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**RE: HEC Masonry and Concrete Repair
For the University of South Carolina-Upstate
USC Project No. CP00405775
BaSE, Inc. Project No. 14132**

ADDENDUM NO. 1 - July 23, 2014

TO: ALL HOLDERS OF RECORD OF CONTRACT DOCUMENTS

The following items add to, modify, clarify, or otherwise alter the Drawings and/or specifications and will become a part of the Contract Documents. Where a portion of the Drawings and/or specifications is added to, modified, clarified, or otherwise altered, the portion not so affected shall remain. Bidder shall include all effects that these items may have on his proposal.

Acknowledge receipt of this addendum by inserting its number and date in the Bid Form. Failure to do so may subject bidder to disqualification.

GENERAL / CLARIFICATIONS

1. Bid Deadline is July 28, 2014, 1:00pm. For information concerning submission of bid, please refer to the SCBO website or contact Aimee Rish at 803-777-2261.
2. A non-mandatory pre-bid meeting was held on July 21, 2014. A list of attendees is attached.
3. In-place 4" masonry veneer directly adjacent to handicap elevator may be removed at the Owner's discretion.
4. Access for concrete delivery for repairs to the South Café Entry Pad will be limited to manual delivery due to location.
5. Modify Note 5 in Detail A2- "Northeast Entry Planter - Repair Notes" - "Drill and install weep holes at 16" o.c. directly above existing masonry support angle *or above new sidewalk, whichever elevation is higher, to allow proper weepage.*
6. The original supplier of the masonry veneer is unknown at this time.
7. The diameter and length of the retrofit tie shall be as recommended by the retrofit tie manufacturer. This information can be found in product data information documentation on the manufacturer's website and/or in the attachment documentation.
8. Bidders are responsible for ensuring they are properly licensed to do the work prior to submitting their bid and, if they are unsure of what their license covers, they should contact LLR.
9. There are no special requirements for disposal of materials used on this project.

10. S&ME Inc. will be performing testing for this project. Coordinate scheduling with the USC-Upstate - Project Manager-Facilities Design and Construction.

DRAWINGS

None

ATTACHMENTS

1. Pre-bid Conference Sign In Sheet
2. Retrofit masonry veneer ties - Recommended product information sheets

END OF ADDENDUM NO. 1



University of South Carolina Pre Bid Conference Sign In Sheet

Spartanburg, SC

Project Name, Number & Project Manager: HEC Masonry & Concrete Repairs/CP00405775/Ben Coonrod
 Pre Bid Conference Date & Time: July 21, 2014 at 10:00AM 155 American Way; Spartanburg, SC

Name	Company	Address	Phone #	Email
Pat LAURO	Watertight Systems, Inc	P.O. Box 1625 Lexington, SC 29071	803-603-5639	plaur@watertightsystems.com
DEVO WHITE	CAPITOL Construction	704 RAMSGATE DR. SPARTANBURG, SC 29301	864-819-801	DEVO @ CAPITOLCONSTRUCTION.US
BEN COONROD	USC		803.530.5386	bcoonrod@ fmca.sc.edu
SCOTT SPROUSE	BAILEY & SON ENGR	124 Edinburgh Ct Greenville, SC 29601	864.232.1284	ssprouse@base91.com
FRED SCOTT	USC UPSTATE		804/503.5538	FSCOTT@USCUPSTATE

*Please make sure you list your company name as registered with LLR.
 * By signing and providing your email address, you are authorizing the University of South Carolina to send you information electronically.

TorkFix

Brick to Brick / Concrete Block / CMU Retrofit mechanical repair anchor

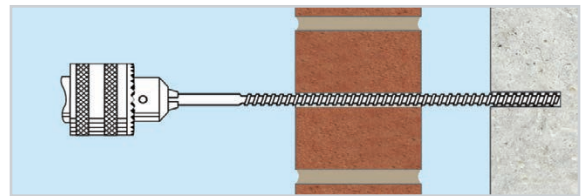


Applications

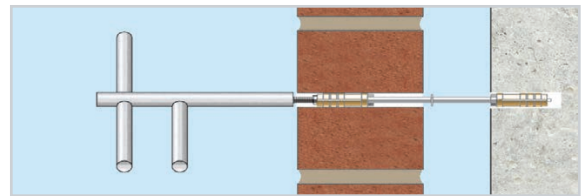
- For securing masonry veneers to brick, concrete block or CMU backup material
- To provide structural stability and resist wind pressure forces where wall ties have failed or been omitted

