly at the time and place indicated in the invitation for bids. Bidders, their authorized agents, and other interested parties are invited to be present.

Disqualification of Bidders

Any or all of the following reasons may be deemed by City in its sole discretion as being sufficient for the disqualification of a bidder and the rejection of his proposal:

- More than one proposal for the same work from an individual, firm, or corporation under the same or different name;
- Evidence of collusion among bidders;
- Failure to submit all required information requested in the bid specifications;
- Unqualified to complete the work as demonstrated by previous project experience and reference checks;
- Lack of competency or of adequate machinery, plant or other equipment, as revealed by the statement of bidders qualification or otherwise;
- Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts;
- Default or unsatisfactory performance on previous contracts;
- Failure to be licensed by the State of Alabama
- Such disqualification would be in the best interests of the City.

AWARD AND EXECUTION OF CONTRACT

Consideration of Proposals

All bidders shall sign the contract form to be considered responsive. After the proposals are opened and read, they will be compared on the basis of the total price for all sections of work to be charged to perform the work and any such additional considerations as may be identified in the bid documents. The results of such comparisons will be immediately available to the public. In case of a discrepancy between the prices written in words and those written figures, the prices written in words shall govern. In case of a discrepancy between the total shown in the proposal and that obtained by adding the products of the quantities of items and unit bid prices, the latter shall govern.

The City reserves the right to reject any or all proposals, to waive technicalities or to advertise for new proposals, if, in the sole discretion of the City, the best interest of the City of Orange Beach will be promoted thereby.

Award of Contract

Within 30 calendar days after the opening of proposals, if a contract is to be awarded, the award will be made to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified, in writing, mailed to the address on his or her proposal, that his or her bid has been accepted and that the bidder has been awarded the contract.

The award shall not be considered official until such time that a Purchase Order, fully executed contract or an award letter has been issued by the City of Orange Beach. No presumption of award shall be made by the bidder until such documents are in hand. Verbal notification of award is not considered official. Any action by the bidder to assume otherwise is done so at his/her own risk and the City will not be held liable for any expense incurred by a bidder that has not received an official award.

Determination of the lowest bidder will be based on the Base Bid, or the Base Bid with any combination of Additive Alternates the City deems to be in its best interest, for the work described on the bid proposal form. Contract award is dependent upon available funds.

Cancellation of Award

The City reserves the right to cancel the award of any contract at any time before the execution of such contract by all parties without any liability of the City.

Return of Proposal Guaranty

All proposal guaranties, except those of the three lowest bidders, will be returned upon request following the opening and checking of the proposals. The proposal guaranties of the three lowest bidders will be returned within ten days following the award of the contract if requested.

Contract Bond

At the time of the execution of the contract, the successful bidder shall furnish labor and materials payment bond in the sum equal to 100 percent of the contract amount.

Each bond shall be: (1) in a form satisfactory to the City; (2) with a surety company licensed and authorized to do business and with a resident agent designated for services of process in the State of Alabama; and (3) conditioned upon the faithful performance by the principal of the agreements contained in the original bid. All premiums for the contract bonds are to be paid by the contractor.

Execution and Approval of Contract

The successful bidder is required to present all contract bonds, to provide proof of insurance, and to execute the contract within 5 days following receipt of the City's notification of acceptance of the bid. No contract shall be considered in effect until it has been fully executed by all parties.

Failure to Execute Contract

Failure to execute the contract and file an acceptable bond within 5 days after notification of acceptance of bid shall be just cause for the cancellation of the award and the forfeiture of the proposal guarantee which shall become the property of the City, not as a penalty, but in liquidation of damages sustained. Award may then be made to the next lowest responsible bidder, or the work may be re-advertised as the City may determine at its sole discretion.

ITEM III

PROPOSAL FORM

Perdido Pass Parking Lot and Seawall Repairs – Phase II

To the City of Orange Beach, Alabama, herein called the City. The Bidder declares as follows:

1. All interested in the Bid as Principals are named herein;
2. This bid is not made jointly, or in conjunction, cooperation or collusion with any other person, firm, corporation, or other legal entity;
3. No officer, agent or employee of the City is directly or indirectly interested in this Bid;
4. The bidder has carefully examined the site of the proposed work and fully informed and satisfied himself as to the conditions there existing, the character and requirements of the proposed work, the difficulties attendant upon its execution and the accuracy of all estimated quantities stated in this Bid, and the bidder has carefully read and examined the Drawings, Agreement, Specifications and other Contract Documents therein referred to and knows and understands the terms and provisions thereof;
5. The bidder understands that if the Bid is accepted the bidder will contract with the City, as provided in the Contract Documents, this Bid Form being part of said Contract Documents, and that the bidder will supply or perform all labor, services, plant, machinery, apparatus, appliances, tools, supplies and all other activities required by the Contract Documents in the manner and within the time therein set forth, and that the bidder will take in full payment therefore the following item prices; and
6. It is the intention of this contract that the items listed above describe completely and thoroughly the entirety of the work as shown on the plans and as described in the specifications. All other items required to accomplish the above items are considered to be subsidiary work, unless shown as a pay item.
7. Contractor agrees to complete all work within forty-five (45) calendar days.

PERDIDO PASS PARKING LOT AND SEAWALL REPAIRS - PHASE II

The following items shall be constructed in accordance with the *Alabama Department of Transportation Standard Specifications for Highway Construction*, Current, Non-metric Edition, except as modified herein:

NOTES:

1. The following unit prices shall include all labor, materials, equipment rental, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.
2. Unit prices for items that have quantities in both the base bid and any alternates shall be the same. If a unit price for an item in one of the alternates varies from the unit price for the same item found in the base bid, the unit price for the base bid will be used in calculating the total price.
3. Bidder understands that the Owner reserves the right to reject any and all bids.

*** BASE BID ***					
ITEM NUMBER	ITEM DESCRIPTION	UNIT	UNIT QUANTITY	UNIT COST	EXTENDED TOTAL
206C-026	REMOVING ASPHALT PAVEMENT	SY	600		
206D-001	REMOVING GUARDRAIL (INCLUDING POSTS)	LF	180		
206D-011	REMOVING FENCE (INCLUDING GATES)	LF	216		
206G-002	REMOVAL OF RUBBLE (RIPRAP/CONCRETE)	CY	130		
210A-000	UNCLASSIFIED EXCAVATION	CY	200		
210D-022	BORROW EXCAVATION (CLEAN SAND)	CY (TBM)	500		
243A-002	SOIL STABILIZATION GEOGRID, TYPE 3	SY	300		
301B-999	COARSE AGGREGATE BACKFILL MATERIAL (UNCRUSHED #57 STONE)	TON	5		
490D-000	SPALL REPAIR	LS	1		
600A-000	MOBILIZATION	LS	1		
610C-001	LOOSE RIPRAP, CLASS 2	TON	120		
610D-003	FILTER BLANKET, GEOTEXTILE	SY	520		
614A-000	SLOPE PAVING	CY	3		
623C-003	COMBINATION CURB & GUTTER, TYPE C (MODIFIED)	LF	340		
665O-000	TEMPORARY EROSION CONTROL	LS	1		
674A-000	CONSTRUCTION SAFETY FENCE	LF	500		

ITEM NUMBER	ITEM DESCRIPTION	UNIT	UNIT QUANTITY	UNIT COST	EXTENDED TOTAL
740A-000	TRAFFIC CONTROL SCHEME	LS	1		
770L-005	BOLLARD, COMPLETE IN PLACE	EA	1		
902A-000	6' HIGH CHAIN LINK FENCE (MATCH EXISTING, INCLUDING GATES)	LF	40		
SP-1	WOODEN PEDESTRIAN BOARDWALK (COMPLETE INCL. STAIN/SEAL)	SF	325		
SP-2	REPLACE BROKEN HANDRAIL FLANGES	EA	1		
SP-3	PAINTING CONCRETE PILECAP	SF	700		
LS-1	SABAL PALMETTO / CABBAGE PALM, FG,14-20' CT	EA	30		
TOTAL PRICE FOR BASE BID =					

*** ADDITIVE ALTERNATE NO. 1***					
ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY		
770L-005	BOLLARD, COMPLETE IN PLACE	EA	2		
SP-1	WOODEN PEDESTRIAN BOARDWALK (COMPLETE INCL. STAIN/SEAL)	SF	2490		
TOTAL PRICE FOR ADDITIVE ALTERNATE NO. 1 =					

*** ADDITIVE ALTERNATE NO. 2***					
ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY		
SP-4	RESETTING CONCRETE PEDESTAL	EA	1		
SP-5	NEW LIGHT POLES AND HEADS (COMPLETE)	EA	6		
TOTAL PRICE FOR ADDITIVE ALTERNATE NO. 2 =					

*** ADDITIVE ALTERNATE NO. 3***					
ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY		
206C-026	REMOVING ASPHALT PAVEMENT	SY	500		

ITEM NUMBER	ITEM DESCRIPTION	UNIT	UNIT QUANTITY	UNIT COST	EXTENDED TOTAL
206D-001	REMOVING GUARDRAIL (INCLUDING POSTS)	LF	55		
206D-011	REMOVING FENCE (INCLUDING GATES)	LF	174		
206G-002	REMOVAL OF RUBBLE (RIPRAP/CONCRETE)	CY	150		
210A-000	UNCLASSIFIED EXCAVATION	CY	250		
210D-022	BORROW EXCAVATION (CLEAN SAND)	CY (TBM)	450		
243A-002	SOIL STABILIZATION GEOGRID, TYPE 3	SY	190		
301B-999	COARSE AGGREGATE BACKFILL MATERIAL (UNCRUSHED #57 STONE)	TON	5		
490D-000	SPALL REPAIR	LS	1		
610C-001	LOOSE RIPRAP, CLASS 2	TON	35		
610D-003	FILTER BLANKET, GEOTEXTILE	SY	280		
614A-000	SLOPE PAVING	CY	1		
623C-003	COMBINATION CURB & GUTTER, TYPE C (MODIFIED)	LF	145		
674A-000	CONSTRUCTION SAFETY FENCE	LF	300		
SP-3	PAINTING CONCRETE PILE CAP	SF	500		
TOTAL PRICE FOR ADDITIVE ALTERNATE NO. 3 =					

*** ADDITIVE ALTERNATE NO. 4***					
ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY		
770L-005	BOLLARD, COMPLETE IN PLACE	EA	1		
SP-1	WOODEN PEDESTRIAN BOARDWALK (COMPLETE INCL. STAIN/SEAL)	SF	1120		
TOTAL PRICE FOR ADDITIVE ALTERNATE NO. 4 =					

BID SUMMARY

TOTAL BASE BID AMOUNT:

TOTAL ADDITIVE ALTERNATE NO. 1 AMOUNT:

TOTAL ADDITIVE ALTERNATE NO. 2 AMOUNT:

TOTAL ADDITIVE ALTERNATE NO. 3 AMOUNT:

TOTAL ADDITIVE ALTERNATE NO. 4 AMOUNT:

TOTAL BASE BID + ADDITIVE ALTERNATE NO.S 1, 2, 3, AND 4:

The Bidder has received and acknowledged Addenda No._____ **through**_____.

Company Name _____

Representative /Title (Printed) _____

Signature _____

Phone # / Email Address _____

Days to Complete Project _____

License # & Type _____

ITEM IV

CONTRACT AGREEMENT

Perdido Pass Parking Lot and Seawall Repairs – Phase II

THIS AGREEMENT made as of the ____th day of ____ in the year 2017, by and between the City of Orange Beach, Alabama (hereinafter called the City) and _____ (hereinafter called the Contractor)

ARTICLE I - Work - The Contractor shall perform all work as specified in the Contract Documents. The Contractor shall provide, at his expense, all labor, materials, equipment and incidentals as may be necessary for the expeditious and proper.

ARTICLE II - ENGINEER - The engineering company assigned to perform engineering design and construction inspection services for this project. The engineering company so assigned to this project is **Burk-Kleinpeter, Inc.**

ARTICLE III - CONTRACT TIME - Work will begin in accordance with the Notice to Proceed and work shall be completed within forty-five (45) calendar days once commenced.

ARTICLE IV - CONTRACT PRICE - City shall pay Contractor for performance of the work in accordance with the Contract Documents.

Contract Amount:

\$_____.

ARTICLE V - PAYMENT - Partial payments will be made in accordance with the Contract Documents. Upon final acceptance of the work and settlement of all claims, City shall pay the Contractor the unpaid balance of the Contract Price, subject to additions and deductions provided for in the Contract Documents.

ARTICLE VI - RETAINAGE - In making partial payments, there will be retainage made in accordance with the Contract Documents. The retainage shall be held until completion of all work, final acceptance and final estimate paid, as described in the Contract Documents.

ARTICLE VII - LIQUIDATED DAMAGES - In event the Contractor fails to successfully execute the work within the specified contract time the City shall assess the Contractor liquidated damages in the amount specified by ALDOT standard specifications, section 108, for each calendar day beyond the specified completion date for each section of work. Liquidated damages shall be deducted from the Contract Price prior to final payment of the Contractor.

ARTICLE VIII – CONTRACT DOCUMENTS – The Contract Documents which comprise the contract between City and Contractor are attached hereto and made a part hereof and consist of the following:

- 8.1 This Agreement
- 8.2 Contractor's Bid and Bonds
- 8.3 Notice of Intent to Award, Notice to Proceed
- 8.4 Instruction to Bidders
- 8.5 General Requirements, Control of Work, Temporary Facilities, Measurement and Payment
- 8.6 Insurance Requirements
- 8.7 Scope of Work
- 8.8 Bid Alternates (if any)
- 8.9 Drawings

8.10 Any modifications, including change orders, duly delivered after execution of this Agreement.

ARTICLE IX – TERMINATION FOR DEFAULT – Should contractor at any time refuse, neglect, or otherwise fail to supply a sufficient number or amount of properly skilled workers, materials, or equipment, or fail in any respect to prosecute the work with promptness and diligence, or fail to perform any of its obligations set forth in the Contract, City may, at its election, terminate the employment of Contractor, giving notice to Contractor in writing of such election, and enter on the premises and take possession, for the purpose of completing the work included under this Agreement, of all the materials, tools and appliances belonging to Contractor, and to employ any other persons to finish the work and to provide the materials therefore at the expense of the Contractor.

