



ADDENDUM NO. 1

November 25, 2019

TO: ALL BIDDERS UNDER INVITATION TO BID NO.19-101186

FROM: Department of Purchasing and Contracting, DeKalb County, Georgia
For additional information, go to: <http://yourdekalb.com/purchasing/index.html>

SUBJECT: Invitation to Bid (ITB) No. 19-101186, "Decatur Library Parking Deck Repairs" is hereby modified as follows:

1. **DELETE** "ITB NO. 19-101186 in its entirety and **REPLACE** with **REVISED ITB 19-101186 attached hereto.**
2. All other conditions remain in full enforce and effect.
3. It is the responsibility of each bidder to ensure that he is aware of all addenda issued under this ITB. Please sign and return this addendum. You may call L. Deneen Walters Procurement Agent; at 404-687-3558 before the bids are due to confirm the number of addenda issued.
4. All bidders under this Invitation to Bid must acknowledge receipt of this Addendum included in the response only.

L. Deneen Walters
Procurement Agent
Department of Purchasing and Contracting

ACKNOWLEDGEMENT

The above Addendum #1 is hereby acknowledged:

(NAME OF BIDDER)

(SIGNATURE)

(TITLE)

DR:ldw



DeKalb County
GEORGIA

DeKalb County
Department of Purchasing and Contracting
Maloof Administration Building, 1300 Commerce Drive, 2nd Floor,
Decatur, Georgia 30030

Revised
November 25, 2019

INVITATION TO BID (ITB) NO. 19-101186
FOR

DECATUR LIBRARY PARKING DECK REPAIRS

DEKALB COUNTY, GEORGIA

Procurement Agent: L. Deneen Walters
Phone: 404-687-3558
Email: ldwalters@dekalbcountyga.gov

Mandatory DeKalb First LSBE Meeting: November 27, 2019, December 4, 2019 & December 11 2019

(Bidders must attend 1 meeting on either of the dates listed in person or via video conference.)
4572 Memorial Drive, Decatur, Georgia 30032
Main Conference Room - A

(Meetings are held at 10:00 a.m. and 2:00 p.m.)
Video Conference: Utilize the link supplied on our webpag labeled "DeKalb First LSBE Video Meeting"

Pre-Bid Conference and Site Visit: December 10, 2019, @ 10:00 a.m. Mandatory

Decatur County Public Library
215 Sycamore Street, Decatur, GA 30030

Deadline for Submission of Questions: 5:00 P.M. ET, December 13, 2019

Bid Opening: 3:00 P.M. ET, December 30, 2019

Price Schedule Opening: 3 – 5 Business days after Bid Opening

FIRM'S NAME AND ADDRESS: (Street, City, State and Zip Code. Type or print):	TELEPHONE AND FAX NUMBERS WITH AREA CODE:
Federal Tax ID No. _____	Phone: _____
ARE YOU A DEKALB COUNTY FIRM? Yes ___ No ___	Fax: _____
SIGNATURE OF PERSON AUTHORIZED TO SIGN BID AND DATE:	E-mail: _____
_____	SIGNER'S NAME AND TITLE (Type of Print):
_____	_____

THE RESPONSIBILITY FOR SUBMITTING A RESPONSE TO THIS BID TO THE DEPARTMENT OF PURCHASING AND CONTRACTING OF DEKALB COUNTY GOVERNMENT ON OR BEFORE THE STATED DATE AND TIME WILL BE SOLELY AND STRICTLY THE RESPONSIBILITY OF THE BIDDER.

TABLE OF CONTENTS
FOR
INVITATION TO BID NO. 19-101186

INVITATION TO BID OVERVIEW3

INVITATION TO BID PROCEDURES.....5

GENERAL TERMS AND CONDITIONS9

MINIMUM SPECIFICATIONS20

PRICE SCHEDULE & BID BOND21-24

BID ACKNOWLEDGEMENT FORM25

REQUIRED DOCUMENTS CHECKLIST.....26

PRODUCT DATA CUT SHEETS.....45-52

EXHIBIT 1.....53-84

EXHIBIT 2.....85-89

Revised

INVITATION TO BID OVERVIEW

A. PURPOSE:

DeKalb County Government (the County) is soliciting bids for **ITB 19-101186, Decatur Library Parking Deck Repairs** from responsible bidders.

B. GENERAL INFORMATION:

1. BID TIMETABLE:

The anticipated schedule for the bid process is as follows:

Date Issued:	November 25, 2019
Mandatory DeKalb First LSBE Meeting: (Bidders must attend 1 meeting on either of the dates listed.)	November 27, 2019, December 4, 2019 & December 11, 2019 4572 Memorial Drive, Decatur, Georgia 30032 Main Conference Room - A (Meetings are held at 10:00 a.m. and 2:00 p.m.)
Pre-Bid Conference and Site Visit:	December 10, 2019, @ 10:00 a.m. Mandatory Decatur County Public Library 215 Sycamore Street, Decatur, GA 30030
Deadline for Submission of Questions:	5:00 P.M. ET, December 13, 2019
Bid Opening:	<u>3:00 P.M. ET, December 30, 2019</u>
Price Schedule Opening:	3 – 5 Business days after Bid Opening
Bids Valid Until:	Bids shall be valid for 90 days from and including the bid opening date.

Sealed bids are to be addressed and delivered to:

DeKalb County Department of Purchasing and Contracting
Maloof Administration Building
1300 Commerce Drive, 2nd Floor

Decatur, Georgia 30030, not later than **3:00 P.M. ET, December 30, 2019.**

*****PRICE SCHEDULE AND BID BOND MUST BE SUBMITTED IN A SEPARATE SEALED ENVELOPE OR BIDDER WILL BE DEEMED NON-RESPONSIVE AND WILL NOT BE CONSIDERED FOR AWARD*****

Submit **one original bid package** (inclusive of the entire Invitation to Bid document and required documents with the exception of the price schedule) stamped "Original" and one **sealed identical copy** stamped "Copy" of the bid package to the address listed above.

2. CONTACT PERSON:

The contact person for this bid is **L. Deneen Walters, Procurement Agent**. General inquiries concerning the meaning or interpretation of this Invitation to Bid (ITB) may be requested from the contact person via telephone at 404-687-3558 or via email at ldwalters@dekalbcountyga.gov. Questions and requests for information or clarification concerning the specifications in this ITB must be submitted to the above listed contact person via email no later than the date and time listed in the bid timetable. Questions and requests received after the above stated time or sent to anyone other than the listed contact person will not receive a response or be the subject of addenda.

Revised

3. QUESTIONS:

All requests must be in writing. Any explanation desired by a bidder regarding the meaning or interpretation of the Invitation to Bid, drawings, specifications, requirements, etc., must be requested in writing and with sufficient time allowed for a reply to reach bidders before the submission of their bids. If any statement in the bidding documents, specifications, plans, etc., appear ambiguous to the Bidder, Bidder is specifically instructed to make a written request to the Department of Purchasing and Contracting as outlined *in* the preceding sentence. Any information given to a prospective bidder concerning an Invitation to Bid will be furnished to all prospective bidders, as an addenda to the Invitation, if such information is necessary to bidders in submitting bids on the Invitation or if the lack of such information would be prejudicial to uninformed bidders. Oral explanations or instructions given before the award of the contract will not be binding. **Questions must be submitted no later than 5:00 pm EST on “December 13, 2019.”**

4. ADDITIONAL INFORMATION/ADDENDA:

The County will issue responses to inquiries and any other corrections or amendments it deems necessary in written addenda issued prior to the bid opening date. Bidders should not rely on any representations, statements or explanations other than those made in this ITB or in any addendum to this ITB. Where there appears to be a conflict between the ITB and any addenda issued, the last addendum issued will prevail. It is the responsibility of the Bidder to ensure awareness of all addenda issued for this solicitation. Please acknowledge the addenda and submit to the DeKalb County Department of Purchasing and Contracting as requested. Bidders may contact the above listed contact person to verify the number of addenda prior to submission. Addenda issued for this ITB will be posted on DeKalb County’s website, www.dekalbcountyga.gov/formalbids. Bidder should regularly check the County’s website for addenda.

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INVITATION TO BID PROCEDURES

BIDDER INFORMATION:

1. **FAILURE TO SUBMIT THE PRICE SCHEDULE AND BID BOND (PAGES 21-24) IN A SEPARATE SEALED ENVELOPE SHALL DEEM THE BID NON-RESPONSIVE. INCLUDING THE PRICE SCHEDULE AND BID BOND IN ANY AREA OUTSIDE OF ITS SEPARATE, SEALED ENVELOPE WILL RESULT IN BIDDER'S BID BEING DEEMED NON-RESPONSIVE.**
2. Failure to return all pages of this Invitation to Bid may result in bid being deemed non-responsive.
3. Minimum specifications are intended to be open and non-restrictive. Contractors are invited to inform the DeKalb County Department of Purchasing and Contracting whenever specifications or procedures appear not to be fair and open. Such information should be supplied as early in the procurement process as possible. Information received in less than five (5) days prior to the scheduled bid opening will not be acted upon unless the DeKalb County Department of Purchasing and Contracting rules that it is in the best interest of the County to consider.
4. Brand names and numbers when provided in solicitations are for reference and to establish a quality standard. Any reference to a brand name shall not be construed as restricting Bidders to that manufacturer (unless "no substitutes" is stated). Bids on equal items will be considered, provided the bid clearly describes the article offered and it is equal or better in quality and function and fully compatible with this requirement.
5. By submitting a bid, Bidder warrants that any goods or services supplied to DeKalb County Government meet or exceed the specifications set forth in this solicitation.
6. If any supplies, materials, and equipment are provided to the County under this solicitation, then such items shall be new and in first-class condition unless the solicitation specifically allows offers of used, reconditioned, or remanufactured items. If newly manufactured products are specified, such products shall be of recent origin and not previously used. No equipment of any type is acceptable if serial numbers or any other manufacturer's identification labels or marks have been removed, obliterated, or changed in any way. A Contractor delivering any such equipment to the County will be deemed to have breached the contract and appropriate action will be taken by the DeKalb County Government Purchasing and Contracting Department.
7. Time of delivery is a part of the solicitation and an element of the contract that is to be awarded. If the Bidder cannot meet the required service delivery dates, a bid should not be submitted. Failure to deliver in accordance with the contract could result in the Contractor being declared in default.
8. Bid Withdrawal
Bids may be withdrawn at any time prior to the bid opening. After bids have been publicly opened, withdrawal of bids shall be based upon Part 3, Section IV, F. within the DeKalb County Purchasing Policy.

Revised

9. Expenses of Preparing Responses to this ITB

The County accepts no responsibility for any expenses incurred by Bidders who submit bids in response to this ITB. Such expenses are to be borne exclusively by the Bidders.

10. It is the responsibility of each Bidder to ensure that its submission is received by 3:00 p.m. on the bid due date. The time/date stamp clock located in the Department of Purchasing & Contracting shall serve as the official authority to determine lateness of any bid. The bid opening time shall be strictly observed. Be aware that visitors to our offices will go through a security screening process upon entering the building. Bidders should plan enough time to ensure that they will be able to deliver their submission prior to our deadline. Late submissions, for whatever reason, will not be evaluated. Bidders should plan their deliveries accordingly. Telephone or fax bids will not be accepted.

11. Price Schedule openings shall be conducted in the Department of Purchasing and Contracting three (3) to five (5) days after the bid opening. Only the Price Schedules of responsive bidders shall be opened. The County reserves the right to decide which bid(s) will be deemed responsive and said determination shall be made in accordance with the requirements stated in this solicitation.

12. Federal Work Authorization

Pursuant to O.C.G.A. §13-10-91, the County cannot enter into a contract for the physical performance of services unless the Contractor, its Subcontractor(s) and sub-subcontractor(s), as that term is defined by state law, register and participate in the Federal Work Authorization Program to verify specific information on all new employees. The Bidder certifies that he/she has complied and will continue to comply throughout the contract term with O.C.G.A. §13-10-91 and any related and applicable Georgia Department of Labor Rule. Contractor agrees that in the event it employs or contracts with any Subcontractor(s) in connection with this contract, Contractor will secure from each Subcontractor an affidavit that certifies the Subcontractor's current and continuing compliance with O.C.G.A. §13-10-91 throughout the contract term. Each Subcontractor agrees that in the event it employs or contracts with any sub-subcontractor(s), each Subcontractor will secure from each sub-subcontractor an affidavit that certifies the sub-subcontractor's current and continuing compliance with O.C.G.A. §13-10-91 throughout the contract term.

13. LSBE Information

a. It is the objective of the Chief Executive Officer and Board of Commissioners of DeKalb County to provide maximum practicable opportunity for all businesses to participate in the performance of government contracts. The current DeKalb County List of Certified Vendors may be found on the County website at <http://www.dekalbcountyga.gov/purchasing/pdf/supplierList.pdf>

b. It is required that all responding Bidders attend the mandatory LSBE meeting within two-weeks of the solicitation's advertisement, and comply, complete and submit all LSBE forms with the Bidder's response in order to remain responsive. Attendance can be in person, via video conference and teleconference. Video conferencing is available through Skype/Lync. Instructions for attendance via video conference can be found on the County's website at <https://www.dekalbcountyga.gov/purchasing-contracting/dekalb-first-lsbe-program>.

Revised

- c. For further details regarding the DeKalb First Local Small Business Enterprise Ordinance, contact the LSBE Program representative, Felton Williams at fbwilliams@dekalbcountyga.gov or (404) 371-6312.

14. First Source Jobs Information

The DeKalb County First Source Jobs Ordinance requires contractors or beneficiaries entering into any type of agreement with the County, including purchase orders, regardless of what they may be called for the procurement or disposal of supplies, services, construction projects, professional or consultant services, which is funded in whole or part with County funds or County administered funds in which the contractor is to receive \$50,000 or more in County expenditures or committed expenditures and recipient of urban redevelopment action grants or community development block funds administered in the amount of \$50,000 or more make a good faith effort to hire DeKalb County residents for at least 50% of jobs using the First Source Registry (candidate database). The work to be performed under this contract is subject to the provisions of the DeKalb County First Source Jobs Ordinance.

For more information on the First Source Jobs Ordinance requirement, please contact WorkSource DeKalb at www.dekalbworkforce.org or 404-687-3400.

15. Attention to General Terms and Conditions

Bidders are cautioned to thoroughly understand and comply with all matters covered under the General Terms and Conditions section of this ITB. The successful Bidder(s) will enter into a contract approved by the County. The County's ITB document and attachments, subsequent County addenda, and the Bidder's response documents are intended to be incorporated into a contract. All Bidders should thoroughly review this document prior to submitting a bid. Any proposed revisions to the terms or language of this document must be submitted in writing with the bid. Since proposed revisions may result in a bid being rejected if the revisions are unacceptable to the County, bidders should review any proposed revisions with an officer of the firm having authority to execute the contract. No alterations can be made in the contract after award is made.

16. Required Signatures

Bids must be signed by an officer or agent of the firm having the authority to execute contracts.

17. Ethics Rules

Bidders are subject to the Ethics provision within the DeKalb County Purchasing Policy; the Organizational Act, Section 22A, the Code of DeKalb County; and the rules of Executive Order 2014-4. Any violations will be addressed, pursuant to these policies and rules.

To the extent that the Organizational Act, Section 22A, the Code of DeKalb County, and the rules of Executive Order 2014-4 allow a gift, meal, travel expense, ticket, or anything else of value to be purchased for a CEO employee by a contractor doing business with the County, the contractor must provide written disclosure, quarterly, of the exact nature and value of the purchase to the Chief Integrity Officer, if created, or the Finance Director or his/her designee. Every contractor conducting business with the County will receive a copy of these ethical rules at the time of execution of the contract.

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18. Business License

Bidders shall submit a copy of its current, valid business license with its Bid. Georgia companies are to submit a valid county or city business license. Contractors that are not Georgia companies are to provide a certificate of authority to transact business in the State of Georgia and a copy of a valid business license issued by its home jurisdiction. If Bidder holds a professional certification which is licensed by the state of Georgia, then Bidder may submit a copy of its valid professional license with Bidder's bid or upon award unless the Minimum Specifications require submittal with the bid. Any license submitted in response to this ITB shall be maintained by the Contractor for the duration of the contract.

BID SUBMITTAL:

1. All bids should be completed in ink or typewritten. Errors should be crossed out and corrections entered in ink or typewritten adjacent to the error. The person signing the bid should initial corrections in ink.
2. Bidders shall complete and submit Attachment A - Required Documents Checklist and all documents responsive to this requirement with the bid submittal.
3. If applicable, provide evidence that the Bidder is a DeKalb County Firm.
4. Bids must be submitted in a sealed envelope(s) or box(es) with the Bidder's name and "ITB 19-101186 for Decatur Library Parking Deck Repairs" on the outside of each envelope or box. All Bidders delivering submittals via delivery services, please place the sealed bid envelope(s) or box(es) inside the delivery service envelope(s) or box(es). Bidders are responsible for informing any delivery service of all delivery requirements. No responsibility shall attach to the County for the premature opening of a submission not properly addressed and/or identified. The Decatur postmaster will not deliver certified or special delivery mail to specific addresses within DeKalb County Government.

C. Contract Award:

1. Bids submitted will be evaluated and recommended for award to the lowest, responsive, and responsible Bidder(s).
2. The intent of this bid is to make an all-award; however, the County reserves the right to award by line item or multiple awards. The County may accept any item or group of items on any bid, whichever is in the best interest of DeKalb County.
3. The County reserves the right to reject any and all bids, to waive informalities, and to re-advertise.
4. The judgment of DeKalb County Purchasing and Contracting on matters, as stated above, shall be final. The County reserves the right to decide which Bid will be deemed lowest, responsive and responsible.

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GENERAL TERMS AND CONDITIONS

- A. In the event of a conflict between any provisions contained in any of the documents governing this transaction, the following shall be the order of precedence: Change Orders or modifications; the Bidder's accepted bid; and the County's ITB.
- B. The Bidder's services shall include all things, personnel, and materials necessary to provide the goods or services that are in compliance with the specifications as authorized by the County.
- C. Bidder extends to the County the option to renew the contract for two (2) additional one year terms, under the same price(s), terms and conditions, and in accordance with Paragraph L, *Term*.

D. DELIVERY:

Delivery of services or goods will commence within ten days (10) calendar days upon request.

Bidder state agreement: Yes _____ No _____

Contact Person: _____

Telephone Number: _____ Cellular Phone Number: _____

Address: _____

Alternate delivery time *may* be considered provided it is so stated. Bidder state alternate terms for delivery or services below.

All prices are to be firm, F.O.B. Destination, Freight Prepaid and Allowed. This shall include delivered, unloaded, and placed in designated place. Delivery must be made between 9:00 A.M. and 2:30 P.M. Monday through Friday, unless otherwise required. The successful bidder shall give a 24-hour prior notice of delivery to Department or Division calling in the order, and must ask for caller's telephone number as well as Purchase Order form and address, since 24-hour Notice of Delivery is required. The County will unload after prior notice.

E. DELIVERIES BEYOND THE CONTRACTUAL PERIOD:

This contract covers all requirements that may be ordered, as distinguished from delivered, during the contract term. This is for the purpose of providing continuity of supply by permitting the County to place orders as requirements arise in the normal course of supply operations. Accordingly, any order mailed (or received, if forwarded by other means than through the mail) to the Contractor on or before the expiration date of the contract, and providing for delivery within the number of days specified in the contract, shall constitute a valid order.

Revised

F. FOREIGN PRODUCTS:

DeKalb County prefers to buy items produced and/or manufactured in the United States of America; however, foreign products may be considered provided it is so stated. Bidder certifies that items offered on this bid is/are manufactured and produced in the United States.

Yes _____ No _____

If "No", state the exact location of plant or facility where items will be produced:

G. COUNTY REQUIREMENT:

The contract will be an "Indefinite Quantity" type with County requirements to be satisfied on an "as ordered" basis. The County makes no promise, real or implied, to order any quantity whatsoever. This invitation and resulting contract will provide for the normal requirements of DeKalb County, and contracts will be used as primary sources for the articles or services listed herein. Articles or services will be ordered from time to time in such quantities as may be needed. As it was impossible to determine the precise quantities of items described in this invitation that will be needed during the contract term, each contractor is obligated to deliver all articles and services that may be ordered during the contract term.

H. WARRANTY AND/OR GUARANTY:

Contractor warrants that its services under this Agreement shall be free of defects in materials and workmanship for a period of one (1) year. The Contractor shall not be liable for indirect, special, or exemplary damages. The Contractor shall be liable for direct damages.

I. SAMPLES & TESTING:

Samples of items, when required, must be submitted within the time specified, and unless otherwise specified by the County, at no expense to the County. If not destroyed by testing, samples will be returned at bidder's request and expense, unless otherwise specified by the Invitation to Bid. Since tests may require several days for completion, the County reserves the right to use a portion of any supplies before the results of the tests are known, without prejudice to any final adjustments, rejecting the unused portion of the delivery and payment will be made on an adjusted basis for the used portion. The costs of inspections and tests of any item which fails to meet the advertised specifications shall be borne by the bidder.

J. LITERATURE:

When the bidder proposes to furnish another product, he is required to furnish, with his bid, literature describing the item(s) being offered. Failure to furnish this literature may result in the bid being deemed non-responsive.

Revised

K. SILENCE OF SPECIFICATIONS:

The apparent silence of these specifications and any supplemental specifications as to any details, or the omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail and that only materials of first quality and correct type, size and design are to be used. All workmanship is to be first quality. All interpretations of this specification shall be made upon the basis of this statement, with County interpretation to prevail.

L. TERM:

The Contractor shall commence the Work under this Contract within ten (10) days from the acknowledgement of receipt of the Notice to Proceed ("Commencement Date"). The Initial Term of this Agreement shall be for twelve (12) calendar months, beginning on the Commencement Date. This annual contract comes with two (2) options to renew. Prior to the expiration of the Initial Term, the parties have the option to renew this agreement for a First annual Renewal Term of twelve (12) calendar months. Prior to the expiration of the First annual Renewal Term, the parties have the option to renew this Agreement for a Second annual Renewal Term of twelve (12) calendar months. Without further action by either party, this Agreement will terminate at the end of the Initial Term or at the end of each annual Renewal Term. Each option to renew must be exercised prior to the beginning of each annual Renewal Term and, is only effective upon adoption and approval by the DeKalb County Governing Authority and the Contractor in accordance with the terms of this Contract.

M. PRICING:

Alterations to the Price Schedule may result in the Bidder being deemed non-responsive and its bid may be rejected.

1. Price Reductions: If at any time after the date of award, the Contractor makes a general price reduction in the comparable price of any article or service covered by the contract to customers generally, an equivalent price reduction based on similar quantities and/or considerations shall apply to the contract for the duration of the contract period (or until the price is further reduced). Such price reduction shall be effective at the same time and in the same manner as the reduction in the price to customers generally. An occasional sale at a lower price, or sale of distressed merchandise at a lower price, would not be considered a general price reduction under this paragraph. For purposes of this paragraph, a general price reduction shall mean any reduction in the price of an article or service offered:
 - To Contractor's customers.
 - In the Contractor's price schedule for the class of customers; i.e., wholesalers, jobbers, retailers, etc., which was used as the basis for bidding on this contract.

The Contractor shall invoice the County at such reduced price indicating on the invoice that the reduction is pursuant to General Terms and Conditions, paragraph I. as stated within the ITB.

Revised

2. Price Escalation Clause: During the life of the contract, the awarded bidder shall furnish price lists to the County for increases, and those of the bidder's supplier (e.g. factory) increases, as prices change. The bidder must also provide a list of the supplier's (e.g. factory's) previous price(s) to the County for purposes of comparison. Price changes will be in effect only after receipt and approval by the Director of the Department of Purchasing and Contracting. Price lists and changes thereto are to be furnished under the contract and without charge to the County. Catalogue(s) or Price List(s) must be submitted to the Department of Purchasing and Contracting, Maloof Administration Building, 1300 Commerce Drive, 2nd Floor, Decatur, Georgia 30030.

3. By submission of this bid, the bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization that in connection with this procurement:
 - The prices in this bid have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor,
 - Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly to any other bidder or to any competitor: and
 - No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a bid for the purpose of restricting competition.

N. PAYMENT:

1. The County shall pay the Contractor based upon the accepted bid prices submitted by Bidder. Invoices should be signed by the Bidder or authorized delegate and must contain the authorizing DeKalb County Purchase Order (PO) and/or Contract Purchase Agreement (CPA) Number in order for payment to be processed. PO Number must also be on the delivery ticket.

A Contract Purchase Agreement is being issued in lieu of a formal contract. Any reference to a contract refers to the CPA.

2. Invoice(s) must be submitted as follows:

Vendor invoices:

Department of Facilities Management
1300 Commerce Drive, 3rd Floor
Decatur, GA 30030
Attn: Vaughn Fountain

For notices:

Chief Financial Officer
DeKalb County Department of Finance
1300 Commerce Drive, 6th Floor
Decatur, GA 30030

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- a. Upon award, Prime Contractor(s) with Local Small Business Enterprise (LSBE) Subcontractor(s) shall enter utilization reports electronically at www.dekalblsbe.info. Proof of payment to the LSBE Subcontractor must be uploaded and submitted. LSBE Subcontractors shall confirm receipt of payment from the Prime, electronically also, at www.dekalblsbe.info.
3. The County's official payment terms are Net 30. Payment dates that fall on a weekend or on a holiday will be issued on the County's next business day.

O. ACCURACY OF WORK:

The Contractor shall be responsible for the accuracy of the Work and any error and/or omission made by the Contractor in any phase of the Work under this Agreement.