Installation Procedures

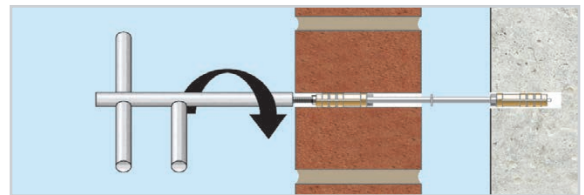
1. Mark the position for the TorkFix tie on the face of the facade.
2. Drill a $\frac{7}{16}$ " diameter pilot hole through the facade, through either the solid brick or mortar joint, and approximately $2\frac{1}{2}$ " into the back-up substrate, using a rotary percussion drill (3-jaw-chuck-type).
3. Screw the threaded end of Setting Tool 1 onto the outer end of the anchor.
4. Insert the anchor fully into the hole in the backup material.
5. Turn the Setting Tool 1 until the inner shell has expanded and is tight.
6. Apply the torque wrench to the end of the Setting Tool 1 ($\frac{1}{4}$ " square) to check the torque – usually 36lbf-ins for standard brick but may be increased to 54lbf-ins for harder substrates.
7. Fit Setting Tool 2 over the end nut and turn until the outer shell has expanded and is tight (36-54lbf-ins).
8. Fit the torque wrench to the end of Setting Tool 2 ($\frac{1}{4}$ " square) and check the torque, as before.
9. Make good the hole and seal the surface with color matched mastic or mortar.



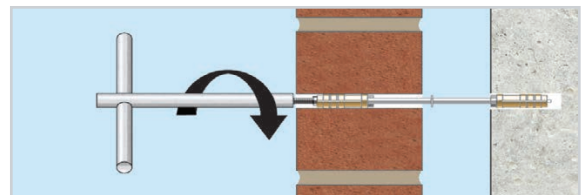
1. Drill the appropriate clearance hole through the facade and into the backup material.



2. Screw the threaded end of Setting Tool 1 onto the outer end of the anchor and insert fully into the hole.



3. Turn Setting Tool 1 until the inner shell expands and is tight. Apply the torque wrench to the end of the Setting Tool 1 to check the torque.



4. Fit Setting Tool 2 over the end nut and turn until the outer shell has expanded and is tight. Fit the torque wrench to the end of Setting Tool 2 to check the torque.



For full Product Information, Case Studies and downloadable Repair Details, giving specifications for many common structural faults, go to:
www.helifix.com/products/retrofit-products/torkfix

Anchor Selection Masonry – Masonry

Maximum Cavity Standard Masonry *	Nominal Anchor Length
Ins	Ins
1 1/2"	4 1/2"
2 1/2"	5 1/2"
3 1/2"	6 1/2"
4 1/2"	7 1/2"
5 1/2"	8 1/2"
6 1/2"	9 1/2"
7 1/2"	10 1/2"
8"	11"

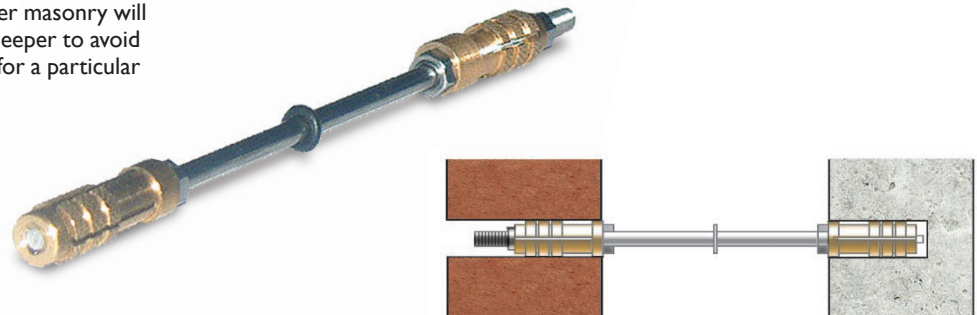
Minimum cavity is dependant on the width of the facade and the maximum depth that can be drilled into the backup material.