ARTICLE X – INDEMNIFICATION OF CITY – Contractor will indemnify City and its agents against all suits, claims, judgments, awards, loss, cost or expense (including without limitation attorney's fees) arising in any way out of the Contractor's negligent performance or non-performance of its obligations under this Contract. Contractor will defend all such actions with counsel satisfactory to City at its own expense, including attorney's fees, and will satisfy any judgment rendered against City in such action.

ARTICLE XI – PERMITS – The Contractor will secure at its own expense, all permits and consents required by law as necessary to perform the work and will give all notices and pay all fees and otherwise comply with all applicable City, State, and Federal laws, ordinances, rules and regulations.

ARTICLE XII – INSURANCE – The Contractor shall secure and maintain, until acceptance of the work, insurance with limits not less than those specified in the Contract.

ARTICLE XIII – MISCELLANEOUS –

- A. Neither City nor Contractor shall, without the prior written consent of the other, assign, sublet or delegate, in whole or in part, any of its rights or obligations under any of the Contract Documents; and, specifically not assign any monies due, or to become due, without the prior written consent of City.
- B. City and Contractor each binds himself, his partners, successors, assigns and legal representatives, to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents.
- D. The Contract Documents constitute the entire Agreement between City and Contractor and may only be altered amended or repealed by a duly executed written instrument.
- E. The laws of the State of Alabama shall govern this Contract without reference to the conflict of law principles thereof.

IN WITNESS WHEREOF, the parties hereunto executed this _____ day of _____, 2017

BIDDER:

CITY OF ORANGE BEACH

By: _____

By: _____

Name: _____

Name: **Mayor Tony Kennon**

ITEM V

CONTRACTOR'S AFFIDAVIT

STATE OF:

COUNTY OF:

Before me, the undersigned, a

(Notary Public)

in and for said County and State personally appeared,

(Individual, Partner, or duly authorized representative of Corporate)

who, being duly sworn, according to law deposes and says that the cost of labor, material, and equipment and outstanding claims and indebtedness of whatever nature arising out of the performance of the Contract between

CITY OF ORANGE BEACH, ALABAMA

and _____
(Contractor)

of _____

Dated: _____

has been paid in full for Construction of: **Perdido Pass Parking Lot and Seawall Repairs – Phase II**

(Individual, Partner, or
duly authorized representative of
Corporate Contractor)

Sworn to and subscribed
before me this ____ day
of _____ 20____

ITEM VI
CONTRACTOR'S RELEASE

KNOW ALL MEN BY THESE PRESENTS that

_____ (Contractor)
of _____,

County of _____ and State of _____

does hereby acknowledge that _____ (Contractor)

has on this day had, and received from the CITY OF ORANGE BEACH ALABAMA, final and completed payment for the Construction of:

Perdido Pass Parking Lot and Seawall Repairs – Phase II

NOW THEREFORE, the said _____ (Contractor)
for myself, my heirs, executors, and administrators) (for itself, its successors and assigns) do/does
by these presents remise, release, quit-claim and forever discharge the City of Orange Beach,
Alabama, its successors and assigns, of and from all claims and demands arising from or in
connection with the said Contract dated _____,
and of and from all, and all manners of action and actions, cause and causes of action and
actions, suits, debts, dues, duties, sum and sums of money, accounts, reckonings, bonds, bills,
specifications, covenants, contracts, agreements, promises, variances, damages, judgments,
extents, executions, claims and demand, whatsoever in law of equity, or otherwise, against the
City of Orange Beach, Alabama, its successors and assigns, which (I, my heirs, executors, or
administrators) (it, its successors and assigns) ever had, now have or which (I, my heirs,
executors, or administrators) (it, its successors and assigns) hereafter can shall or may have, for,
upon or by reason of any matter, cause, or thing whatsoever; from the beginning of record time to
the date of these presents.

IN WITNESS WHEREOF,

Contractor:

By: _____

print name of witness: _____ Its Duly Authorized

Dated: _____

ITEM VII

INSURANCE REQUIREMENTS

Insurance shall be in such form as will protect the Contractor from all claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract whether such operation by himself or by anyone directly or indirectly employed by him.

AMOUNT OF INSURANCE

Comprehensive General Liability:

Bodily injury or Property Damage - \$2,000,000 Per occurrence and general aggregate

Automobile and Truck Liability:

Bodily Injury or Property Damage - \$2,000,000 Per occurrence and general aggregate

Full Workers Comprehensive Insurance coverage for all people employed by the Contractor to perform work on this project. This insurance shall at a minimum meet the requirements of the most current laws of the State of Alabama.

Contractual Liability Insurance coverage in the amounts specified above under Comprehensive General Liability.

Product and Completed Operations coverage to be included in the amounts specified above under Comprehensive General Liability.

ADDITIONAL INSURED

All liability policies (including any excess policies used to meet coverage requirements) shall include the City of Orange Beach, Alabama as named Additional Insured.

- 1) The contractor's insurance shall be primary in the event of a loss.
- 2) The Additional Insured endorsement must include language specifically stating that the entity is to be covered for all activities performed by, or on behalf of, the contractor, including the City of Orange Beach's general supervision of the contractor.
- 3) City of Orange Beach shall be listed as a Certificate Holder. The City shall be identified as follows:
City of Orange Beach
Attn: City Clerk
P.O. BOX 458
4099 Orange Beach Blvd.
Orange Beach, AL 36561

ITEM VIII

GENERAL REQUIREMENTS

SCOPE OF WORK

1. INTENT OF CONTRACT

The intent of the Contract is to provide for the construction and completion in every detail of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the terms of the Contract. The Contractor shall be required to conform to the intent of the plans and specifications. No extra claims shall be allowed for portions of the work not specifically addressed in the plans and specifications but required to produce a whole and complete project, such work will be considered subsidiary to the bid items.

2. INCIDENTAL WORK

Unless specifically excepted in the Bid or Technical Specifications, incidental work items for which separate payment is not measured includes, but is not limited to, the following items:

- a. Daily clean up after job
- b. Signs
- c. Demobilization
- d. Cooperation with other contractors and utility companies.

3. ALTERATION OF PLANS OR OF CHARACTER OF WORK

The City reserves the right, without notice to Surety, to make such alterations of the plans or of the character of the work as may be necessary or desirable to complete fully and acceptably the proposed construction; provided that such alterations do not increase or decrease the contract cost. Within these cost limits, the alterations authorized in writing by the City shall not impair or affect any provisions of the Contract or bond and such increases or decreases of the quantities as a result from these alterations or deletions of certain items, shall not be the basis of claim for loss or for anticipated profits by the contractor. The contractor shall perform the work as altered at the contract unit price or prices.

4. EXTRA WORK ITEMS

Extra work shall be performed by the Contractor in accordance with the specifications and as directed, and will be paid for at a price as provided in the Contract documents or if such pay items are not applicable then at a price negotiated between the contractor and the City or at the unit bid price. If no agreement can be negotiated, the Contractor will accept as payment for extra work, cost plus 15% (overhead & profit). Costs shall be substantiated by invoices and certified payroll. If the City determines that extra work is to be performed, a change order will be issued.

5. CHANGE ORDERS

The City reserves the right to issue a formal change order for any increase, decrease, deletion, or addition of work or any increase in contract time or price. The contractor shall be required to sign the change order and it shall be considered as part of the Contract documents.

6. FINAL CLEANING UP

Before acceptance of the work, the contractor shall remove from the site all machinery, equipment, surplus materials, rubbish, temporary utility connections, temporary structures, barricades and signs. All parts of the work shall be left in a neat and presentable condition. On

all areas used or occupied by the contractor, regardless of the contract limits, the bidder shall clean-up all sites and storage grounds.

7. ERRORS AND INCONSISTENCY IN CONTRACT DOCUMENTS

Any provisions in any of the Contract Documents that may be in conflict with the paragraphs in these General Requirements shall be subject to the following order of precedence for interpretation.

1. Technical Specifications will govern General Requirements.
2. Plans and/or Shop Drawings will govern Technical Specifications, and General Requirements.

CONTROL OF WORK

1. AUTHORITY OF ENGINEER

(a) All work shall be done under supervision of the Engineer and to his satisfaction. The Engineer will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work; all questions that may arise as to the interpretation of the plans and specifications; and all questions as to the acceptable fulfillment of the Contract by the Contractor.

(b) The Engineer will have the authority to suspend the work wholly or in part for such periods as he may deem necessary due to the failure of the Contractor to correct conditions unsafe for workers or the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for conditions considered unsuitable for the prosecution of the work, including unfit weather; or for any other condition or reason deemed to be in the public interest. The Contractor shall not be entitled to any additional payments arising out of any such suspensions.

(c) The City reserves the right to demand a certificate of compliance for a material or product used on the project. When the certificate of compliance is determined to be unacceptable to the Engineer, the Contractor may be required to provide engineering and testing services to guarantee that the material or product is suitable for use in the project, at its expense (see Sample of Certificate of Compliance).

2. PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPES

(a) The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.

(b) When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or as a result of the failure to perform work by the Contractor, the Contractor shall restore, at its own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing rebuilding, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

(c) If the Contractor fails to repair, rebuild or otherwise restore such property as may be deemed necessary, the City, after 48 hours notice, may proceed to do so, and the cost thereof may be deducted from any money due or which may become due the Contractor under the contract.

(d) The Contractor shall use every precaution to prevent injury or damage to wires, poles, or other property of public utilities; trees, shrubbery, vegetation, and fences along and adjacent to

the right-of-way, all underground structures such as pipes and conduits, within or outside of the right-of-way; and the Contractor shall protect and carefully preserve all property marks until an authorized agent has witnessed or otherwise referenced their location.

3. MAINTENANCE DURING CONSTRUCTION

The Contractor shall maintain the work during construction and until the project is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and workers to ensure that the structure is kept in satisfactory conditions at all times.

4. SAFETY PRECAUTIONS

Upon commencement of work, the Contractor shall be responsible for initiating, maintaining and supervising all safety precautions necessary to ensure the safety of employees on the site, other persons who may be affected thereby, including the public, and other property at the site or adjacent thereto.

5. PERMITS

Other than the building (demolition) permit from the City of Orange Beach, it will be the responsibility of the Contractor to obtain all permits required for this project, and for the operation of equipment in, or on, all city streets and public ways associated with this project.

6. BARRICADES, WARNING SIGNS AND TRAFFIC OFFICERS

(a) The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of nearby Building Occupants and the public. Work Areas shall be protected by effective barricades and signage. Obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to control and direct traffic in a proper manner, as approved by the engineer.

(b) The Contractor will be held responsible for all damage to the work due to lack of adequate controlling devices. The work prescribed herein will not be paid for separately but will be paid for as part of the Contract Price unless specifically appearing as a bid item.

MEASUREMENT AND PAYMENT

PARTIAL PAYMENTS

Partial payments will be made on a monthly basis during the contract period. In making partial payments, there will be retainage made in accordance with the Contract Documents. The retainage shall be held until completion of all work, final acceptance and final estimate paid, as described in the Contract Documents.

FINAL ACCEPTANCE

Upon due notice from the Contractor of presumptive completion of the entire project, the City or City Engineer will make an inspection. If all construction provided for and contemplated by the contract is found complete to his satisfaction, this inspection shall constitute the final inspection and the City or City Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of the final inspection.

SCOPE OF WORK

Contractor to furnish all labor, material equipment, manpower and the like as required to construct improvements to Perdido Pass Parking Lot and Seawall Repairs – Phase II. The complete scope of work will be based on approved plans and specifications.

ITEM IX

E-VERIFY AFFIDAVIT

STATE OF _____

COUNTY OF _____

Before _____ me, _____ the _____ undersigned _____ authority, _____ personally appeared _____ (affiant) who, being by me first duly sworn, doth depose and say as follows:

I _____ (name), on behalf of _____ (business entity), and with lawful authority to act in its behalf, attest to the following from personal knowledge:

1. That the said Business Entity does not knowingly employ, hire for employment, or continue to employ any unauthorized aliens in the State of Alabama; and
2. That said business entity is enrolled in the E-Verify Program and **that documentation establishing said enrollment is attached hereto or that reason you are not enrolled is written on the bottom of this affidavit.**
3. That while performing work for or providing a product to the City of Orange Beach, that it will verify the immigration status of every employee who is required to be verified according to the applicable federal rules and regulations; and
4. That said business entity shall acquire from its subcontractors notarized affidavits that they will not knowingly employ, hire for employment or continue to employ unauthorized aliens, that they will enroll in E-verify before performing any contract work or providing any product, and that they shall attach to the affidavits, documentation establishing their enrollment in E-verify.

Further affiant sayeth not.

x _____ as authorized agent for _____
(Signature) (business entity)

I, the undersigned Notary Public, in and for said County and State, hereby certify that _____, whose name is signed to the foregoing Affidavit, and who is known to me, acknowledged before me on this date that, being informed of the contents of the above and foregoing affidavit, he/she as an officer of _____ (business entity) and with full authority, executed the same voluntarily for and as the act of said business entity on the day the same bears date.

Given under my hand and official seal of office this ____ day of _____, 20____.