P. ADDITIONAL WORK:

The County shall in no way be held liable for any work performed under this section which has not first been approved in writing by the County in the manner required by applicable law and/or the terms of this Contract. The County may at any time order changes within the scope of the Work without invalidating the Contract upon seven (7) days written notice to the Contractor. The Contractor shall proceed with the performance of any changes in the Work so ordered by the County unless such change entitles the Contractor to a change in Contract Price, and/or Contract Term, in which event the Contractor shall give the County written notice thereof within fifteen (15) days after the receipt of the ordered change, and the Contractor shall not execute such changes until it receives an executed Change Order from the County. No extra cost or extension of time shall be allowed unless approved by the County and authorized by execution of a Change Order. The parties' execution of any Change Order constitutes a final settlement of all matters relating to the change in the Work which is the subject of the Change Order. The County shall not be liable for payment for any work performed under this section which has not first been approved in writing by the County in the manner required by applicable law and/or the terms of this Contract.

Q. OWNERSHIP OF DOCUMENTS:

All documents, including drawings, estimates, specifications, and data are and remain the property of the County. The Contractor agrees that the County may reuse any and all plans, specifications, drawings, estimates, or any other data or documents described herein in its sole discretion without first obtaining permission of the Contractor and without any payment of any monies to the Contractor therefore. Any reuse of the documents by the County on a different site shall be at its risk and the Contractor shall have no liability where such documents are reused.

R. RIGHT TO AUDIT:

The County shall have the right to audit all books and records, including electronic records, relating or pertaining to this contract or agreement, including but not limited to all financial and performance related records, property, and equipment purchased in whole or in part with County funds and any documents or materials which support whose records, kept under the control of the Contractor, including but not limited to those kept by the Contractor's

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employees, agents, assigns, successors and subcontractors. The County also has the right to communicate with Contractor's employees related to the audited records.

The Contractor shall maintain such books and records, together with such supporting or underlying documents and materials, for the duration of this contract and for seven (7) years after termination or expiration, including any and all renewals thereof. The books and records, together with supporting documents and materials shall be made available, upon request to the County or its designee, during normal business hours at the Contractor's office or place of business. In the event that no such locations is available, then the books, records and supporting documents shall be made available for audit at a time and location which is convenient for the County.

S. SUCCESSORS AND ASSIGNS:

The Contractor agrees it shall not sublet, assign, transfer, pledge, convey, sell, or otherwise dispose of the whole or any part of this Contract or his right, title, or interest therein to any person, firm, or corporation without the previous written consent of the County. If the County consents to any such assignment or transfer, then the Contractor binds itself, its partners, successors and assigns to all covenants of this Contract. Nothing contained in this Contract shall create, nor be interpreted to create privity, or any other relationship whatsoever, between the County and any person, or entity or than Contractor.

T. REVIEWS AND ACCEPTANCE:

Work performed by the Contractor shall be subject to review and acceptance in stages as required by the County. Acceptance shall not relieve the Contractor of its professional obligation to correct, at his own expense, any errors in the Work.

U. TERMINATION OF AGREEMENT:

The Contractor understands and agrees that the date of the beginning of Work, rate of progress, and time for completion of the Work are essential conditions of this Contract. Both parties may, for its own convenience and at its sole option, without cause and without prejudice to any other right or remedy of the party, elect to terminate the Contract by delivering to the other party, at the address listed in the Notices article of this Contract, a written notice of termination specifying the effective date of termination. Such notice shall be delivered to the other party at least thirty (30) days prior to the effective date of termination. If Contractor's services are terminated by the County, the termination will not affect any rights or remedies of the County then existing or which may thereafter accrue against Contractor or its surety. In case of termination of this Contract before completion of the Work, Contractor will be paid only for the portion of the Work satisfactorily performed through the effective date of termination as determined by the County. Neither party shall be entitled to recover lost profits, special, consequential or punitive damages, attorney's fees or costs from the other party to this Contract for any reason whatsoever. This Contract shall not be deemed to provide any third-party with any remedy, claim, right of action, or other right. The parties' obligations pursuant to this Section shall survive any acceptance of Work, or termination or expiration of this Contract.

Revised

V. INDEMNIFICATION AGREEMENT:

The Contractor shall be responsible from the execution date or from the time of the beginning of the Work, whichever shall be the earlier, for all injury or damage of any kind resulting from the Work, to persons or property, including employees and property of the County. The Contractor shall exonerate, indemnify, and save harmless the County, its elected officials, officers, employees, agents and servants, hereinafter collectively referred to in this Section as "the County Indemnitees," from and against all claims or actions based upon or arising out of any damage or injury (including without limitation any injury or death to persons and any damage to property) caused by or sustained in connection with the performance of this Contract or by conditions created thereby or arising out of or any way connected with Work performed under this Contract, as well as all expenses incidental to the defense of any such claims, litigation, and actions. Furthermore, Contractor shall assume and pay for, without cost to the County Indemnitees, the defense of any and all claims, litigation, and actions suffered through any act or omission of the Contractor, or any Subcontractor, or anyone directly or indirectly employed by or under the supervision of any of them. Notwithstanding any language or provision in this Contract, Contractor shall not be required to indemnify any County Indemnitee against claims, actions, or expenses based upon or arising out of the County Indemnitee's sole negligence. As between the County Indemnitees and the Contractor as the other party, the Contractor shall assume responsibility and liability for any damage, loss, or injury, including death, of any kind or nature whatever to person or property, resulting from any kind of claim made by Contractor's employees, agents, vendors, Suppliers or Subcontractors caused by or resulting from the performance of Work under this Contract, or caused by or resulting from any error, omission, or the negligent or intentional act of the Contractor, vendors, Suppliers, or Subcontractors, or any of their officers, agents, servants, or employees. The Contractor shall defend, indemnify, and hold harmless the County Indemnitees from and against any and all claims, loss, damage, charge, or expense to which they or any of them may be put or subjected by reason of any such damage, loss, or injury. The Contractor expressly agrees to provide a full and complete defense against any claims brought or actions filed against the County Indemnitees, where such claim or action involves, in whole or in part, the subject of the indemnity contained in this Contract, whether such claims or actions are rightfully or wrongfully brought or filed. The County has the sole discretion to choose the counsel who will provide the defense. No provision of this Contract and nothing herein shall be construed as creating any individual or personal liability on the part of any elected official, officer, employee, agent or servant of the County, nor shall the Contract be construed as giving any rights or benefits hereunder to anyone other than the parties to this Contract. The parties' obligations pursuant to this Section shall survive any acceptance of Work, or termination or expiration of this Contract.

W. INSURANCE:

Insurance must meet the County's requirements and will be furnished by the successful Bidder(s) upon award.

1. Successful Bidder(s) will advise their insurance agent of the County's requirements as listed below and that they may not proceed with any work until insurance is provided that is in compliance with these requirements.

Revised

2. Contractor's insurance company or agent must mail, email, or bring an original certificate of insurance and applicable declarations or endorsements to the DeKalb County address listed within this Insurance provision. Insurance must be from companies able to do business in Georgia and acceptable to the County as follows:
 - a. Certificates must cover:
 - i. Statutory Workers Compensation
 - (1) Employer's liability insurance by accident, each accident \$1,000,000
 - (2) Employer's liability insurance by disease, policy limit \$1,000,000
 - (3) Employer's liability insurance by disease, each employee \$1,000,000
 - ii. Business Auto Liability Insurance with a minimum \$500,000 Combined Single Limit/Each Occurrence (Including operation of non-owned, owned, and hired automobiles).
 - iii. Commercial General Liability Insurance
 - (1) Each Occurrence - \$1,000,000
 - (2) Fire Damage - \$250,000
 - (3) Medical Expense - \$10,000
 - (4) Personal & Advertising Injury - \$1,000,000
 - (5) General Aggregate - \$2,000,000
 - (6) Products & Completed Operations - \$1,500,000
 - (7) Contractual Liability where applicable
 - b. DeKalb County, GA shall be named as Additional Insured under any General Liability, Business Auto and Umbrella Policies. Coverage shall apply as Primary and non-contributory with Waiver of Subrogation in favor of DeKalb County, Georgia. Such additional insured coverage shall be endorsed to Contractor's policy by attachment of ISO Additional Insured Endorsement forms CG 20 10 10 01 (ongoing operations) and CG 20 37 10 01 (products-completed operations), or form(s) providing equivalent coverage.
 - c. This insurance for the County as the additional insured shall be as broad as the coverage provided for the named-insured Contractor. It shall apply as primary insurance before any other insurance or self-insurance, including any deductible, non-contributory, and waiver of subrogation provided to the County as the additional insured.
 - d. Contractor agrees to waive all rights of subrogation and other rights of recovery against the County and its elected officials, officers, employees or agents, and shall cause each Subcontractor to waive all rights of subrogation for all coverages.
 - e. Certificates shall state that the policy or policies shall not expire, be cancelled or altered without at least sixty (60) days prior written notice to

Revised

the County.

- f. Contractor understands and agrees that the purchase of insurance in no way limits the liability of the Contractor.
- g. The insurance carrier must have a minimum A.M. Best rating of not less than "A" (Excellent) with a Financial Size Category of VII or better.
- h. Certificates to contain policy number, policy limits and policy expiration date of all policies issued in accordance with this contract.
- i. Certificates to contain the location and operations to which the insurance applies.
- j. Certificates to contain successful contractor's protective coverage for any subcontractor's operations. If this coverage is included in General Liability, please indicate on the Certificate of Insurance.
- k. Certificates to contain successful contractor's contractual insurance coverage. If this coverage is included in the General Liability, please indicate this on the Certificate of Insurance.
- l. Certificates shall be issued and delivered to the County and must identify the "Certificate Holder" as follows:

DeKalb County, Georgia
Director of Purchasing and
Contracting
Maloof Administration Building
1300 Commerce Drive, 2nd Floor
Decatur, Georgia 30030
- m. The successful contractor shall be wholly responsible for securing certificates of insurance coverage as set forth above from all subcontractors who are engaged in this work.

X. GEORGIA LAWS GOVERN:

The laws of the State of Georgia shall govern the construction of this Contract without regard for conflicts of laws. Should any provision of this Contract require judicial interpretation, it is agreed that the court interpreting or construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against one party, by reason of the rule of construction, that a document is to be construed more strictly against the party who itself or through its agent prepared same; it being agreed that the agents of all parties have participated in the preparation hereof, and all parties have had an adequate opportunity to consult with legal counsel. In interpreting this Contract in its entirety, the printed provisions of this Contract, and any additions written or typed hereon, shall be given equal weight, and there shall be no inference by operation of law or otherwise; that any provision of this Contract shall be construed against either party hereto.

Revised

Y. VENUE:

This Agreement shall be deemed to have been made and performed in DeKalb County, Georgia. For the purposes of venue, all suits or causes of action arising out of this Agreement shall be brought in the courts of DeKalb County, Georgia.

Z. COUNTY REPRESENTATIVE:

The County may designate a representative through whom the Contractor will contact the County. In the event of such designation, said representative shall be consulted and his written recommendation obtained before any request for extra work is presented to the County. Payments to the Contractor shall be made only upon itemized bill submitted to and approved by said representative.

AA. CONTRACTOR'S STATUS:

The Contractor will supervise and direct the Work, including the Work of all Subcontractors. Only persons skilled in the type of work which they are to perform shall be employed. The Contractor shall, at all times, maintain discipline and good order among his employees, and shall not employ any unfit person or persons or anyone unskilled in the work assigned him. The relationship between the County and the Contractor shall be that of owner and independent contractor. Other than the consideration set forth herein, the Contractor, its officers, agents, servants, employees, and any Subcontractors shall not be entitled to any County employee benefits including, but not limited to social security, insurance, paid annual leave, sick leave, worker's compensation, free parking or retirement benefits. All services provided by Contractor shall be by employees of Contractor or its Subcontractors and subject to supervision by Contractor. No officer or employee of Contractor or any Subcontractor shall be deemed an officer or employee of the County. Personnel policies, tax responsibilities, social security payments, health insurance, employee benefits and other administrative policies, procedures or requirements applicable to the Work or services rendered under this Contract shall be those of the Contractor, not the County.

BB. SOLE AGREEMENT:

This Contract constitutes the sole contract between the County and the Contractor. The terms, conditions, and requirements of this Contract may not be modified. No verbal agreement or conversation with any officer, agent, or employee of the County, either before or after the award of the Contract, shall affect or modify any of the terms or obligations herein contained. No representations, oral or written, shall be binding on the parties unless expressly incorporated herein.

CC. SEVERABILITY:

If any provision of this Contract or the application thereof to any person or circumstance shall to any extent be held invalid, then the remainder of this Contract or the application of such provision to persons or circumstances, other than those as to which it is held invalid, shall not be affected thereby, and each provision of this Contract shall be valid and enforced to the fullest extent permitted by law.

Revised

DD. NOTICES:

Any notice or consent required to be given by or on behalf of any party hereto to any other party hereto shall be in writing and shall be sent to the Director of the Department of Purchasing and Contracting or to the Contractor or his authorized representative on the work site by (a) registered or certified United States mail, return receipt requested, postage prepaid, (b) personal delivery, or (c) overnight courier service. All notices sent to the addresses listed below shall be binding unless said address is changed in writing no less than fourteen days before such notice is sent. Future changes in address shall be effective upon written notice being given by the Contractor to the Director of the Department of Purchasing and Contracting or by the County to the Contractor's authorized representative via certified first class U.S. mail, return receipt requested. Such notices will be addressed as follows:

If to the County:

Chief Procurement Officer
Department of Purchasing and Contracting
Malooof Administration Building
1300 Commerce Drive, 2nd Floor
Decatur, Georgia 30030

If to the Contractor:

Notices shall be sent to the contact information that is listed in the Bidder's Response to the ITB.

EE. Georgia Open Records Act:

Without regard to any designation made by the person or entity making a submission, DeKalb County considers all information submitted in response to this invitation or request to be a public record that will be disclosed upon request pursuant to the Georgia Open Records Act, O.C.G.A. §50-18-70 et seq., without consulting or contacting the Responder person or entity making the submission, unless a court order is presented with the submission. Bidders or Responders may wish to consult an attorney or obtain legal advice prior to making a submission.

FF. Cooperative Procurement

The County through the Department of Purchasing & Contracting may permit piggybacks to this contract from other city, county, local authority, agency, or board of education if the vendor will extend the same prices, terms, and conditions to the city. Piggybacking shall only be available where competition was used to secure the contract and only for a period of 12-months following entry, renewal or extension of the contract. This provision shall not apply to any contract where otherwise prohibited or mandated by state law.

Revised

MINIMUM SPECIFICATIONS

I. GENERAL REQUIREMENTS:

- Work shall include repairs to the precast concrete double tee flanges with insertion of flange biscuits. Work shall include repairs to random concrete cracking, concrete spalling repairs, joint sealant replacement, providing for a traffic coating for the upper deck, and inclusive of restriping for the upper deck.
- Work shall be completed within 90 days.
- Work hours shall be between the hours of 8:00 a.m. to 5:00 p.m. for the deck sealant replacement and the application of the traffic coating. All other deck repair work shall be completed on weekends.
- All work shall be in accordance with the Report recommendations, inclusive Drawing Detail, and acceptable repair product materials: "Product Data Cut Sheets" as completed by Matrix Engineering Group Inc. dated: August 30, 2019 (attached). Inclusive is the companion Report by sub consulting Engineers: Palmer Engineering Company dated: February 12, 2015 {for Information}.
- All work shall include a one (1) year construction warranty in workmanship.
- A Project Manager A&E professional will be assigned to administer this Project by the DeKalb County Facilities Management.
- Contractor must successfully have completed at least two (2) other similar size precast concrete parking deck repairs within the last five (5) years.

II. ADDITIONAL SPECIFICATIONS

- The bidder will be required to furnish a Bid Bond with its Bid in the amount of 10% of the Contract Amount. The Bid Bond shall be issued by a surety company licensed to write bonds in the State of Georgia, payable to DeKalb County, Georgia (or an official bank check), in the amount of ten percent (10%) of the Bid,

III. QUALIFICATION

- The contractor will have to be qualified to install the CFRP Tee Joint Biscuits (V2 Structural Systems products) by listing past projects where they have used and install the product on the Attachment B. Failure to provide this document with the Bid may result in the proposed Bid being deemed non-responsive.

Revised

PRICE SCHEDULE (pages 23-26)

PRICE SCHEDULE AND BID BOND MUST BE SUBMITTED IN A SEPARATE SEALED ENVELOPE OR BIDDER WILL BE DEEMED NON-RESPONSIVE AND WILL NOT BE CONSIDERED FOR AWARD. INCLUDING THE PRICE SCHEDULE AND BID BOND IN ANY AREA OUTSIDE OF THE SEPARATE SEALED ENVELOPE WILL RESULT IN THE BID BEING DEEMED NON-RESPONSIVE.***

PRICE SCHEDULE				
ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	TOTAL PRICE
Weekend Work Only				
1	<i>Double T Flange (T-Biscuits)</i> - remove existing joint sealant and backer rod by mechanical means, clean joint to remove surface contaminants, and install T-Biscuits, as shown, with proper size backer rod and BASF Master Seal NP2 multi-component polyurethane sealant.	Lump Sum		\$ _____
2	<i>Random Cracks</i> - rout and seal visible hairline cracks in deck slab, as shown, to a nominal 3/8-inch width/depth and install BASF Master Seal NP2 multi-component polyurethane sealant, repair to be completed on unit costs basis.	200 Linear Foot	\$ _____	\$ _____
3	<i>Random Concrete Spall Repairs</i> - remove existing spalled concrete, as shown, by mechanical means and install new polymer modified cementitious repair mortar to match adjacent concrete profile, repairs to be completed on unit costs basis.	100 Square Foot	\$ _____	\$ _____
During Normal Work Business (Hours M-F 8:00 a.m. - 5:00 p.m.)				
4	<i>Sealant Replacement</i> - remove existing joint sealant and backer rod by mechanical means, clean joint to remove surface contaminants, and install proper size backer rod with BASF Master Seal NP2 multi-component polyurethane sealant at top level, elevated slab joints and deck elevation vertical wall joints. Work to be completed simultaneously with traffic coating repair.	Lump Sum		\$ _____

Revised

5	<p><i>Traffic Coating</i> - Bead blast existing concrete slab to remove surface contaminants and install NeoGard AutoGard FC urethane fast curing heavy duty vehicular traffic coating system at top level, elevated slab only. Includes removal and replacement coating at pedestrian bridge to parking deck and deck restriping. Deck access broken into thirds (3rds) with each third (3rd) closed for presented duration.</p>	Lump Sum		\$ _____
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******End of Price Schedule******

Revised

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____

(hereinafter called the Principal) and _____

_____ (hereinafter called the Surety), a corporation chartered and existing under the laws of the State of _____ with its principal offices in the City of _____ and listed in the Federal Register and licensed to write surety bonds in the State of Georgia, are held and firmly bound unto DeKalb County, Georgia, in the full and just sum of _____ Dollars (\$_____) good and lawful money of the United States of America, to be paid upon demand of DeKalb County, Georgia, to which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, and assigns, jointly and severally and firmly by these presents.

WHEREAS, the Principal is about to submit, or has submitted to DeKalb County, Georgia, a Bid for **ITB # 19-101186 Decatur Library Parking Deck Repairs.**

WHEREAS, the Principal desires to file this Bond in accordance with the law to accompany this Bid.

NOW, THEREFORE, the conditions of this obligation are such that if the Bid be accepted within sixty (60) days of the Bid opening, the Principal shall execute a Contract in accordance with the Bid and upon the terms, conditions, and prices set forth therein, and in the form and manner required by DeKalb County, Georgia, and within ten (10) days from the date of Notice of Award of the Contract, execute a sufficient and satisfactory Performance Bond and Payment Bond payable to DeKalb County, Georgia, each in an amount of one hundred percent (100%) of the total Contract Price, in form and with security satisfactory to DeKalb County and furnish satisfactory proof of the insurance required, then this obligation to be void; otherwise, to be and remain in full force and virtue in law; and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to the aforesaid DeKalb County, Georgia, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

IN TESTIMONY THEREOF, the Principal and Surety have caused these presents to be duly signed and sealed this _____ day of _____, 20____.

PRINCIPAL

By: _____ (SEAL)

Signature of Principal

Print Name and Title of Authorized Signer

Print Name of Principal Business

Revised

ATTEST:

Corporate Secretary

SURETY

By: _____ (SEAL)
Signature of Surety (by Power of Attorney)

Print Name and Title of Authorized Signer

Print Name of Surety Business

WITNESS:

Revised

BID ACKNOWLEDGEMENT FORM

I, the undersigned, acknowledge that I have read the Bid Document in its entirety and agree to conform to its every requirement. I further acknowledge that failure to prepare, submit, or execute this bid in the exact manner requested will be just cause to reject my entire bid.

Name of Business Entity Submitting Bid

Print Name and Title of Authorized Signer

Business Entity Street Address

Authorized Signature

Business Entity City, State and Zip Code

Contact Person's Phone Number

Business Entity County

Contact Person's E-mail Address

- Bidder acknowledges addendum(s): No. 1 __, No. 2 __, No. 3 __ (if Applicable) _____ (Initial)
- Bidder acknowledges that this bid is valid for 90 days from and including _____ (Initial)
the bid opening date.
- Bidder acknowledges that bid meets or exceeds minimum specifications. _____ (Initial)
Any deviation from minimum specifications must be explained, in detail,
by bidder as to how the bid does not meet the exact specifications.
- Bidder acknowledgement of Revisions to the above Terms and Conditions:
 - No revisions _____ (Initial)
 - There are revisions and they are included with the bid submittal _____ (Initial)

The above acknowledgment must be properly signed and firmly attached to your bid. The acknowledgment becomes a part of your bid and without it your bid is not be complete and will be subject to rejection.

THIS PAGE MUST BE RETURNED WITH YOUR BID. FAILURE TO SUBMIT THIS COMPLETED FORM WILL RESULT IN YOUR BID BEING DEEMED NON-RESPONSIVE.

Revised

ATTACHMENT A

REQUIRED DOCUMENTS CHECKLIST

Bidder shall complete and submit the following documents with their bid:

Bid Page No.	Title	Check This Box If Included With Bid
25	Bid Acknowledgement Form*	
26	Required Documents Checklist	
27	Contractor Reference and Release Form*	
28	Subcontractor Reference and Release Form, if applicable**	
30	Contractor Affidavit*	
31	Subcontractor Affidavit, if applicable**	
32-40	LSBE - Exhibits A and/or B of Attachment G*	
42	New Employee Tracking Form*	
41	First Source Jobs Acknowledgement Form *	
	Business License*	
23-24	Bid Bond* (separate envelope with price schedule)	

***If these mandatory forms are not completed and submitted with the bid, the bidder will be deemed non-responsive.**

****These forms are applicable if a subcontractor will be utilized to fulfill the requirements of this contract. If these forms are applicable, they must be completed and submitted along with the bid. Failure to submit these forms, if applicable, will result in the bidder being deemed non-responsive.**

I, the undersigned, acknowledge that I have included the requested documents as listed above.

Printed Name

Signature

Revised

ATTACHMENT B

CONTRACTOR REFERENCE AND RELEASE FORM

List below at least three (3) references, including company name, contact name, address, email address, telephone numbers and contract period who can verify your experience and ability to perform the type(s) of product(s)/ service(s) listed in the solicitation. Contractor must successfully have completed at least two (2) other similar size precast concrete parking deck repairs within the last five (5) years.

Company Name	Contract Period		
Contact Person Name and Title	Telephone Number (include area code)		
Complete Primary Address	City	State	Zip Code
Email Address	Fax Number (include area code)		
Project Name and Description			

Company Name	Contract Period		
Contact Person Name and Title	Telephone Number (include area code)		
Complete Primary Address	City	State	Zip Code
Email Address	Fax Number (include area code)		
Project Name and Description			

Company Name	Contract Period		
Contact Person Name and Title	Telephone Number (include area code)		
Complete Primary Address	City	State	Zip Code
Email Address	Fax Number (include area code)		
Project Name and Description			

REFERENCE CHECK RELEASE STATEMENT

You are authorized to contact the references provided above for purposes of this ITB.

Signed _____ Title _____
(Authorized Signature of Bidder)

Company Name _____ Date _____

Revised

ATTACHMENT C

SUBCONTRACTOR REFERENCE AND RELEASE FORM

List below at least three (3) references, including company name, contact name, address, email address, telephone numbers and contract period who can verify your experience and ability to perform the type(s) of product(s)/ service(s) listed in the solicitation.

Company Name	Contract Period		
Contact Person Name and Title	Telephone Number (include area code)		
Complete Primary Address	City	State	Zip Code
Email Address	Fax Number (include area code)		
Project Name and Description			

Company Name	Contract Period		
Contact Person Name and Title	Telephone Number (include area code)		
Complete Primary Address	City	State	Zip Code
Email Address	Fax Number (include area code)		
Project Name and Description			

Company Name	Contract Period		
Contact Person Name and Title	Telephone Number (include area code)		
Complete Primary Address	City	State	Zip Code
Email Address	Fax Number (include area code)		
Project Name and Description			

REFERENCE CHECK RELEASE STATEMENT

You are authorized to contact the references provided above for purposes of this ITB.

