

*Approved 4/7/2025  
R/E*

**Record Detail** \* (This section is required.)

<b>Permit Type</b>	<b>Permit Number</b>	<b>Opened Date</b>
Building/Residential/Alteration/SFD	B25001200	03/29/2025

**Description of Work**  
 SFD//INSTALLATION OF GEOLOCK WALL ANCHORS TO LEFT FOUNDATION WALL. APOX SQ.FT-15\*\*SUBJECT TO FIELD INSPECTION\*\*

[check spelling](#)

**Address** \* (This section is required.)

Search Reset Clear Get Parcel & Owner

<b>Street #</b>	<b>Street Name</b>	<b>Street Type</b>
1931	OLD ANNAPOLIS	RD
<b>Unit Type</b>	<b>Unit #</b>	<b>X Coordinate</b>
--Select--		-77.10635
		<b>Y Coordinate</b>
		39.31939
<b>City</b>	<b>State</b>	<b>Zip Code</b>
WOODBINE	MD	21797
	<b>Primary</b>	
	Yes	

**Parcel** \* (This section is required.)

Search Reset Clear Get Address & Owner

GIS ID *	Parcel	Parcel Area	Land Value	Improved Value	Exemption Value	Plan Area
909189	121	5.77	250700	566500	315800	RURAL

**Legal Description**  
 LOT 1 5.773 ACRES [ ]1931 OLD ANNAPOLIS RD [ ]

[check spelling](#)

<b>Block</b>	<b>Lot</b>	<b>Census Tract</b>	<b>Council Dist</b>	<b>Inspection Dist</b>	<b>Supervisor Dist</b>	<b>Map #</b>	<b>DAP Zone</b>
	1	604001	5				
<b>Plan Area</b>	<b>State Tax Id</b>	<b>Subdivision Name</b>	<b>Primary</b>				
	1404314638		Yes				
<b>Section</b>	<b>Area</b>	<b>Tax Map</b>					
		7					
<b>Grid</b>	<b>Zoning District</b>	<b>ADC Map</b>					
7-20	RC-DEO	4691-C9					
<b>SDP No.</b>	<b>Final Plan No.</b>	<b>WP File No.</b>					



**Applicant** *(This section is not required.)*

Search As Owner As Lic. Prof As Contact

<b>Type *</b> Applicant	<b>First Name</b> ✓ CHARLES	<b>MI</b>	<b>Last Name</b> LEVINE
<b>Relationship</b> Applicant	<b>Full Name</b> ✓ CHARLES LEVINE		
<b>Primary</b> No	<b>Organization Name</b> CHASENARE ENTERPRISES LLC		
	<b>Street Address</b> 2864 MILLERS WAY DRIVE		
	<b>Address Line 2</b>		
	<b>City</b> ELLCOTT CITY	<b>State</b> MD	<b>Zip Code</b> ✓ 21043
	<b>Phone</b> 443-355-7074	<b>Cell</b>	<b>Fax</b>
	<b>E-mail *</b> chasnr@verizon.net		

**Contact** *(This section is not required.)*

Search As Owner As Lic. Prof As Contact

<b>Type</b> Contact	<b>First Name</b> ✓ CHARLES	<b>MI</b>	<b>Last Name</b> LEVINE
<b>Relationship</b> Applicant	<b>Full Name</b> ✓ CHARLES LEVINE		
<b>Primary</b> Yes	<b>Organization Name</b> CHASENARE ENTERPRISES LLC		
	<b>Street Address</b> 2864 MILLERS WAY DRIVE		
	<b>Address Line 2</b>		
	<b>City</b> ELLCOTT CITY	<b>State</b> MD	<b>Zip Code</b> ✓ 21043
	<b>Phone</b> 443-355-7074	<b>Cell</b>	<b>Fax</b>
	<b>E-mail</b> chasnr@verizon.net		

**Addtl Info**

Est Construction Cost \*    Housing Units \*    Number of Buildings \*    Public Owned