SEAL

Signature of Notary Public

My Commission Expires: _____

ITEM X
FORM OF BID BOND

NOTE: PROPOSAL WILL NOT BE ACCEPTED AND BIDS WILL NOT BE CONSIDERED UNLESS THIS FORM FOR BID BOND IS USED AND SIGNED BY PRINCIPAL AND SURETY, OR UNLESS A CASHIER'S CHECK (DRAWN ON AN ALABAMA BANK) IN THE PROPER AMOUNT IS FURNISHED.

KNOW ALL MEN BY THESE PRESENTS:

That the contractor, as **Principal**, and _____

_____, as **Surety**, are held and firmly
(Name of Surety)

bound unto **THE CITY OF ORANGE BEACH** as **Obligee** in the full and just sum of five percent (5%) of amount bid (Maximum amount - \$10,000.00), lawful money of the United States, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said **Principal** is herewith submitting its proposal for

_____, located in the City of
Orange Beach, County of Baldwin, State of Alabama.

The condition of this obligation is such that:

If the aforesaid **Principal** shall be awarded the contract and said **Principal** will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the performance of the terms and conditions of the contract, then this obligation will be void; otherwise, the **Principal** and the **Surety** will pay unto the **Obligee** the difference in money between the amount of the contract as awarded and the amount of the proposal of the next lowest acceptable bidder, but not to exceed the total amount of the proposal guaranty. If no other bids are received, the full amount of the proposal guaranty shall be retained and/or recovered as liquidated damages for such default.

Witness our hands and seals this _____ day of _____, 20____.
(Day) (Month) (Year)

FORM OF BID BOND

SIGNATURE OF INDIVIDUAL BIDDER: (USE ONLY WHERE BIDDER IS AN INDIVIDUAL)

_____, Doing Business As, _____
(Name of Individual) (Business Name)

Business Mailing Address: _____
(Mailing Address)

NAME OF CORPORATION, PARTNERSHIP, OR JOINT VENTURE:

(Name of Partnership, Joint Venture or Corporation*) - (If Two Corporations**)

Business Mailing

Address: _____

(Address)

BY: _____ (L.S.)
(Signature and Position or Title of Officer Authorized to Sign Bids and Contracts for the Firm)

Business Mailing

Address: _____

(Address)

BY: _____ (L.S.)
(Signature and Position or Title of Officer Authorized to Sign Bids and Contracts for the Firm)

Business Mailing

Address: _____

(Address)

BY: _____ (L.S.)
(Signature and Position or Title of Officer Authorized to Sign Bids and Contracts for the Firm)

*(Corporate Seal)

Attest: _____
(Secretary)

Name of State under the laws of which
the Corporation was chartered:

(State)

**(Corporate Seal)

Attest: _____
(Secretary)

Name of State under the laws of which
the Corporation was chartered:

(State)

SURETY: _____

(Name of Surety)

BY (AGENT): _____
(Attorney in Fact)

AGENT'S ADDRESS: _____

(Mailing Address)

NOTICE: VALID POWER OF ATTORNEY MUST BE
ATTACHED.

PLEASE LEAVE ATTACHED IN YOUR BIDDING FORM

ITEM XI

BOND FOR PERFORMANCE OF THE WORK

STATE OF ALABAMA,
BALDWIN COUNTY.

KNOW ALL MEN BY THESE PRESENTS: That _____

_____, as Principal, and,

_____, as Surety,

are held and firmly bound unto the CITY OF ORANGE BEACH, ALABAMA, as Obligee, in the penal sum of

_____ Dollars

(\$_____), for the payment of which well and truly to be made, we hereby bind ourselves,

our heirs, executors, administrators, successors and assigns.

PROVIDED, HOWEVER, that the condition of this obligation is such that whereas the above bound Principal has this day entered into a Contract with the said Obligee, for the construction of Perdido Pass Parking Lot and Seawall Repairs – Phase II in the City of Orange Beach, Baldwin County, Alabama, to-wit: a copy of which said Contract is hereto attached.

NOW, THEREFORE, In the event the said Principal as such Contractor shall faithfully and promptly perform said Contract and all the conditions and requirements thereof, then this obligation shall be null and void and of no effect, otherwise to remain and be in full force and effect.

PROVIDED, further, that upon the failure, in any respect, of the said Principal to promptly and efficiently prosecute said work in accordance with the Contract, the above bound Surety shall, at its own expense, take charge of said work and complete the Contract, pursuant to the terms of the Contract, receiving, however, any balance of the funds in the hands of said Obligee due under said Contract. Said Surety may, if it so elects, by written direction given to the Obligee authorize the Obligee to advertise for bids to complete the said Contract at the expense of said Surety, and such Surety hereby agrees and binds itself to pay the expense of the completion of such work, less any funds in the hands of the Obligee remaining, under said Contract, to be due to said Principal.

In the event said Principal shall fail or delay the prosecution and completion of said work and said Surety shall also fail to act promptly as hereinbefore provided, then said Obligee may cause ten days notice of such failure to be given, either to said Principal or Surety, and at the expiration of said ten days, if said Principal or Surety do not proceed promptly to execute said contract, the Obligee shall have the authority to cause said work to be done, and when the same is completed and the cost thereof estimated, the said Principal and Surety shall and hereby agree to pay any excess in the cost of said work above the agreed price to be paid under said Contract.

Upon the completion of said Contract pursuant to its terms, if any funds remain due on said Contract, the same shall be paid to said Principal or Surety.

The said Principal and Surety further agree as part of this obligation to pay all such damages of any kind to person or property that may result from a failure in any respect to perform and complete said Contract.

The decision of said Obligee's designated representative upon any question connected with the execution of said Contract, or any failure or delay in the prosecution of the work by said Principal or Surety, shall be final and conclusive.

The Proposal, Specifications and the Contract hereinbefore referred to, and the Bond for the Payment of Labor, Materials, Feed-stuffs or Supplies executed under the provisions of Section 39-1-1, Code of

Alabama 1975, as amended, are made a part of this obligation, and this instrument is to be construed in connection therewith.

IN WITNESS WHEREOF, we have hereunto set our hands and seals, this the _____ day of _____, 20____, pursuant to the authority of the governing body of each of our respective parties.

NAME OF CONTRACTOR: _____
(Individual, Partnership, Corporation, or Joint Venture)

By: (X) _____ (X) _____
Contractor's Signature Witness

Title/Address Title

By: (X) _____ (X) _____
Contractor's Signature Witness

Title/Address Title

By: (X) _____ (X) _____
Contractor's Signature Witness

Title/Address Title

NAME OF SURETY

BY: _____
ATTORNEY-IN-FACT
Countersigned by Alabama Licensed Insurance
Producer for Surety, if applicable:

NOTICE TO INSURANCE PRODUCER:
Please print or write legibly your name and
complete address below including
PRODUCER'S COMPANY

Producer's Name

License No.

Address PRODUCER'S COMPANY

ITEM XII

GENERAL CONDITIONS

1. SPECIFICATIONS CONCERNING CONSTRUCTION

This project shall be constructed in accordance with the Alabama Department of Transportation Standard Specifications for Highway Construction, current non-metric edition, and any Supplemental Specifications and Special Provisions included herein.

2. TERMINATION FOR FAILURE OF PERFORMANCE

In the event of failure by the Contractor to perform any and all of the Contractor's obligations in a prompt and efficient manner satisfactory to the City, the City will have the right to summarily terminate this agreement. This includes all projects covered hereby. The Contractor will be given written notice of such termination, after which the City may employ contracting services of its choice to complete the project or projects under this agreement. The Contractor and its Sureties will reimburse the City any additional costs that may result from such termination and employment of other contracting services.

3. CITY RIGHT TO PERFORM WORK

It is understood that the City may delete any of the items listed in the project's Proposal (Section III) and the Contractor agrees to construct the remaining items at the bid price for each item.

4. PROJECT SIGNS

City of Orange Beach shall construct and install standard project identification signs at locations within the project limits.

5. THIRD PARTY BENEFICIARY

The parties agree that in consideration of the mutual covenant set out herein, the Contractor, its subcontractors, servants, agents or employees, or any other entities consulted or hired or used by the Contractor on this City of Orange Beach Project will comply in every respect with the specifications provided by the Design Consultant to the City for all the work, labor, supplies, and materials provided by the Contractor, subcontractor, servants, agents or employees, or any other entities consulted or hired or used by the Contractor in any way with the location and/or relocation of any utilities, and/or appurtenances operated or maintained by any utility company affected by said project as identified on the Construction Plans.

ITEM XIII

CITY OF ORANGE BEACH
SUPPLEMENTAL SPECIFICATIONS

101-12 – DEFINITION OF TERMS

105-12 – CONTROL OF WORK

107-12 – LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

108-12 – PROSECUTION AND PROGRESS

109-12 – MEASUREMENT AND PAYMENT

110-12 – CLAIMS

111-12 DISADVANTAGED BUSINESS ENTERPRISE (DBE)

210-12 – EXCAVATION AND EMBANKMENT

614-12 – SLOPE PAVING

652-12 – GROUND PREPARATION, VEGETATION ESTABLISHMENT AND MOWING

665-12 – TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

Supplemental Specification No. 101-12

SUBJECT: Definition of Terms

The Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, is hereby amended as follows:

SECTION 101 DEFINITION OF TERMS

101.01 Definitions.

(b) TERMS.

Amend the following terms to read as shown:

Department:	The City of Orange Beach Public Works Department as appointed by the City Council of Orange Beach, Alabama for administration of Public Works Projects.
Director:	The Director of Engineering and Environmental Services as appointed by the City Council of Orange Beach Alabama.
Division:	The City of Orange Beach Public Works Department as appointed by the City Council of Orange Beach, Alabama for administration of Public Works Projects.
Division Engineer:	The Director of Engineering and Environmental Services as appointed by the City Council of Orange Beach Alabama.
Engineer:	Director of Engineering and Environmental Services; acting directly or through the Project Engineer as his representative who is responsible for engineering supervision of the construction.
State:	City of Orange Beach, the party of the first part to the Contract, acting by and through the Director of Engineering and Environmental Services.

Supplemental Specification No. 105-12

SUBJECT: Construction Stakes, Lines and Grades

The Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, is hereby amended as follows:

SECTION 105 CONTROL OF WORK

105.08 Construction Stakes, Lines and Grades.

(b) FOR PROJECTS NOT CONTAINING ITEM 680-A, GEOMETRIC CONTROLS, THE FOLLOWING SHALL APPLY:

1. DETERMINATION OF LINES AND GRADES.

Modify the second paragraph to read as follows:

Prior to construction, the engineer shall provide horizontal and vertical controls at several locations throughout the Project area. The engineer shall provide a site plan showing coordinates at key locations.

105.13 Maintenance of the Work.

(a) GENERAL.

Add the following to the end of the first sentence in the first paragraph:

and shall maintain it in that condition for thirty (30) days after the final construction inspection.

Supplemental Specification No. 107-12

SUBJECT: Legal Relations and Responsibility to Public

The Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, is hereby amended as follows:

SECTION 107 LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

107.17 Contractor's Responsibility for Work.

Add the following to the end of the first paragraph:

This does not include theft. The Contractor is responsible for protecting their work from theft, and will be responsible for repairing any damages caused by theft.

Supplemental Specification No. 108-12

SUBJECT: Extension of Contract Time

The Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, is hereby amended as follows:

SECTION 108 PROSECUTION AND PROGRESS

108.04 Prosecution of Work.

(b) SOIL EROSION AND STORMWATER MANAGEMENT.

1. COMPLIANCE AND PROGRESS.

Modify the first sentence to read as follows:

If the Contractor fails to comply with the requirements given in the Erosion and Sediment Control Plan (ESCP) or the directions of the Engineer, the Engineer may order the Contractor to discontinue all operations except the work involved in erosion control until the requirements are met.

3. STORMWATER MANAGEMENT PLAN.

Delete this entire subarticle.

4. FUEL TANKS.

Delete this entire subarticle.

5. EROSION AND SEDIMENT CONTROL PLAN.

Delete the second sentence of this subarticle.

6. QUALIFIED CREDENTIALLED INSPECTOR.

Delete this entire subarticle.

7. STORMWATER MEETING.

Delete this subarticle and replace with the following:

A Stormwater meeting shall take place after the preconstruction conference and prior to the beginning of work. This meeting shall take place at the project site. Attendees should include department construction personnel, the Contractor's superintendent and any subcontractors that will be involved in clearing, earthwork, seeding or erosion and sediment control operations. The ESCP, clearing limits and sequence of construction shall be among items discussed. Project discharge points, adjacent property and water bodies should be observed and discussed during this meeting. Any existing stormwater problems or issues should be discussed and documented.

8. LIMIT OF EXPOSURE OF ERODIBLE MATERIAL.

Delete this entire subarticle.

108.08 Determination of Contract Time.

(d) MONTHLY STATEMENT AND TIME CHARGES.

1. CONTRACTS ON A WORK DAY BASIS.

Delete the last paragraph of the sub-section and add the following:

The monthly time statement shall be submitted to the Contractor with the monthly estimate. Upon receiving the monthly time statement, the Contractor shall review the statement and compare the time charges with his records. The Contractor shall sign the monthly time statement if he is in agreement with the days charged for the period indicated on the monthly time charge report. If the Contractor disagrees with the time charges on the monthly time statement, the Contractor shall indicate his disagreement and the reasons for the disagreement for each date in question, in writing. A current copy of the bar graph schedule of operations shall be submitted with the written statement of disagreement.

The Contractor signed monthly time statement or the unsigned monthly time statement with the written protest and schedule of operations shall be included with the Contractor monthly estimate. The Contractor monthly estimate will not be processed without the above documentation.