Signed _____ Title _____
 (Authorized Signature of Bidder)

Company Name _____ Date _____

Revised

ATTACHMENT D

CONTRACTOR & SUBCONTRACTOR EVIDENCE OF COMPLIANCE:

- (1) County contracts for the physical performance of services within the state of Georgia shall include the following provisions:¹
 - a. the contractor has registered with and is authorized to use the federal work authorization program to verify information on all newly hired employees or subcontractors;
 - b. by affidavit, the contractor must attest to the contractor's name, address, user identification number, date of authorization, and verification of the continual participation throughout the contract period, and
 - c. the affidavit shall become a part of the covered contract and must be attached.
- (2) No contractor or subcontractor who enters into a contract with the County shall enter into such a contract or subcontract in connection with the physical performance of services within Georgia unless the contractor or subcontractor registers and participates in the federal work authorization program to verify information of all newly hired employees. Any employee, contractor, or subcontractor of such contractor or subcontractor shall also be required to satisfy the requirements of O.C.G.A. § 13-10-91, as amended.
- (3) Upon contracting with a new subcontractor, a contractor or subcontractor shall, as a condition of any contract or subcontract entered into pursuant to O.C.G.A. § 13-10-91, as amended, agree to provide the County with notice of the identity of any and all subsequent subcontractors hired or contracted by the contractor or subcontractor. Such notice shall be provided within five (5) business days of entering into a contract or agreement for hire with any subcontractor. Such notice shall include an affidavit from each subsequent contractor attesting to the subcontractor's name, address, user identification number, and date of authorization to use the federal work authorization program.
- (4) An affidavit shall be considered an open public record; provided, however, that any information protected from public disclosure by federal law or by Article 4 of Chapter 28 of Title 50 shall be redacted. Affidavits shall be maintained by the County for five years from the date of receipt.
- (5) To verify compliance, the contractor agrees to participate in random audits conducted by the Commissioner of the Georgia Department of Labor. The results of the audits shall be published on the www.open.georgia.gov website, and on the Department of Labor's website no later than December 31 of each year.
- (6) Any person who knowingly and willfully makes a false, fictitious, or fraudulent statement in an affidavit submitted pursuant to O.C.G.A. § 13-10-91 shall be guilty of a violation of Code § 16-10-20 and, upon conviction, shall be punished as provided in such section. Contractors and subcontractors convicted for false statements based on a violation of such section shall be prohibited from bidding on or entering into any public contract for twelve (12) months following such conviction.

¹ O.C.G.A. § 13-10-91, as amended

ATTACHMENT E

CONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned verifies its compliance with O.C.G.A. § 13-10-91, as amended, stating affirmatively that the individual, firm or corporation which is contracting with DEKALB COUNTY, GA, a political subdivision of the State of Georgia, has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603, in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91, as amended]. The affiant agrees to continue to use the federal work authorization program throughout the contract period.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with the COUNTY, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. § 13-10-91, as amended, on the Subcontractor Affidavit form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the COUNTY, within five (5) days from when the subcontractor(s) is retained to perform such service.

BY: Authorized Officer or Agent
(Bidder's Name)

Federal Work Authorization
Enrollment Date

Title of Authorized Officer or Agent of Bidder

Identification Number

Printed Name of Authorized Officer or Agent

Address (* do not include a post office box)

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE

_____ DAY OF _____, 20__

Notary Public

My Commission Expires: _____

Revised

ATTACHMENT F

SUBCONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned verifies its compliance with O.C.G.A. § 13-10-91, as amended, stating affirmatively that the individual, firm, or corporation which is engaged in the physical performance of services under a contract with _____ name of contractor) on behalf of DEKALB COUNTY, GA, a political subdivision of the State of Georgia, has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603, in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91, as amended]. The affiant agrees to continue to use the federal work authorization program throughout the contract period.]

BY: Authorized Officer or Agent
(Bidder's Name)

Federal Work Authorization
Enrollment Date

Title of Authorized Officer or Agent of Bidder

Identification Number

Printed Name of Authorized Officer or Agent

Address (* do not include a post office box)

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE

_____ DAY OF _____, 20__

Notary Public

My Commission Expires: _____

Revised

ATTACHMENT G

**DEKALB FIRST LSBE INFORMATION
WITH EXHIBITS A – B**

**SCHEDULE OF LOCAL SMALL BUSINESS ENTERPRISE PARTICIPATION
OPPORTUNITY TRACKING FORM**

The Chief Executive Officer and the Board of Commissioners of DeKalb County believe that it is important to encourage the participation of small and local businesses in the continuing business of County government; and that the participation of these types of businesses in procurement will strengthen the overall economic fabric of DeKalb County, contribute to the County's economy and tax base, and provide employment to local residents. Therefore, the Chief Executive Officer and the Board of Commissioners have made the success of local small businesses a permanent goal of DeKalb County by implementing the DeKalb First Local Small Business Enterprise Ordinance.

**PROVISIONS OF DEKALB FIRST LOCAL SMALL BUSINESS ENTERPRISE (LSBE)
ORDINANCE**

Percentage of LSBE Participation Required
20% of Total Award

Certification Designation	Request For Proposals (RFP)
LSBE Within DeKalb (LSBE-DeKalb)	Ten (10) Preference Points
LSBE Outside DeKalb (LSBE-MSA)	Five (5) Preference Points
Demonstrated GFE	Two (2) Preference Points

Certified Local Small Business Enterprises (LSBEs) located within DeKalb County and prime contractors utilizing LSBEs that are locally-based inside DeKalb County shall receive ten (10) points in the initial evaluation of their response to any Request for Proposal. Certified LSBEs located outside of DeKalb County but within the nine (9) County Metropolitan Statistical Area (MSA) consisting of Cherokee, Clayton, Cobb, Douglas, Fayette, Fulton, Gwinnett, Henry and Rockdale Counties shall receive five (5) points in the initial evaluation of their response to any Request for Proposal. Prime Contractors who demonstrate sufficient good faith efforts in accordance with the requirements of the ordinance shall be granted two (2) points in their initial evaluation of responses to any Request for Proposal. Pro-rated points shall be granted where a mixture of LSBE-DeKalb and LSBE MSA firms are utilized. Utilization of each firm shall be based upon the terms of the qualified sealed solicitation.

Prime Contractor(s) deemed responsible and remains responsive to an Invitation to Bid (ITB) because they are either a certified LSBE-DeKalb or LSBE-MSA firm or has obtained 20% participation of an LSBE-DeKalb or LSBE-MSA firm, submits the lowest bid price shall be deemed the lowest, responsive and responsible bidder.

Prime Contractor(s) deemed responsible and remains responsive to an Invitation to Bid (ITB) and documented good faith efforts, submits a lower bid price than a Prime Contractor that achieved 20% LSBE participation, or otherwise required benchmark, then the Prime Contractor who actually met the benchmark will be given the opportunity to match the lowest bid price of the Prime Contractor who only made good faith efforts. Prime Contractor(s) who choose not to match the lowest bid price, then the Prime Contractor who made the good faith efforts will be deemed the lowest, responsive and responsible bidder.

Revised

For all qualified sealed solicitations, the Director of Purchasing and Contracting, DeKalb County Government, shall determine if the bidder/proposer has included written documentation showing that at least twenty percent (20%) of the total contract award will be performed by a certified LSBE. This written documentation shall be in the form of a notarized Schedule of LSBE Participation (Attached hereto as "Exhibit A".) For all contracts, a signed letter of intent from all certified LSBEs describing the work, material, equipment and/or services to be performed or provided by the LSBE(s) and the agreed upon percentage shall be due with the bid or proposal documents and included with "Exhibit A". The certified vendor list establishes the group of Certified LSBE's from which the bidder/proposer must solicit subcontractors for LSBE participation. This list can be found on our website <https://www.dekalbcountyga.gov/purchasing> or obtained from the Special Projects LSBE Program team.

Prime Contractors failing to meet the LSBE benchmark must document and demonstrate Good Faith Efforts in accordance with the attached "Checklist for Good Faith Efforts" portion of "Exhibit A." The notarized Schedule of LSBE Participation shall be due and submitted with each bid or proposal. Failure to achieve the LSBE benchmark or demonstrate good faith efforts shall result in a bid or proposal being rejected. Prime Contractors that fail to attend the mandatory LSBE meeting in person or via video conference shall mean that the Prime Contractor has not demonstrated sufficient good faith efforts and its bid or proposal if submitted, shall be deemed non-responsive without any further review.

Upon award, Prime Contractors are required to submit a report detailing LSBE Sub-Contractor usage with each request for payment and not less than on a monthly basis. Prime Contractors shall ensure that all LSBE sub-contractors have been paid within seven (7) days of the Prime's receipt of payment from the County. Failure to provide requested reports/documentation shall constitute a material breach of contract, entitling the County to terminate the Contract for default or pursue other remedies. LSBE sub-contractors must confirm payments received from the Prime(s) for each County contract they participate in.

For eligible bids/proposals valued over \$5,000,000.00, the Mentor-Protégé provision of the Ordinance shall apply. Prime Contractors must agree to become mentors and take on an LSBE protégé in an effort to enhance the potential of future LSBEs. Qualifying projects shall be performed by both Mentor and Protégé through a subcontract between both parties. This requirement is in addition to all other applicable sections of the DeKalb First Ordinance. Please review the ordinance, section 2-214 or contact the LSBE Program Representative for detailed information regarding this initiative.

Revised

EXHIBIT A

**SCHEDULE OF DEKALB FIRST LOCAL SMALL BUSINESS ENTERPRISE PARTICIPATION
OPPORTUNITY TRACKING FORM**

As specified, Bidders and Proposers are to present the details of LSBE participation below:

PRIME BIDDER/PROPOSER _____

SOLICITATION NUMBER: **ITB 19-101186**

TITLE OF UNIT OF WORK – Decatur Library Parking Deck Repairs

1. My firm, as the prime bidder/proposer on this unit of work, is a certified (check all that apply):
___ LSBE-DeKalb ___ LSBE-MSA

2. If you are a Certified LSBE-DeKalb or MSA, please indicate below the percentage of that your firm will carry out directly: _____.

3. If the prime bidder/proposer is a joint venture, please describe below the nature of the joint venture and level of work and percentage of participation to be provided by the LSBE-DeKalb or MSA joint venture firm.

4. List the LSBE-DeKalb or MSA subcontractors and/or firms (including suppliers) to be utilized in of this contract, if awarded. No changes can be made in the subcontractors listed below without the prior written approval of the County. Please attach a signed letter of intent from all certified LSBEs describing the work, materials, equipment or services to be performed and/or provided and the agreed upon percentage of work to be performed. A Letter of Intent form is attached hereto as "Exhibit B".

Name of Company	
Address	
Telephone	
Fax	
Contact Person	
Indicate certification status and attach proof of certification: LSBE-DeKalb/LSBE-MSA	
Description of services to be performed	
Percentage of work to be performed	

Revised

Name of Company	
Address	
Telephone	
Fax	
Contact Person	
Indicate certification status and attach proof of certification: LSBE-DeKalb/LSBE-MSA	
Description of services to be performed	
Percentage of work to be performed	

Name of Company	
Address	
Telephone	
Fax	
Contact Person	
Indicate certification status and attach proof of certification: LSBE-DeKalb/LSBE-MSA	
Description of services to be performed	
Percentage of work to be performed	

Name of Company	
Address	
Telephone	
Fax	
Contact Person	
Indicate certification status and attach proof of certification: LSBE-DeKalb/LSBE-MSA	
Description of services to be performed	
Percentage of work to be performed	

Name of Company	
Address	
Telephone	
Fax	
Contact Person	
Indicate certification status and attach proof of certification: LSBE-DeKalb/LSBE-MSA	
Description of services to be performed	
Percentage of work to be performed	

Revised

EXHIBIT A, CONT'D
DEKALB COUNTY
CHECKLIST FOR GOOD FAITH EFFORTS

A bidder/proposer that does not meet the County's LSBE participation benchmark is required to submit documentation to support all "Yes" responses as proof of "good faith efforts." Please indicate whether or not any of these actions were taken:

	Yes	No	Description of Actions
1.			Prime Contractors shall attend a MANDATORY LSBE Meeting in person or via video conference within two-weeks of advertisement of the solicitation.
2.			Provide a contact log showing the company's name, contact person, address, email and contact number (phone or fax) used to contact the proposed certified subcontractors, nature of work requested for quote, date of contact, the name and title of the person making the effort, response date and the percentage of work.
3.			Provide interested LSBEs via email, of any new relevant information, if any, at least 5 business days prior to submission of the bid or proposal.
4.			Efforts made to divide the work for LSBE subcontracting areas likely to be successful and to identify portions of work available to LSBEs consistent with their availability. Include a list of divisions of work not subcontracted and the corresponding reasons for not including them. The ability or desire of a bidder/proposer to perform the contract work with its own organization does not relieve it of the responsibility to make good faith efforts on all scopes of work subject to subcontracting.
5.			Efforts were made to assist potential LSBE subcontractors meet bonding, insurance, or other governmental contracting requirements. Where feasible, facilitating the leasing of supplies or equipment when they are of such a specialized nature that the LSBE could not readily and economically obtain them in the marketplace.
6.			Communication via email or phone with DeKalb First Program Staff seeking assistance in identifying available LSBEs. Provide DeKalb First Program Staff representative name and title, and date of contact.
7.			For all contracts, a signed letter of intent from all certified LSBEs describing the work, materials, equipment or services to be performed or provided by the LSBE(s) and the agreed upon LSBE participation percentage shall be due with the bid or proposal documents.
8.			Other Actions, to include Mentor/Protégé commitment for solicitations \$5M and above (specify):

Please explain all "no" answers above (by number):

Revised

This list is a guideline and by no means exhaustive. The County will review these efforts, along with attached supporting documents, to assess the bidder/proposer's efforts to meet the County's LSBE Participation benchmark. If you require assistance in identifying certified, bona fide LSBEs, please contact the Purchasing and Contracting Department - DeKalb First Program, Felton Williams, Procurement Projects Manager at 404-371-6312.

Revised

EXHIBIT A, CONT'D

DEKALB FIRST LOCAL SMALL BUSINESS ENTERPRISE SCHEDULE OF PARTICIPATION OPPORTUNITY TRACKING FORM

Bidder/Proposer Statement of Compliance

Bidder(s)/Proposer(s) hereby state that they have read and understand the requirements and conditions as set forth in the objectives and that reasonable effort were made to support the County in providing the maximum practicable opportunity for the utilization of LSBEs consistent with the efficient and economical performance of this contract. The Bidder and any subcontractors shall file compliance reports at reasonable times and intervals with the County in the form and to the extent prescribed by the Director of DeKalb County Purchasing and Purchasing and Contracting Department. Compliance reports filed at such times as directed shall contain information as to the employment practices, policies, programs and statistics of Contractors and their subcontractors.

1. Non-Discrimination Policy

- a. During the performance of this agreement, Contractor agrees to conform to the following Non-Discrimination Policy adopted by the County.
- b. Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, or disability. The Contractor will take action to ensure that applicants are employed, and the employees are treated during employment without regard to their race, color, religion, sex, national origin, or disability. Such action shall include, but not be limited to, the following:
 - (1) Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places available to employees and applicants for employment, notices to be provided setting forth provisions of this non-discrimination clause.
 - (2) Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, or disability.
- c. Without limiting the foregoing, Contractor shall not discriminate on the basis of disability in the admission or access to, or treatment or employment in, the programs and activities, which form the subject of the contract. The Contractor will take action to ensure that applicants for participation in such programs and activities are considered without regard to disability. Such action shall include, but not be limited to, the following:
 - (1) Contractor agrees to post in conspicuous places available to participants in its programs and activities notices to be provided setting forth the provisions of this non-discrimination clause.
 - (2) Contractor shall, in all solicitations or advertisements for programs or activities, which are the subject of the contract, state that all qualified applicants will receive consideration for participation without regard to disability.

2. Commitment

The undersigned certifies that he/she has read, understands, and agrees to be bound by the bid specifications, including the accompanying Exhibits and other terms and conditions of the Invitation to Bid and/or Request for Proposal regarding LSBE utilization. The undersigned

Revised

further certifies that he/she is legally authorized by the bidder or responder to make the statements and representations in Exhibit A and that said statements and representations are true and correct to the best of his/her knowledge and belief. The undersigned will enter into formal agreement(s) with the LSBE(s) listed in this Exhibit A, which are deemed by the owner to be legitimate and responsible LSBEs. Said agreement(s) shall be for the work and contract with the Prime Contractor. The undersigned understands and agrees that if any of the statements and representations are made by the Bidder knowing them to be false, or if there is a failure of the successful Bidder (i.e., Contractor) to implement any of the stated agreements, intentions, objectives, goals and commitments set forth herein without prior approval of the County, then in any such events the contractor's act or failure to act, as the case may be, shall constitute a material breach of contract, entitling the County to terminate the Contract for default. The right to so terminate shall be in addition to, and not in lieu of, any other rights and remedies the County may have for other defaults under the Contract. Additionally, the Contractor will be subject to the loss of any future contract awards by the County for a period of one year.

Firm Name (Please Print):

Firm's Officer:

(Authorized Signature and Title Required) Date

Sworn to and Subscribed to before me this ____ day of _____, 201__.

Notary Public
My Commission Expires: _____

EXHIBIT B

**LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR
PROVIDING MATERIALS OR SERVICES**

Instructions:

1. Complete the form in its entirety and submit with bid documents.
2. Attach a copy of the LSBE's current valid Certification Letter.

To: _____
(Name of Prime Contractor Firm)

From: _____ **LSBE –DeKalb** **LSBE –MSA**
(Name of Subcontractor Firm) (Check all that apply)

ITB Number: 19-101186

Project Name: Decatur Library Parking Deck Repairs

The undersigned subcontractor is prepared to perform the following described work or provide materials or services in connection with the above project (specify in detail particular work items, materials, or services to be performed or provided).

Description of Materials or Services	Project/Task Assignment	% of Contract Award

Prime Contractor

Sub-contractor

Signature: _____

Signature: _____

Title: _____

Title: _____

Date: _____

Date: _____

Revised



FIRST SOURCE JOBS ORDINANCE
INFORMATION (WITH EXHIBITS 1 – 4)

EXHIBIT 1

FIRST SOURCE JOBS ORDINANCE ACKNOWLEDGEMENT

The DeKalb County First Source Ordinance requires contractors or beneficiaries of eligible projects entering into any type of agreement with the County, including purchase orders, regardless of what they may be called, for the procurement or disposal of supplies, services, construction projects, professional or consultant services, which is funded in whole or part with County funds or County administered funds in which the contractor is to receive \$50,000 or more in County expenditures or committed expenditures and recipient of urban redevelopment action grants or community development block funds administered in the amount of \$50,000 or more to make a good faith effort to hire DeKalb County residents for at least 50% of jobs created using the First Source Registry (candidate database) within one hundred twenty (120) days of contract execution. The work to be performed under this contract is subject to the provisions of the DeKalb County First Source Jobs Ordinance. All contractors will be asked to submit an Employment Roster and/or copies of active payroll registers on a monthly basis to verify compliance. The undersigned acknowledges and agrees to comply with the provisions of the DeKalb County First Source Jobs Ordinance.

CONTRACTOR OR BENEFICIARY INFORMATION:

Contractor or Beneficiary Name (Signature)

Contractor or Beneficiary Name (Printed)

Title

Telephone

Email

Name of Business

Please answer the following questions:

1. How many job openings do you anticipate filling related to this contract? _____
2. How many incumbents/existing employees will retain jobs due to this contract?
DeKalb Residents: _____ Non-DeKalb Residents: _____
3. How many work hours per week constitutes Full Time employment? _____

Please return this form to WorkSource DeKalb, (404)687-3900 or email to fkadkins@dekalbcountyga.gov, malee@dekalbcountyga.gov, vlricksion@dekalbcountyga.gov, or jmjones@dekalbcountyga.gov

WorkSource DeKalb (WSD) is an EEO/M/F/D/V employer/program. Auxiliary aids/services are available upon request to individuals with disabilities. Persons with hearing impairments may call 1-800-255-0135 or 711 TTY for assistance. WSD is 100% funded by the U. S. Department of Labor and is a proud partner of the American Job Center Network. Revised March 2018

Revised



FIRST SOURCE JOBS ORDINANCE
INFORMATION
EXHIBIT 2

NEW EMPLOYEE TRACKING FORM

Name of Bidder _____

Address _____

E-Mail _____

Phone Number _____

Fax Number _____

Do you anticipate hiring from the First Source Candidate Registry? Y or N (Circle one)

If so, the approximate number of employees you anticipate hiring: _____

Type of Position (s) you anticipate hiring: (List position title, one position per line) Attach job description per job title:	The number you anticipate hiring:	Timeline

Please return this form to WorkSource DeKalb, fax (404) 687-4099 or email to FirstSourceJobs@dekalbcountyga.gov.

**FIRST SOURCE JOBS ORDINANCE INFORMATION
EXHIBIT 3**

BUSINESS SERVICE REQUEST FORM

Please note: We need one form completed for each position that you have available.

DATE: _____ FEDERAL TAX ID: _____

COMPANY NAME: _____ WEBSITE: _____

ADDRESS: _____

(WORKSITE ADDRESS IF DIFFERENT): _____

CONTACT NAME: _____

CONTACT PHONE: _____ CONTACT FAX: _____

CONTACT E-MAIL ADDRESS: _____

Are you a private employment agency or staffing agency? YES NO

JOB DESCRIPTION: (PLEASE INCLUDE A COPY OF JOB DESCRIPTION)

POSITION TITLE:

NUMBER OF POSITIONS AVAILABLE: _____ **TARGET START DATE:** _____

WEEKLY WORK HOURS: 20-30 hours 30-40 hours Other

SPECIFIC WORK SCHEDULE:

SALARY RATE(OR RANGE):

PERM TEMP TEMP-TO-PERM SEASONAL

PUBLIC TRANSPORTATION ACCESSIBILITY YES NO

IF SCREENINGS ARE REQUIRED, SELECT ALL THAT APPLY:

CREDIT DRUG MVR BACKGROUND OTHER

Please return form to: Business Solutions Unit (First Source)

774 Jordan Lane Bldg. #4

Decatur, Ga. 30033

Phone: (404) 687-3400

FirstSourceJobs@dekalbcountyga.gov

FIRST SOURCE JOBS ORDINANCE INFORMATION

Revised

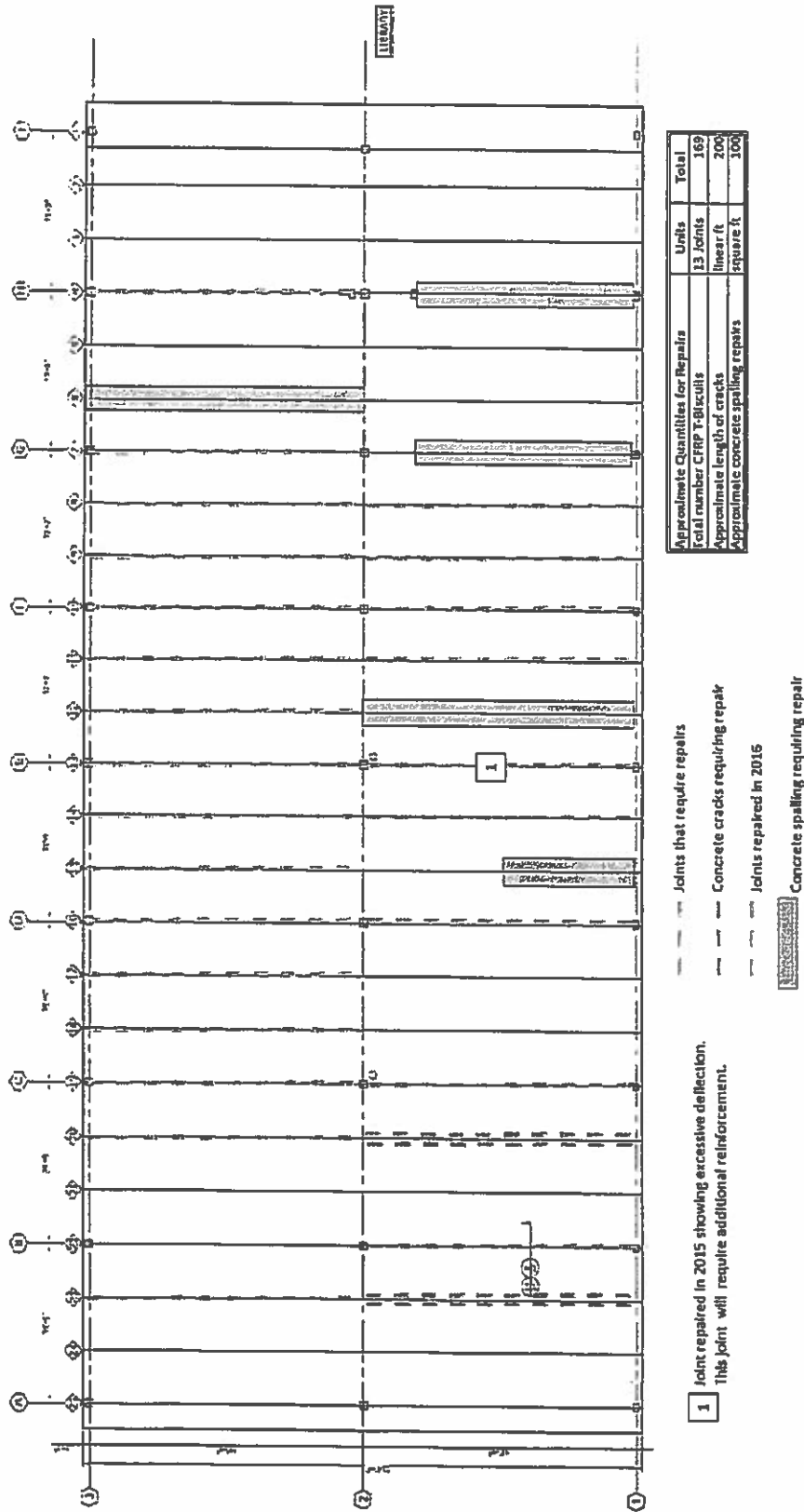
EXHIBIT 4

**EMPLOYMENT ROSTER
DeKalb County**

Contract Number: _____								
Project Name: _____								
Contractor: _____						Date: _____		
Name	Position:	Start Date	Hourly Rate of Pay	Hired for this Project? (yes/no)	Anticipated Length of Employment (Months)	% of Time Dedicated to the Project	Full or Part Time? (No. of Hours)	Georgia County of Residency

