



Building Permit Application

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive
Permits: 410-313-2455
www.howardcountymd.gov

Date Received: _____

Permit No.: _____

Building Address: 7009 Gardner Lane
 City: Highland State: MD Zip Code: 20777
 Suite/Apt. # _____ SDP/WP/BA #: _____
 Census Tract: _____ Subdivision: Swann Hill
 Section: _____ Area: _____ Lot: 7
 Tax Map: 40 Parcel: 238 Grid: 1
 Zoning: _____ Map Coordinates: _____ Lot Size: _____

Property Owner's Name: Christopher Heltzel
 Address: 7009 Gardner Lane
 City: Highland State: MD Zip Code: 20777
 Phone: (301) 536-1695 Fax: _____
 Email: _____
 Applicant's Name & Mailing Address, (if other than stated herein)
 Applicant's Name: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Existing Use: SFH
 Proposed Use: SFH
 Estimated Construction Cost: \$ 7,500
 Description of Work: Install 13 Carbon Armor strips to stabilize the basement wall and 52' of WaterGuard with 1 sump pump to be powered by an existing GFI outlet
 Occupant/Tenant Name: _____
 Was tenant space previously occupied? Yes No
 Contact Name: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Contractor Company: JES Construction LLC
 Contact Person: Mimi Rosell
 Address: 8122 Bethlehem Rd.
 City: Manassas State: VA Zip Code: 20109
 License No.: 50637
 Phone: 703.434.3955 Fax: _____
 Email: mrosell@jeswork.com

Engineer/Architect Company: _____
 Responsible Design Prof.: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

| Commercial Building Characteristics | Residential Building Characteristics | |
|---|---|-------|
| Height: | <input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse | |
| No. of stories: | Depth | Width |
| Gross area, sq. ft./floor: | 1 st floor: | |
| | 2 nd floor: | |
| Area of construction (sq. ft.): | Basement: | |
| | <input type="checkbox"/> Finished Basement | |
| Use group: | <input type="checkbox"/> Unfinished Basement | |
| | <input type="checkbox"/> Craw Space | |
| Construction type: | <input type="checkbox"/> Slab on Grade | |
| <input type="checkbox"/> Reinforced Concrete | No. of Bedrooms: | |
| <input type="checkbox"/> Structural Steel | Multi-family Dwelling | |
| <input type="checkbox"/> Masonry | No. of efficiency units: | |
| <input type="checkbox"/> Wood Frame | No. of 1 BR units: | |
| <input type="checkbox"/> State Certified Modular | No. of 2 BR units: | |
| | No. of 3 BR units: | |
| | Other Structure: | |
| | Dimensions: | |
| > Roadside Tree Project Permit | Footings: | |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Roof: | |
| Roadside Tree Project Permit # | <input type="checkbox"/> State Certified Modular | |
| | <input type="checkbox"/> Manufactured Home | |

| Utilities | |
|---|---|
| Electric: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Gas: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Water Supply | |
| <input type="checkbox"/> Public | |
| <input checked="" type="checkbox"/> Private | |
| Sewage Disposal | |
| <input type="checkbox"/> Public | |
| <input checked="" type="checkbox"/> Private | |
| Heating System | |
| <input type="checkbox"/> Electric | <input type="checkbox"/> Oil |
| <input type="checkbox"/> Natural Gas | <input type="checkbox"/> Propane Gas |
| <input type="checkbox"/> Other: | |
| Sprinkler System: | |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Grading Permit Number: | |
| Building Shell Permit Number: | |

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THEREIN; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature: [Signature] Print Name: Elmer Rodriguez
 Email Address: mrosell@jeswork.com Date: 3/1/18
 Title/Company: Permitting / JES Construction LLC

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY
 PLEASE WRITE NEATLY & LEGIBLY
 -FOR OFFICE USE ONLY-

| AGENCY | DATE | SIGNATURE OF APPROVAL |
|--------------------|----------------|-----------------------|
| State Highways | | |
| Building Officials | | |
| PSZA (Zoning) | | |
| PSZA (Engineering) | | |
| Health | <u>3/15/18</u> | <u>[Signature]</u> |