108.11 Schedule of Liquidated Damages.

Delete the Liquidated Damages table and add the following:

Original Contract Amount		Liquidated Damages Daily Change	
More Than	To and Including	Calendar Day or Fixed Date	Work Day
\$ 0	\$ 100,000	\$ 900	\$ 1,200
100,000	200,000	1,200	1,500
200,000	500,000	1,800	2,100

500,000	1,000,000	2,100	2,400
1,000,000	2,000,000	2,600	3,100
2,000,000	5,000,000	3,000	3,700
5,000,000	10,000,000	3,600	4,700
10,000,000	- - - - -	4,300	5,500

Supplemental Specification No. 109-12

SUBJECT: Bituminous Materials Price Adjustment and Retainage for Construction Monthly Pay Estimates

The Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, is hereby amended as follows:

SECTION 109 MEASUREMENT AND PAYMENT

109.07 Partial Payment.

Add the following to the end of this section:

In making partial payments, there shall be retained five (5) percent of the estimated amount of the work done and the value of materials stored on the site, and after fifty (50) percent completion (original contract plus supplemental agreements) has been accomplished no further retainage will be withheld. The retainage above set out shall be held until completion of all work, final acceptance by the Department as noted in Subarticle 105.15(c) and the final estimate paid.

109.08 Payment to Subcontractors.

Delete this entire subarticle.

109.12 Final Payment.

Add the following to this section:

(e) SEMIFINAL PAYMENT.

Wherever final payment is delayed or it appears that it may be delayed, due to conditions over which the Contractor has no control, a semifinal estimate may be prepared to make payment of that portion of the retainage that may be deemed appropriate by the Engineer in accordance with the following conditions:

1. No payment will be made until the Contractor has made application for such payment and has notified the Engineer of a waiver of all claims, except those

previously filed prior to the date of such application and claims for adjustment to final quantities of Contract Items.

2. No payment will be made until proper notification of consent to release retainage has been received from the Contractor's Surety.
3. A non-resident contractor must provide a certified "statement of good standing" from the State Department of Revenue and appropriate City authority. This statement shall certify that the non-resident contractor has paid all taxes due and payable to the State of Alabama or any political subdivision thereof.
4. Retainage will not be released below \$5000 or 0.5% of the contract amount, whichever is the higher amount, without written approval of the Director. On projects with large outstanding claims by the Contractor against the State, the Director reserves the right at his sole discretion to increase the above amount of retainage retained or to deny the release of any retainage pending final settlement.
5. The semifinal estimate retainage shall, in addition to that noted in Item 4 above, reflect liquidated damages that may be unresolved at the time of execution.
6. No payment will be made until the Contractor submits the affidavit required in Subarticle 109.12(c) above.

Supplemental Specification No. 110-12

SUBJECT: Claims

The Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, is hereby amended as follows:

SECTION 110 CLAIMS

Delete the entire section as written and add the section listed below:

110.01 General.

When filing a claim, the Contractor shall follow the procedures set forth in this Section.

110.02 Notice of Intent.

In any case where the Contractor deems that extra compensation is due him for additional cost not clearly covered in his contract and not ordered by the Project Engineer as extra work as defined herein, the Contractor shall notify the Project Engineer in writing

signed by an Officer of the Company, with a copy to the City Engineer, of his intention to make claim for such extra compensation.

The written notice of intent shall be furnished to the Project Engineer prior to the time the contested work is started. Oral notification by the Contractor and confirmed in writing by the Contractor within three calendar days, will be accepted as complying with this requirement.

The written notice of intent shall set forth the reasons the Contractor believes additional compensation will be due, the nature of cost involved and insofar as possible the total amount of the claim.

The Contractor hereby agrees to waive any claim for additional compensation if notification, as provided in the foregoing, is not furnished or the Project Engineer is not provided facilities by the Contractor for keeping account of actual costs.

Such notice by the Contractor, and the fact that the Project Engineer has kept account of the cost as aforesaid, is not evidence of the validity of the claim. A separate determination of the validity of the claim will be made by the City.

110.03 Record Keeping.

After giving the Project Engineer and the City Engineer a notice of intent to file a claim, the Contractor shall keep daily records of all costs incurred for affected operations. These daily records shall identify each operation affected, the specific locations where work is affected, and the potential effect to the project's schedule. The Project Engineer will also keep records of all labor, material, and equipment applicable to affected operations. On Monday, or the first work day, of each week following the date of the notice of intent to file a claim, the Contractor shall provide Project Engineer with the daily records for the preceding week. If the Contractor's records indicate costs greater than those kept by the Project Engineer, the Project Engineer will meet with the Contractor and present its records to the Contractor at the meeting. The Contractor shall notify the Project Engineer in writing within three workdays of any inaccuracies noted in, or disagreements with, the Project Engineer records. The Project Engineer will review the matter, correct any inaccuracies he finds in his records, and notify the Contractor in writing of his decision.

Refusal or failure by the Contractor to attend the aforementioned meetings and present his records shall constitute a waiver by the Contractor of his claim.

To protect the integrity of the independent records maintained by the Project Engineer for comparison with those submitted by the contractor, the Project Engineer's records, other than those mentioned above, will not be made available to the Contractor until after the Project Engineer's receipt of the Contractor's complete records documenting the claim. The Project Engineer will retain possession of the records and provide copying facilities with the contractor reimbursing the Project Engineer for the expense of the copying. No amendment to the claim shall be made following receipt of the Project Engineer's records.

110.04 Claims Process.

(a) GENERAL.

After the work has been completed on the disputed item(s) of work, the Contractor shall have 90 calendar days to submit his claim. Any claim not submitted within this 90-calendar day period is waived. The Contractor shall submit six copies of the

claim, containing the required documentation listed in Article 110.03, to the Project Engineer. Once the claim is received, a joint review of the claim will be made by the City Engineering Department and a written response to the Contractor will be made within 90 calendar days. This written request submitted and signed by an Officer of the Company, along with six additional copies of the original claim, shall be made to the Project Engineer, by certified mail, within 30 calendar days from the date of the City's response. Failure to make the request within the required time period shall constitute waiver of the claim by the Contractor. The decision of the City on all claims shall be final.

110.05 Claim Compensation.

(a) GENERAL.

1. COMPENSABLE ITEMS.

The liability of the City for claims will be limited to the following specifically identified compensable items:

- a. Additional job site labor expenses
- b. Additional costs for materials
- c. Additional job-site overhead
- d. An additional 10 percent of the total of Subitems a, b, and c above for home office overhead profit
- e. Equipment costs, which shall be determined in accordance with the requirements of Item 109.04(b)4
- f. Bond costs
- g. Subcontractor costs as determined by, and limited to, those items identified as payable under Subitems a, b, c, d, e, and f above
- h. Administrative allowance, to the Prime Contractor, equal to three percent of the first \$20,000 and one percent of all over \$20,000 of the total amount for processing a claim on behalf of a subcontractor
- i. Gross receipts tax
- j. Interest that accrues after 30 calendar days from the date of the City Council President's or Mayor's signature on the supplemental agreement that approves payment for a claim

2. NON-COMPENSABLE ITEMS.

The City will have no liability for the following specifically identified non-compensable items:

- a. Profit, in excess of that provided herein
- b. Loss of anticipated profit
- c. Labor and equipment inefficiencies
- d. Home office overhead in excess of that provided herein
- e. Consequential damages, including but not limited to loss of bonding capacity, loss of bidding opportunities and insolvency.
- f. Indirect costs or expenses of any nature
- g. Attorney fees, claims preparation expenses or costs of litigation
- h. Interest prior to the final resolution of the claim as defined in Subitem 110.05(a)1.j. above

(b) CLAIMS FOR DELAY.

The City will have no liability for damages due to delay, beyond those items that are specially identified as compensable under Subarticle 110.05(a) above. Equipment costs, for equipment involved in a delay claim, shall be determined in accordance with the requirements for Standby Rates as provided in Item 109.04(b)4.

The City will be liable only for those delay damages caused by or arising from acts or omissions on the part of the City, which violate legal or contractual duties owed to the Contractor by the City. Such delays may constitute a basis for a claim for delay damages and/or a request for a time extension. The Contractor assumes the risk of damages from all other causes of delay.

(c) CLAIMS FOR ACCELERATION.

The City will have no liability for any constructive acceleration unless the City gives express written direction for the Contractor to accelerate his effort beyond that required by the original contract. Any acceleration related costs will be handled as extra work as provided in Article 104.03.

110.06 Required Claim Documentation.

All claims shall be submitted in writing signed by an Officer of the Company, and shall be sufficient in detail to enable the Project Engineer and the City Engineer to ascertain the basis and the amount of each claim. All information submitted to the City under this Article will be used solely for analyzing and/or resolving the claim. As a minimum, the following information shall be provided for all claims:

- (a) A copy of the "Written Notice of Potential Claim" filed for the specific claim by the Contractor.
- (b) The date on which actions resulting in the claim occurred or conditions resulting in the claim became evident.
- (c) A detailed factual statement of the claim providing all necessary dates, locations and items of work affected by the claim.
- (d) The specific provisions of the Contract that support the claim, and a statement of the reasons why such provisions support the claim.

- (e) The amount of additional compensation sought and a breakdown of the amount into the categories specified as payable under Article 110.05, Claim Compensation.
- (f) The name, function, and activity of each City official, or employee, involved in, or knowledgeable about facts that give rise to such claim.
- (g) The name, function, and activity of each Contractor or Subcontractor official, or employee, involved in, or knowledgeable about facts that give rise to such claim.
- (h) The identification of any pertinent documents, and the substance of any material oral communication relating to such claim.
- (i) If an extension of time is also sought, the specific days for which it is sought and the basis or such request.

For delay claims, in addition to the above, a description of the operations that were delayed, the reasons for the delay and how they were delayed will be required.

110.07 Auditing of Claims.

All claims filed against the City shall be subject to audit by a Certified Public Accounting Firm employed by the City at any time following the filing of such claim. The audit may begin on ten days notice to the Contractor, Subcontractor, or Supplier. The Contractor, Subcontractor, or Supplier shall cooperate with the auditors. Failure of the Contractor, Subcontractor, or Supplier to maintain and retain sufficient records to allow the City's auditor to verify the claim shall constitute a waiver of that portion of such claim that cannot be verified and shall bar recovery there under.

Without limiting the generality of the foregoing, and as a minimum, the auditors shall have available to them the following documents:

- (a) Daily time sheets and foreman's daily reports
- (b) Union agreements, if any
- (c) Insurance, welfare, and benefits records
- (d) Payroll register
- (e) Earnings records
- (f) Payroll tax returns
- (g) Material invoices, purchase orders, and all material and supply acquisition contracts
- (h) Material cost distribution worksheet
- (i) Equipment records (list of company equipment, rates, etc.)
- (j) Vendor rental agreements, and Subcontractor invoices
- (k) Subcontractor payment certificates
- (l) Canceled checks (payroll and vendors)
- (m) Job cost report
- (n) Job payroll ledger.
- (o) General ledger, general journal, (if used) and all subsidiary ledgers and journals together with all supporting documentation pertinent to entries made in these ledgers and journals.
- (p) Cash disbursements journal.
- (q) Financial statements for all years reflecting the operations on this project.
- (r) Income tax returns for all years reflecting the operations on this project.
- (s) Depreciation records on all company equipment whether such records are

- maintained by the company involved, its accountant, or others.
- (t) If a source other than depreciation records is used to develop costs for the Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents.
 - (u) All documents which reflect the Contractor's actual profit and overhead during the years this Project was being performed and for each of the five years prior to the commencement of this Project.
 - (v) All documents related to the preparation of the Contractor's bid including the final calculations on which the bid was based.
 - (w) All documents which relate to each and every claim together with all documents which support the amount of damages as to each claim.
 - (x) Worksheets used to prepare the claim establishing the cost components for items of the claim including, but not limited to, labor, benefits and insurance, materials, equipment, subcontractors, and all documents which establish the time periods, individuals involved, the hours and the rates for the individuals.

Supplemental Specification No. 111-12

SUBJECT: Disadvantaged Business Enterprise (DBE)

The Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, is hereby amended as follows:

SECTION 111 DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Delete this entire section.

Supplemental Specification No. 210-12

SUBJECT: Borrow Excavation

The Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, is hereby amended as follows:

SECTION 210 EXCAVATION AND EMBANKMENT

210.09 Method of Measurement.

(a) GENERAL.

Modify the first two (2) paragraphs to read as follows:

Measurement for Unclassified Excavation, Channel Excavation and Muck Excavation will be either the cubic yard of the material in its original position computed

from cross sections by the average end area method or per ton as specified by the unit of measure of the pay item.

Measurement for Borrow Excavation, Borrow Excavation (Underwater Backfill) or Borrow Excavation (Underwater Embankment) will be either by the ton or by the cubic yard, loose volume of the material in the hauling vehicle at the point of use as specified by the unit measure of the pay item.

Supplemental Specification No. 614-12

SUBJECT: Structure Excavation and Backfill for Slope Paving

The Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, is hereby amended as follows:

SECTION 614 SLOPE PAVING

614.04 Method of Measurement.

Delete the entire subarticle and replace with the following:

Structure excavation and backfill utilizing existing materials will not be measured or paid for separately. Foundation backfill will be paid for as specified by the current Supplemental Specification for Section 214, if required.

Supplemental Specification No. 652-12

SUBJECT: Preparation and Planting in Soft Soil

The Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, is hereby amended as follows:

SECTION 652 GROUND PREPARATION, VEGETATION ESTABLISHMENT AND MOWING

652.03 Construction Requirements.

(d) PREPARATION AND PLANTING IN SOFT SOIL.