Revised

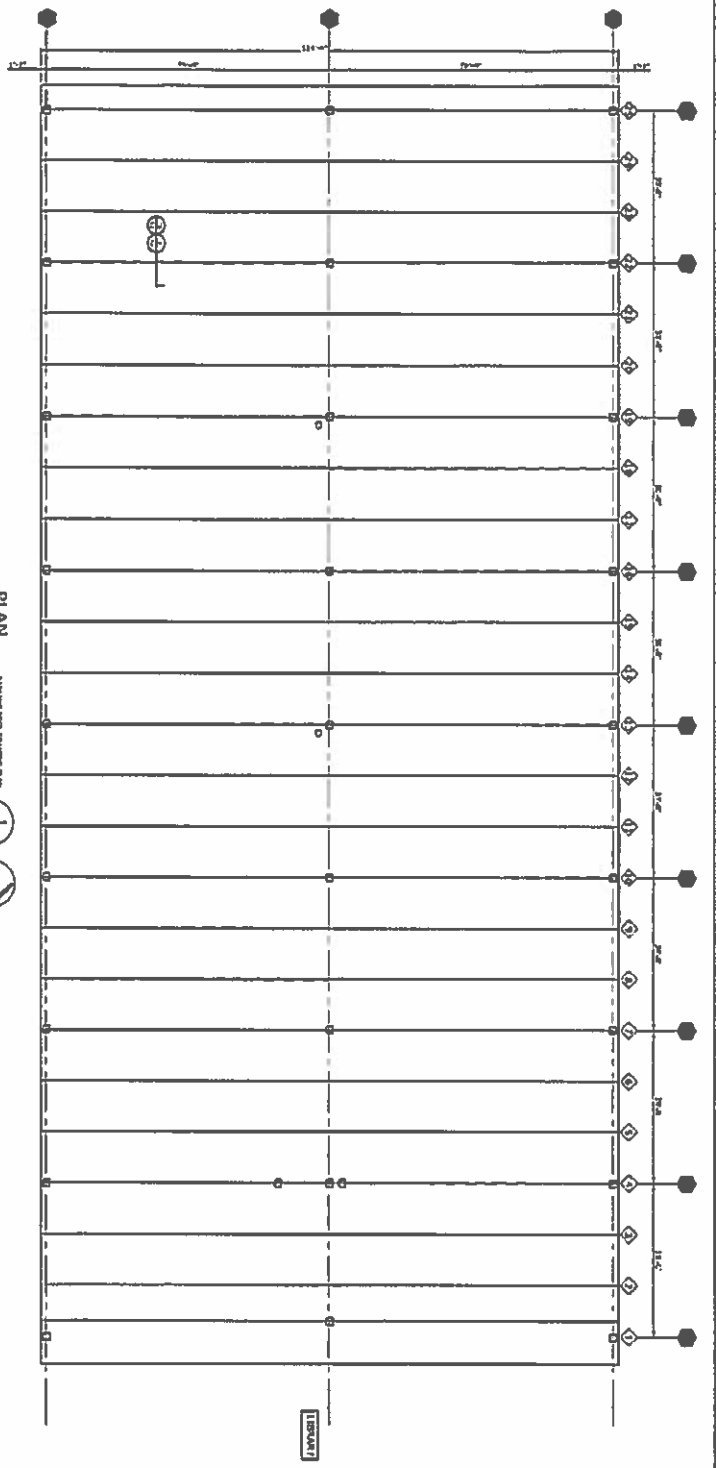
PRODUCT DATA CUT SHEETS



Project: Decatur Library Parking Deck Repairs- Decatur, GA

Figure 1: Concrete Repairs Location Plan

August 30, 2019

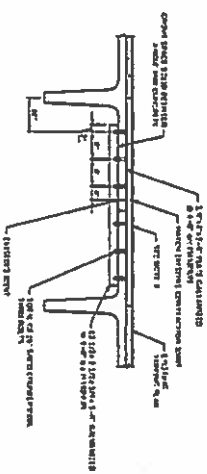


PLAN

SECTION 1
S1



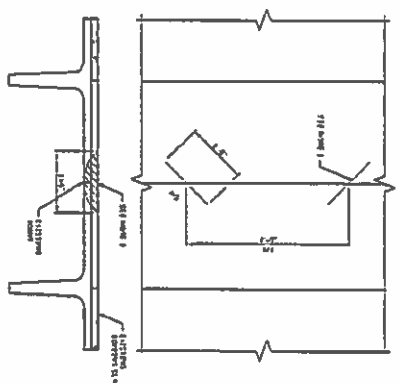
Notes:
1. All dimensions are in feet and inches unless otherwise noted.
2. All dimensions are to the center of the member unless otherwise noted.



SECTION

SECTION 2
S1

Notes:
1. All dimensions are in feet and inches unless otherwise noted.
2. All dimensions are to the center of the member unless otherwise noted.



SECTION

SECTION 2A
S1

Notes:
1. All dimensions are in feet and inches unless otherwise noted.
2. All dimensions are to the center of the member unless otherwise noted.

SHEET
S1
1 OF 1

DECK FRAMING PLAN

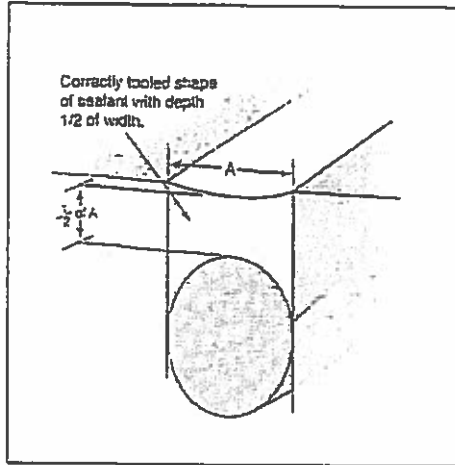


THIS SEAL AND THE REGISTERED ENGINEER'S LICENSE NUMBER ARE THE PROPERTY OF THE BOARD OF PROFESSIONAL ENGINEERS OF THE STATE OF GEORGIA. ANY REPRODUCTION OR ALTERATION OF THIS SEAL IS PROHIBITED BY LAW.

PALMER
REGISTERED PROFESSIONAL ENGINEER
STATE OF GEORGIA
NO. 12854
EXPIRES 12/31/2014

**DECATUR LIBRARY
PARKING DECK
DECATUR, GA**

ISSUED:		
NO.	REVISIONS	DATE



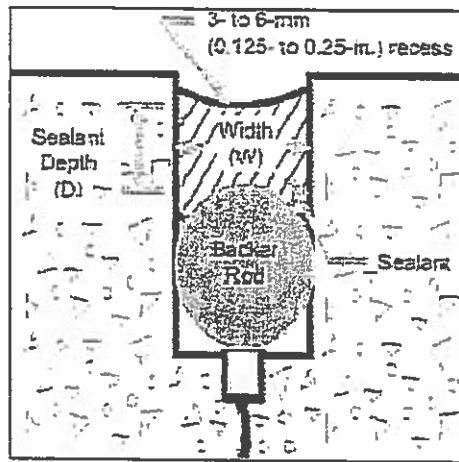
JOINT DETAIL
- FORMED JOINTS

SCALE: NTS

A
 S1

NOTES:

1. FOLLOW ALL MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS FOR PREPARATION AND INSTALLATION.
2. Sound test around formed joints and repair unsound concrete and joint nosing with Low mod mortar.
3. Remove old sealant and clean joints
- 3.1. REPAIR PRODUCT: Silcadur 21 Low mod mortar (Uniman 20/40 even dried sand)
4. Seal joints with two component sealant and properly sized and placed backer rod.
- 4.1. Sikaflex 2CNSTG



JOINT DETAIL

SCALE: NTS

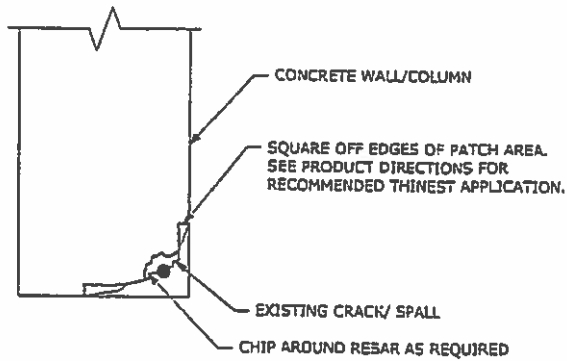
A2
 S1

NOTES:

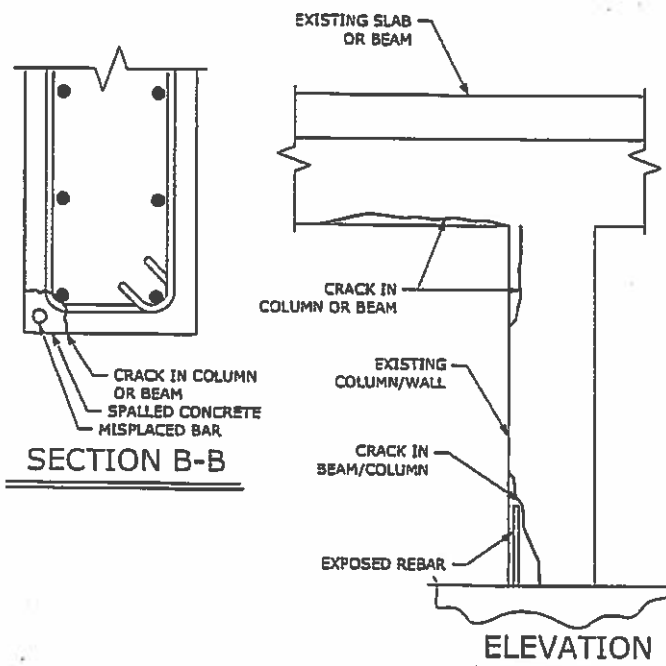
1. FOLLOW ALL MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS FOR PREPARATION AND INSTALLATION.
2. Sound test around cracks to determine soundness of concrete around cracks.
3. Route and seal cracks with two component sealant and properly sized and placed backer rod.
- 3.1. REPAIR PRODUCT: Sikaflex 2CNSTG



PROJECT TRINITY PARKING DECK -II
 PROJECT NO. 16135
 SHEET NO. S1 OF
 CALCULATED BY ELH DATE 04/20/2016



DETAIL OF PATCH PREPARATION



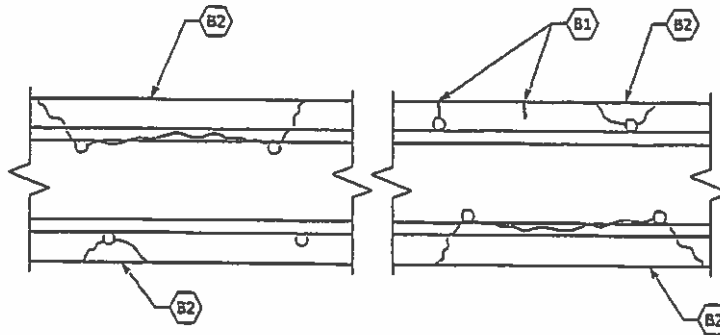
Repair Program A - Exposed Rebar
 Repair and restoration of exposed and corroded reinforcing for vertical and overhead conditions:

1. Follow all instructions and recommendations of Manufacturer for surface prep and installation of repair products. Cure as directed by manufacturer.
2. Chip away all loose and delaminated concrete.
3. Notify engineer of any rebar that has experienced a loss of cross section in excess of 30% for possible reinforcement.
4. Square off repair area with 3/4-inch deep edges, minimum, and achieve an ICRI CSP \geq 7-8. Coordinate depth of squared off area with minimum depth requirements of product used in a particular repair area.
5. Remove concrete around perimeter of reinforcing where more than 1/3 of perimeter of bar is exposed. Clearance around bar need only be that necessary for removal of concrete, cleaning of rebar, and application of repair products.
6. Mechanically clean steel with wire brush or sand blasting to a bare steel condition.
7. Apply anti-corrosion bonding agent - Armatec 110 Epochem - to steel.
8. Saturate Concrete to a SSD condition
9. Patch concrete with cementitious overhead non-sag mortar - Sika 123 Plus.
10. Cure as directed by manufacturer.

DETAIL COLUMN AND BEAM REPAIR **B**
 SCALE: 3/4" = 1'-0" **S2**

PALMER
 engineering
 company
MEMBER IAC AND OTHER ENGINEERING COMPANIES
 3581 Habersham at Northlake, Tucker, Georgia 30084
 P:(770) 908-9900 F:(770) 908-9919 www.palmer.com

PROJECT TRINITY PARKING DECK -II
 PROJECT NO. 16135
 SHEET NO. S2 OF
 CALCULATED BY ELH DATE 04/20/2016



EXAMPLE SPALLING AND REBAR EXPOSURE AT TOP AND BOTTOM OF SLAB

Repair Program B -Concrete Slab and Stair Surface Repair:

TYPE B1

1. Type B1 conditions are cracks in the slab or stair surface that appear to have water penetrating the crack but have not yet caused concrete to spall.
2. Sound test around cracks to determine the soundness of concrete around the cracks.
3. Route and seal the cracks with SikaFLEX 2C NS/SL, two component sealant.
4. Following all manufacturer's instructions and recommendations for preparation, installation and curing.

TYPE B2

1. Type B2 conditions have spalled concrete and exposed rebar.
2. Follow all instructions and recommendations of Manufacturer for surface prep and installation of repair products. Cure as directed by manufacturer.
3. Chip away all loose and delaminated concrete.
4. Notify engineer of any rebar that has experienced a loss of cross section in excess of 30% for possible reinforcement.
5. Square off repair area with 3/4-inch deep edges, minimum, and achieve an ICRI CSP # 7-8. Coordinate depth of squared off area with minimum depth requirements of product used in a particular repair area.
6. Remove concrete around perimeter of reinforcing where more than 1/3 of perimeter of bar is exposed. Clearance around bar need only be that necessary for removal of concrete, cleaning of rebar, and application of repair products.
7. Mechanically clean steel with wire brush or sand blasting to a bare steel condition.
8. Apply anti-corrosion bonding agent - Armotec 110 Epochem - to steel.
9. Saturate Concrete to a SSD condition
10. Patch concrete with cementitious overhead non-sag mortar - Silka 123 Plus.
11. Cure as directed by manufacturer.

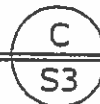
OWNER OPTION ADD/ALTERNATE

12. The owner may, at their option, have the contractor price and install a surface coating over all horizontal surfaces in the exposed stairs to reduce water infiltration and slow the rate of deterioration of concrete and rebar. See repair procedure below:
13. Remove loose and delaminated concrete.
14. Prepare surface in accordance with manufacturer's directions and recommendations.
15. Install leveling compound in some areas. See repair detail D.
16. Apply Sikagard Flexcoat System in accordance with manufacturer's directions and recommendations.
17. Cure as directed by the manufacturer.

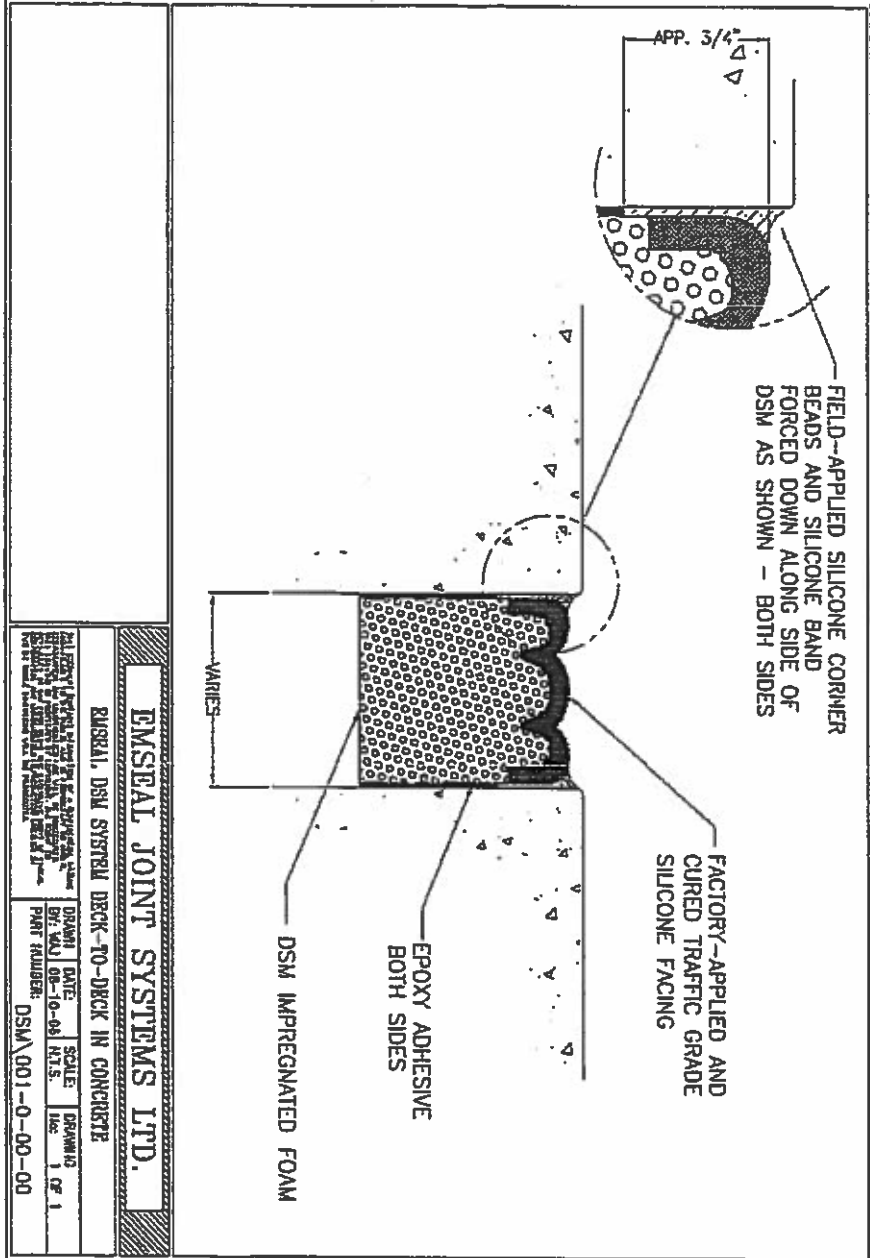
DETAIL

SLAB AND STAIR REPAIR

SCALE: 3/4" = 1'-0"



PROJECT	TRINITY PARKING DECK -II		
PROJECT NO.	16135		
SHEET NO.	S3	OF	
CALCULATED BY	ELH	DATE	04/20/2016



JOINT DETAIL

NOTES:

1. FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS. NOTIFY ENGINEER, IN WRITING, OF DISCREPANCIES IN QUANTITIES OR LOCATION OF REPAIRS.
2. PROVIDE BASE QUANTITY OF REPAIRS AND UNIT COST FOR ADDITION OR DELETION OF QUANTITIES DURING CONSTRUCTION.
3. FOLLOW ALL MANUFACTURERS DIRECTIONS AND RECOMMENDATIONS FOR SURFACE PREPARATION AND INSTALLATION. PROVIDE OSNI SYSTEM BY EMSFAL AT JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE STANDS. SEE PLAN FOR LOCATIONS.
4. BASIC INSTRUCTIONS FOR JOINT REPLACEMENT:
 1. REMOVE EXISTING JOINT SEALS
 2. ABRASIVE BLAST THE EXISTING BLOCK CUTS AND VERTICAL JOINT SURFACES.
 3. FILL EXISTING BLOCK CUTS WITH EMCRETE ELASTOMERIC CONCRETE TO MAKE A SQUARE JOINT OPENIN

SCALE: NTS

D
S4

EMSEAL JOINT SYSTEMS LTD.
 RUBBER, DSM SYSTEM DECK-TO-DECK IN CONCRETE

DESIGNED BY: []	DATE: []	SCALE: []	DRAWING NO. []
CHECKED BY: []	DATE: []	SCALE: []	DRAWING NO. []
APPROVED BY: []	DATE: []	SCALE: []	DRAWING NO. []

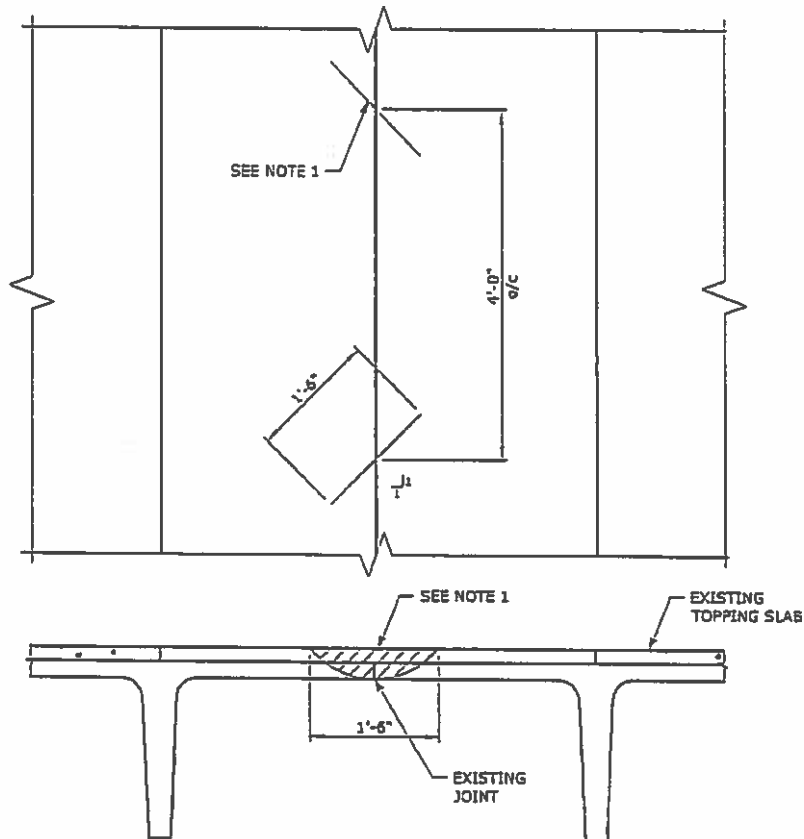
PART NUMBER: DSM\001-0-00-00



PALMER
 engineering
 company

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PROJECT TRINITY PARKING DECK -II
 PROJECT NO. 16135
 SHEET NO. S4 OF
 CALCULATED BY ELH DATE 04/20/2016



SECTION DOUBLE TEE REPAIR E
 SCALE: 3/4" = 1'-0" S5

NOTE:

1. INSTALL CFRP TEE BISCUITS MANUFACTURED BY V2 STRUCTURAL SYSTEMS OF AUBURN AL. FOLLOW MANUFACTURES DIRECTIONS AND RECOMMENDATIONS FOR WORK PREPARATION AND INSTALLATION



PROJECT TRINITY PARKING DECK -D
 PROJECT NO. 16135
 SHEET NO. S5 OF _____
 CALCULATED BY ELH DATE 04/20/2016

EXHIBIT 1



Matrix
Engineering
Group, Inc.

engineers | special inspectors | construction consultants

February 13, 2015

Mr. Hari Karikaran
DeKalb County Infrastructure
330 W. Ponce De Leon
Decatur, Georgia 30030

**RE: *Parking Deck Evaluation and Recommended Repair Details
Decatur Library at 215 Sycamore Street, Decatur, Georgia
Matrix Engineering Group Project Number 291087.169***

Mr. Karikaran:

Matrix Engineering Group, Inc. and its teaming partner Palmer Engineering Company completed the evaluation for the Decatur Library parking deck structure located at 215 Sycamore Street, Decatur, Georgia. Our scope of work was performed per the authorized proposal dated January 30, 2015 and PO Number 2925 issued on February 2, 2015.

Our scope of work was to perform visual examination of the parking deck structure, review our previous evaluation completed in March 2013, and provide a drawing showing the areas currently require repairs with recommended repair details. The attached report prepared by Palmer Engineering Company describes the current parking deck structure condition, identifies the joints that require repairs, provide recommended alternates with details for the repairs that should implement to correct the identified deficiencies.

Matrix Engineering Group, Inc. appreciates the opportunity to have provided this service to the DeKalb County. Should you have any questions or concerns regarding this project, please feel free to call us.

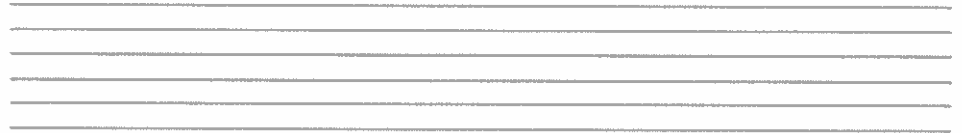
Sincerely,

MATRIX ENGINEERING GROUP, INC.