4500  
Construction Type 0 0 No

434 - Additions, Alterations and Conversions - Residential

RESIDENTIAL ALTERATION INFO

RESIDENTIAL ALTERATION INFORMATION

Total Square Footage *	No of Stories *	Basement	Bedrooms	Full Baths	Half Baths	Water *	Sewage *
15	2	--Select--				Private	Private
Existing Utilities *	Existing Heating System *	Existing Sprinkler System	Type of New Fireplace	Expiration Date	Fee Exempt		
Electric	Electric	None	--Select--	9/29/2025	<input type="radio"/> Yes <input checked="" type="radio"/> No		

Submit Cancel

Date: March 20, 2025  
Project: Tacey Property  
Address: 1931 Old Annapolis Rd  
Woodbine, MD 21797

### GeoLock Foundation Wall Support System Analysis

This report is prepared for Fortress Foundation Solutions (contractor) by FDN Engineering (engineer). GeoLock wall anchors are specified for installation at the above referenced project. The foundation wall support system is an active system that is intended to stabilize the existing earth retaining structure that has experienced movement, and potentially recover some of the inward movement. Load requirements for the GeoLock wall anchors were calculated at areas shown on repair plan. Engineering design was performed for this project - see page 2 for engineering notes and results. See page 3 for design information and details for the GeoLock anchor supports. See page 4 for a repair plan of the proposed supports on the structure.

To the best of our professional knowledge, the design of the GeoLock wall anchors meets the structural requirements of the 2021 International Building Code to the extent that it applies to our scope of work. Engineer is retained in a limited capacity for this project. No responsibility and/or liability is assumed by, nor shall be assigned to engineer for items beyond the proposed scope as shown herein.

Upon completion of foundation wall support system, the contractor shall supply engineer a log of the installed locations and depth of the GeoLock wall anchors, as well as photos of completed work. Engineer will evaluate the field data and prepare a letter of completion for closeout, if necessary.

FDN Engineering, LLC  
2412 N 179th St.  
Omaha, NE 68116  
(402) 739-9642



*Chad Keller*  
03/20/2025

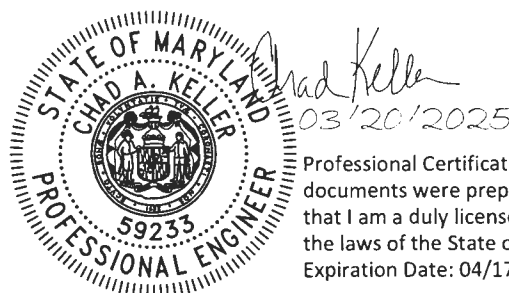
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 59233, Expiration Date: 04/17/2026