2. INITIAL SOIL AMENDMENTS.

Add the following paragraph at the beginning of the subsection:

The fertilizer and lime described below shall be applied at least one week prior to sowing seed. After application, the treated topsoil shall be watered as necessary to leach the lime and fertilizer into the topsoil composition. Watering shall be done at least one time prior to sowing seed.

Supplemental Specification No. 665-12

SUBJECT: Temporary Seeding and Mulching

The Alabama Department of Transportation Standard Specifications for Highway Construction, 2012 Edition, is hereby amended as follows:

SECTION 665 TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

665.03 Construction Requirements.

(a) EROSION CONTROL AND RUNOFF CONVEYANCE.

1. TEMPORARY SEEDING AND MULCHING.

c. Temporary Seeding and Mulching.

Delete the last sentence in the sub-section and add the following:

Seeding and mulching shall also be applied by either hydraulic or conventional methods. Mulching shall be applied at a rate of no less than 2.0 tons per acre, separately or concurrently with fertilizer.

ITEM XIV

SPECIAL PROVISIONS

SPECIAL PROVISION NO. 1 – PAVEMEND VR

SPECIAL PROVISION NO. 2 – SET 45

SPECIAL PROVISION NO. 3 – TEXCOTE XL

SPECIAL PROVISION NO. 4 – TAMOSEAL

SPECIAL PROVISION NO. 5 – LYTE POLES

SPECIAL PROVISION NO. 6 – RAZAR SERIES LED



**Vertical, Overhead & Precast
RAPID REPAIR VERTICAL
& OVERHEAD MORTAR**



Updated 2.4.14

1 General Characteristics

Pavemend VR™ is a cementitious, rapid setting, one step vertical and overhead structural repair mortar with parging mortar consistency. It is a single component powder that is water activated. **Pavemend VR™** has 10 to 15 minutes of working time, **plus an additional 10 to 15 minutes to shape and shave the repair to match the existing contours of the host concrete.** **Pavemend VR™** will exceed compressive strengths of **2,500 psi in 3 hours from final set** and 6,000 psi at 28 days. **Pavemend VR™ can be applied in a single lift from 1/16" to over 4" without bonding agents and can be easily sculpted and shaped to match the existing concrete.** **Pavemend VR™** can be applied in ambient temperature ranges of 40 to 100 degrees Fahrenheit and **can be re-animated to a gel state prior to final set without additional water, providing ease of use and reduced material waste.**

RECOMMENDED USES: **Pavemend VR™** has been designed specifically for use in vertical and overhead applications such as spall repair and impact damage on beams, columns, pile and pile caps, tendon grouting, pressure bearing pre-cast pipe, curbs, steps, pre-stressed panels, tunnels, sewers, loading docks, silos, retaining walls, culverts, catch basins, decorative moldings, parapet walls, septic tanks, cold storage vaults and other pre-cast product repair applications.

2 Additional Physical Properties

UNIT WEIGHT (NEAT)

115 lb/ft³ (1842 kg/m³)

SETTING TIME

Set Times at 72°F/22°C at 1" (2.54 cm) material depth

Initial set: 15 - 20 minutes

Final set: 25 - 35 minutes

VOLUME YIELD

0.14ft³ (0.004 m³) per 17 lb (7.7 kg) 2 gallon unit

COVERAGE (Approximate / 2 gallon bucket)

1/16" (1.5mm)	26.9 ft²
1/8" (3.0 mm)	13.4 ft²
1/4" (6.0 mm)	6.7 ft²
1/2" (12.0 mm)	3.7 ft²
3/4" (19 mm)	2.2 ft²

3 Material Specifications

Results provided by licensed engineering test laboratory and represent typical results from production materials. Actual results may vary from third party testing results; however, CERATECH's materials *meet and/or exceed* **ASTM C928**, and *exceed* established internal quality control standards, (available upon request). All samples were air cured.

Property	Results 2" cubes	Test Method
Compressive Strengths, psi		
3 hours	> 2,300	ASTM C 109
1 day - 24 hours	> 3,000	ASTM C 109
7 days	> 4,000	ASTM C 109
28 days	> 7,000	ASTM C 109
Flexural Strength, psi		
7 days	> 600	ASTM C 78
28 days	> 650	ASTM C 78
Splitting Tensile Strength, psi		
28 days	> 300	ASTM C 496
Direct Tension Strength, psi		
7 days	> 300	ASTM C 496
28 days	TBD	ASTM C 496
Bond Strength, psi		
1 day - 24 hours	> 1,500	ASTM C 882
7 days	> 1,600	ASTM C 882
Scaling Resistance, lbs/ft²		
25 cycles	0	ASTM C 672
Modulus of Elasticity, msi		
28 days	3.17	ASTM C 469
Coefficient of Thermal Expansion, in/in/°F		
28 days	2.01	AASHTO TP 60
Length Change, % of total length		
28 days soak / 28 days dry	-0.001 /-0.001	ASTM C 157
TBD - To be determined		



**Vertical, Overhead & Precast
RAPID REPAIR VERTICAL
& OVERHEAD MORTAR**



Updated 2.4.14

4 Site Preparation

Surfaces should be prepared in accordance with ICRI 03730, "Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion" and / or ACI 546R-96 "Concrete Repair Guide". Concrete surfaces should be prepared by appropriate mechanical methods to obtain an exposed aggregate surface with a minimum surface profile of +/- 1/16" (1.5 mm) in accordance with ICRI 03732. Pre-existing coatings or surface treatments should be completely removed. Dry, clean, stable surfaces are required. Remove all standing water. Reinforcing steel should have no loose scale. **Surfaces of host concrete must be damp.**

5 Mixing Instructions

Standard NEAT Procedures (Bucket Mixing with Drill & Paddle)

- Loosen material by tumbling bucket & dry mixing *before* adding water.
- To ensure product performance, **DO NOT divide or separate individual units into smaller portions. MIX ENTIRE CONTENTS AT ONE TIME.**
- A drill (6 amp minimum) with a mixer blade turning at least 500 to 800 rpm is required. Drills with speeds greater than 800 RPMs may entrain air in the mix.
- **DO NOT HAND MIX**
- To begin the mixing process, add the proper amount of water:

For Each	Add
17lb (7.7 kg) - 2 gal. (7.6 L) bucket	1 U.S. quart (.95L) of water
- The desired water temperature is between **65°F/18°C** and **75°F/24°C**.
- **After adding the water, it is very important to rapidly incorporate all of the dry Pavemend VR™ powders to achieve a uniform wet mixture within the first 30 seconds of mixing.**
- In ambient temperatures under 72°F/22°C, CERATECH highly recommends the use of a thermal gun or temperature probe to verify that a **Critical Mix Temperature of 80°F/27°C has been reached.** Place material into repair area when this temperature has been achieved.
- In ambient temperatures over 72°F/22°C and without using a thermal measuring gun or temperature probe, mix material for 4 1/2 minutes in ambient temperatures of 72°F/22°C to 80°F/27°C, mix for 3 1/2 minutes in ambient temperatures of 80°F/27°C to 90°F/32°C, mix for 3 minutes in ambient temperatures above 90°F/32°C and place.

MIXING NOTES:

1. Pavemend VR™ undergoes an exothermic chemical reaction during blending. Heat, the by-product of the reaction, is the best indication that the

reaction is complete and that the product is ready to be poured. **Pavemend VR™ has a Critical Mix Temperature of 80°F/27°C which MUST BE REACHED before pouring to obtain optimum performance.** (*In cold weather, it may be impossible to reach the Critical Mix Temperature, therefore a 20°F rise in material temperature is mandatory to ensure that the necessary chemical reactions have taken place to deliver the desired performance characteristics*); Mixing time to reach the **Critical Mix Temperature** will vary with ambient air and mix water temperatures, however, **never mix Pavemend VR™ for less than 3 minutes.** It is recommended that a thermal gun or temperature probe be used to ensure that the **Critical Mix Temperature** has been achieved.

2. Special instructions for cold weather mixing: (Under 50°F)

- At temperatures of approximately 40°F, add a single unit of Pavemend VR™ Cold Weather Accelerant directly to material within bucket before adding mix water. Mix for 5 minutes (If Pavemend VR™ Cold Weather Accelerant is not available, mix material for approximately 10 minutes or achieve a 20°F rise in material temperature).
- At temperatures of approximately 50°F, add a single unit of Pavemend VR™ Cold Weather Accelerant directly to material within bucket before adding mix water. Mix for 4 minutes (If Pavemend VR Cold Weather Accelerant is not available, mix material for approximately 8 - 9 minutes or achieve a 20°F rise in material temperature).

6 Packaging & Shelf Life

PACKAGING

17 lb (7.7 kg) 2 gallon (7.6 L) bucket
GSA P/N: C800

SHELF LIFE

Buckets - 3 years (when stored in original unopened bucket)

STORAGE

Buckets are environmentally sealed and require no special storage requirements

7 Limitations

- Not recommended for surface temperatures above **120°F/49°C** or below **40°F/10°C**.
- Will not bond to polymers.
- Pumping not recommended.



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Vertical, Overhead & Precast
**RAPID REPAIR VERTICAL
& OVERHEAD MORTAR**



Updated 2.4.14

8 Application & Finish

- Minimum profile thickness is 0.06" (1.5mm).
- Maximum profile thickness is not limited. When placing profiles greater than 4.00" (10 cm) layering is required to minimize sag.
- Scrub coats can be utilized when the host concrete is excessively dry or when very thin cosmetic applications are desired.
- **All existing control joints must be honored and re-established if necessary 1 - 3 hours from final set.**
- Finish the repair to the desired texture and / or to match the surrounding concrete. **DO NOT use additional water during the finishing process.**
- **Self-curing**
- Clean all tools and equipment with water prior to the material reaching final set.

9 Safety

- See **Material Safety Data Sheet (MSDS)**.
- This document does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.
- Dispose of water and materials in accordance with Federal, State and Local regulations.
- The use of a dust mask, safety goggles and gloves is recommended.
- Keep out of the reach of children.

WARRANTY:

CERATECH, Inc. ("CERATECH") warrants that its products are free from defects in materials and workmanship. If any CERATECH product fails to conform to this warranty, CERATECH will replace the product at no cost to the buyer or refund the purchase price, at CERATECH's election. Any warranty claim must be made within one (1) year from the date of the shipment of the product to the buyer. In no event shall CERATECH be liable to the buyer for any consequential or incidental damages of any nature. CERATECH MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, WRITTEN OR ORAL AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF ITS PRODUCTS AND EXCLUDES THE SAME. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.





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Technical Data Guide

3 | 03 01 00
Maintenance of
Concrete

MasterEmaco® T 545 and T 545HT

Very rapid-setting chemical action mortar

FORMERLY SET® 45 AND SET® 45 HW

PACKAGING

50 lb (22.6 kg) polyethylene-lined bags

YIELD

A 50 lb (22.6 kg) bag of mixed with the required amount of water produces a volume of approximately 0.39 ft³ (0.011 m³); 60% extension using ½" (13 mm) rounded, sound aggregate produces approximately 0.58 ft³ (0.016 m³).

STORAGE

Store in unopened containers in cool, clean, dry conditions

SHELF LIFE

12 months when properly stored

VOC CONTENT

0 g/L less water and exempt solvents

DESCRIPTION

MasterEmaco T 545 is a one-component magnesium phosphate-based mortar. Offered in two formulations: T 545 for ambient and substrate temperatures below 85° F (29° C) and T 545 HT for ambient and substrate temperatures ranging from 85 to 100° F (29 to 38° C).

PRODUCT HIGHLIGHTS

- Single component to just add water and mix
- Reaches 2,000 psi compressive strength in 1 hour to rapidly return repairs to service
- Takes rubber tire traffic in 45 minutes
- Wide temperature use range from below freezing to hot weather exposures
- Very low drying shrinkage for improved bond to concrete for repair and anchoring applications
- Resistant to freeze/thaw cycles and deicing chemicals so it is usable in most environments
- Air cure only, no wet curing compounds required
- Coefficient of thermal expansion similar to Portland cement concrete for more permanent repairs
- Higher sulfate resistance than conventional mortars

APPLICATIONS

- Interior and exterior
- Horizontal and formed vertical or overhead repairs
- Applications requiring high early-strength gain
- Structural concrete repairs
- Partial and full-depth repairs
- Cold temperature repairs
- Grouting applications such as anchor bolts, rebar, dowel rods and precast applications

SUBSTRATES

- Concrete

HOW TO APPLY

SURFACE PREPARATION

1. Concrete must be structurally sound and fully cured (28 days).
2. Saw cut the perimeter of the area being repaired into a square with a minimum depth of ½" (13 mm).
3. The surface to be repaired must be clean, strong and roughened to a CSP of 8–9 following ICRI Guideline no. 310.2 to permit proper bond.
4. Any surface carbonation in the repair area will inhibit chemical bonding. Apply a pH indicator to the prepared surface to test for carbonation. If carbonation is present, abrade surface to a depth that is not carbonated.

MIXING

1. MasterEmaco T 545 must be mixed, placed, and finished within 10 minutes in normal temperatures (71° F [21° C]). Only mix quantities that can be placed in 10 minutes or less.
2. Do not deviate from the following sequence; it is important for reducing mixing time and producing a consistent mix. Use a minimum ½" slow-speed drill and mixing paddle or an appropriately sized forced-action mortar mixer. Do not mix by hand.

Technical Data

Composition

MasterEmaco T 545 is a magnesium-phosphate patching and repair mortar.