Sam Alyateem, P.E.
Principal

M:\1.0 MATRIX PROJECTS FOLDER 1.2 DeKalb County 2013 Contract Decatur Library Parking Deck 2.0 DESIGN - MEG 291087.169 Cover Letter 02 12 2105.doc

4358 Chamblee Tucker Road, Suite 3
Tucker, GA. 30084 | t: 770.448.3124 | f: 770.448.5324



February 12, 2015

Sam Alyateem
Matrix Engineering Group Inc.
4358 Chamblee Tucker Road
Suite 3
Tucker, Georgia 30084

Re: Decatur Library Parking Deck.
125 Sycamore Street, Decatur 30030

PEC #: **13053.1**

Dear Sam:

At your request, Palmer Engineering was at the site of the Decatur Library Parking Deck on February 12, 2015. The purpose of this visit is to follow up on our prior visit on February 8th of 2013. The details of the prior visit are documented in our report dated March 11, 2013. This report is intended to update our understanding of the current conditions of the parking deck and provide a scope of work to perform the necessary repairs.

The parking deck conditions are relatively unchanged from two years ago. The problem is that the connections between double tee joists were either never made or have failed. As a result, cars driving over the joints create a differential deflection in the adjacent tees causing a clanging sound when the tees rebound and bang against each other.

The current condition of the deck does not pose an immediate threat to the overall stability of the deck. However, the unsecured joints do compromise the diaphragm of the deck and could reduce it's ability to resist a lateral load event. In addition, the failed joints present a maintenance problem that could continue to deteriorate the parking deck.

Please refer to the report by Palmer Engineering Company dated March 11, 2013 for a more thorough description of the existing structure and the repair problems.

Based on our recent visit and the request of DeKalb County, we have developed a drawing to identify the scope of repairs. This scope is to

address the 13 joints that are currently causing problems. It is very likely that additional joists will become problematic in the future. However, we feel that there is no need to provide preemptive repairs at this time.

The drawing attached offers two solutions. The first is with structural steel and bolts. This is a more traditional repair and has its pros and cons. It is well known by many contractors and relatively simple to install. However, it does require removal of some of the topping slab which is an added cost. The topping slab along a few joints needs to be repaired anyway.

The second repair option has only been in use for 5 years but appear promising. The initial repairs put in place 5 years ago in Boston are still performing well. This repair should be quicker, and cheaper to install. We believe this solution will also be more aesthetically appealing. We can provide contact with a certified installer that specializes in this type of repair. Once a contractor is selected to do the work, we recommend a meeting with us so that we can convey the intent of the repairs accurately.

Sam, I hope this information will help the county in the next step in taking care of the issue at the Decatur Library. Palmer Engineering Company appreciates the opportunity to be part of your team to provide structural expertise for DeKalb County on this project. Please do not hesitate to call if you have any questions regarding this matter or if we can help you with anything else.

Sincerely,

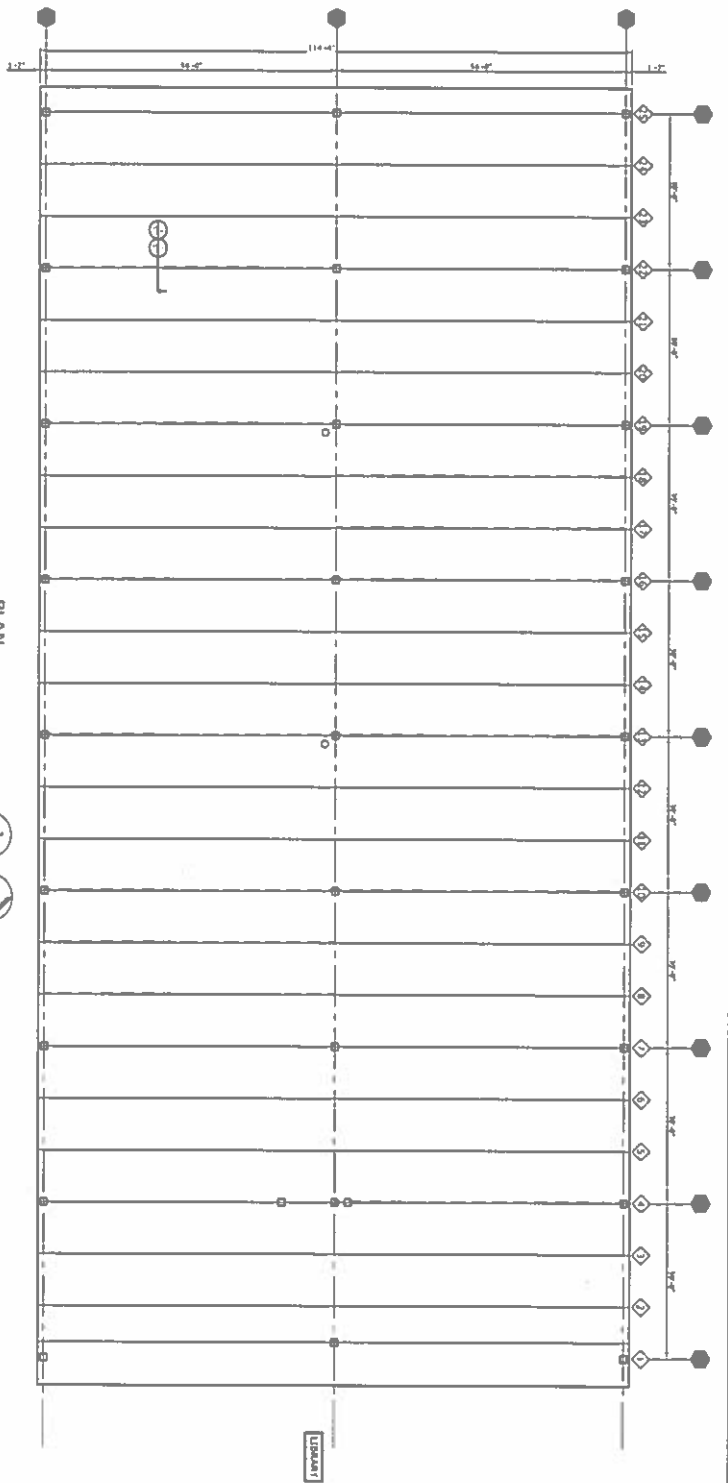
PALMER ENGINEERING COMPANY



Eric Hagberg, PE
Vice President



Attached: Drawing S1

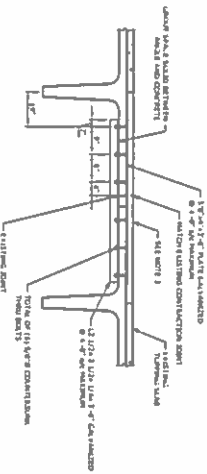


PLAN

SCALE: 1/8" = 1'-0"
S1



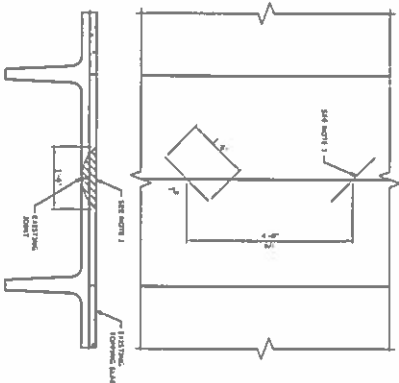
- 1. DIMENSIONS SHOWN ARE TO FACE UNLESS OTHERWISE NOTED.
- 2. DIMENSIONS SHOWN ARE TO FACE UNLESS OTHERWISE NOTED.



SECTION

SCALE: 3/8" = 1'-0"
S1

- 1. USE CASTING HEIGHT TO MATCH WITH ADJACENT CONCRETE.
- 2. DO NOT REMOVE ANY PART OF THE CASTING HEIGHT TO MATCH WITH ADJACENT CONCRETE.
- 3. PROVIDE 4" MIN. THICKNESS SLAB TO BE CAST WITH ALL OTHER CONCRETE.
- 4. PROVIDE 4" MIN. THICKNESS SLAB TO BE CAST WITH ALL OTHER CONCRETE.
- 5. PROVIDE 4" MIN. THICKNESS SLAB TO BE CAST WITH ALL OTHER CONCRETE.



SECTION

SCALE: 3/8" = 1'-0"
S1

- 1. PROVIDE 4" MIN. THICKNESS SLAB TO BE CAST WITH ALL OTHER CONCRETE.
- 2. PROVIDE 4" MIN. THICKNESS SLAB TO BE CAST WITH ALL OTHER CONCRETE.
- 3. PROVIDE 4" MIN. THICKNESS SLAB TO BE CAST WITH ALL OTHER CONCRETE.
- 4. PROVIDE 4" MIN. THICKNESS SLAB TO BE CAST WITH ALL OTHER CONCRETE.
- 5. PROVIDE 4" MIN. THICKNESS SLAB TO BE CAST WITH ALL OTHER CONCRETE.

SHEET
S1
1 OF 1

DECK FRAMING PLAN



THIS DRAWING IS THE PROPERTY OF THE PALMER ENGINEERING COMPANY AND IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE PALMER ENGINEERING COMPANY.

PALMER ENGINEERING COMPANY
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DECATUR LIBRARY PARKING DECK
DECATUR, GA

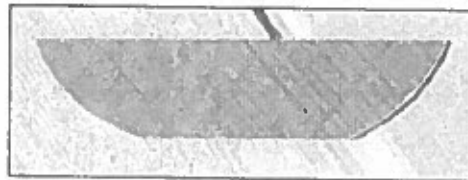
ISSUED:

NO.	REVISIONS	
	REMARKS	DATE

CFRP Tee Biscuits

Description

CFRP Tee Joint Biscuits are custom carbon/glass fiber reinforced plastic laminates designed to repair failed metal embedment in pre-cast concrete structures. A specially engineered tri-axial carbon fabric is used provide high strength, while a proprietary textured glass fabric is bonded on the exterior face to provide additional toughness as well as a roughened bonding surface. The constituent resin matrix is a toughened vinyl ester with proven ability to provide strength along with superior chemical resistance, especially to salt and gasoline. Using a proprietary aerospace composite manufacturing technique, the fabric and resin are combined to form a finished composite laminate. This laminate is then cut to shape using ultra high pressure water jet cutting equipment.



Advantages

Tee Biscuits are used to repair the flange-to-flange connections for precast and pre-stressed double tee systems used in parking garages. The distinct advantage of this system is the ease and speed of installation. All that is needed to install the system is cut a groove to into the deck at a 45° angle, fill with Biscuit Bond Paste, insert the T-Biscuit and allow it to set. This can be done quickly and easily while only closing a few parking spots keeping your customer's revenue flowing.

Laminate Properties

Tensile Strength (along the X/Y axis)	110,630 psi (762 MPa)
Compressive Strength (along the X/Y axis)	98,640 psi (680 MPa)
Compressive Strength (through thickness)	9,200 psi (63 MPa)
In Plane shear strength (along the Z axis or through thickness)	20,992 psi (145 MPa)
Inter laminar shear (along the X/Y axis)	2,050 psi (14 MPa)
Bond strength to concrete (using V2 biscuit bond epoxy)	2,760 psi (19 MPa)

Biscuit Properties along the X/Y Axis

Biscuit Type	Thickness in. (cm)	Tensile Capacity lbs. (kilo)	Compressive Capacity lbs. (kilo)	Shear Capacity lbs. (kilo)	Pull out Capacity lbs. (kilo)
Light Duty	0.11 (0.28)	36,500 (16,556)	32,551 (14,765)	6,921 (3,139)	Concrete Failure
Standard	0.17 (0.43)	50,406 (25,585)	50,306 (22,818)	10,706 (4,856)	Concrete Failure
High Load	0.23 (0.58)	76,300 (34,609)	68,061 (30,872)	14,485 (6,570)	Concrete Failure

Caution: Values are based on laboratory testing and are ultimate design values only. Please use appropriate design safety factors.



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(334) 502-3000

www.V2composites.com



Product Data Sheet

CFRP Tee Biscuits

Installation

INSTALLATION WITH V2 BISCUIT BOND PASTE:

- Cut a 0.25" groove at a 45° angle with the decks 18 inches long and a blade depth set at 3.5 inches.
- Using compressed air, clean out the dust thoroughly (if using a pressure washer, let sit for at least 24 hours before applying bond and T-Biscuit)
- Mask off the top of the groove with tape (for a cleaner look)
- Mix the Biscuit Bond Paste according manufacturer's instructions and fill the groove with a liberal amount of adhesive and work it in with a trowel or putty knife.
- Apply biscuit bond to both sides of the T-Biscuit and place into the groove working all of the air out of the groove with a putty knife.
- Allow epoxy to gel
- Once epoxy has set, remove masking tape

MIXING CONSIDERATIONS FOR PASTE: Measure exactly 1 part "A" to 1 part "B" by volume into a clean pail or onto a palette. Mix epoxy using hand methods to achieve a smooth consistency and uniform color **NOTE:** Large batches of epoxy will set up much faster than small batches. Only mix the amount of material that can be used within the pot life.

Storage

T-Biscuits and epoxy should be stored in a dry environment at a temperature between 40° to 90° F (4° to 32° C). Ideal temperature range is 65° to 75° F (18° to 24° C). Temperatures below 60° F (16° C) will cause epoxy to thicken making it difficult to properly blend the components. Under proper conditions, the shelf life of epoxy is twelve (12) months in unopened, damage-free containers. *Protect from moisture. Do not allow product to freeze.*

Warnings

Paste "A" material contains epoxy resins and may cause skin irritation. Paste "B" material contains amines and may cause severe burns on skin.

First Aid

See MSDS for more information.

Clean Up

Clean equipment immediately after use with MEK or Acetone. Clean skin with soap and water. Wash contaminated clothing before re-use.



Warranty

V2 Structural Systems warrants its products to be free from manufacturing defect and that products meet the published characteristics when tested in accordance with ASTM and V2 standards. No other warranties by V2 are expressed or implied, including no warranty of merchantability or fitness for a particular purpose. V2 will not be liable for damages of any sort resulting from any claimed breach of warranty. V2's liability under this warranty is limited to replacement of material or refund of the sales price of the material. There are no warranties on any product that has exceeded the "shelf life" or "expiration date" printed on the package label.

If you have any questions or comments about any of V2 products or application techniques you may contact us directly at 334-502-3000, Monday through Friday 8:00 AM to 4:00 PM Central Time.



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V2 Composites Inc. makes no warranties, expressed or implied, including merchantability or fitness for a particular purpose, except as expressly stated in writing.



Biscuit Bond Paste

Description

V2 Biscuit Bond Paste is a two component, 100% solids, high strength, structural epoxy gel adhesive specifically designed for the installation of V2 Repair Biscuits and the structural bonding of other V2 composite laminates.

Applications

- Bonding and embedding composite laminates to concrete, masonry, wood and steel
- Patching vertical and overhead concrete, masonry, and wood surfaces
- Grouting deep dowel bars, bolts, pins, etc.
- Bonding similar and dissimilar materials such as concrete, metal, wood, etc.

Conforms To

ASTM C-881 Types I and II,
Grade 3, Class A, B and C

Advantages

- Easy to work with smooth gel consistency
- Super High Strengths
- Moisture Insensitive
- Excellent Bond Strengths
- Good Chemical Resistance
- USDA Approved

Packaging

- 2 Gallon Units
- 15 Gallon Units

Physical Properties

Mix Ratio A:B	1:1 By Volume		
Viscosity	Non-sag thixotropic Gel		
Color	Concrete Gray		
Pot Life	60 gram (golf ball)	1/2 gallon (soft ball)	Tack Free (1/8" layer)
90° F (32° C)	4min	3min	40 min
73° F (23° C)	8 min	7min	1 hr, 30 min
50° F (10° C)	18 min	10 min	2 hr, 15 min
Coverage			
(Neat)	231 cubic inches per gallon		
(Smooth Surfaces)	1/8" thick = 12 square feet per gallon		
(Rough Surfaces)	1/8" thick = 6 square feet per gallon		

Test Data (Strengths Reported In P.S.I.)

Compressive Strength	ASTM D-695	7,050
Compressive Modulus	ASTM D-638	2.30 x 105
Tensile Strength	ASTM D-638	2,900
Tensile Modulus	ASTM D-638	1.67 x 105
Bond Strength	ASTM C-882	3,337 (2 day)
(Dry Cure)		3,510 (14 day)
Elongation	ASTM D-638	1.8%
Shore Hardness	D SCALE	85
Heat Deflection	ASTM D-648	124° F



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Application Techniques

MATERIAL CONDITIONING: Pre-condition materials to 65° - 85° F (19° - 30° C) before using.

SURFACE PREPARATION: Surface must be clean and free of any dust, oil, grease, laitance, curing compounds, or any other contaminants. On concrete and steel this should be achieved by sandblasting, water blasting, or other mechanical means. Composite laminates should be wiped with MEK following any other preparation recommended by the manufacturer.

MIXING CONSIDERATIONS: Measure exactly 1 part "A" to 1 part "B" by volume into a clean pail or onto a palette. Mix epoxy using hand methods to achieve a smooth consistency and uniform color.

NOTE: Large batches of epoxy will set up much faster than small batches. Only mix the amount of material that can be used within the pot life.

Installing Material

BONDING AND EMBEDDING: Apply material to the surfaces to be bonded taking care to work the material into the exposed surface. A glue line of 1/8" or less is desirable.

PATCHING OVERHEAD AND VERTICAL SURFACES: Using a trowel or putty knife, apply material to area being patched. Up to one and a half parts oven dried sand may be added to the mixed epoxy to extend it and bring the coefficient of thermal expansion closer to that of concrete. Apply in 1-1/2" lifts or less.

GROUTING BOLTS AND ANCHOR BARS: Hole size should be no more than 1/8" larger than bar or bolt. Clean all dust out of the hole and grout with neat Biscuit Bond Paste.

Limitations

- Mixing at other than 1:1 ratio will result in reduced properties and will potentially inhibit curing.
- Do not use solvents to thin.
- Minimum application temperature is 40° F (5° C).
- Minimum age of concrete must be 21-28 days.
- Forms a vapor barrier after cure.
- Full cure in 7 days

Warnings

"A" material contains epoxy resins and may cause skin irritation.. "B" material contains amines and may cause severe burns on skin.

Storage

Store resin in a dry environment at a temperature between 40° to 90° F (4° to 32° C). Ideal temperature range is 65° to 75° F (18° to 24° C). Temperatures below 60° F (16° C) will cause epoxy to thicken making it difficult to properly blend the components. Under proper conditions, the shelf life is twelve (12) months in unopened, damage-free containers. *Protect from moisture. Do not allow product to freeze.*

First Aid

Skin Contact: Wipe off contaminated area and wash with soap and water.

Eye Contact: Immediately flush eyes with large amounts of water. Seek medical attention.

Inhalation: Move to fresh air if symptoms occur. If breathing is difficult, get medical attention.

Ingestion - Seek immediate medical attention

See MSDS for more information.

Clean Up

Clean equipment immediately after use with MEK or Acetone. Clean skin with soap and water. Wash contaminated clothing before re-use.

Warranty

V2 Structural Systems warrants its products to be free from manufacturing defect and that products meet the published characteristics when tested in accordance with ASTM and V2 standards. No other warranties by V2 are expressed or implied, including no warranty of merchantability or fitness for a particular purpose. V2 will not be liable for damages of any sort resulting from any claimed breach of warranty. V2's liability under this warranty is limited to replacement of material or refund of the sales price of the material. There are no warranties on any product that has exceeded the "shelf life" or "expiration date" printed on the package label.

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V2 T-Biscuits

Custom carbon/glass fiber reinforced plastic laminates

Product Description

CFRP Tee Joint Biscuits are custom carbon/glass fiber reinforced plastic laminates designed to repair failed flange-to-flange shear connectors of pre-cast double Tee beams. A specially engineered tri-axial carbon fabric is used provide high strength, while a proprietary textured glass fabric is bonded on the exterior face to provide additional toughness as well as a rough bonding surface. The constituent resin matrix is a toughened vinyl ester with proven ability to provide strength along with superior chemical resistance, especially to salt and gasoline. Using a proprietary aerospace composite manufacturing technique, the fabric and resin are combined to form a finished composite laminate. This laminate is then cut to shape using ultra high-pressure water jet cutting equipment.

Advantages

- Easy and fast installation
- Minimal disruption to operations
- Superior strength and toughness
- Chemical resistant

Typical Biscuit Properties Along X/Y Axis			
Thickness in. (cm)	Tensile Capacity lbs. (kilo)	Compressive Capacity lbs. (kilo)	Shear Capacity lbs. (kilo)
0.17 (0.43)	50,406 (25,585)	50,306 (22,818)	10,706 (4,856)
Laminate Properties			
Tensile Strength (along X/Y axis)		110,630 psi (762 MPa)	
Compressive Strength (along X/Y axis)		98,640 psi (680 MPa)	
Compress Strength (through thickness)		9,200 psi (63 MPa)	
In Plane Shear Strength (along the Z axis or through thickness)		20,992 psi (145 MPa)	
Inter Laminar Shear (along X/Y axis)		2,050 psi (14 Mpa)	
Bond Strength to Concrete (using V2 Biscuit Bond Epoxy)		2,760 psi (19 MPa)	
Large Scale In Situ Testing			
Vertical Shear (5k psi concrete)		8,000 lbs.	
Horizontal Shear (5k psi concrete)		17,200 lbs.	
Tension (Pull Out) (8k psi concrete)		16,500 lbs.	



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V2 T-Biscuit

Installation With V2 Biscuit Bond Past

1. Make a cut .25" wide by 18" long at a 90° angle across the seam. The depth of the cut should be ½" from the bottom of the flange of the double T. Typically, the cut is approximately 3.5" deep.
2. If the slots were dry cut using compressed air with a minimum of 100 psi, clean out the slots to remove dirt and dust. If the slots were wet cut, pressure wash the slots to remove slurry or dirt. Allow 24 hours to dry. Mask off the top of the groove with tape (for a cleaner look).
3. Mix the Biscuit Bond Paste according manufacturer's instructions and fill the groove with a liberal amount of adhesive and work it in with a trowel or putty knife.
4. Apply biscuit bond to both sides of the T- Biscuit and place into the groove working all of the air out of the groove with a putty knife. Allow epoxy to gel. Once epoxy has set, remove masking tape.

Mixing Considerations for Paste

Measure exactly 1 part "A" to 1 part "B" by volume into clean pail or onto a palette. Mix epoxy using hand methods to achieve a smooth consistency and uniform color.

NOTE: Large batches of epoxy will set up much faster than small batches. Only mix the amount of material that can be used within the pot life.

Storage

T-Biscuits and epoxy should be stored in a dry environment at a temperature between 40° to 90°F (4° to 32°C). Ideal temperature range is 65° to 75°F (18° to 24°C). Temperatures below 60°F (16°C) will cause epoxy to thicken, making it difficult to properly blend the components. Under proper conditions, the shelf life of epoxy is twelve (12) months in unopened, damage-free containers. Protect from moisture. Do not allow product to freeze.

Clean Up & First Aid

Clean equipment immediately after use with MEK or Acetone. Clean skin with soap and water. Wash contaminated clothing before re-use. See MSDS for more information.

Caution

Paste "A" material contains epoxy resins and may cause skin irritation. Paste "B" material contains amines and may cause severe burns on skin.

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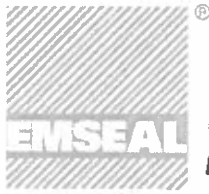
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Rev.0815



EMCRETE

Non-Hazardous High-Impact Elastomeric Concrete Material

TECH DATA



Product Description

EMCRETE is a flexible, durable, high-impact elastomeric concrete material. It is a bio-based, non-hazardous, extremely-low VOC product primarily used as a component of an expansion joint assembly either to fill blockouts on each side of an expansion joint gap, to repair a damaged expansion joint gap edge, as an impact-absorbing backfill nosing, or as a fast-curing patching material for potholes, or spalls on concrete roadways, parking surfaces, bridges, runways, etc.

EMCRETE is comprised of a two-component polyurethane resin mixed with sand and chopped fiberglass aggregates. The sand imparts compressive strength. The fiber provides cross-linked reinforcement while, in combination with the sand, adds body to the polyurethane resin.

Typical Uses

Some of the typical uses of EMCRETE within EMSEAL expansion joint systems are:

Repair

To repair spalled gap edges in high load-bearing applications. The spalled concrete must be cut out using industry standards for concrete repair. Once the gap edge has been cut and cleaned, the self-leveling EMCRETE can be poured to form a horizontal elastomeric gap edge that is more resistant to spalling and gap edge deterioration.

Elastomeric Concrete

To act as an elastomeric concrete where the possibility of spalling or cracking is a concern for standard concrete or where existing spalls or potholes in concrete roadways, runways, bridges etc. is required.

Leveling and Dampening

As a leveling bed and sound dampening support of the coverplates of EMSEAL SJS Seismic Joint Systems systems. The SJS family of products from EMSEAL are coverplate systems secured to a precompressed foam and spline assembly. The coverplates ride on the deck surface. It is typical to form, cut or grind a shallow blockout on each side of the joint gap and fill this with EMCRETE. This provides a surface that can be grinded to ensure that the coverplates do not rock and are fully supported over their entire contact area. Ensuring the plates are properly supported while absorbing the shocks of vehicular impact both contribute in attenuating sound.

Impact Absorbing

As an impact-absorbing header material behind the rails of EMSEAL FP systems. MIGUTAN, DSM-FP, and SJS-FP are systems designed for installation in split-slab conditions. These systems install onto the structural slab and feature watertight integration with the split-slab waterproofing membrane through integral side flashing sheets supplied with the expansion joint system.

Installation Summary

The following is a summary. Installation must follow the complete Installation Instructions shipped with the material and available at www.emseal.com.