Sediment Control approval required for issuance? Yes No
 CONTINGENCY CONSTRUCTION START

| DPZ SETBACK INFORMATION |
|--|
| Front: |
| Rear: |
| Side: |
| Side St.: |
| All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Lot Coverage for New Town Zone: |
| SDP/Red-line approval date: |

| | |
|-----------------|----|
| Filing Fee | \$ |
| Permit Fee | \$ |
| Tech Fee | \$ |
| Excise Tax | \$ |
| PSFS | \$ |
| Guaranty Fund | \$ |
| Add'l per Fee | \$ |
| Total Fees | \$ |
| Sub- Total Paid | \$ |
| Balance Due | \$ |
| Check | # |



*Engineered Solutions • Guaranteed Results
Serving the Entire Mid-Atlantic Region*

Foundation/Structural Repairs • Interior/Exterior Waterproofing • Crawlspace Moisture Control

March 1, 2018

Howard County
Department of Inspection, Licenses & Permits
3430 Court House Dr.
Ellicott City, MD 21043

**RE: Engineering Report for Building Permit
Heltzel Residence
7009 Gardner La
Highland, MD 20777**

To Whom It May Concern:

As part of the permit application for structural repairs, JES Construction Inc. (JES) is providing engineering commentary relative to the installation of the Carbon Armors for the above-reference project. The existing residence consists of a single story, brick structure with a CMU basement. At this time, JES proposes installing Thirteen (13) Carbon Armors to stabilize lateral movement on the basement wall. The basement wall is approximately 7'7" high and is supporting approximately 7' of backfill. The purpose of the Carbon Armors will be to stabilize the wall and prevent further inward bowing or other related distress.

For this project, the Carbon Armors will be installed approximately 4' apart (center-to-center spacing) and approximately 2' from the corners. See attached sketch for layout. The Carbon Armors consist of a high strength fiber-reinforced polymer (FRP) composite materials used to reinforce concrete block and poured concrete foundation walls. Technical specifications associated with the Carbon Armor System are attached.

Hampton Roads
1741 Corporate Landing Pkwy
Virginia Beach, VA 23454
877-537-9675

Northern VA Area
8122 Bethlehem Rd.
Manassas, VA 20109
888-743-7464

Richmond Area
2410 Southland Drive
Chester, VA 23831
800-570-1525

Heltzel Residence
7009 Gardner La
Highland, MD 20777

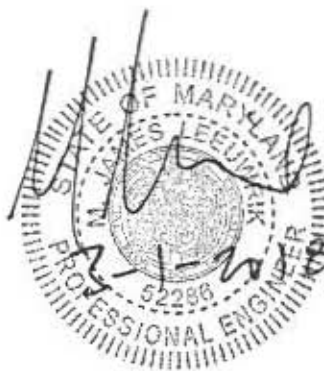
The commentary provided herein is intended to provide guidance during the planning and installation phases of the project.

Please feel free to call us if you have any questions or if we can be of any further assistance.