Test Data

PROPERTY	RESULTS				TEST METHOD
Typical Compressive Strengths*, psi (MPa)					ASTM C 109, modified
	Plain Concrete 72° F (22° C)	T 545 72° F (22° C)	T 545 36° F (2° C)	T 545 HT 95° F (35° C)	
1 hour	—	2,000 (13.8)	—	—	
3 hour	—	5,000 (34.5)	—	3,000 (20.7)	
6 hour	—	5,000 (34.5)	1,200 (8.3)	5,000 (34.5)	
1 day	500 (3.5)	6,000 (41.4)	5,000 (34.5)	6,000 (41.4)	
3 day	1,900 (13.1)	7,000 (48.3)	7,000 (48.3)	7,000 (48.3)	
28 day	4,000 (27.6)	8,500 (58.6)	8,500 (58.6)	8,500 (55.2)	
Note: Only T 545 formula, tested at 72° F (22° C), obtains 2,000 psi (13.8 MPa) compressive strength in 1 hour.					
Modulus of Elasticity, psi (MPa)					ASTM C 469
		7 days	28 days		
MasterEmaco T 545		4.18 x 10 ⁶ (2.88 x 10 ⁴)	4.55 x 10 ⁶ (3.14 x 10 ⁴)		
MasterEmaco T 545 HT		4.90 x 10 ⁶ (3.38 x 10 ⁴)	5.25 x 10 ⁶ (3.62 x 10 ⁴)		
Freeze/thaw durability test, % RDM, 300 cycles, for MasterEmaco T 545 and T 545 HT					ASTM C 666, Procedure A (modified**)
Scaling resistance to deicing chemicals, MasterEmaco T 545 and T 545 HT					ASTM C 672
5 cycles			0		
25 cycles			0		
50 cycles			1.5 (slight scaling)		
Sulfate resistance MasterEmaco T 545 length change after 52 weeks, % Type V cement mortar after 52 weeks, %					ASTM C 1012
			0.09		
			0.20		
Typical setting times, min, for MasterEmaco T 545 at 72° F (22° C), and MasterEmaco T 545 HT at 95° F (35° C)					Gilmore ASTM C 266, modified
Initial set			9 – 15		
Final set			10 – 20		
Coefficient of thermal expansion,*** both MasterEmaco T 545 and T 545 HT Hot Weather coefficients					CRD-C 39
			7.15 x 10 ⁻⁶ /° F (12.8 x 10 ⁻⁶ /° C)		
Flexural Strength, psi (MPa), 3 by 4 by 16" (75 by 100 by 406 mm) prisms, 1 day strength,					ASTM C 78, modified
MasterEmaco T 545			550 (3.8)		
MasterEmaco T 545 with ¾" (9 mm) pea gravel			600 (4.2)		
MasterEmaco T 545 with ¾" (9 mm) crushed angular noncalcareous hard aggregate			650 (4.5)		

* All tests were performed with neat material (no aggregate)

**Method discontinues test when 300 cycles or an RDM of 60% is reached.

***Determined using 1 by 1 by 11" (25 mm by 25 mm by 279 mm) bars. Test was run with neat mixes (no aggregate).

Extended mixes (with aggregate) produce lower coefficients of thermal expansion.

Test results are averages obtained under laboratory conditions. Expect reasonable variations.

3. Pour potable water into mixer. Use a maximum of 4 pts (1.9 L) of water per 50 lb (22.6 kg) bag of MasterEmaco T 545. Do not deviate from the recommended water content.
4. Add the powder to the water and mix for approximately 1–1½ minutes.
5. Use neat material for repairs from ½–2" (6–51 mm) in depth. For deeper repairs, extend a 50 lb (22.6 kg) bag of MasterEmaco T 545 HT by adding up to 30 lbs (13.6 kg) of properly graded, dust-free, hard, rounded aggregate or non-calcareous crushed angular aggregate, not exceeding ½" (13 mm) in accordance with ASTM C 33, #8 (Test aggregate for fizzing with 10% HCl). If aggregate is damp, reduce water content accordingly. Special procedures must be followed when angular aggregate is used. Contact your local BASF representative for more information.

APPLICATION

1. Immediately place the mixture onto the properly prepared substrate. Work the material firmly into the bottom and sides of the patch to ensure good bond.
2. Level the MasterEmaco T 545 and screed to the elevation of the existing concrete. Minimal finishing is required.

CURING

No curing is required, but protect from rain immediately after placing. Liquid-membrane curing compounds or plastic sheeting may be used to protect the early surface from precipitation, but never wet cure.

FOR BEST PERFORMANCE

- Color variations are not indicators of abnormal product performance.
- MasterEmaco T 545 will not freeze at temperatures above -20° F (-29° C) when appropriate precautions are taken.
- Do not add sand, fine aggregate, or Portland cement.
- Do not use MasterEmaco T 545 for repairs less than ½" (13 mm) deep. For deep repairs, use MasterEmaco T 545 HT formula extended with aggregate, regardless of the temperature. Consult your BASF representative for further instructions.
- Do not use limestone aggregate.
- Do not deviate from the recommended water content printed on the bag.
- Precondition these materials to approximately 70° F (21° C) for 24 hours before using.
- Protect repairs from direct sunlight, wind, and other conditions that could cause rapid drying of material for the first three hours.
- When mixing or placing in a closed area, provide adequate ventilation.
- Do not use as a precision machinery grout.
- When using in contact with galvanized steel or aluminum, consult your local BASF sales representative.
- Do not mix partial bags.
- For professional use only; not for sale to or use by the general public.
- Make certain the most current versions of product data sheet and SDS are being used; visit www.master-builders-solutions.BASF.us to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.basf.us, e-mailing your request to basfbscst@basf.com or calling 1(800)433-9517. Use only as directed.

**For medical emergencies only,
call ChemTrec® 1(800)424-9300.**

LIMITED WARRANTY NOTICE

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is the replacement of product or refund of the purchase price, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.



Guide Specification

TEX•COTE® XL-70 "W" TEXTURED COATING CONCRETE PROTECTIVE COATING

Concrete Surfaces: Tilt-up, Pre-cast and Cast-In-Place.
(Consult TEX•COTE® Representative for other approved substrates.)

SECTION 09960 – EXTERIOR TEXTURED COATINGS

1.00 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, and Division-1 Specification sections.

1.02 DESCRIPTION OF WORK

- A. Types of special coatings include, but are not necessarily limited to, the following:

- 1. Concrete Coating System

1.03 RELATED WORK

- A. Concrete Surfaces (Tilt-up, Pre-cast and Cast-In-Place)

1.04 SYSTEM DESCRIPTION

- A. Concrete Coating System:

- 1. TEX•COTE® XL-70 "W" Textured Coating: A high build, plasticized, epoxy acrylate, acrylic resin system specially formulated to provide a weatherproof surface applied over concrete and masonry surfaces.

1.05 SUBMITTALS

- A. Product Data: Submit manufacturer's technical information including label analysis and application instructions for each material proposed for use.



Guide Specification

B. Wall Sample:

1. General: For each coating system specified, provide eight (8) foot by eight (8) foot wall sample for Architect's approval prior to beginning Project application of each special coating system.

C. Manufacturer's recommended application procedures which, when approved by Architect, will become the basis for accepting or rejecting actual application procedures used on the Wall.

1.06 DELIVERY AND STORAGE

A. Lids must be kept tightly sealed. Do not allow moisture to enter containers.

B. Store containers in a dry place, upright and airtight at temperatures of forty-five (45° F) degrees F. and not exceeding one hundred (100°F) degrees F. Skins formed on surface of material must be removed prior to moving containers, mixing or using.

1.07 JOB CONDITIONS

A. Apply coating only when temperature of surfaces to be coated and surrounding air temperatures are between forty-five (45°F) degrees F and one hundred (100°F) degrees F, unless otherwise permitted by manufacturer's printed instruction.

B. Do not apply over frozen surfaces, or when rain is imminent.

C. Incompatible substrate release agents, form oils, and any foreign material are removed prior to priming and coating.

D. Roof and parapet top caps are installed and sealed against water penetration prior to priming and coating.

E. Primer shall not be exposed to ultra violet for more than four (4) weeks prior to application of coating. If exposure exceeds four (4) weeks, primer shall be re-coated, as recommended by manufacturer.

F. Material use is above grade only. Do not use below grade.

G. Paintable Joint Sealants must cure per manufacturer's recommendation. All joint sealants must be cleaned and wiped with an acetone solvent or approved cleaner prior to priming and coating.



Guide Specification

1.08 WARRANTY

- A. On completion, in accordance with manufacturer's current written specifications, provide Owner with manufacturer's written "Limited Warranty" for product replacement.

2.00 PRODUCTS

- | | | |
|----|--|---|
| A. | Textured Coatings of America, Inc.
2422 East 15th Street
Panama City, Florida 32405-6348
(850) 769-0347 | Textured Coatings of America, Inc.
4101 Ravenswood Road, Suite 218
Fort Lauderdale, Florida 33312
(954) 581-0771 |
|----|--|---|

2.02 MATERIALS

- A. Tilt-Up, Pre-Cast, and Cast-In-Place Concrete Coating System:
 - 1. TEX·COTE® XL-70 "W" Textured Coating, XL-70 "W" Primer, XL-70 Solvent Primer.
 - 2. Textures: To be selected by Architect or owner. Available in smooth, sand, fine, and coarse textures.
 - 3. Colors: To be selected by Architect or owner.
- B. Patching Compounds:
 - 1. Fine Cracks up to 1/32": Brush or knife TEX·COTE® FLEX-PATCH® Smooth into cracks and bring to smooth and flush with concrete surface.
 - 2. Cracks larger than 1/32": Use cementitious patching compound with acrylic bonding adhesive agent. i.e.: ARDEX, SACK-CRETE or equal. Fill cracks and bring smooth and flush with existing surfaces.

2.03 EQUIPMENT

- A. TEX·COTE® XL-70 "W" Primer, XL-70 Solvent Primer:
 - 1. Spray Equipment: Graco 5900HD or equivalent with .015-.019 tip sizes.
 - 2. Suitable for application by roller with 1/4"-3/4" nap roller cover or brush.
- B. TEX·COTE® XL-70 "W" Textured Coating:



Guide Specification

1. Spray Equipment: Graco President 10:01 Pump with Graco 204-000 Spray Gun, Graco Tex-Spray GM 1030, Graco HTX2030

3.00 EXECUTION

3.01 INSPECTION

A. Applicator must examine areas and conditions under which special coating work is to be applied and notify Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until satisfactory conditions have been corrected in a manner acceptable to applicator.

3.02 SURFACE PREPARATION

A. General: Perform preparation and cleaning procedures in accordance with coating system manufacturer's instructions and as herein specified, for each particular substrate and coating condition.

1. Remove hardware accessories, machined surfaces, plates, lighting fixtures and similar items in place and not to be finish-coated or provide surface applied protection prior to surface preparation and coating operations. Remove, of necessary, for complete coatings of items and adjacent surfaces. Following completion of coating of each area, reinstall removed items.

2. All surfaces shall be sound and clean prior to application of primer and coatings. Such surface contaminants as dust, dirt, mildew, form oils, release agents, loose substrate, etc., shall be removed by water-blasting. Excessive form oils, release agents and curing compounds may require light sandblasting. Water-blasting/ power-washing of all surfaces to be coated is required.

3. Mask all glass, shrubbery and asphalt surfaces.

4. Caulked Panel Joints must cure per manufacturer's recommendation. All joint sealants must be cleaned and wiped with an acetone solvent or approved cleaner prior to priming and coating. TEX·COTE® TEX-TITE™ Caulk Primer shall be applied to all joint sealants prior to application of coating.

3.03 MATERIALS PREPARATION

A. Mix and prepare coating materials in accordance with manufacturer's directions.

B. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing and application of coatings in a clean condition, free of foreign materials and residue.



Guide Specification

C. Stir materials before application to produce a mixture of uniform density, and stir as required during application. Do not stir surface film into material. Remove film, and if necessary, strain material before using.

3.04 APPLICATION

A. Apply coating in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.

B. Concrete System:

1. Primer Coat – Typical Tilt-Up or Pre-Cast concrete does not require the use of a primer prior to the application of TEX·COTE® XL-70 "W" Textured Coatings. When a primer coat is desired, apply TEX·COTE® XL-70 "W" Primer at a rate of 250-350 square feet per gallon. For concrete surfaces that exhibit chalking, calcium hydroxide, efflorescence, or other problems that may inhibit adhesion, apply TEX·COTE® XL-70 Solvent Primer at a rate of 175-300 square feet per gallon.

2. Textured Coating – Apply TEX·COTE® XL-70 "W" Textured Coating at a rate of 45 +/- 5 square feet per gallon in the desired texture. Application shall be a uniform film thickness over the entire surface being covered. Minimum dry film thickness is approximately 15 mils.

3. A wet edge shall be maintained to prevent lap-marks.

C. Avoid starting and stopping midway on wall. Continue to a natural break such as a panel edge or corner.

3.05 CLEANING AND PROTECTION

A. General:

1. Clean-up: During progress of work, remove from site discarded coating materials, rubbish, cans and rags at end of each work day.

2. Upon completion of coating work, clean window glass and other coating-splattered surfaces. Protect work of other trades, whether to be coated or not, against damage by coating and finishing work. Correct any damage by cleaning, repairing or replacing, and recoating, as acceptable to Architect.

3. Provide "wet paint" signs as required protecting newly-coated finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of coating operations.