Substrates must be thoroughly dry and the temperature must be at least 45° F (8° C) and rising to install EMCRETE. The bonding surface should be in sound and good condition before prepping. The entire

bonding surface is to be wire brushed and fully cleaned leaving no contaminants such as dirt, dust, oils, or other residue on any surface. Next, the area where EMCRETE will be poured should be fully prepped and formed. The substrate is then primed with the (non-HAP) EMPRIME primer that is included with units of EMCRETE and allowed to dry for 30 minutes. The EMCRETE is then mixed in accordance with the complete Installation Instructions in the pre-measured amounts provided. The EMCRETE is then poured into the forms where it will self-level and cure exothermically. It can be trowelled to ensure a consistent surface. The working time of EMCRETE is less than 10-minutes after mixing. Working time, and cure time, is longer in cool weather and shorter in hot weather. EMCRETE reaches a hardness which allows for pedestrian or vehicular traffic within 1-hour after application under standard conditions.

Supply

Packaging

EMCRETE Elastomeric Concrete is sold by the unit. Each unit is comprised of a large container which holds of pre-measured containers of the liquids (Parts A & B, and EMPRIME) as well as Sand and Fiber.



Yield*

1 Unit: 9,766 cubic cm (596 cubic inches)

*account for a 5% waste factor

Performance Properties

IMPORTANT: When comparing elastomeric concrete materials it is vital to compare the data of the fully mixed material. Resin-only data is irrelevant as the material is not used without aggregate. Aggregate increases compressive strength at the expense of flexibility and brittleness. Heavy aggregate loading, while it reduces cost, is detrimental to performance of the material as an impact-absorbing nosing and patching material. The following are properties of EMCRETE (resins, sand, and chopped fiberglass) at as-supplied ratios .

Properties of Mixed EMCRETE Resin and Aggregate

Physical Property	Value	Test Method
Adhesion (primed concrete)	413 psi	ASTM D7234
Adhesion (primed steel)	492 psi	ASTM D7234
Adhesion (primed galvanized steel)	417 psi	ASTM D7234
Tensile Strength	651 psi	ASTM D412
Elongation	20%	ASTM D412
Compressive Strength	1500 psi	ASTM D695
Compressive Modulus	11.27 ksi	ASTM D695
Hardness (Shore D)	57	ASTM D2240
Hardness (Shore A)	98	ASTM D2240
Viscosity @ 50 rpm (mixed resin)	1560 cP	ASTM D4847
Impact Testing —Ball Drop**	No Failure at 69°F (20°C)	ASTM D3029-95
	No Failure at -4°F (-20°C)	ASTM D3029-95

**1-pound steel ball dropped onto 3/8-inch thick (8mm) x 2 3/4-inch diameter (70mm) disk from 17 feet (5.2m)

EMCRETE Applications

Fig. 1: EMCRETE Used as Expansion Joint Nosing Material

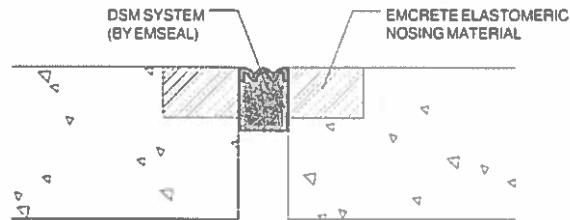


Fig. 2: EMCRETE Used as Concrete Patching Material

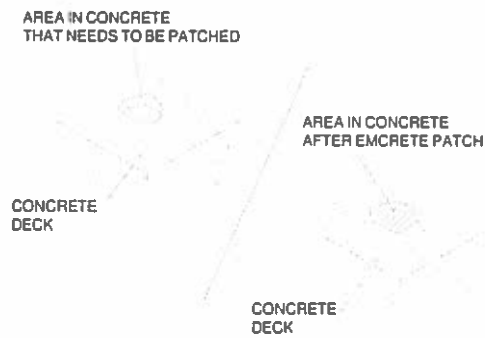
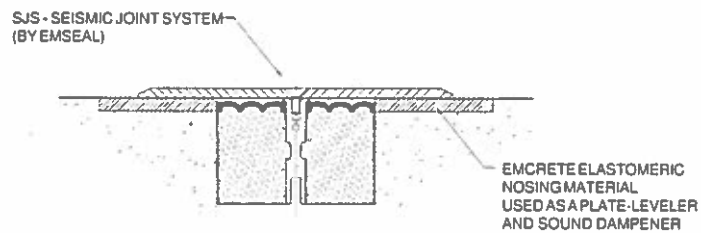
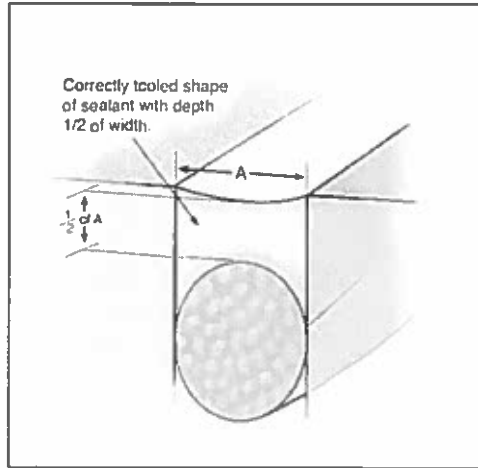


Fig. 3: EMCRETE Used with SJS System as a Plate-Leveler and Sound Dampener





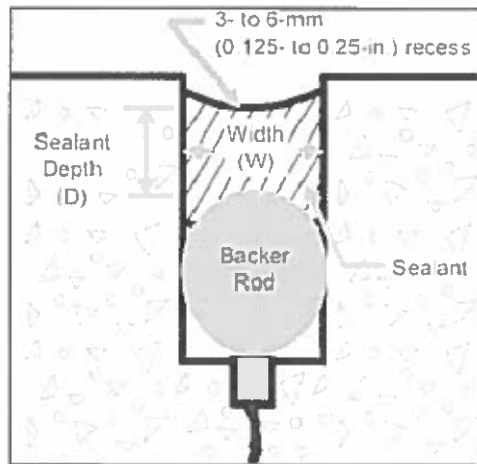
**JOINT DETAIL
- FORMED JOINTS**

SCALE: NTS

A
S1

NOTES:

1. FOLLOW ALL MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS FOR PREPARATION AND INSTALLATION.
2. Sound test around formed joints and repair unsound concrete and joint nosing with Low mod mortar.
3. Remove old sealant and clean joints
 - 3.1. REPAIR PRODUCT: Sikadur 21 Low mod mortar (Uniman 20/40 oven dried sand)
4. Seal joints with two component sealant and properly sized and placed backer rod.
 - 4.1. Sikaflex 2CNSTG



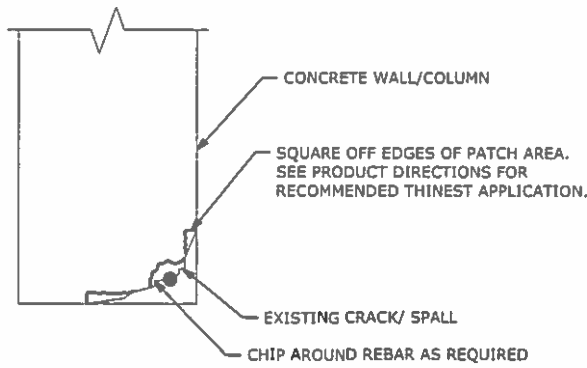
JOINT DETAIL

SCALE: NTS

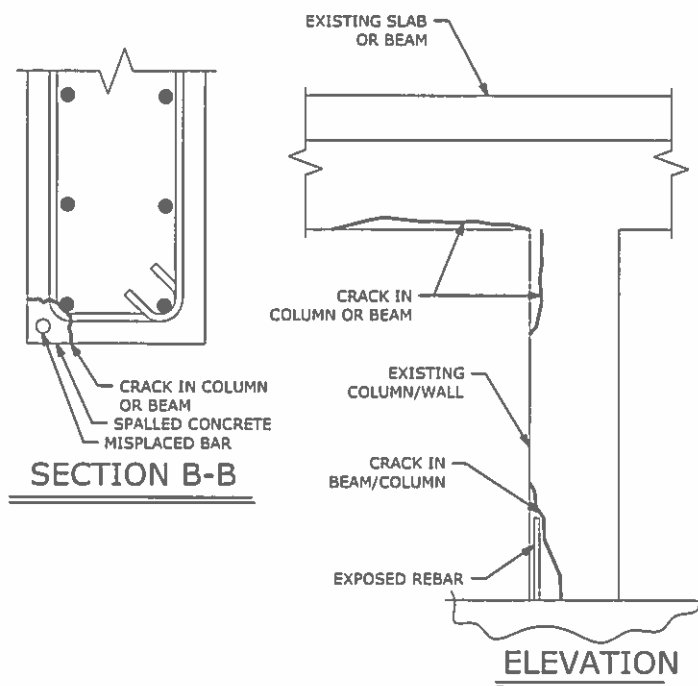
A2
S1

NOTES:

1. FOLLOW ALL MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS FOR PREPARATION AND INSTALLATION.
2. Sound test around cracks to determine soundness of concrete around cracks.
3. Route and seal cracks with two component sealant and properly sized and placed backer rod.
 - 3.1. REPAIR PRODUCT: Sikaflex 2CNSTG)



DETAIL OF PATCH PREPARATION



Repair Program A - Exposed Rebar

Repair and restoration of exposed and corroded reinforcing for vertical and overhead conditions:

1. Follow all instructions and recommendations of Manufacturer for surface prep and installation of repair products. Cure as directed by manufacturer.
2. Chip away all loose and delaminated concrete.
3. Notify engineer of any rebar that has experienced a loss of cross section in excess of 30% for possible reinforcement.
4. Square off repair area with 3/4-inch deep edges, minimum, and achieve an ICRI CSP # 7-8. Coordinate depth of squared off area with minimum depth requirements of product used in a particular repair area.
5. Remove concrete around perimeter of reinforcing where more than 1/3 of perimeter of bar is exposed. Clearance around bar need only be that necessary for removal of concrete, cleaning of rebar, and application of repair products.
6. Mechanically clean steel with wire brush or sand blasting to a bare steel condition.
7. Apply anti-corrosion bonding agent - Armatec 110 Epochem - to steel.
8. Saturate Concrete to a SSD condition
9. Patch concrete with cementitious overhead non-sag mortar - Sika 123 Plus.
10. Cure as directed by manufacturer.

DETAIL COLUMN AND BEAM REPAIR

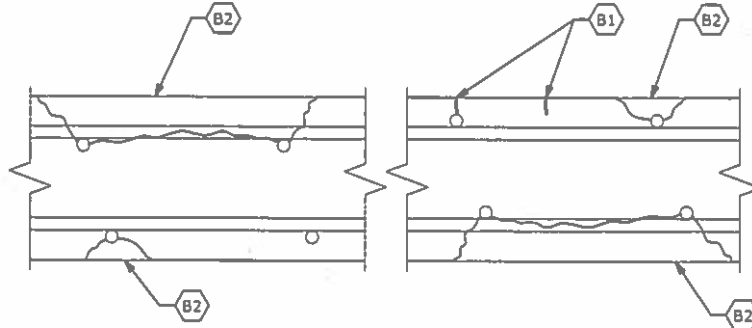
SCALE: 3/4" = 1'-0"



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PROJECT TRINITY PARKING DECK -II
 PROJECT NO. 16135
 SHEET NO. S2 OF _____
 CALCULATED BY ELH DATE 04/20/2016



EXAMPLE SPALLING AND REBAR EXPOSURE AT TOP AND BOTTOM OF SLAB

Repair Program B -Concrete Slab and Stair Surface Repair:

TYPE B1

1. Type B1 conditions are cracks in the slab or stair surface that appear to have water penetrating the crack but have not yet caused concrete to spall.
2. Sound test around cracks to determine the soundness of concrete around the cracks.
3. Route and seal the cracks with SikaFLEX 2C NS/SL, two component sealant.
4. Following all manufacturer's instructions and recommendations for preparation, installation and curing.

TYPE B2

1. Type B2 conditions have spalled concrete and exposed rebar.
2. Follow all instructions and recommendations of Manufacturer for surface prep and installation of repair products. Cure as directed by manufacturer.
3. Chip away all loose and delaminated concrete.
4. Notify engineer of any rebar that has experienced a loss of cross section in excess of 30% for possible reinforcement.
5. Square off repair area with 3/4-inch deep edges, minimum, and achieve an ICR CSP # 7-8. Coordinate depth of squared off area with minimum depth requirements of product used in a particular repair area.
6. Remove concrete around perimeter of reinforcing where more than 1/3 of perimeter of bar is exposed. Clearance around bar need only be that necessary for removal of concrete, cleaning of rebar, and application of repair products.
7. Mechanically clean steel with wire brush or sand blasting to a bare steel condition.
8. Apply anti-corrosion bonding agent - Armatoc 110 Epochem - to steel.
9. Saturate Concrete to a SSD condition
10. Patch concrete with cementitious overhead non-sag mortar - Sika 123 Plus.
11. Cure as directed by manufacturer.

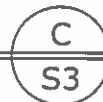
OWNER OPTION ADD/ALTERNATE

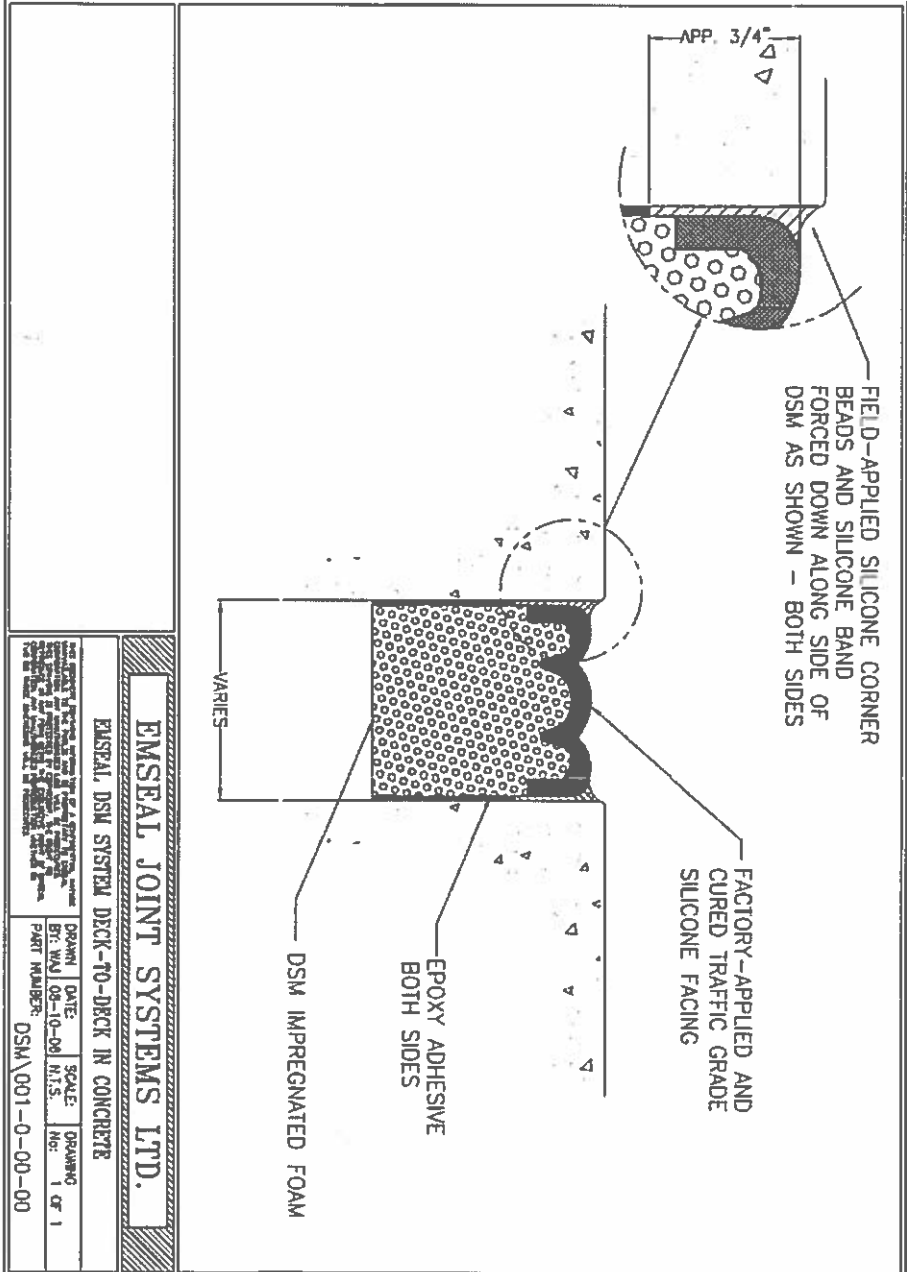
12. The owner may, at their option, have the contractor price and install a surface coating over all horizontal surfaces in the exposed stairs to reduce water infiltration and slow the rate of deterioration of concrete and rebar. See repair procedure below:
13. Remove loose and delaminated concrete.
14. Prepare surface in accordance with manufacturer's directions and recommendations.
15. Install levelling compound in some areas. See repair detail D.
16. Apply Sikagard Flexcoat System in accordance with manufacturer's directions and recommendations.
17. Cure as directed by the manufacturer.

DETAIL

SLAB AND STAIR REPAIR

SCALE: 3/4" = 1'-0"





JOINT DETAIL

NOTES:

SCALE: NTS D
S4

1. FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS. NOTIFY ENGINEER, IN WRITING, OF DISCREPANCIES IN QUANTITIES OR LOCATION OF REPAIRS.
2. PROVIDE BASE QUANTITY OF REPAIRS AND UNIT COST FOR ADDITION OR DELETION OF QUANTITIES DURING CONSTRUCTION.
3. FOLLOW ALL MANUFACTURERS DIRECTIONS AND RECOMMENDATIONS FOR SURFACE PREPARATION AND INSTALLATION. PROVIDE DSM SYSTEM BY EMSAL AT JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE STANDS. SEE PLAN FOR LOCATIONS.
4. BASIC INSTRUCTIONS FOR JOINT REPLACEMENT:
 1. REMOVE EXISTING JOINT SEALS
 2. ABRASIVE BLAST THE EXISTING BLOCK OUTS AND VERTICAL JOINT SURFACES.
 3. FILL EXISTING BLOCK OUTS WITH EMCRETE ELASTOMERIC CONCRETE TO MAKE A SQUARE JOINT OPENING

EMSAL JOINT SYSTEMS LTD.

EMSAL DSM SYSTEM DECK-TO-DECK IN CONCRETE

DRAWN	DATE	SCALE	DRAWING
BR: WJL	08-10-08	N.T.S.	NO: 1 OF 1
PART NUMBER: DSM\001-0-00-00			

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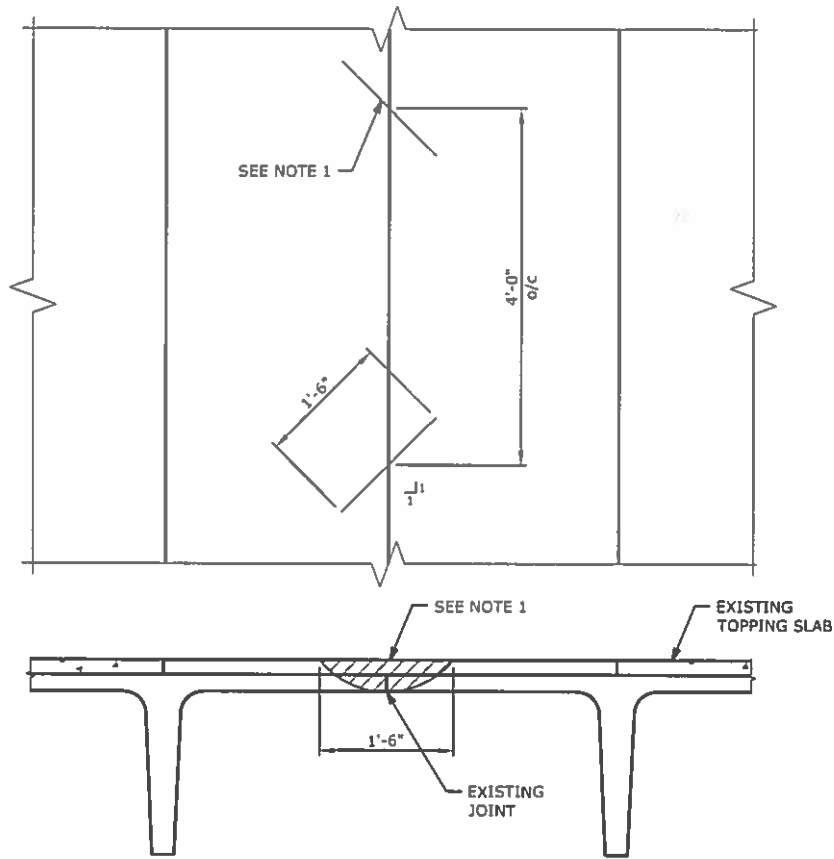
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PROJECT TRINITY PARKING DECK -II

PROJECT NO. 16135

SHEET NO. S4 OF _____

CALCULATED BY ELH DATE 04/20/2016



SECTION

DOUBLE TEE REPAIR

E
S5

SCALE: 3/4" = 1'-0"

NOTE:

1. INSTALL CFRP TEE BISCUITS MANUFACTURED BY V2 STRUCTURAL SYSTEMS OF AUBURN AL. FOLLOW MANUFACTURES DIRECTIONS AND RECOMMENDATIONS FOR WORK PREPARATION AND INSTALLATION



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PROJECT TRINITY PARKING DECK -II
PROJECT NO. 16135
SHEET NO. S5 OF _____
CALCULATED BY ELH DATE 04/20/2016

Product Data Sheet
Edition 10.6.2014
Sika® Armatec® 110 EpoCem

Sika® Armatec® 110 EpoCem

Bonding Agent and Reinforcement Protection

Description	Sika® Armatec® 110 EpoCem is a 3-component, solvent-free, moisture-tolerant, epoxy-modified, cementitious product specifically formulated as a bonding agent and anti-corrosion coating.
Where to Use	<ul style="list-style-type: none"> ■ As an anti-corrosion coating for reinforcing steel in concrete restoration. ■ As added protection to reinforcing steel in areas of thin concrete cover. ■ As a bonding agent for repairs to concrete and steel. ■ As a bonding agent for placing fresh, plastic concrete to existing hardened concrete.
Advantages	<ul style="list-style-type: none"> ■ Excellent adhesion to concrete and steel. ■ Acts as an effective barrier against penetration of water and chlorides. ■ Long open time - up to 16 hours. ■ Not a vapor barrier. ■ Can be used exterior on-grade. ■ Contains corrosion inhibitors. ■ Excellent bonding bridge for cement or epoxy based repair mortars. ■ High strength, unaffected by moisture when cured. ■ Spray, brush or roller application. ■ Non-flammable, solvent free.
Coverage	<p>Bonding agent: minimum (theoretical) on smooth, even substrate 80 ft.²/gal. (=20 mils thickness). Coverage will vary depending on substrate profile and porosity.</p> <p>Reinforcement Protection: 40 ft.²/gal. (=20 mils thickness) (2 coat application).</p>
Packaging	<p>3.5 gal. unit. (47.6 fl. oz. Comp. A + 122.1 fl. oz. Comp. B + 46.82 lb. Comp. C) Comp. A + B in carton, Comp. C in multi-wall bag.</p> <p>1.65 gal. unit. (22.7 fl. oz. A + 57.6 fl. oz. B + 4 bags @ 5.5 lb.) Factory-proportioned units in a pail.</p>

Typical Data (Material and curing conditions @ 73°F and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	1 year in original, unopened packaging.		
Storage	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F (18°-24°C) before using. If components A and B are frozen, discard. Protect Component C from humidity.		
Color	Concrete gray		
Density (Mixed)	125 lb./ft. ³ (2.0 kg.)		
Pot Life	Approximately 90 minutes		
Compressive Strength (ASTM C-109)	3 days	4500 psi	(31.0 MPa)
	7 days	6500 psi	(44.8 MPa)
	28 days	8500 psi	(58.6 MPa)
Flexural Strength (ASTM C-348)	28 days	1250 psi	(8.6 MPa)
Splitting Tensile Strength (ASTM C-496)	28 days	600 psi	(4.1 MPa)
Important Data for Sika Armatec 110 as a Corrosion Protective Coating			
Water	Water Permeability at 10 bar (145 psi)	8.92 x 10 ⁻¹⁵ ft./sec.	
	Control	7.32 x 10 ⁻¹⁰ ft./sec.	
	Water vapor diffusion coefficient μ H ₂ O	110	
Carbon Dioxide	Carbon dioxide diffusion coefficient μ CO ₂	14000	
TEST DATA: Time-to-Corrosion Study			
- Sika® Armatec® 110 more than tripled the time to corrosion			
- Reduced corrosion rate by over 40%			



PRIOR TO EACH USE OF ANY SIKA PRODUCT, THE USER MUST ALWAYS READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS ON THE PRODUCT'S MOST CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET WHICH ARE AVAILABLE ONLINE AT [HTTP://USA.SIKA.COM/](http://USA.SIKA.COM/) OR BY CALLING SIKA'S TECHNICAL SERVICE DEPARTMENT AT 800.933.7452 NOTHING CONTAINED IN ANY SIKA MATERIALS RELIEVES THE USER OF THE OBLIGATION TO READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS FOR EACH SIKA PRODUCT AS SET FORTH IN THE CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET PRIOR TO PRODUCT USE.

