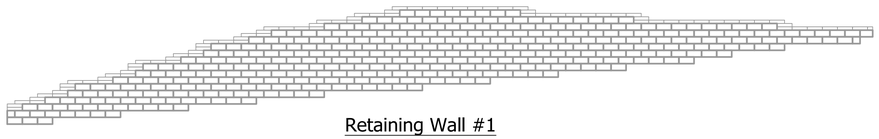
RETAINING WALL PLANS
FOR

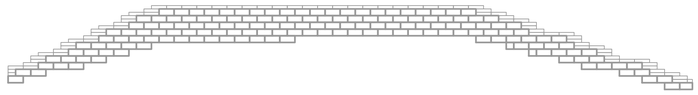
PROVIDENCE CREEK SUBDIVISION - PHASE 3

RETAINING WALLS

1370, 1800 & 1820 BALLARD ROAD
HARNETT COUNTY, NC



Retaining Wall #1
Not To Scale
1370, 1800 & 1820 Ballard Road
Providence Creek - Phase 3 - Subdivision - Harnett County, NC



Retaining Wall #2
Not To Scale
1370, 1800 & 1820 Ballard Road
Providence Creek - Phase 3 - Subdivision - Harnett County, NC

SHEET INDEX

GEOTECHNICAL GENERAL NOTE:

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2. A GLOBAL STABILITY ANALYSIS HAS NOT BEEN DONE FOR THIS PROJECT. WE RECOMMEND THAT A GLOBAL STABILITY ANALYSIS BE PERFORMED BY A 3RD PARTY GEOTECHNICAL ENGINEER FOR RETAINING WALLS THAT HAVE SLOPES ABOVE, BELOW, BOTH (SLOPES ABOVE & BELOW THE RETAINING WALL) & MULTI-TIERED RETAINING WALL.

GENERAL DESIGN NOTE:

1. WALL PROFILES WERE CREATED & DESIGNED BY VENTURE ENGINEERING, P.A. PER EXISTING & PROPOSED GRADES AS SHOWN IN PLAN VIEW ON SHEET C-2 AS PROVIDED BY McKIM & CREED SEALED 07/16/24.
2. ALL GRADES SHOWN ON RETAINING WALL SITEPLAN IN THIS SET OF DRAWINGS ARE NOT KNOWN TO BE ORIGINAL DESIGN GRADES OR AS-BUILT GRADES. ALL GRADES TO BE SURVEY STAKED PRIOR TO CONSTRUCTION.

DESCRIPTIONS	DATE
REVISIONS	

NORTH CAROLINA PROFESSIONAL SEAL 44480 ENGINEER MARK MAGRATH 09/05/24

Venture Engineering, P.A.
312 WEST MILLBROOK ROAD SUITE 237
RALEIGH, NC 27609
P: 919-676-0303 F: 919-676-0301
EMAIL ADDRESS: BMONDSCHEIN@VENTURE-E.COM
LICENSE NO. C-2590

PROVIDENCE CREEK SUBDIVISION
PHASE 3 - RETAINING WALLS
1370, 1800 & 1820 BALLARD ROAD
HARNETT COUNTY, NC

COVER SHEET
PROVIDENCE CREEK SUBDIVISION - PHASE 3 - HARNETT COUNTY, NC

DATE: September 05, 2024
DES: TLH
CHECKED: KLY
APPROVED: MJM

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

DRAWING NUMBER
G-1

VE PROJECT NO: 00240001 *PROVIDENCE CREEK SUBDIVISION - PHASE 3*

PROVIDENCE CREEK SUBDIVISION - PHASE 3 RETAINING WALL CONSTRUCTION - HARNETT COUNTY, NORTH CAROLINA

Statement of Special Inspections

Project: **Providence Creek Subdivision – Phase 3**
Location: Ballard Road – **Harnett County, NC**
Owner's Representative: Mark J. Magrath, PE – ***Venture Engineering, P.A.***
Owner's Address: Bruce Allen Construction Co., LLC. – 1915 Evans Road– Cary, NC
Architect of Record: ***McKim & Creed***
Structural Engineer of Record: Mark J. Magrath, PE – ***Venture Engineering, P.A.***
Geotechnical Engineer Of Record: **Terretech**

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection requirements (Chapter 17) of the North Carolina State Building Code. The Statement includes a Schedule of Special Inspections applicable to this project as well as the required qualifications for the Special Inspector and Agents of the Special Inspector to perform on this project.

The Special Inspector shall keep records of all inspections, furnish inspection reports, and identify discrepancies as detailed by project specifications Section # – "Special Inspections".

A Final Report of Special Inspections, documenting the completion of all required Special Inspections and confirming the correction of any discrepancies, will be submitted prior to issuance of a Certificate of Use and Occupancy.

The Special Inspections program does not relieve the Contractor of his or her responsibilities. Job Site safety and means and methods of construction are solely the responsibility of the Contractor.

Schedule of Special Inspection

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows.