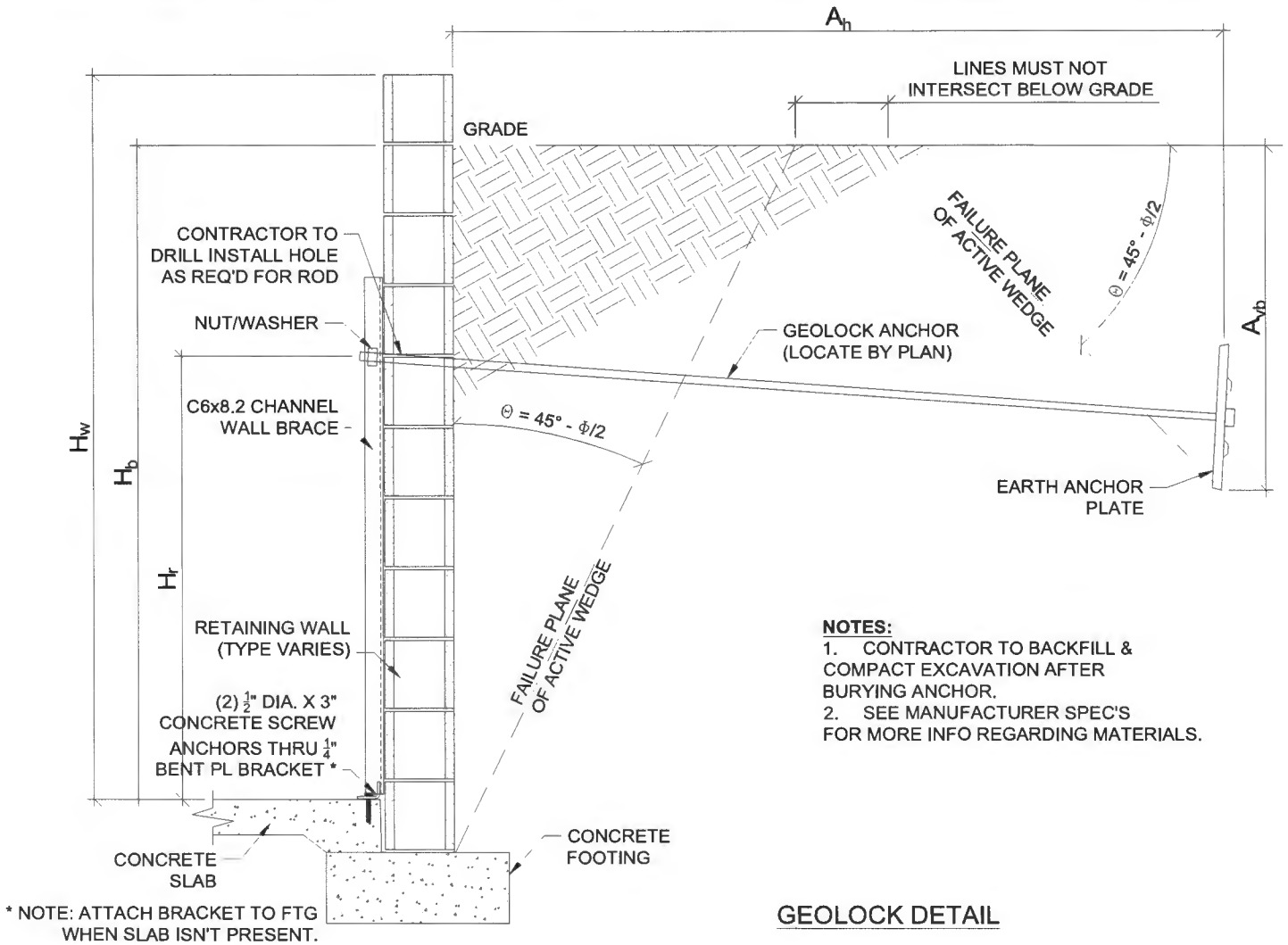
GeoLock Project Notes (contractor to inform engineer if assumptions are inaccurate):

1. Structure is a masonry soil retaining wall (level and drained condition).
2. Contractor will install the GeoLock wall anchors, wall plate, earth anchor, nut & washers, and all related components per the support manufacturer's current installation instructions and technical manual.
3. The product is installed in undisturbed or uniformly placed and well-engineered fill soils. Anchor is not installed in recently backfilled sites.
4. When the product is installed in a soil where the conditions are considered corrosive to steel, adequate protection to the exposed steel must be provided.
5. The capacity of the existing foundation and supported structure has not been checked and is assumed to be adequate to transfer the design soil loads to the GeoLock wall anchors.
6. It is assumed that the earth plate anchor is not located in a potential landside area, where steep grades are next to wall, or at hillside creep soils.