Important Data for Sika® Armatec® 110 as a Bonding Agent

Bond Strength (ASTM C882)	14 days moist cure, plastic concrete to hardened concrete:	
Wet on Wet	2800 psi	(19.3 MPa)
24 hr. Open Time	2600 psi	(17.9 MPa)

Bond of Steel Reinforcement to Concrete (Pullout Test):

Sika® Armatec® 110 Coated	625 psi	(4.3 MPa)
Epoxy Coated	508 psi	(3.5 MPa)
Plain Reinforcement	573 psi	(3.95 MPa)

How to Use

Surface Preparation **Cementitious substrates:** Should be cleaned and prepared to achieve a laitance and contaminant-free surface prepared in accordance with the requirements specified by the overlay or repair material by blast cleaning or equivalent mechanical means. Substrate must be saturated surface dry (SSD) with no standing water.
Steel: Should be cleaned and prepared thoroughly by blast cleaning.

Mixing Shake contents of both Component 'A' and Component 'B'. Empty entire contents of both Component 'A' and Component 'B' into a clean, dry mixing pail. Mix thoroughly for 30 seconds with a Sika paddle on a low speed (400-600 rpm) drill. Slowly add the entire contents of Component 'C' while continuing to mix for 3 minutes until blend is uniform and free of lumps. Mix only that quantity that can be applied within its pot life.

Application **As a bonding agent -** Apply by stiff-bristle brush or broom. Spray apply with Goldblatt Pattern Pistol or equal equipment. For best results, work the bonding slurry well into the substrate to ensure complete coverage of all surface irregularities. Apply the freshly mixed patching mortar or concrete wet on wet, or up to the maximum recommended open time, onto the bonding slurry.

Maximum recommended open time between application of Armatec® 110 and patching mortar or concrete:

80°-95°F (26°-35°C)	6 hours
65°-79°F (18°-26°C)	12 hours
50°-64°F (10°-17°C)	16 hours
40°-49°F (4°-9°C)	wet-on-wet

For corrosion protection only - Apply by stiff-bristle brush or spray at 80 ft.²/gal. (20 mils). Take special care to properly coat the underside of the totally exposed steel. Allow coating to dry 2-3 hours at 73°F, then apply a second coat at the same coverage. Allow to dry again before the repair mortar or concrete is applied. Pour or place repair within 7 days.

Limitations

- Substrate and ambient temperature: Minimum 40°F (5°C).
- Maximum 95°F (35°C).
- Minimum thickness: As a bonding agent 20 mils.
- For reinforcement protection 40 mils.
- (2 coats, 20 mils each).
- Not recommended for use with expansive grouts.
- Use of semi-dry mortars onto Sika® Armatec® 110 EpoCem must be applied "wet on wet".
- When used in overhead applications with hand placed patching mortars, use "wet on wet" for maximum mortar built thickness.
- Substrate profile as specified by the overlay or repair material is still required.
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® Hi-Mod 32.

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KEEP CONTAINER TIGHTLY CLOSED. KEEP OUT OF REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR INDUSTRIAL USE ONLY. FOR PROFESSIONAL USE ONLY.

For further information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety related data. Read the current actual Safety Data Sheet before using the product. In case of emergency, call CHEMTREC at 1-800-424-9300, international 703-627-3887.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Safety Data Sheet which are available online at <http://usa.sika.com/> or by calling Sika's Technical Service Department at 800-933-7452. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Safety Data Sheet prior to product use.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS. SALE OF SIKA PRODUCTS ARE SUBJECT SIKA'S TERMS AND CONDITIONS OF SALE AVAILABLE AT [HTTP://USA.SIKA.COM/](http://usa.sika.com/) OR BY CALLING 201-933-8800.

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Sikaflex®-2c NS

Two-component, non-sag, polyurethane elastomeric sealant

Description	Sikaflex-2c NS is a 2-component, premium-grade, polyurethane-based, elastomeric sealant. It is principally a chemical cure in a non-sag consistency. Meets ASTM C-920, Type M, Grade NS, Class 25, use T, NT, M, G, A, O, I and Federal Specification TT-S-00227E, Type II, Class A. Tested in accordance with ASTM C-1382 for use in EIFS systems.
Where to use	<ul style="list-style-type: none"> ■ Intended for use in all properly designed working joints with a minimum depth of 1/4 inch. ■ Ideal for vertical and horizontal applications. ■ Placeable at temperatures as low as 40°F. ■ Adheres to most substrates commonly found in construction. ■ An effective sealant for use in Exterior Insulation Finish Systems (EIFS). ■ Submerged environments, such as canal and reservoir joints.
Advantages	<ul style="list-style-type: none"> ■ Capable of ±50% joint movement. ■ Chemical cure allows the sealant to be placed in joints exceeding 1/2 in. in depth. ■ High elasticity with a tough, durable, flexible consistency. ■ Exceptional cut and tear resistance. ■ Exceptional adhesion to most substrates without priming. ■ Available in 35 architectural colors. ■ Color uniformity assured via Color-pak system. ■ Available in pre-pigmented Limestone Gray (no Color-pak needed). ■ Non-sag even in wide joints. ■ Easy to mix. ■ Paintable with water-, oil-, and rubber-base paints. ■ Jet fuel resistant.
Coverage	1 gal. yields 231 cu. in. or 154 lin. ft. of a 1/2 in. x 1/4 in. joint.
Packaging	1.5 gal. unit. 3 gal units. Color-pak is purchased separately. Limestone Gray color available pre-pigmented.

Typical Data (Material and curing conditions 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf life	One year in original, unopened containers.	
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.	
Colors	A wide range of architectural colors are available. Special colors available on request.	
Application Temperature	40° to 100°F, ambient and substrate temperatures. Sealant should be installed when joint is at mid-range of its anticipated movement.	
Service Range	-40° to 170°F (-40°-75°C).	
Curing Rate (ASTM C-679)		
Tack-Free Time	6-8 hrs.	
Final Cure	3 days	
Application Life	3-4 hrs.	
Tear Strength	ASTM D-624	45 lb./in.
Shore A Hardness	ASTM D-2240	25 ± 5
Tensile Properties (ASTM D-412)		
Tensile Strength at Break	95 psi	
Tensile Elongation	500%	
100% Modulus	70 psi	
Adhesion in Peel (Fed Spec. TT-S-00227E)		
Substrate	Peel Strength	% Adhesion Loss
Concrete	25 lb.	Zero
Weathering Resistance	Excellent	
Chemical Resistance	Good resistance to water, diluted acids, diluted alkalines, and residential sewage. Consult Technical Service for specific data.	

How to Use

Surface Preparation All joint-wall surfaces must be clean, sound, and frost-free. Joint walls must be free of oils, grease, curing compound residues, and any other foreign matter that might prevent bond. Ideally this should be accomplished by mechanical means. Bond breaker tape or backer rod must be used in bottom of joint to prevent bond.



Priming	<p>Priming is typically not necessary. Most substrates only require priming if sealant will be subjected to water immersion after cure. Testing should be done, however, on questionable substrates, to determine if priming is needed.</p> <p>Consult Technical Service or Sikaflex Primer Technical Data Sheet for additional information on priming.</p> <p>Note: Most Exterior Insulation Finish Systems (EIFS) manufacturers recommend the use of a primer. When EIFS manufacturer specifies a primer or if on-site bond testing indicates a primer is necessary, Sikaflex 429 primer is recommended. On-site adhesion testing is recommended with final system prior to the start of a job.</p>
Mixing	<p>Pour entire contents of Component 'B' into pail of Component 'A'. Add entire contents of Color-pak into pail and mix with a low-speed drill (400-600 rpm) and Sikaflex paddle.* Mix for 3-5 minutes to achieve a uniform color and consistency. Scrape down sides of pail periodically. Avoid entrapment of air during mixing.</p> <p>When mixing in cold weather (<50°F), do not force the mixing paddle to the bottom of the pail. After adding Component 'B' and Color-pak into Component 'A', mix the top 1/2 to 3/4 of the pail during the first minute of mixing. After scraping down the sides of the pail, mix again for another minute. The paddle should reach the bottom of the pail between the first and second minute of mixing. Scrape down the sides of the pail a second time and then mix for an additional 2-3 minutes until the sealant is well blended.</p> <p>Color-pak must be used with tint base. For pre-pigmented Limestone base, just mix with low speed drill and Sikaflex paddle (no Color-pak needed).</p>
Application	<p>Recommended application temperatures 40°-100°F. Pre-conditioning units to approximately 70°F is necessary when working at extremes. Move pre-conditioned units to work areas just prior to application.</p> <p>Apply sealant only to clean, sound, dry, and frost-free substrates. Sikaflex-2c should be applied into joints when joint slot is at mid-point of its designed expansion and contraction.</p> <p>To place, load directly into bulk gun or use a follower plate loading system. Place nozzle of gun into bottom of joint and fill entire joint. Keeping the nozzle deep in the sealant, continue with a steady flow of sealant preceding nozzle to avoid air entrapment. Also, avoid overlapping of sealant since this also entraps air. Joint dimension should allow for 1/4 inch minimum and 1/2 inch maximum thickness for sealant. Proper design is 2:1 width to depth ratio. Tool sealant to ensure full contact with joint walls and remove air entrapment.</p>
Limitations	<ul style="list-style-type: none"> ■ The ultimate performance of Sikaflex-2c NS depends on good joint design and proper application. ■ Minimum depth in working joint is 1/4 in. ■ Maximum expansion and contraction should not exceed 50% of average joint width. ■ Do not cure in the presence of curing silicones. ■ Avoid contact with alcohol and other solvent cleaners during cure. ■ Allow 3-day cure before subjecting sealant to total water immersion. ■ Avoid exposure to high levels of chlorine. (Maximum level is 5 ppm). ■ Do not apply when moisture vapor transmission exists since this can cause bubbling within the sealant. ■ Avoid over-mixing sealant. ■ Light color shades tend to yellow over time when exposed to ultraviolet rays. ■ Light colors can yellow if exposed to direct gas fired heating elements. ■ When overcoating: an on-site test is recommended to determine actual compatibility. ■ The depth of sealant in horizontal joints subject to traffic is 1/2 inch. ■ In horizontal joints exposed to vehicular or foot traffic, "TG" additive is recommended. See Sikaflex-2c NS TG data sheet for specific details.
Caution	<p>Component 'A'; Irritant - Avoid contact. Product is a skin, respiratory and eye irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded. Use with adequate ventilation.</p> <p>Component 'B'; Combustible; Sensitizer; Irritant - Contains Xylene. Keep away from heat, sparks and open flame. Use with adequate ventilation. Product is a respiratory and skin sensitizer. Avoid contact. Product is an eye, skin, and respiratory irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded.</p>
First Aid	<p>Eyes - Rinse eyes thoroughly for fifteen minutes. Contact physician. Skin - Wash affected area thoroughly with soap and water. Remove contaminated clothing. If irritation persists contact physician. Inhalation - Remove to fresh air. If breathing stops, institute artificial respiration. Contact physician. Ingestion - Dilute with water. Contact physician.</p>
Clean Up	<p>Uncured material can be removed with approved solvent. Cured material can only be removed mechanically. For spillage, collect, absorb, and dispose of in accordance with current, applicable local, state, and federal regulations.</p>

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Product Data Sheet
Edition 5.5.2011
Sikaflex-2c SL

Sikaflex®-2c SL

Two-component, self-leveling, polyurethane elastomeric sealant

Description	Sikaflex-2c SL is a 2-component, premium-grade, polyurethane-based, elastomeric sealant. It is principally a chemical cure in a <u>self-leveling</u> consistency. Meets ASTM C-920, Type M, Grade P, Class 25, use T, NT, M, G, A, O, I and Federal Specification TT-S-00227E, Type 1, Class A.
Where to use	<ul style="list-style-type: none"> ■ Intended for use in all properly designed working joints with a minimum depth of 1/4 inch. ■ Ideal for horizontal applications. ■ Placeable at temperatures as low as 40°F. ■ Adheres to most substrates commonly found in construction. ■ Submerged conditions, such as canal and reservoir joints.
Advantages	<ul style="list-style-type: none"> ■ True self-leveling properties. ■ Capable of ±50% joint movement. ■ Chemical cure allows the sealant to be placed in non-moving joints exceeding 1/2 in. in depth. ■ High elasticity with a tough, durable, flexible consistency. ■ Exceptional cut and tear resistance. ■ Exceptional adhesion to most substrates without priming. ■ Available in 35 architectural colors. ■ Color uniformity assured via Color-pak system. ■ Available in pre-pigmented Limestone Gray (no Color-pak needed). ■ Self-leveling consistency, easy to apply in horizontal joints. ■ Easy to mix. ■ Paintable with water-, oil-, and rubber-base paints. ■ Jet fuel resistant. ■ No color-pak needed in pre-pigmented Limestone.
Coverage	1 gal. yields 231 cu. in. or 154 lin. ft. of a 1/2 in. X 1/4 in. joint.
Packaging	1.5 gal. unit. 3 gal. units. Color-pak is purchased separately. Limestone Gray color available pre-pigmented.

Typical Data (Material and curing conditions 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf life	One year in original, unopened containers.	
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.	
Colors	A wide range of architectural colors are available. Special colors available on request.	
Application Temperature	40° to 100°F, ambient and substrate temperatures. Sealant should be installed when joint is at mid-range of its anticipated movement.	
Service Range	-40° to 170°F (-40°-75°C).	
Curing Rate (ASTM C-679)		
	Tack-free Time	6-8 hrs.
	Final Cure	3 days
Application Life	TT-S-00227E	4 hrs.
Tear Strength	ASTM D-624	100 lb./in.
Shore A Hardness	ASTM D-2240	40 ± 5
Tensile Properties (ASTM D412)		
	Tensile Strength at Break	175 psi
	Tensile Elongation	650%
	100% Modulus	100 psi
Adhesion in Peel (Fed Spec. TT-S-00227E)		
	Substrate	Peel Strength
	Concrete	30 lb.
		% Adhesion Loss
		Zero
Weathering Resistance	Excellent	
Chemical Resistance	Good resistance to water, diluted acids, diluted alkalines, and residential sewage. Consult Technical Service for specific data.	

How to Use

Surface Preparation All joint-wall surfaces must be clean, sound, and frost-free. Joint walls must be free of oils, grease, curing compound residues, and any other foreign matter that might prevent bond. Ideally this should be accomplished by mechanical means. A roughened surface will also enhance bond. Bond breaker tape or backer rod must be used in bottom of joint to prevent bond.



Priming Priming is typically not necessary. Most substrates only require priming if sealant will be subjected to water immersion after cure. Testing should be done, however, on questionable substrates, to determine if priming is needed.

Consult Technical Service or Sikaflex Primer Technical Data Sheet for additional information on priming.

Mixing Pour entire contents of Component 'B' into pail of Component 'A'. Add entire contents of Color-pak into pail and mix with a low-speed drill (400-600 rpm) and Sikaflex paddle. * Mix for 3-5 minutes to achieve a uniform color and consistency. Scrape down sides of pail periodically. Avoid entrapment of air during mixing.

Color-pak must be used with tint base. **Note:** When mixing 3 gal. unit, two containers of Component B and two color-paks must be used.

*For pre-pigmented Limestone base, just mix with low speed drill and Sikaflex paddle (no Color-pak needed).

Application Recommended application temperatures 40°-100°F. Pre-conditioning units to approximately 70°F is necessary when working at extremes. Move pre-conditioned units to work areas just prior to application. Apply sealant only to clean, sound, dry, and frost-free substrates. Sikaflex-2c should be applied into joints when joint slot is at mid-point of its designed expansion and contraction.

To place, pour or extrude the SL grade in one direction and allow it to flow and level as necessary. If extruding, load mixed sealant directly into bulk gun or use follower plate loading system. Place nozzle of gun into bottom of joint and fill entire joint. Keeping the nozzle deep in the sealant, continue with a steady flow of sealant preceding nozzle to avoid air entrapment. Also, avoid overlapping of sealant since this also entraps air. Tool as necessary. Joint dimension should allow for 1/4 inch minimum and 1/2 inch maximum thickness for sealant. Proper design is 2:1 width to depth ratio.

- Limitations**
- The ultimate performance of Sikaflex-2c, depends on good joint design and proper application.
 - Minimum depth in working joint is 1/4 in.
 - Maximum expansion and contraction should not exceed 50% of average joint width.
 - Do not cure in the presence of curing silicones.
 - Avoid contact with alcohol and other solvent cleaners during cure.
 - Allow 3 day cure before subjecting sealant to total water immersion.
 - Avoid exposure to high levels of chlorine. (Maximum level is 5 ppm).
 - Do not apply when moisture vapor transmission exists since this can cause bubbling within the sealant.
 - Avoid over-mixing sealant.
 - White color tends to yellow slightly when exposed to ultraviolet rays.
 - Light colors can yellow if exposed to direct gas fired heating elements.
 - When overcoating: an on-site test is recommended to determine actual compatibility.
 - The minimum depth of sealant in horizontal joints subject to traffic is 1/2 inch.
 - Do not tool with detergent or soap solution.

Caution **Component 'A'; Irritant** - Avoid contact. Product is a skin, respiratory and eye irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded. Use with adequate ventilation.

Component 'B'; Combustible; Sensitizer; Irritant - Contains Xylene. Keep away from heat, sparks and open flame. Use with adequate ventilation. Product is a respiratory and skin sensitizer. Avoid contact. Product is an eye, skin, and respiratory irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded.

First Aid In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician. For respiratory problems, remove to fresh air. Wash clothing before re-use. Discard contaminated shoes.

Clean Up Uncured material can be removed with approved solvent. Cured material can only be removed mechanically. For spillage, collect, absorb, and dispose of in accordance with current, applicable local, state, and federal regulations.

Linear Feet of Sealant per Gallon

Width	Depth	
	Inches	
Width	1/4	308.0
	1/2	154.0
	3/4	102.7
	1	77.0
	1 1/2	61.6
	1 3/4	51.3

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Sikagard® FlexCoat - Cementitious Protective Coating

Two-component, polymer-modified, waterproof, cement-based coating system

Description	Sikagard® FlexCoat is a polymerized cementitious protective coating. It consists of a unique rubber-like polymer liquid (Part A) mixed at the time of application with a cement aggregate blend (Part B).
Where to Use	<ul style="list-style-type: none"> ■ Balcony deck surfacing. ■ Concrete exterior restoration. ■ Sidewalk resurfacing. ■ Wall refinishing and installation coating. ■ Stadium renovation. ■ Swimming pool walkways.
Advantages	<p>It can be applied over almost any clean, sound surface e.g. concrete, block, masonry, etc. for a number of different floor, wall and roof uses. Important characteristics of Sikagard® FlexCoat are its extraordinary adhesion coupled with its ability to withstand prolonged pedestrian and light vehicular traffic. In these respects, the material is far superior to conventional cementitious coatings. Sikagard® FlexCoat provides a waterproof coating which substantially reduces or prevents water penetration, freeze-thaw scaling and concrete carbonation. It is a "breathable" coating which releases normal entrapped vapor without loosening or blistering. Sikagard® FlexCoat is available in natural cement color.</p> <p>Sikalastic® Traffic Systems can be top coated with Sikagard® Flexcoat cement based systems. Please refer to the spec component of the Sikalastic®/Sikagard® Flexcoat Hybrid System.</p>
Packaging	55 lb. bag. and 2.5 gallon liquid (packaged in 3.5 gallon pail) = 1 unit.
Coverage	Sikagard® FlexCoat is applied in two coats. Each coat should be applied at 250 ft. ² /unit. A total of 60 mils total thickness is required. On-site results for coverage will vary.

Typical Data (Material and curing conditions @ 75°F (24°C))

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	1 year in original, unopened packaging
Storage Conditions	Store dry at 40°-95°F(4°-35°C). Condition material to 65°-75°F before using.
Adhesion (ASTM C-882), Type I	515 psi
Absorption	<2%
Weight gain by 4" coated concrete cube after 21 days water immersion	
Weathering (ASTM G23) Weatherometer) Method 1 procedure, 60 cycles	No visible degradation
Hydrocarbon Substances Resistance (ASTM D-1308, Spot Open Test)	
21 days repeated reapplication of gasoline, motor oil SAE-10, jet fuel	No softening or attack
Resistance to Wind-Driven Rain Fed Spec. TT-C-658 (8 hrs.) & TT-P-0035 (24 hrs.)	
At 5" water pressure and 60 gal./hr. water flow	No water or dampness noted on back of test panels
Compressive Strength (ASTM C-109)	2,440 psi
Tensile Strength (ASTM C-190)	430 psi
Elongation (ASTM D-412)	12%
Shore Hardness (ASTM D-2240)	Durometer "A" - 82
Impact Resistance (MIL-D-3134, Para. 4.7.3.)	No cracking or detachment (2 lb. steel ball dropped from 8 ft. height on to coated steel plate)
Water Vapor Permeability (E-96)	1.96 perms/inches
Flammable Properties (ASTM E-84 Steiner Tunnel Test)	Flame Spread - 4 Smoke Density - 0
Fire Resistance (UL790)	Complies as Class A



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How to Use

Surface Preparation	Prepare surfaces by removal of dirt, foreign matter plus patching in accordance with manufacturer's recommendations. An open textured surface ICRI CSP.3 is recommended. Deeper areas shall be patched with appropriate patch material like SikaQuick® or SikaRepair® products. The material is applied in multiple coats by brush, roller, trowel or spray to a typical thickness of 60 mils.
Mixing	Place the liquid component in appropriate mixing container. It is always recommended to start mixing with approximately 80% of the liquid. Add the powder while continuing to mix. Mix to a uniform consistency, maximum 3 minutes. Mechanically mix with a low-speed drill (400-600 rpm) and paddle.
Application	Pre-wet surface to SSD (Saturate Surface Dry). Insure good intimate contact with the substrate is achieved. Sikagard® FlexCoat can be applied with brush, roller, trowel or spray application. Apply first coat of Sikagard® FlexCoat. Apply following coats (one or two depending on service conditions/ requirements) by brush, trowel roller or spray. Finish to specified texture. Color Finish (optional) – apply Sikagard® FlexCoat ATC acrylic top coat for color finish, when specified, in two coats by roller, brush or spray. Caution: Do not install Sikagard® FlexCoat in cold weather (i.e. below 50°F/10°C) or when rainfall can be expected prior to material setting.
Tooling & Finishing	Curing Protect newly applied Sikagard® FlexCoat from direct sunlight, wind, rain and freezing.
Limitations	<ul style="list-style-type: none"> ■ Apply product in temperatures > 50°F (7°C) and rising. ■ Minor shade variation may occur with natural cement color material. ■ Not suitable for use in areas where acids or other aggressive chemicals are spilled. ■ Top coats strongly recommended for color uniformity. ■ Will reflect dynamic concrete cracks. ■ Static and dynamic cracks can be detailed in accordance with accepted industry practices of using embedding mesh or other methods to reduce the reflecting of cracks. ■ Sikagard® FlexCoat is a dense, cement-based waterproofing material that is vapor permeable. This product will not create a vapor barrier. ■ Efflorescence in the existing substrate can result in the failure of the bond or discoloration of the surface if there are areas of concrete that are not protected from water ingress. ■ Sikagard® FlexCoat has been tested with Sikagard® FlexcoatATC. Use of any other top coat needs to be tested for compatibility and performance. ■ As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® 32 Hi-Mod.

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SikaTop® 123 PLUS

Two-component, polymer-modified, cementitious, non-sag mortar plus Sika FerroGard® 901 penetrating corrosion inhibitor

Description	SikaTop® 123 PLUS is a two-component, polymer-modified, Portland cement-based, fast-setting, non-sag mortar. It is a high performance repair mortar for vertical and overhead surfaces and offers the additional benefit of Sika FerroGard® 901, a penetrating corrosion inhibitor included in its formulation.
Where to Use	<ul style="list-style-type: none"> ■ On grade, above and below grade on concrete and mortar. ■ On vertical and overhead surfaces. ■ As a structural repair material for parking structures, industrial plants, walkways, bridges, tunnels, dams and ramps. ■ Approved for repairs over cathodic protection systems
Advantages	<ul style="list-style-type: none"> ■ Extremely low shrinkage proven by four industry standard test methods. ■ High compressive and flexural strengths. ■ Increased freeze/thaw durability and resistance to deicing salts. ■ Compatible with coefficient of thermal expansion of concrete - Passes ASTM C 884. ■ Increased density - improved carbon dioxide resistance (carbonation) without adversely affecting water vapor transmission (not a vapor barrier). ■ Enhanced with Sika FerroGard® 901, a penetrating corrosion inhibitor - reduces corrosion even in the adjacent concrete. ■ USDA certifiable for incidental food contact ■ ANSI/NSF Standard 61 potable water approved complaint.
Coverage	0.39 cu. ft./ unit.
Packaging	Component 'A' - 1-gal. plastic jug, 4/carton. Component 'B' - 44-lb. multi-wall bag.

Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	One year in original, unopened packaging.		
Storage Conditions	Store dry at 40°-95°F. Condition material to 65°-75°F before using. Protect Component 'A' from freezing. If frozen, discard.		
Color	Concrete gray when mixed.		
Mixing Ratio	Plant-proportioned kit, mix entire unit.		
Application Time	Approximately 15 minutes.		
Finishing Time	20-60 minutes		
Note:	All times start after adding Component 'B' to Component 'A' and are highly affected by temperature, relative humidity, substrate temperature, wind, sun and other job site conditions.		
Density (wet mix)	ASTM C 138		132 lbs./ft ³ (2.2 kg./l)
Flexural Strength	ASTM C 293	28 days	1,500 psi
Split Tensile	ASTM C 496	28 days	900 psi
Bond Strength	ASTM C 882 (modified)	28 days	2,000 psi
Compressive Strength	ASTM C 109		
		1 day	3,000 psi
		7 days	4,000 psi
		28 days	6,000 psi
Shrinkage	ASTM C 157 (mod. ICRI 320.3R)		
Specimen Size 1x1x11-1/4"		28 days	0.05%
Specimen Size 3x3x11-1/4"		28 days	0.038%
Ring Test (days)	ASTM C 1581		>70 days
Ring Test - Average Max Strain	ASTM C 1581		<-36 µstrain
Ring Test - Average Stress Strain	ASTM C 1581		4.92 psi/day
Ring Test - Potential for Cracking	ASTM C 1581		Low
Baenzinger Block		90 days	No cracking
Freeze/Thaw Durability (300 cycles)	ASTM C 666		98%
Cl Permeability (cou)	ASTM C 1202		<500 Coulombs.
Direct Bond Strength	ASTM C 1583	28 days	500 psi (substrate failure)
Modulus of Elasticity	ASTM C 531		2.94 x 10 ⁶ psi
Initial Set Time (min)	ASTM C 266		20-40
Final Set Time (min)	ASTM C 266		<75



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How to Use

Substrates	Concrete, mortar, and masonry products.
Surface Preparation	<p>Remove all deteriorated concrete, dirt, oil, grease and all bond inhibiting materials from surface. Be sure repair area is not less than 1/8 inch in depth. Preparation work should be done by high pressure water blast, scabber, or other appropriate mechanical means to obtain an exposed aggregate surface with a minimum surface profile of $\pm 1/16$ inch (CSP-5). Saturate surface with clean water. Substrate should be saturated surface dry (SSD) with no standing water during application.</p> <p>Reinforcing Steel: Steel reinforcement should be thoroughly prepared by mechanical cleaning to remove all traces of rust. Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with clean water after mechanical cleaning. For priming of reinforcing steel use Sika® Armatec® 110 EpoCem (consult Product Data Sheet).</p> <p>Priming Concrete Substrate: Prime the prepared substrate with a brush or sprayed applied coat of Sika® Armatec® 110 EpoCem (consult Product Data Sheet). Alternately, a scrub coat of SikaTop® 123 PLUS can be applied prior to placement of the mortar. The repair mortar has to be applied into the wet scrub coat before it dries.</p>
Mixing	Pour Component 'A' into mixing container. Add Component 'B' while mixing continuously. Mix mechanically with a low-speed drill (400 - 600 rpm) and mixing paddle or mortar mixer. Mix to a uniform consistency, maximum 3 minutes. Manual mixing can be tolerated only for less than a full unit. Thorough mixing and proper proportioning of the two components is necessary.
Application	SikaTop® 123 PLUS must be scrubbed into the substrate, filling all pores and voids. Force material against edge of repair, working toward center. After filling repair, consolidate, then screed. Material may be applied in multiple lifts. The thickness of each lift, not to be less than 1/8 inch minimum or more than 1.5 inches maximum. Where multiple lifts are required score top surface of each lift to produce a roughened surface for next lift. Allow preceding lift to reach initial set, 30 minutes minimum, before applying fresh material. Saturate surface of the lift with clean water. Scrub fresh mortar into preceding lift. Allow mortar or concrete to set to desired stiffness, then finish with wood or sponge float for a smooth surface.
Tooling & Finishing	As per ACI recommendations for portland cement concrete, curing is required. Moist cure with wet burlap and polyethylene, a fine mist of water or a water based*, compatible curing compound (ASTM C 309 complaint). Curing compounds adversely affect the adhesion of following lifts of mortar, leveling mortar or protective coatings. Moist curing should commence immediately after finishing. If necessary protect newly applied material from direct sunlight, wind, rain and frost. *Pretesting of curing compound is recommended.
Limitations	<ul style="list-style-type: none"> ■ Application thickness: Minimum 1/8 inch (3 mm). Maximum in one lift - 1.5 in. (38 mm). ■ Minimum ambient and surface temperatures 45°F (7°C) and rising at time of application. ■ Do not use solvent-based curing compound. ■ Size, shape and depth of repair must be carefully considered and consistent with practices recommended by ACI or ICRI. For additional information, contact Technical Service. ■ For additional information on substrate preparation, refer to ICRI Guideline No. 310.2R re: Polymer Overlays and Concrete Repair. ■ If aggressive means of substrate preparation is employed, substrate strength should be tested in accordance with ACI 503 Appendix A prior to the repair application. ■ As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® 32. Hi-Mod.

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Product Data Sheet
Edition 11.20.2014
Sikadur® 21, Lo-Mod LV

Sikadur® 21, Lo-Mod LV

Low-modulus, low-viscosity, epoxy resin binder

Description	Sikadur® 21, Lo-Mod LV, is a 2-component, 100% solids, moisture-tolerant, epoxy resin binder. It conforms to the current ASTM C-881 Type II, Grade 1, Class B & C and AASHTO M-235 specifications.
Where to Use	Use as a binder for epoxy mortar for patching and overlays.
Advantages	<ul style="list-style-type: none"> ■ Tolerant to moisture both before and after cure. ■ Convenient easy mix ratio A:B = 1:1 by volume. ■ Excellent strength development. ■ Low viscosity gives you easy handling, high-yield epoxy mortar. ■ Material is USDA-certifiable for incidental food contact.
Coverage	<p>Prime Coat - approximately 200-250 ft²/gal.</p> <p>Mortar Binder - 1 gal. of mixed Sikadur® 21, Lo-Mod LV with the addition of 6 parts by loose volume of an oven-dried sand, yields approximately 924 in³.</p>
Packaging	4 gallon units. Note: Part A of the Sikadur 22 Lo-Mod, Sikadur 22 Lo-Mod FS and Sikadur 21 Lo-Mod LV is a universal component of these three products.

Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	2 years in original, unopened containers.		
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-85°F (18°-29°C) before using.		
Color	Clear, amber.		
Mixing Ratio	Component 'A':Component 'B' = 1:1 by volume.		
Viscosity	Approximately 1,000 cps.		
Pot Life	Approximately 25 minutes. (200 gram mass)		
Tack-Free Time	Approximately 3 hours; @ 90°F (32°C) Approximately 2 hours		
Traffic Time	4-5 hours.		
Tensile Properties (ASTM D-638)		MORTAR 1:6	NEAT
14 day Tensile Strength		1,300 psi (8.9 MPa)	5,800 psi (40.0 MPa)
Elongation at Break		0.2 %	5.5 %
Modulus of Elasticity		6.6 x 10 ⁵ psi (4,551 MPa)	1.43 x 10 ⁵ psi (986 MPa)
Flexural Properties (ASTM D-790)		MORTAR 1:6	NEAT
14 day Flexural Strength (Modulus of Rupture)		2,300 psi (15.8 MPa)	9,600 psi (66.2 MPa)
Tangent Modulus of Elasticity in Bending		1.2 x 10 ⁶ psi (8,274 MPa)	2.98 x 10 ⁵ psi (2,055 MPa)
Shear Strength (ASTM D-732)		MORTAR 1:6	NEAT
14 day Shear Strength		2,000 psi (13.7 MPa)	5,670 psi (39 MPa)
Water Absorption (ASTM D-570)			NEAT
7 day (24 hr immersion)			0.26%
Bond Strength (ASTM C-882): Hardened concrete to hardened concrete			
2 day (dry cure)	Bond Strength	1,100 psi (7.5 MPa)	
14 day (moist cure)	Bond Strength	1,600 psi (11 MPa)	
Abrasion (Taber Abrader)			MORTAR 1:6
14 day Weight loss, 1,000 cycles (H-22 wheel; 1,000 gm. weight)			4.1 gm
Compressive Properties (ASTM C-579) Compressive Strength, psi (MPa)			
		Mortar 1:6 (ASTM D-695)	73°F (23°C) NEAT
	40°F*(4°C)	73°F*(23°C)	90°F* (32°C)
4 hour	-	-	500 (3.4)
8 hour	-	400 (2.7)	2,200 (15.1)
16 hour	20 (0.13)	2,100 (14.4)	4,600 (31.7)
1 day	40 (0.27)	2,600 (17.9)	4,700 (32.4)
3 day	1,400 (9.6)	4,900 (33.7)	5,500 (37.9)
7 day	3,500 (24.1)	5,400 (37.2)	6,200 (42.7)
14 day	4,500 (31.0)	6,000 (41.3)	6,200 (42.7)
28 day	4,600 (31.7)	6,100 (42.0)	6,200 (42.7)



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Compressive Modulus	<u>MORTAR</u>	<u>NEAT</u>
28 day	7.6 x 10 ³ psi (5,240 MPa)	2.58 x 10 ³ psi (1,779 MPa)

* Material cured and tested at the temperatures indicated.

How to Use

Surface Preparation	Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, laitance, grease, curing compounds, impregnations, waxes and any other contaminants. Preparation Work: Concrete - Should be cleaned and prepared to achieve a laitance and contaminant free, open textured surface by blast cleaning or equivalent mechanical means. Steel - Should be cleaned and prepared thoroughly by blast cleaning to white metal finish.
Mixing	Proportion equal parts by volume of Component 'A' and 'B' into clean pail. Mix thoroughly for 3 min. with Sika paddle on low-speed (400-600 rpm) drill until uniformly blended. Mix only that quantity that can be used within pot life. To prepare epoxy mortar - Slowly add 6 parts by loose volume of oven-dried sand aggregate to 1 part of mixed Sikadur® 21, Lo-Mod LV. Mix until uniform in consistency.
Application	Epoxy Mortar - Prime prepared surface with mixed Sikadur® 21, Lo-Mod LV. Apply epoxy mortar by trowel or vibrating screed while primer is still tacky. Finish with finishing trowel.
Limitations	<ul style="list-style-type: none"> ■ Minimum substrate and ambient temperature 40°F (4°C). ■ Porous substrates must be tested for moisture-vapor transmission prior to application. (Ref. ASTM D-4263). ■ Minimum age of concrete before application is 21-28 days depending upon curing and drying conditions. ■ Do not apply to exterior slab on grade. ■ Maximum application thickness on exterior substrates exposed to thermal change is 1/2 in (13 mm). ■ Do not dilute. Addition of solvents will prevent proper cure. ■ Use oven-dried aggregates only. ■ Material is a vapor barrier after cure. ■ Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

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Product Data Sheet
Edition 5.5.2011
Sikaflex-2c NS TG

Sikaflex®-2c NS TG

Two-component, traffic-grade,
polyurethane elastomeric sealant

Description	Sikaflex-2c NS TG is a premium-grade, polyurethane-based elastomeric sealant. It is principally a chemical cure in a non-sag consistency. Available in 35 standard colors (>320 special colors) with a convenient Color-pak. Also available as a pre-pigmented product in Limestone Gray. Meets ASTM C 920, Type M, Grade NS, use T, NT, O, M, G, A and Federal Specification TT-S-00227E. Product developed by addition of Sikaflex 2c NS TG Component to the standard Sikaflex 2c NS EZ Mix joint sealant.
Where to Use	<ul style="list-style-type: none"> ■ Applications to include: parking garages, walkways, plazas, platforms, etc., with exposure to foot or pneumatic-tire traffic. ■ Intended for horizontal joints with a minimum depth of 1/4 inch. ■ Placeable at temperatures as low as 40°F. ■ Adheres to most substrates commonly found in construction. ■ Acceptable for sealing joints in institutions, correctional facilities, etc., as a tamper resistant sealant.
Advantages	<ul style="list-style-type: none"> ■ Capable of ±25% joint movement. ■ Chemical cure allows the sealant to be placed in joints exceeding 1/2 inch in depth. ■ Tough, durable, flexible consistency. ■ Exceptional cut and tear resistance. ■ Exceptional adhesion to most substrates without priming. ■ Color uniformity assured via Color-pak system or pre-pigmented Limestone Gray. ■ Fuel resistant. ■ No Color-pak needed in pre-pigmented Limestone Gray.
Coverage	1 gal. yields 231 cu. in. or 154 lin. ft. of a 1/2 in. X 1/4 in. joint.
Packaging	Sikaflex 2c NS - 1.5 gal. unit plus, Sikaflex 2c NS TG Component - 1/2 pint can (6- 1/2 pint cans/case). Contents 5.25- fl. oz./can. Color-pak is also purchased separately. Limestone Gray color available pre-pigmented.

Typical Data (Material and curing conditions 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	One year in original, unopened containers.	
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.	
Colors	A wide range of architectural colors are available. Special colors available on request.	
Application Temperature	40° to 100°F, ambient and substrate temperatures. Sealant should be installed when joint is at mid-range of its anticipated movement.	
Service Range	-40° to 170°F (-40° - 75°C)	
Shore A Hardness (ASTM D-2240)	21 day	45 ± 5
Tensile Properties (ASTM D-412)	21 day	
Tensile Stress	220 psi	
Elongation at Break	300%	
Modulus of Elasticity	25%	75 psi
	50%	110 psi
	100%	140 psi
Adhesion in Peel (TT-S-00230C, ASTM C-794)		
Substrate: Concrete	Peel Strength: 25 lb.	Adhesion Loss: 0%
Weathering Resistance	Excellent	
Chemical Resistance	Good resistance to water, diluted acids, and diluted alkalines. Consult Technical Service for specific data.	
Joint Movement Capability	± 25%	



How to Use

Surface Preparation	All joint-wall surfaces must be clean, sound, and frost-free. Joint walls must be free of oils, grease, curing compound residues, and any other foreign matter that might prevent bond. Ideally, this should be accomplished by mechanical means. A roughened surface will also enhance bond. Bond breaker tape or backer rod must be used in bottom of joint to prevent bond.
Priming	Priming is typically not necessary. Most substrates only require priming if sealant will be subjected to water immersion after cure. Testing should be done, however, on questionable substrates, to determine if priming is needed. Consult Technical Service or Sikaflex Primer Technical Data Sheet for additional information on priming.
Mixing	Pour entire contents of Component 'B' and (1) 1/2 pint unit of Sikaflex-2c NS TG Component into pail of Component 'A'. For tint base: add entire contents of Color-pak into pail and mix with a low-speed drill (400-600 rpm) and Sikaflex paddle. *Mix for 3-5 minutes to achieve a uniform color and consistency. Scrape down sides of pail periodically. Avoid entrapment of air during mixing. *For pre-pigmented limestone base: just mix with low speed drill and Sikaflex paddle without Color-pak.
Application	Recommended application temperatures 40°-100°F. Pre-conditioning units to approximately 70°F is necessary when working at extremes. Move pre-conditioned units to work areas just prior to application. Apply sealant only to clean, sound, dry, and frost-free substrates. Sikaflex-2c NS TG should be applied into joints when joint slot is at mid-point of its designed expansion and contraction. To place NS TG, load directly into bulk gun or use a follower plate loading system. Place nozzle of gun into bottom of joint and fill entire joint. Keeping the nozzle deep in the sealant, continue with a steady flow of sealant preceding the nozzle to avoid air entrapment. Avoid overlapping of sealant to eliminate entrapment of air. Tool as required. Proper design is 2:1 width to depth ratio.
Limitations	<ul style="list-style-type: none"> ■ The ultimate performance of Sikaflex 2c NS TG depends on good joint design and proper application. ■ Minimum depth in working joint is 1/4 in; maximum depth for working joint is 1/2 in. ■ Maximum expansion and contraction should not exceed 25% of average joint width. ■ Do not cure in the presence of curing silicones. ■ Avoid contact with alcohol and other solvent cleaners during cure. ■ Allow 3-day cure before subjecting sealant to total water immersion and prior to painting. ■ Do not apply when moisture vapor transmission exists since this can cause bubbling within the sealant. ■ Avoid over-mixing sealant. ■ White color tends to yellow over time when exposed to ultraviolet rays. ■ When over-coating: an on-site test is recommended to determine actual compatibility. ■ The depth of sealant in horizontal joints subject to traffic is 1/2 in. ■ Avoid exposure to high levels of chlorine. (Maximum continuous level is 5 ppm). ■ Do not tool with detergent or soap solutions. ■ Protect Sikaflex-2c NS TG Component from moisture. Use entire contents of container. ■ Maximum addition rate of TG Component is (1) 1/2 pint container/unit of Sikaflex-2c NS. ■ Do not use in contact with bituminous/asphaltic materials.
Caution	<p>Component 'A'; Irritant - Avoid contact. Product is a skin, respiratory and eye irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded. Use with adequate ventilation.</p> <p>Component 'B'; Combustible; Sensitizer; Irritant - Contains Xylene. Keep away from heat, sparks and open flame. Use with adequate ventilation. Product is a respiratory and skin sensitizer. Avoid contact. Product is an eye, skin, and respiratory irritant. Use of safety goggles and chemical resistant gloves recommended. Use of a NIOSH approved respirator required if PELs are exceeded.</p> <p>Sikaflex 2c NS TG Component; Irritant; Sensitizer; Combustible - Contains Xylene, Isocyanate. Keep away from heat, sparks, and open flame. Use with adequate ventilation. Avoid skin contact. Product is an eye, skin, and respiratory irritant. Product is a respiratory and skin sensitizer. Use of goggles and chemical resistant gloves recommended. Use of an NIOSH approved respirator required if PELs are exceeded.</p>
First Aid	In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician. For respiratory problems, remove to fresh air. In case of ingestion, dilute with water and milk; contact a physician. Wash clothing before re-use. Discard contaminated shoes.
Clean Up	Uncured material can be removed with approved solvent. Cured material can only be removed mechanically. In case of spillage, wear suitable protective equipment, collect with absorbent materials and dispose of in accordance with current, applicable local, state, and federal regulations.

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EXHIBIT 2



Matrix
Engineering
Group, Inc.

engineers | special inspectors | construction consultants

August 30, 2019

Mr. David Asbell
DeKalb County Infrastructure
330 W. Ponce De Leon
Decatur, Georgia 30030

**RE: *Parking Deck Evaluation and Recommended Repairs
Decatur Library at 215 Sycamore Street, Decatur, Georgia
Matrix Engineering Group Project Number 291087.213***

Mr. Asbell:

Matrix Engineering Group, Inc. completed the inspection at the Decatur Library parking deck structure located at 215 Sycamore Street, Decatur, Georgia and is pleased to submit this report of its findings and recommendations for repairs. This work was performed per the authorized proposal dated August 08, 2019 and PO Number 1174223 issued on August 12, 2019.

INTRODUCTION:

Based on our site meeting, it was our understanding that the parking deck is experiencing joint movements between the Double-T members (flange-to-flange movements) creating loud noises when cars pass over them. Similar conditions occurred in 2015 and the joints that were deflecting were repaired in accordance with design details prepared by Matrix and its consultant Palmer Engineering. A copy of the report and design is attached to this report for information. A total of 13 joints were repaired in November 2015. The failed flange-to-flange shear connectors of the pre-cast double tee beams were repaired primarily by installing Custom Fiber Reinforced Plastic (CFRP) Tee Joint Biscuits.

SCOPE OF WORK:

The scope of work included performing visual examination of the parking deck structure, determine the joints that are deflecting and other concrete surfaces that require maintenance and prepare recommendations for repairs.

EVALUATION AND FINDINGS:

The Double-T beams were evaluated by monitoring the movement of the beams as vehicles were passing over them. Each joint between the beams was visually evaluated for deflection and noise. Joints that require reinforcement were marked in the field and the locations were noted on a floor plan. Additionally,

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general walkthrough was performed at the top of the parking deck structure for the purpose of identifying deteriorated concrete areas that may require maintenance.

FINDINGS:

Based on our evaluation, we noted several joints deflecting under the vehicle's transient loads. One of the joints that were repaired in 2015 exhibited excessive movements, while all other repaired joints were in good conditions. The location of this joint is between Column Lines 1 and 2 at Column Line E. The installed CFRP Biscuits appear to have lost their adhesion to the concrete and will require additional reinforcement or re-installation.

All joints that exhibited movements were marked for repairs. A total of 13 joints were marked during this evaluation. Additionally, during our walk-through at the top level, we observed some cracks as well as spalled concrete that will require maintenance. These locations were documented and marked on Figure 1 attached to this report.

RECOMMENDATIONS:

Joint Reinforcement:

Since the joints that were reinforced in 2015 with CFRP tee biscuits are performing well, we recommend that the same reinforcement option be used for the reinforcement of the joints noted in this evaluation. We recommend that the same repair method is implemented to repair the joints. Repair Detail 2A/S1 prepared by Palmer Engineering included in the attached report should be used.

We also recommend that the warranty period be checked on the repairs that were done in 2015 and determine if the failed joint at Column Line E is still under warranty.

Concrete Crack and Spalling Repair:

Spalled concrete and cracks were observed during our inspection. Refer to the Figure 1 for the locations of the cracks and spalled areas. The spalled concrete areas around the joints as well as the noted cracks should be repaired in accordance with the applicable details (A/S1, A2/S1, and C/S3) prepared by Palmer Engineering attached to this report.

For budgeting purposes, we recommend that the following quantities be used for pricing. Unit prices should be provided for each item to allow for additions or deletions as warranted by the field conditions and to determine the cost of actual work performed:

- Number of CRFP T-Biscuits: 169 (13 joints at 13 T-Biscuits/each)
- Linear foot of Cracks: 200 feet (Estimated)
- Square feet of spalled concrete: 100 square foot (Estimated)

Step-by-Step procedures for repairs are included in the design details. Additionally, the specified materials including product data sheets and installation procedures are attached to this report. The contractor should perform the work in strict compliance with the manufacturer instructions. Other approved materials can be used with prior approval of the engineer.

The successful contractor should be prepared to work on a fast track schedule and/or weekends to minimize closure of the parking deck. Prior to beginning of the work, the contractor should submit the proposed work schedule, procedures, and materials to be used for review and approval by the Owner and Designer prior to commencement of the work to avoid delays during construction.

Matrix Engineering Group, Inc. appreciates the opportunity to have provided this service to the DeKalb County and looks forward to our continued association. Should you have any questions or concerns regarding this project, please feel free to call us.

Sincerely,

MATRIX ENGINEERING GROUP, INC.



Sam Alyateem, P.E.
Principal

Attachments:

Figure 1: Concrete Repairs Location Plan
Reports and Repair Design Details
Product Specifications and Manufacturer Recommended Procedures

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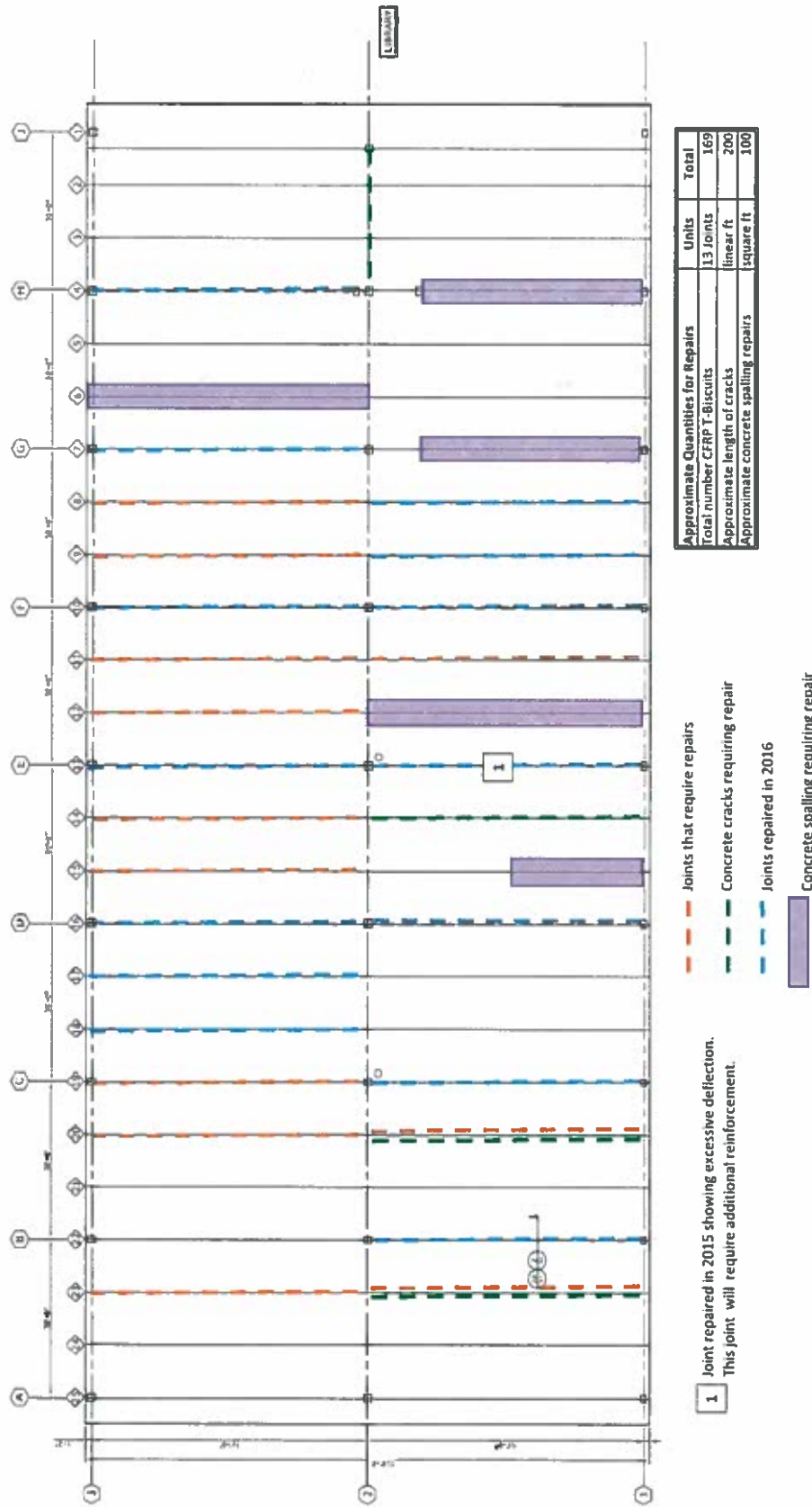


Figure 3. Concrete Repairs Location Plan