- ☐ Soils (Continuous)
- ☐ Special Foundations
- ☐ Cast-in-Place Concrete
- ☐ Structural Load Bearing Precast Concrete
- ☐ Post Tensioned Concrete
- ☐ Structural Masonry – Level 1
- ☐ Wood Shear Walls
- ☐ Structural Steel
- ☒ Site Retaining Walls (Continuous)
- ☐ Cold-Formed Steel Framed "X" Bracing / Seismic Resisting Systems
- ☐ Wall Panels and Veneers
- ☐ Sprayed Fire Resistant Materials
- ☐ Exterior Insulation & Finish System (EIFS)
- ☐ Smoke Control
- ☐ Quality Assurance for Seismic Resistance
- ☐ Quality Assurance for Wind Requirements

Seismic Design Category: NA
Basic Wind Speed: NA
Wind Exposure Category: NA

Statement of Special Inspections Prepared by (Structural Engineer of Record):

Signature 09/05/24 Date

Owner's Authorization

Signature Date

Accepted for the Building Official by:

Signature Date

GEOTECHNICAL GENERAL NOTE:

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REVISIONS

DESCRIPTIONS	DATE

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PROVIDENCE CREEK SUBDIVISION
PHASE 3 - RETAINING WALLS
1370, 1800 & 1820 BALLARD ROAD
HARNETT COUNTY, NC

SSI - STATEMENT OF SPECIAL INSPECTIONS
PROVIDENCE CREEK SUBDIVISION - PHASE 3 - HARNETT COUNTY, NC

DATE: September 05, 2024
DES: TLH
CHECKED: KLY
APPROVED: MJM

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

DRAWING NUMBER
B-1

PROVIDENCE CREEK SUBDIVISION - PHASE 3 RETAINING WALL CONSTRUCTION - HARNETT COUNTY, NORTH CAROLINA

VE PROJECT NO: 00240001 *PROVIDENCE CREEK SUBDIVISION - PHASE 3*

1.1 GENERAL

SRW RETAINING WALL SYSTEMS ARE DESIGNED AS A GRAVITY RETAINING WALL UTILIZING A HIGH DENSITY POLYESTER GEOGRID TO REINFORCE THE SOIL ZONE BEHIND THE WALL. THE GEOGRID IS POSITIVELY CONNECTED TO THE MODULAR CONCRETE BLOCK CREATING A REINFORCED SOIL MASS CAPABLE OF RESISTING LATERAL EARTH PRESSURES AND SURCHARGED LOADS. ALL REFERENCES TO THE ENGINEER REFER TO VENTURE ENGINEERING, P.A.

1.2 QUALITY ASSURANCE

CONTRACTOR SHALL BE QUALIFIED TO BUILD RETAINING WALL AND SHALL SUBMIT CERTIFICATION, PRIOR TO START OF WORK THAT THEY HAVE SUCCESSFULLY INSTALLED ON A MINIMUM OF 5 SIMILAR PROJECTS, I.E., HEIGHT, SOIL FILL TYPES, ERECTION TOLERANCES, ETC.

1.3 BACK FILL MATERIALS

THE SOIL MATERIAL ASSOCIATED WITH THE RETAINING WALL IN THE REINFORCED ZONE, THE RETAINED ZONE, OR THE FOUNDATION BEDDING SHALL HAVE THE FOLLOWING PROPERTIES:

A.) FOUNDATION SOILS Ø = 28 DEGREES, COHESION = 0 PSF, UNIT WEIGHT = 120 LBS/CU.F.T.

B.) RETAINED SOILS Ø = 28 DEGREES, COHESION = 0 PSF, UNIT WEIGHT = 120 LBS/CU.F.T.

C.) REINFORCED SOILS Ø = 28 DEGREES, COHESION = 0 PSF, UNIT WEIGHT = 120 LBS/CU.F.T.

D.) UNIT FILL SHALL CONSIST OF CLEAN 1" MINUS CRUSHED STONE OR CRUSHED GRAVEL MEETING THE FOLLOWING:

THE SOILS CHARACTERISTICS ABOVE WERE ASSUMED BASED ON SOILS CONDITIONS ON SIMILAR PROJECTS IN THAT AREA. IF THIS INFORMATION DOES NOT REPRESENT THE ACTUAL SOIL TO BE USED, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND THE WALL SHALL BE REDESIGNED.

SIEVE SIZE	% PASSING
2"	100
3/4"	75-100
No. #4	0-10
No. #50	0-5

E.) REINFORCED BACKFILL SOILS SHALL BE FREE OF DEBRIS OR ORGANIC MATERIAL MEETING THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING
2"	100
3/4"	100-75
No. #40	< 0-60
No. #200	< 25-30

1.4 FOUNDATION LOADS

RETAINING WALL UNDER 20 FEET IN HEIGHT SHALL HAVE A MINIMUM BEARING OF 3,000 PSF.
RETAINING WALL OVER 20 FEET IN HEIGHT SHALL HAVE A MINIMUM BEARING OF 5,000 PSF.

1.5 CONCRETE MASONRY WALL UNITS

CONCRETE WALL UNITS SHALL BE SRW UNITS MANUFACTURED IN ACCORDANCE WITH ASTM-C1372 AND ASTM C140 AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.