GeoLock Analysis and Results:

7. A conservative equivalent fluid pressure of 60 psf/ft is assumed for the design (no water table presence).
8. GeoLock anchors are designed to resist tension load, only.
9. Wall is approx. 6'-0" tall with 5'-6" of soil backfill. Anchors placed up 4'-0" from bottom of wall.
10. To stabilize the wall, the maximum tension load applied to rod is **3,000 lbs** (service).
11. The GeoLock wall anchor system is to use a 3/4-inch diameter all-thread rod with a 16in x 26in earth anchor plate and a Channel wall plate.
12. Earth anchor plate to be at least 10'-3" from the stabilized wall.
13. Bottom of earth anchor plate to be placed at least 4'-3" below the soil backfill top surface.
14. Contractor to apply a torque, not exceeding, 80 ft-lbs, which equates a force of 11900 lbs on the rod.
15. The torque values above assume that contractor uses SupportWorks Anchor Wax to reduce friction. Notify engineer if required torque/load at installation is not achieved.
16. GeoLock anchor spacing along the wall is typically 6'-0" O.C., and 3'-0" from corner - spacing shall not exceed 6'-0" O.C.





**GEOLOCK DETAIL**

Wall Height ( $H_w$ )	6'-0"
Maximum Backfill Height ( $H_b$ )	5'-6"
Anchor Rod Height ( $H_r$ )	4'-0"
Wall Plate Size	Channel
Earth Anchor Plate Size	16in x 26in
Earth Anchor Plate from Wall ( $A_h$ ) - Min.	10'-3"
Earth Anchor Plate Bottom Below Grade ( $A_{vb}$ )	4'-3"
Maximum Torque Applied to Nut	80 ft-lbs

FDN Engineering, LLC  
 2412 N 179th St.  
 Omaha, NE 68116  
 (402) 739-9642



*Chad Keller*  
 03/20/2025

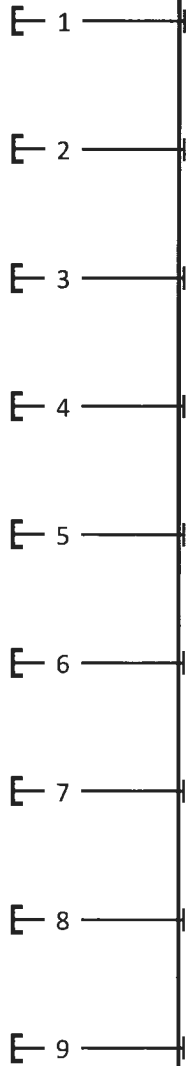
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 59233, Expiration Date: 04/17/2026

**LEGEND:**

E # — Indicates GeoLock Anchor and Mark Number

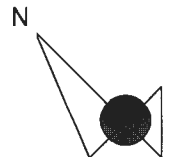
**GeoLock Notes:**

1. Structure is a masonry retaining wall.
2. Layout of (9) GeoLock wall anchors.
3. Typical spacing = 6'-0" O.C. and 3'-0" from corners. Max spacing = 6'-0" O.C.
4. Install per GeoLock manufacturer's instructions and technical specifications.
5. Notify engineer if design assumptions are discovered inaccurate.



FRONT  
PROPERTY

PARTIAL FOOTPRINT  
OF PROPERTY

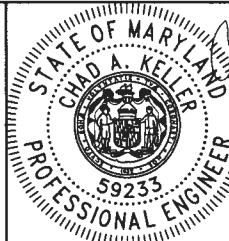


DRAWING NOT TO SCALE

**Project:**

Tacey Property  
1931 Old Annapolis Rd  
Woodbine, MD 21797

**FDN Engineering, LLC**  
2412 N 179th St.  
Omaha, NE 68116  
(402) 739-9642



*Chad Keller*  
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GEOLOCK™ WALL ANCHOR