* For the purposes of this table the masonry strength has been assumed to be 1,000psi. Weaker masonry will require the expander to be embedded deeper to avoid breakout, reducing the maximum cavity for a particular length of anchor.

Typical Performance Average of 20 tests

Substrate material	Compressive strength psi	Pull Out Lbf
Engineering Brick	7250	1325+ **
Brick	3990	1127
Soft Brick	2465	818
Reinforced Conc.	7250	1105
Precast Conc.	2900	1150
CMU 15 MPa	2175	600
CMU – LW	1015	398
Pavers	--	990
1" Travertine	--	400

** Limit of test equipment

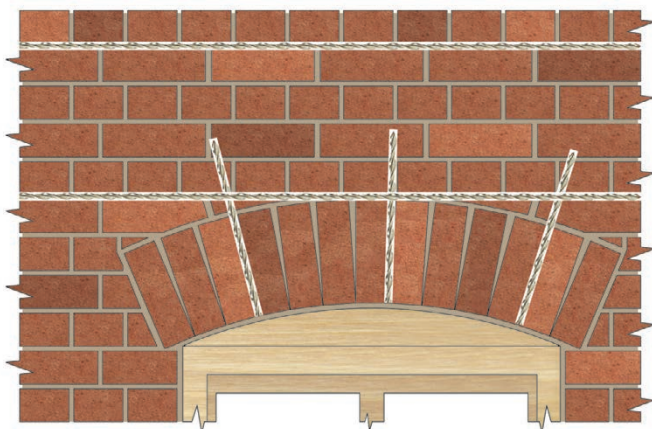
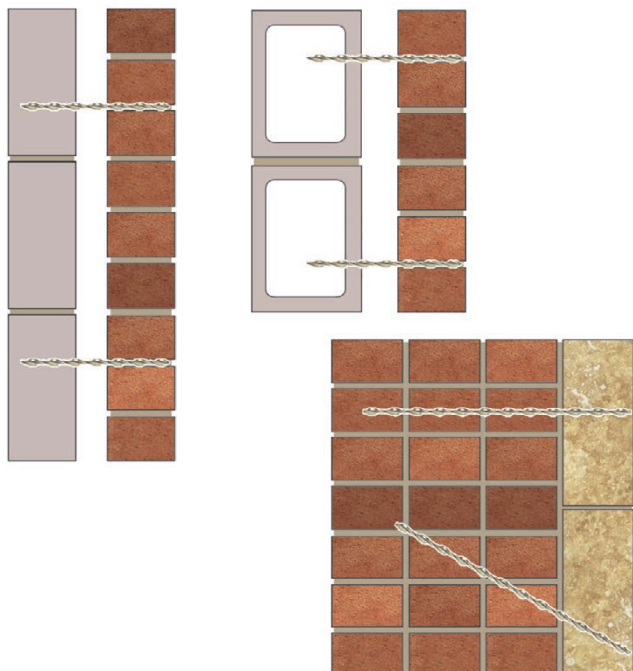


Technical Specifications

Material:	Austenitic stainless steel Grade 304
Diameter:	11/64"
Length:	Facade thickness + cavity width + backup penetration of 2 1/2"
Diameter of clearance hole, facade and backup:	7/16"
Depth of clearance hole:	Length of TorkFix + 2 1/2"
Fixing density:	To engineer's specification
Bonding agent:	None required
Additional technical information:	
RECOMMENDED TOOLING	
For drilling pilot hole:	Rotary percussion 3-jaw-chuck drill

DryFix

Dry mechanical pinning and remedial tying system



Applications

- Versatile replacement wall tie
- For securing multiple layers of masonry
- For pinning delicate masonry features

Features

- Requires no resin, grout or mechanical expansion
- Quick, easy, non-disruptive installation using the Power Driver Attachment
- Installed tie is recessed below face of masonry
- Highly economical with low installed costs
- Effective in all common building materials
- Leaves masonry virtually unmarked
- Usable in all weather, temperature and environmental conditions