Respectfully,



M. James Leeuwrik, PE
Director of Engineering & QC
JES Construction LLC
Manassas Branch



Attachments: Plan and Details
Technical Specifications
Installation Instructions

Heltzel Residence
7009 Gardner La
Highland, MD 20777

APPROVED

WALK-THRU BUILDING PERMIT

PP#

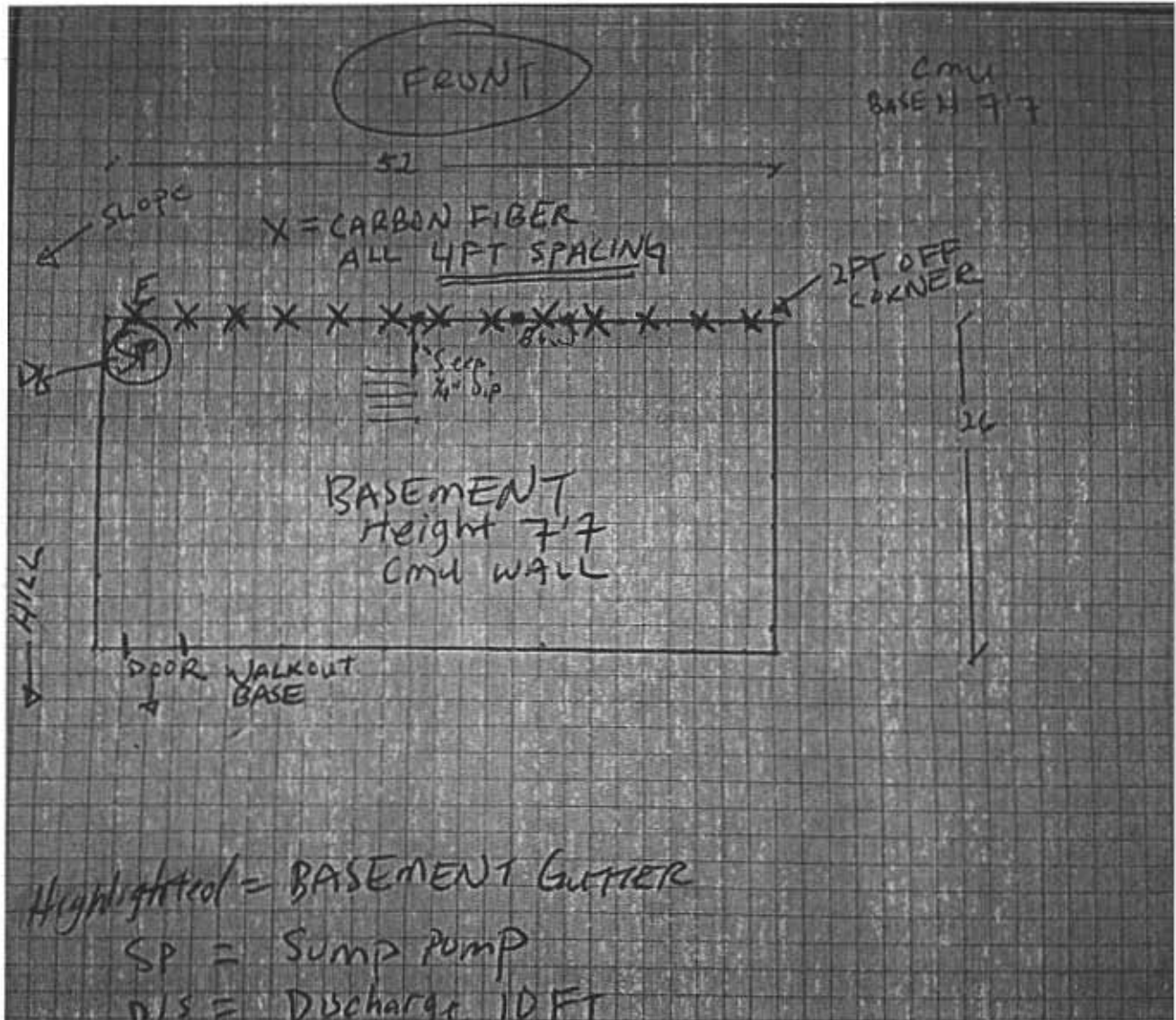
APP 34M *[Signature]* DATE 3/1/18

DESC OF WORK

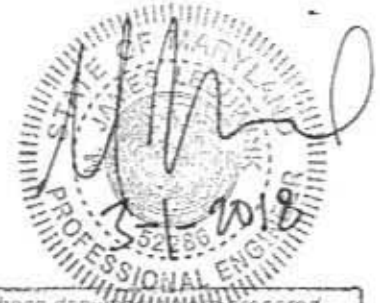
Wall stabilization Existing
Also increase in living space

STATE OF MARYLAND
JAMES STEUBERT
2-1-2018
52286
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 52286, Expiration Date: Feb. 8, 2020