# Permanently Stabilize Your Foundation Walls

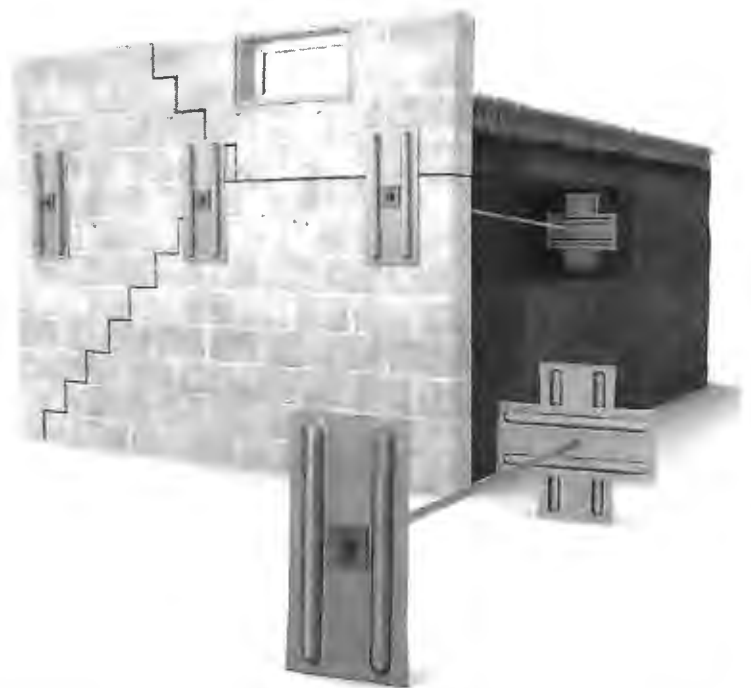
**GEOLOCK WALL ANCHORS** protect foundation walls from further inward movement. Heavy-duty steel earth anchors are embedded in stable soil away from your foundation wall and then connected to steel wall plates with galvanized steel rods. Once tightened, the anchors hold the wall securely in place. The system can also be tightened during dry seasons to further straighten walls over time.

**GeoLock Wall Anchors can be installed year-round—often within a single day—restoring lost property value and peace of mind right away.**



### **Guaranteed.**

The GeoLock system is backed by a 25-year product warranty from Supportworks® as well as a service warranty from your local contractor.



## GEOLOCK ADVANTAGES



Effectively stabilize concrete block and poured concrete walls



Can be tightened over time to straighten wall



Minimal disturbance to home lawn and landscaping



Easily concealed or painted to match unfinished walls



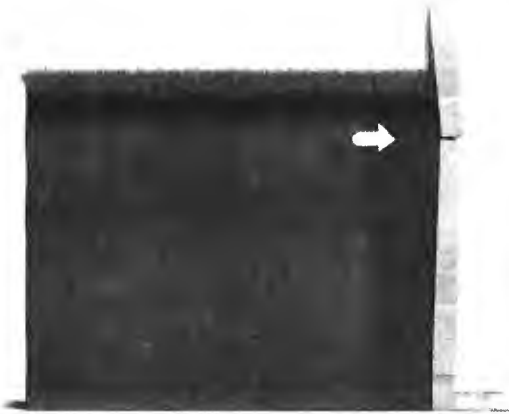
Galvanized steel resists corrosion



### **HideAway™ Wall Anchor Covers**

Optional low-profile, stainless steel cover design optimizes valuable living space, while allowing easy access for future tightening and adjustment.

## HOW DID YOUR WALL GET THIS WAY?



Foundation walls not only support the weight of your home, but also must resist horizontal pressure from the soil outside. When your home was built, a hole was dug for the basement. After construction, the hole was backfilled, creating what engineers call an “active wedge” of loose fill soil that is much less dense than undisturbed, native soil. Water flows into this area more easily, exerting inward pressure on your foundation—even more so when the water freezes or clay soils expand. Under stress, the walls can begin to crack, bow or lean in.

## THE PROVEN SOLUTION



1 Carefully remove sod away from foundation wall, excavate hole several feet deep and insert earth anchor plate.



2 Drive galvanized steel rod through small hole in foundation wall and attach to earth anchor.



3 Install wall anchor plate.



4 Replace soil and sod. Tighten wall anchor to specified torque rating.



**FIX & PROTECT** | Add WallDefense® to permanently stabilize other foundation walls that are not yet showing signs of damage.



**Foundation  
Supportworks**

Learn more about this product and find your local dealer at [FoundationSupportworks.com](http://FoundationSupportworks.com)

PH 10/01/14

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