Guide Specification

4. At the completion of work of other trades, touch-up and restore all damaged or defaced surfaces.

4.00 PERFORMANCE CRITERIA

A. TEX•COTE® XL-70 "W" Textured Coating

1. ASTM B-117-95: Salt Spray Test (Hours) – 2,100 hours – Passed
2. ASTM D968: Abrasion - Falling Sand (Liters) - 2,000 with 10% erosion - Rating Excellent
3. ASTM D522-93A: Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings, ½" Mandrel - Pass
4. MSDOT 971-22.2a: Freeze/Thaw (100 cycles) - Pass
5. ASTM G153-04: Standard Practice for Conducting Accelerated Outdoor Exposure Tests of Coatings, 5,000 hours - Pass
6. ASTM E84-96A: Standard Test Method for Surface Burning Characteristics of Building Materials – Class A Rating
7. ASTM E96-95: Moisture Vapor Transmission – 20 Perms
8. ASTM D6904-03: Standard Test Method for Wind Driven Rain Resistance on Masonry (98 mph wind) – 24 Hours - Pass



EUCLID CHEMICAL

TAMOSEAL

CEMENT-BASED WATERPROOFING TREATMENT

DESCRIPTION

TAMOSEAL is a cement-based, polymer-modified material designed to waterproof concrete and masonry. When mixed with AKKRO-7T or FLEX-CON acrylic admixture, it becomes suitable to seal vertical and light duty horizontal surfaces.

PRIMARY APPLICATIONS

- Concrete and block wall foundations
- Manholes
- Water tanks
- Reservoirs
- Balconies
- Interior/exterior

FEATURES/BENEFITS

- Waterproofs and decorates
- Tenacious bond
- Becomes an integral part of substrate
- Durable
- Breathable
- Slightly flexible to seal static cracks

TECHNICAL INFORMATION

Material Properties @ 75°F (24°C), 50% RH

Compressive Strength, psi (MPa) ASTM C 109
 7 days.....4,500 (31.0)
 28 days.....6,400 (44.1)

Flexural Strength, psi (MPa) ASTM C 348
 7 days.....350 (2.4)
 28 days.....810 (5.6)

Tensile Strength, psi (MPa) ASTM C 190
 7 days.....330 (2.3)
 28 days.....390 (2.7)

Absorption, % ASTM C 67
 24 hour soak4.4%
 5 hour boil3.9%

Freeze-Thaw Resistance, % ASTM C 672
 Loss at 50 cycles.....1.20%

Durability Factor ASTM C 666
 After 300 cycles.....101.0

Working Time.....1 hour

Water Permeance ASTM E 514 (after coating leaking wall)

Extent of damp area: 72 hours0.0%
 Maximum leakage: 1 hournone
 Leakage rate ml/hrnone
 Permeance rating.....Excellent

Salt Spray Resistance 300 hour exposure at 5% solution at 90°F (32 °C) resulted in no adhesion loss or deterioration at completion of test.

Fungus Growth Resistance Fed Test 141, Method 6272.....Resistant

Resistance to Wind Driven Rain
 Fed. Spec TT-C-00555Excellent

Weatherometer ASTM G 96 6000 hours
 No crazing, cracking, chipping, flaking, light chalking or color change. No other deterioration.

Appearance: TAMOSEAL is available in standard colors: white, oyster and gray. Special colors subjected to minimum order quantities include: adobe, cream, custard, pearl, pewter, pueblo, sand, suede, and summer. Custom colors are also available.

PACKAGING

TAMOSEAL is packaged in 50 lb (22.7 kg) plastic pails and 50 lb (22.7 kg) poly-lined bags.

SHELF LIFE

1 year in original, unopened package

COVERAGE

Under normal waterproofing conditions, apply the TAMOSEAL base coat at 2 lb/yd² (1.08 kg/m²), which equals 225 ft²/50 lb bag (21 m²/22.7 kg bag). Add a finish coat at 1 lb/yd² (0.5 kg/m²), which equals 450 ft²/50 lb bag (42 m²/22.7 kg bag). The total thickness of the two coats will be approximately 1/16 to 1/8 inch (1.6 to 3.22 mm).

Note: Coverage rates are approximate and will depend on the texture and porosity of the substrate.

DIRECTIONS FOR USE

Surface Preparation: New concrete and masonry must be cured 7 days before application of TAMOSEAL. The surface must be structurally sound, clean and free of dirt, oil, and other contaminants. Abrade the surface to provide an absorptive surface. Repair all surface defects including cracks and voids. Allow patches and other surface preparations to cure for 24 hours. Saturate surface dry (SSD) the substrate with potable water prior to TAMOSEAL application.

Mixing: TAMOSEAL must be mechanically mixed using a slow speed motor and mixing blade to thoroughly disperse the ingredients. Do not aerate the mix.

For Vertical Applications: One 50 lb (22.7 kg) bag of TAMOSEAL requires 2 gal (7.6 L) of mixing liquid. This consists of 2 qt (1.9 L) of AKKRO-7T blended with 6 qt (5.7 L) of potable water, or 2.3 qt (2.2 L) of FLEX-CON blended with 5.7 qt (5.4 L) of potable water.

For Horizontal Applications: One 50 lb (22.7 kg) bag of TAMOSEAL requires 2 gal (7.6 L) of mixing liquid. This consists of 1 gallon (3.8 L) of AKKRO-7T blended with 1 gal (3.8 L) of potable water or 1.15 gallon (4.4 L) of FLEX-CON blended with 0.85 gallon (3.2 L) of potable water.

Pour approximately one half of the required mixing liquid into an empty, clean container and begin slow speed mixing. Slowly add TAMOSEAL and the remainder of the mixing liquid as needed to the mixture. Stop mixing and allow the mixture to “fatten” for ten minutes. Re-mix to achieve proper consistency. Use mixed TAMOSEAL within one hour.

Application: Saturate surface dry (SSD) the substrate with potable water before starting any TAMOSEAL application. **Hand Brush:** Apply TAMOSEAL using a 6 in. (15 cm) masonry brush. Load bristles with TAMOSEAL and apply a heavy coat using long, smooth horizontal strokes. Apply sufficient material to fill all voids. Final strokes should all be in one direction to produce an even texture and finish. Allow first coat to dry for 12 to 24 hours before applying a finish coat. **Push Broom:** Use a 5 gal (18.9 L) pail or wide mouth tub to hold TAMOSEAL. Dip a 10 in. (25 cm) tampico-bristle push broom into the TAMOSEAL and mix just enough to load the bristles. Apply a heavy coat using long, even horizontal strokes. Apply sufficient material to fill all voids. Lift the brush at the end of each stroke. Final strokes should all be in one direction to produce an even texture and finish. Do not overbrush. Allow first coat to dry for 12 to 24 hours before applying a finish coat.

Spray: Use heavy-duty spray equipment capable of spraying cement coatings or mastics.

Horizontal Applications: Use a water-based cure and seal from Euclid Chemical on all horizontal applications for added protection and ease of cleaning.

Note: Prior to application, it is recommended that a mock up or field sample be made containing all materials that will be coated. Obtain approval of the architect or owner for the final color, texture and coverage rate before proceeding with work. Retain approved sample until the project is completed.

CLEAN-UP

Clean mixing and application equipment with water immediately after use. Clean any splatter or spills with water before material sets. TAMOSEAL is a cementitious product containing an acrylic additive, and if allowed to dry on the surface, removal becomes extremely difficult.

PRECAUTIONS/LIMITATIONS

- Do not apply to frozen or frost filled surfaces or when temperature is expected to fall below 40°F (4°C) in the 24 hour period following application.
- Do not use on moderate to heavy traffic bearing surfaces.
- Do not fill open cisterns, tanks, etc. with water for at least 7 days.
- Some colors may chalk or show water marks after weathering.
- When using TAMOSEAL containing AKKRO-7T or FLEX-CON in enclosed tanks or reservoirs, make sure that adequate ventilation is available during the application and the total curing period.
- Not recommended for negative side waterproofing where hydrostatic pressures exceed 8 ft (2.4 m) water head.
- TAMOSEAL should not be applied to surfaces actively leaking.
- In all cases, consult the Safety Data Sheet before use.

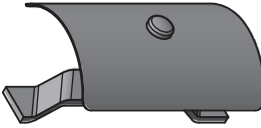
Rev. 04.15

WARRANTY: The Euclid Chemical Company (“Euclid”) solely and expressly warrants that its products shall be free from defects in materials and workmanship for one (1) year from the date of purchase. Unless authorized in writing by an officer of Euclid, no other representations or statements made by Euclid or its representatives, in writing or orally, shall alter this warranty. EUCLID MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. If any Euclid product fails to conform with this warranty, Euclid will replace the product at no cost to Buyer. Replacement of any product shall be the sole and exclusive remedy available and buyer shall have no claim for incidental or consequential damages. Any warranty claim must be made within one (1) year from the date of the claimed breach. Euclid does not authorize anyone on its behalf to make any written or oral statements which in any way alter Euclid’s installation information or instructions in its product literature or on its packaging labels. Any installation of Euclid products which fails to conform with such installation information or instructions shall void this warranty. Product demonstrations, if any, are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining the suitability of Euclid’s products for the Buyer’s intended purposes.

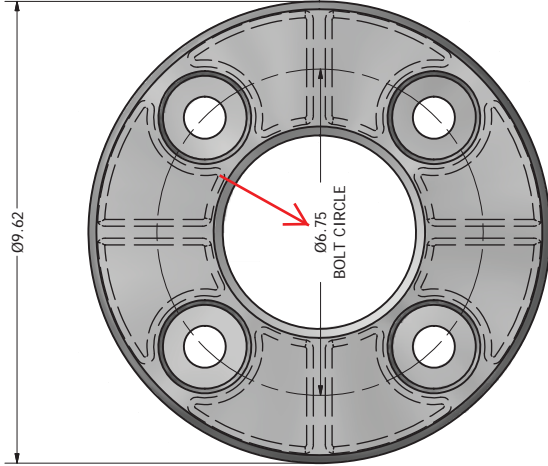
#305-4012-14-D1-FINISH TO BE SELECTED (SINGLE ASSEMBLY)

NO.	POLE SHAFT SPECIFICATIONS				
1.	SHAFTS ARE ONE SECTION DESIGN FABRICATED FROM 6063 T6 ALUMINUM EXTRUSION-SPIN, TAPERED.				
2.	BASE CASTING IS 356 T6 ALUMINUM. THE SHAFT TELESCOPES INTO THE BASE CASTING AND IS CIRCUMFERENTIALLY WELDED TOP AND BOTTOM.				
3.	ANCHOR BOLTS ARE "L" FORMED RODS HAVING A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. FABRICATED FROM ASTM F1554 GR. 55 THEN PARTIALLY GALVANIZED PER ASTM A153 SPECIFICATIONS AND FURNISHED COMPLETE WITH 2 HEX NUTS AND 2 FLAT WASHERS.				
4.	POLES SHALL HAVE A POLYESTER POWDER COAT FINISH IN A STANDARD COLOR.				
POLE DIMENSIONS					
POLE HGT. (FT.)	TOP DIA. (IN.)	BOTTOM DIA. (IN.)	GAGE	MTG. HGT. (FT.)	
14'	3.00	4.00	.125	14'	
BASE PLATE DIMENSIONS					
BOLT CIRCLE (IN.)	BASE PLATE DIM. (IN.)	BOLT HOLE (IN.)	PLATE THK. (IN.)		
6.75	9.62	.88	.75		
ANCHOR BOLT DIMENSIONS					
ANCHOR BOLT DIA. (IN.)	ANCHOR BOLT LENGTH (IN.)				
.75	20.00				

ALLOWABLE WIND LOADING (SQ. FT.)			
WIND*	120 MPH	140 MPH	150 MPH
EPA	6.4	5.2	4.3
*2010 FBC / ASCE 7 (3 SEC. GUST FACTOR)	3.6	3.0	2.5
	170 MPH	180 MPH	2.0



2.00 X 4.00 HAND HOLE COVER



Ø9.62 X 1.88 THK. BASE CASTING

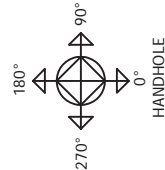


P.O. Box 340
Eastpointe, MI 48021
P: (586) 771-4610 | F: (586) 771-5527
www.lytepoles.com

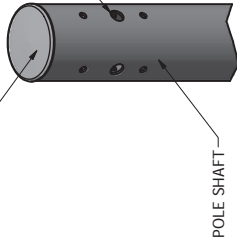
a DWM company

DRAWN: L. GRUNIS	3/20/2015
CHECKED	
REVISION:	DATE:
APPROVED:	
QUOTE:	
S.O.#	
REF:	

SOME GEOGRAPHICAL AREAS HAVE SPECIAL WIND CONDITIONS THAT CAN CREATE WIND INDUCED VIBRATIONS CAUSING A FATIGUE PROBLEM. NO METHOD HAS YET BEEN FOUND FOR PREDICTING DESTRUCTIVE LIGHTING POLE VIBRATION. THESE CONDITIONS ARE UNIQUE AND CANNOT BE GUARANTEED AGAINST, AND ARE THE RESPONSIBILITY OF A LOCAL SITE ENGINEER.			
TITLE:			
CATALOG:			
DWG NO: 305-4012-14		SIZE	C
SHEET 1 OF 1		HANDHOLE	

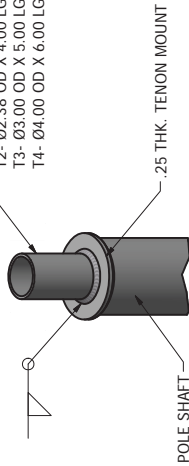


- DRILLED PER FIXTURE REQUIREMENTS:
- D1- DRILLED FOR 1 FIXTURE
 - D2- DRILLED FOR 2 FIXTURES AT 90° OR 180°
 - D3- DRILLED FOR 3 FIXTURES AT 90° OR 120°
 - D4- DRILLED FOR 4 FIXTURES