Howard County Dept of Inspection, Licenses & Permits
 Heltzel Residence - 7099 Gardner Lane, Highland, MD
 3/1/2018
 FSI Carbon Armor
 Design Tensile Strength = 121.7 KSI
 Strap Size - 7" X 0.062"



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 52266, Expiration Date: Feb. 8, 2020

Bowed Wall Repair Design Calculation Sheet

| | |
|--|----------------|
| Soil Density | 110 pcf |
| Earth Pressure Coefficient | 0.5455 |
| Backfill Ht. | 7 ft |
| Wall Height | 7.583 ft |
| Wall Construction Type [CMU / CIP] | CMU |
| CMU / CIP Concrete Wall Thickness | 7 5/8 in |
| Spacing of FRP Strap | 4.00 ft |
| Bottom Reaction to Resultant | 2.33 L1 |
| Top Reaction to Resultant | 5.25 L2 |
| Design Equivalent Lateral Earth Pressure | 60.01 pcf |
| Lateral Earth Pressure at Bottom of Wall | 420.04 psf |
| Resultant Force on Wall | 1470.12 lb/ft |
| Reaction at the Top | 452.37 lb |
| Reaction at the Bottom | 1017.76 lb |
| Service Load Moment (Per LF of wall) | 2374.77 ft-lb |
| Factored Design Moment (REQUIRED) | 15198.51 ft-lb |
| Ultimate Moment Capacity (AVAILABLE) | 18313.44 ft-lb |

VERSION 3/1/18

CarbonArmor™ Wall Reinforcing System

Foundation Supportworks® offers a complete line of high-strength fiber-reinforced polymer (FRP) composite materials used to reinforce concrete block and poured concrete foundation walls. These high-strength composite systems effectively combine the benefits of epoxies and high-strength carbon fibers to create materials that are both extremely reliable and versatile. When used in conjunction with concrete substrates, like basement walls, significant increases to both structural integrity and load bearing capacity can be attained. The materials used in the CarbonArmor™ system achieve the highest strength-per-ply available, and are supported by the most extensive application and durability testing in the industry. The CarbonArmor™ Wall Reinforcing System is a proven method to laterally support bowing foundation walls, and hundreds of successful installations have been completed throughout the United States and Canada.

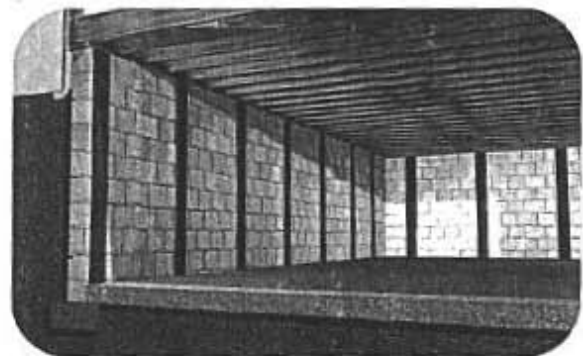
Technical Specifications of Carbon Composite

| | |
|---------------------------------|--|
| Tensile Strength: | Design Value = 121.7 ksi, Test method in accordance with ASTM D3039 |
| Modulus of Elasticity: | Design Value = 10,401.7 ksi, Test method in accordance with ASTM D3039 |
| Effective Ply Thickness: | 0.062 inches |

Technical Specifications of Saturant Epoxy

| | |
|--|-----------|
| Tensile Strength: | 9-10 ksi |
| Tensile Modulus: | 441.7 ksi |
| Elongation at Break Percentage: | 4.99% |
| Flexural Strength: | 17.16 ksi |
| Flexural Modulus: | 417.1 ksi |

Note: Material Safety Data Sheets (MSDS) for the CarbonArmor™ carbon fabric, saturating resin and saturating hardener are available upon request.



Rendering of the CarbonArmor™ system installed within a basement

1-800-281-8545 • www.foundationssupportworks.com

Corporate Headquarters:
12330 Cary Circle • Omaha, NE 68128