For full Product Information, Case Studies and downloadable Repair Details, giving specifications for many common structural faults, go to:

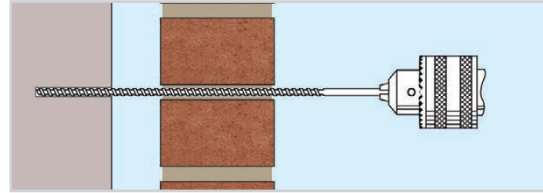
www.helifix.com/products/retrofit-products/dryfix



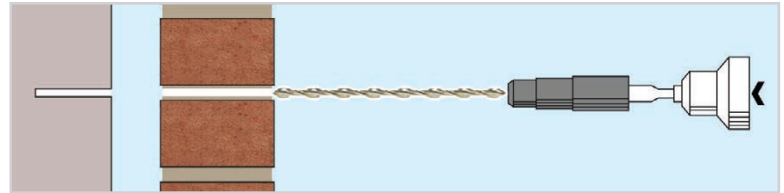
DryFix tie being power-driven into pilot hole

Installation Procedures

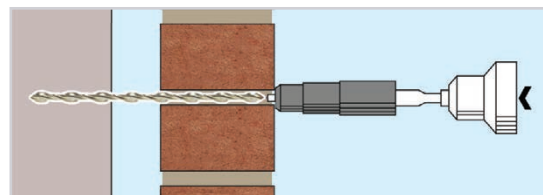
1. Mark the position for the DryFix tie on the facade.
2. Drill an appropriate diameter pilot hole (depending on density of backup material) through the facade and into the backup substrate, to predetermined depth, using a rotary percussion drill (3-jaw-chuck-type).
3. Fit the special DryFix PDA insertion tool to an electric hammer drill (SDS type).
4. Load the DryFix tie into the insertion tool.
5. Power-drive the tie into position until its outer end is recessed below the face of the mortar joint by the insertion tool.
6. Repair the entry hole with matching materials.



1. Drill small pilot hole using rotary percussion drill, 3-jaw-chuck type.
Note: When used in a joint, the mortar must be of sufficient strength and on-site testing of its suitability is essential.



2. Load tie into DryFix Power Driver Attachment fitted to SDS hammer drill



3. Drive in tie until outer end is fully recessed below face of masonry

Technical Specifications

Material:	Austenitic stainless steel Grade 304 or 316				
Diameter:	8mm (10mm available)				
Length:	Facade thickness + cavity width + required penetration into the backup less required penetration of the PDA				
Standard lengths:	155mm, 170mm, 195mm, 220mm, 245mm, 270mm, 295mm, 325mm and 350mm – in boxes of 50				
Depth of pilot hole:	Length of DryFix + 1"				
Facade Substrate	Backup Material	Near Wythe Pilot/ Clearance Hole	Far Wythe Pilot/ Clearance Hole	Penetration into Backup	Pull Out (Proof Load)
Clay Brick	Aircrete	5-6mm	None	3" - 3 1/2"	1.0kN
Clay Brick	Wood Stud	5-6mm	None	2"	1.2kN
Clay Brick	Clay Brick	5-6mm	5-6mm	2 1/2"	2.0kN
Clay Brick	Concrete Block	6mm	6mm	2"	2.0kN
Clay Brick	Concrete	6mm	6-6.5mm (very hard concrete may require an Asymmetric tie)	1 1/2"	2.0kN

NOTE: All figures quoted are indicative dependent on the exact nature of the substrate. Testing should always be undertaken on site using the Helifix Load Test Unit. Compression Resistance should be checked with the Helifix Technical Department. Fixing Density should be calculated by the Helifix Technical Department

Minimum fixing density:	In accordance with project specification or check with Helifix Technical Department
Bonding agent:	None required
RECOMMENDED TOOLING	
For drilling pilot hole:	Rotary percussion 3-jaw-chuck drill
For installing DryFix tie:	Power Driver Attachment fitted to an electric hammer drill (SDS type).