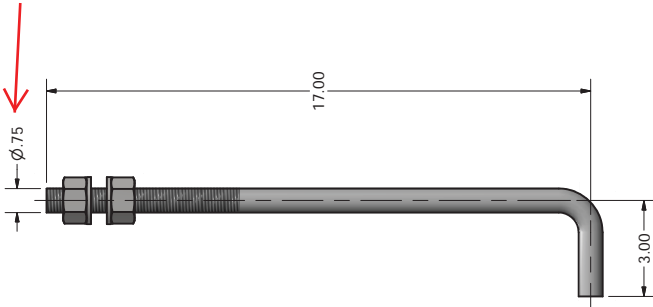


DRILLED MOUNTING OPTIONS

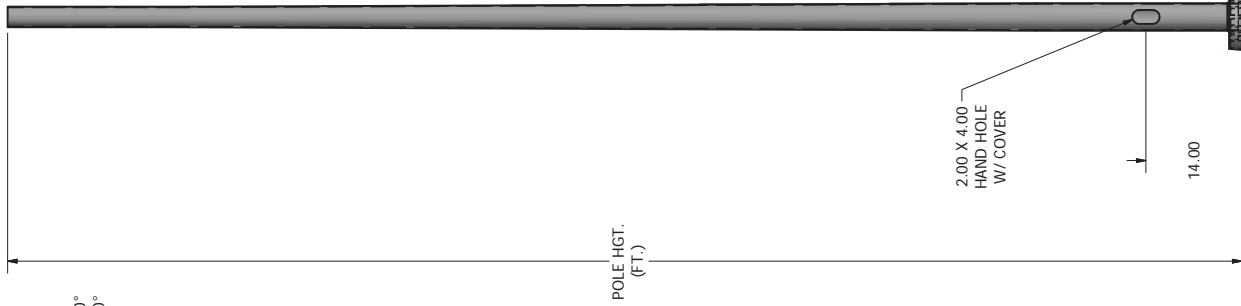
- TENON MOUNT OPTIONS:
- T2- Ø2.38 OD X 4.00 LG
 - T3- Ø3.00 OD X 5.00 LG
 - T4- Ø4.00 OD X 6.00 LG



TENON MOUNT OPTIONS



POLE DETAIL



SOLID STATE AREA LIGHTING

RAZAR SERIES-LED

SPECIFICATIONS

OPTICAL HOUSING

Heavy cast low copper aluminum (A356 alloy; <0.2% copper) assembly with integral cooling fins. The Optical Panel mounting surface is milled flat (surface variance $\pm .002$ ") to facilitate thermal transfer of heat to housing and cooling fins. Solid barrier wall separates optical and electrical compartments. The optical and electrical compartments are integrated to create one assembly. Minimum wall thickness is .188".

ELECTRICAL HOUSING w/ INTEGRATED ARM

Heavy cast low copper aluminum (A356 alloy; <0.2% copper) assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

PLED™ OPTICS

Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side and functions as a house side shielding element. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments.

LED DRIVER(S)

Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F. Driver(s) is/are UL and cUL recognized and mounted directly against the Electrical Housing to facilitate thermal transfer, held down by universal clamps to facilitate easy removal. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50,60Hz.

LED EMITTERS

High output LED's are utilized with drive currents ranging from 350mA to 1050mA. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

FINISH

Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step media blast and iron phosphate pretreatment for protection and paint adhesion. 400°F bake for maximum hardness and durability.

PROJECT NAME: _____

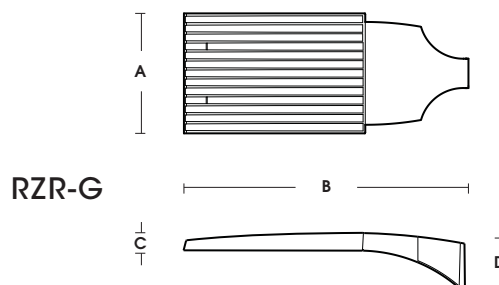
PROJECT TYPE: _____



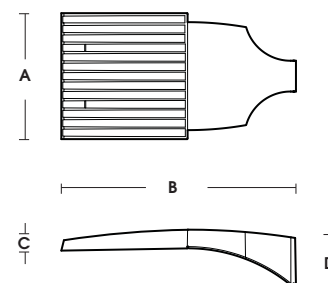
RAZAR

(MODELS: RZRM, RZR and RZR-G)

PATENT PENDING



RZR-G



RZR & RZRM

FIXTURE	A	B	C	D
RZR-G	15" 381mm	36.5" 927mm	3" 76mm	7" 187mm
RZR	14.75" 375mm	28.25" 718mm	2.75" 70mm	6.5" 165mm
RZRM	11.5" 292mm	22" 559mm	2.5" 64mm	5.25" 133mm

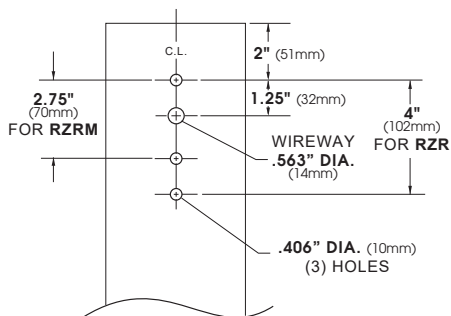


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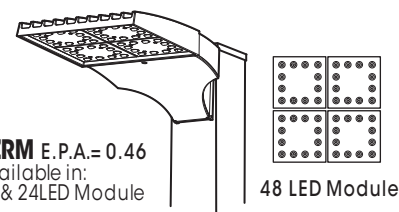
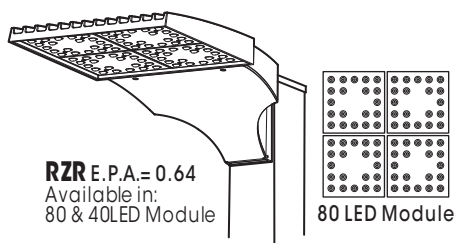
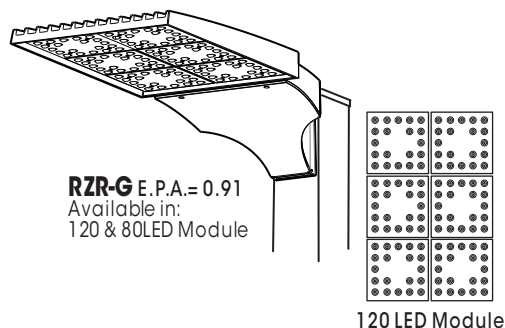
RAZAR SERIES-LED

SPECIFICATIONS

POLE DRILLING TEMPLATE



PLED® MODULES



MAX INPUT WATTAGE

# OF LED's	350mA	525mA	700mA	1050mA
120	127W	195W	260W	396W
80	87W	131W	174W	266W
48	55W	81W	105W	160W
40	45W	66W	87W	134W
24	28W	41W	53W	81W

Spec/Order Example: RZR/PLED-IV/80LED-700mA/CW/277/RAL-8019-S/10SP

SPEC / ORDERING INFORMATION

MODEL	OPTICS	LED MODE	VOLTAGE	FINISH	OPTIONS
MODEL	OPTICS	LED MODE	VOLTAGE	FINISH	OPTIONS
<input type="checkbox"/> RZR-G	<input type="checkbox"/> TYPE II PLED-II	NO. LEDs RZR-G <input type="checkbox"/> 120LED <input type="checkbox"/> 350mA <input type="checkbox"/> NW (4000K)* <input type="checkbox"/> 80LED <input type="checkbox"/> 525mA <input type="checkbox"/> CW (5000K) <input type="checkbox"/> 40LED <input type="checkbox"/> 700mA <input type="checkbox"/> WW (3000K)	<input type="checkbox"/> 120 <input type="checkbox"/> 208 <input type="checkbox"/> 240 <input type="checkbox"/> 277 <input type="checkbox"/> 347 <input type="checkbox"/> 480	<input type="checkbox"/> BLACK RAL-9005-T <input type="checkbox"/> WHITE RAL-9003-T <input type="checkbox"/> GREY RAL-7004-T <input type="checkbox"/> DARK BRONZE RAL-8019-T <input type="checkbox"/> GREEN RAL-6005-T	<input type="checkbox"/> HIGH-LOW DIMMING FOR EXTERNAL CONTROL... HLSW <input type="checkbox"/> HOUSE SIDE SHIELDING HS-PLED <input type="checkbox"/> PHOTO CELL + VOLTAGE (EXAMPLE: PC120V) PC+V <input type="checkbox"/> TWIST LOCK PHOTO CELL + VOLTAGE (EXAMPLE: PC120V)... TPC+V <input type="checkbox"/> TWIST LOCK RECEPTACLE ONLY... TPR
<input type="checkbox"/> RZR	<input type="checkbox"/> TYPE II MEDIAN ILLUMINATOR PLED-II-ML	RZR <input type="checkbox"/> 80LED <input type="checkbox"/> 40LED			
<input type="checkbox"/> RZRM	<input type="checkbox"/> TYPE III PLED-III				
	<input type="checkbox"/> TYPE IV PLED-IV				
	<input type="checkbox"/> TYPE IV PLED-IV-FT	RZRM <input type="checkbox"/> 48LED <input type="checkbox"/> 24LED			
	<input type="checkbox"/> TYPE V NARROW PLED-VSQ-N				
	<input type="checkbox"/> TYPE V PLED-V-SQ-M				
	<input type="checkbox"/> TYPE V PLED-V-SQ-W				

LED COUNT	SOURCE TYPE	SOURCE	INITIAL LUMENS - 4000K	INITIAL LUMENS - 3000K	INITIAL LUMENS - 5000K	L70 GREATER THAN (HR)	STARTING TEMP.	SYSTEM WATTS	VOLTS	MAX INPUT AMPS
24	LED	24 PLED® Optical Module - 350mA	3,073 - 3,340	2,690 - 2,924	3,147 - 3,421	60,000+	-20°F	28	120 277	0.24 0.10
24	LED	24 PLED® Optical Module - 525mA	4,366 - 4,746	3,822 - 4,155	4,471 - 4,860	60,000+	-20°F	41	120 277	0.34 0.15
24	LED	24 PLED® Optical Module - 700mA	5,467 - 5,943	4,786 - 5,203	5,598 - 6,086	60,000+	-20°F	53	120 277	0.45 0.20
24	LED	24 PLED® Optical Module - 1050mA	7,150 - 7,772	6,260 - 6,805	7,322 - 7,960	60,000+	-20°F	81	120 277	0.68 0.30
40	LED	40 PLED® Optical Module - 350mA	5,002 - 5,579	4,379 - 4,884	5,122 - 5,713	60,000+	-20°F	45	120 277	0.38 0.17
40	LED	40 PLED® Optical Module - 525mA	7,047 - 7,860	6,170 - 6,881	7,216 - 8,049	60,000+	-20°F	66	120 277	0.55 0.24
40	LED	40 PLED® Optical Module - 700mA	8,822 - 9,840	7,724 - 8,615	9,034 - 10,077	60,000+	-20°F	87	120 277	0.73 0.32
40	LED	40 PLED® Optical Module - 1050mA	11,594 - 12,932	10,150 - 11,322	11,872 - 13,244	60,000+	-20°F	134	120 277	1.12 0.49
48	LED	48 PLED® Optical Module - 350mA	6,145 - 6,680	5,380 - 5,849	6,293 - 6,841	60,000+	-20°F	55	120 277	0.46 0.20
48	LED	48 PLED® Optical Module - 525mA	8,731 - 9,492	7,644 - 8,310	8,941 - 9,720	60,000+	-20°F	81	120 277	0.68 0.29
48	LED	48 PLED® Optical Module - 700mA	10,933 - 11,885	9,572 - 10,406	11,195 - 12,172	60,000+	-20°F	105	120 277	0.88 0.38
48	LED	48 PLED® Optical Module - 1050mA	14,299 - 15,545	12,519 - 13,609	14,642 - 15,919	60,000+	-20°F	160	120 277	1.33 0.58
80	LED	80 PLED® Optical Module - 350mA	10,003 - 11,158	8,758 - 9,769	10,243 - 11,426	60,000+	-20°F	87	120 277	0.75 0.33
80	LED	80 PLED® Optical Module - 525mA	14,093 - 15,720	12,338 - 13,763	14,431 - 16,098	60,000+	-20°F	131	120 277	1.10 0.48
80	LED	80 PLED® Optical Module - 700mA	17,644 - 19,681	15,447 - 17,230	18,067 - 20,155	60,000+	-20°F	174	120 277	1.45 0.63
80	LED	80 PLED® Optical Module - 1050mA	23,188 - 25,864	20,301 - 22,644	23,745 - 26,448	60,000+	-20°F	266	120 277	2.22 0.96
120	LED	120 PLED® Optical Module - 350mA	15,005 - 16,931	13,137 - 14,823	15,365 - 17,339	60,000+	-20°F	127	120 277	1.06 0.46
120	LED	120 PLED® Optical Module - 525mA	21,140 - 23,750	18,508 - 20,793	21,647 - 24,322	60,000+	-20°F	195	120 277	1.63 0.70
120	LED	120 PLED® Optical Module - 700mA	26,466 - 30,399	23,171 - 26,614	27,101 - 31,131	60,000+	-20°F	260	120 277	2.17 0.94
120	LED	120 PLED® Optical Module - 1050mA	34,782 - 38,790	30,452 - 33,961	35,617 - 39,725	60,000+	-20°F	396	120 277	3.33 1.43

NOTES:

1. Max Input Amps is the highest of starting, operating, or open circuit currents
2. Lumen values for LED Modules vary according to the distribution type
3. System Watts includes the source watts and all driver components.
4. Fuse value should be sufficient to protect all wiring components. For electronic driver and LED component protection, use 10KV - 20KV surge suppressors.
5. L70(10K) - TM-21 6x rule applied

WARNING: All fixtures must be installed in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.