1.6 GEOGRID REINFORCEMENT

THE GEOGRID REINFORCING MATERIAL SHALL BE HIGH TENACITY POLYESTER MANUFACTURED BY SYNTEEN AND SHALL MEET THE SPECIFICATION REQUIREMENTS PUBLISHED BY STRATAGRID FOR:

GRIDLOCK 370

1.7 WALL BATTER

BATTER FOR THE ENTIRE WALL SHALL BE MAINTAINED AT A 4.4° SETBACK.

2.0 FOUNDATION REQUIREMENTS

THE FOUNDATION BEARING CAPACITY THAT WAS ASSUMED FOR DESIGN SHALL BE VERIFIED IN THE FIELD, AND COPIES OF THE TEST DATA FILED WITH THE ENGINEER. THE FOOTING SHALL BE CLEARED OF LOOSE SOIL. A MINIMUM OF 12" OF WASHED STONE SHALL BE PLACED AT THE BACK OF EACH BLOCK AS INDICATED ON THE DETAILS.

2.1 LEVELING PAD

MATERIAL SHALL CONSIST OF COMPACTED SAND, GRAVEL, CRUSHED ROCK, OR UNREINFORCED CONCRETE. THE PAD SHALL BE 4"- 6" THICK . SAND OR GRAVEL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR. AGGREGATE MATERIAL SHALL RECEIVE A MINIMUM OF ONE PASS OF THE COMPACTION EQUIPMENT.

2.2 UNIT FILL

THE VOID WITHIN EACH UNIT SHALL BE FILLED WITH A WASHED STONE HAVING 100% OF THE AGGREGATE PASSING THE 2" SIEVE. A MINIMUM OF 3/8" WASHED STONE SIZE IS REQUIRED (NO MORE THAN 5% PASSING THE #200 SIEVE.) PLACE THIS MATERIAL BEHIND THE BLOCK AS WELL. ALL EXCESS MATERIAL SHALL BE SWEPT CLEAN FROM THE TOP OF THE BLOCK PRIOR TO INSTALLING THE NEXT COURSE. EACH COURSE OF BLOCK SHALL BE COMPLETELY FILLED BEFORE PROCEEDING TO THE NEXT COURSE.

2.3 FIRST BLOCK COURSE

THE FIRST COURSE OF BLOCK SHALL BE PLACED ON TOP OF AND IN FULL CONTACT WITH THE LEVELING PAD. THE UNITS SHALL MAINTAIN A DISTANCE OF MINIMUM 6" FROM THE FRONT AND BACK OF THE LEVELING PAD. PROPER ALIGNMENT MAY BE ACHIEVED WITH THE AID OF A STRING LINE.

2.4 CAPS

APPLY A CONSTRUCTION ADHESIVE TO THE UNITS TO PREVENT THEIR REMOVAL.

3.0 GEOGRID INSTALLATION

THE GEOGRID REINFORCEMENT SHALL BE LAID HORIZONTALLY ON COMPACTED BACK FILL AND CONNECTED TO THE CONCRETE WALL UNITS(SRW UNITS SHALL BE USED FOR THIS PROJECT). GEOGRID SHALL BE PULLED TAUT REMOVING ALL SLACK FROM THE MATERIAL AND ANCHORED BEFORE ADDING FILL. GEOGRID SHALL BE INSTALLED AT THE ELEVATIONS AND LENGTHS REQUIRED AS SHOWN ON THE PLANS. (REFER TO DETAILS FOR THE APPROPRIATE ORIENTATION) SOIL SURFACE SHALL BE SMOOTH AND LEVEL AND HAVE COMPACTED TO 95% STANDARD PROCTOR BEFORE INSTALLING THE GRID.

3.1 FILL PLACEMENT

BACK FILL MATERIAL SHALL BE AND COMPACTED 95% STANDARD PROCTOR ON EVERY GEOGRID LIFT LAYER INTERVAL. ONLY HAND OPERATED EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET OF THE SRW UNITS. BACK FILL SHALL BE PLACED FROM THE WALL REARWARD TO INSURE TAUTNESS OF THE GEOGRID. CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOGRID.

3.2 UNSUITABLE MATERIAL

SOILS CONTAINING ROOTS, BRUSH, SOD, OR THE OTHER ORGANIC MATERIAL SHALL NOT BE ALLOWED. FROZEN SOILS, SNOW, ICE, HEAVY CLAYS, OR WET SOILS SHALL NOT BE ALLOWED. MATERIAL PASSING THE #40 SIEVE SHALL HAVE A LIQUID LIMIT OF LESS THAN 30 AND A PLASTIC LIMIT OF LESS THAN 15, UNLESS WRITTEN CONSENT IS OBTAINED FROM THE ENGINEER PRIOR TO PLACEMENT.

3.3 SOIL PROPERTIES

MINIMUM INTERNAL ANGLE OF FRICTION SHALL EQUAL OR BE GREATER THAN REFERENCE IN SECTION 1.3
VERIFICATION SHALL BE FILED WITH THE ENGINEER THAT THE SOIL WILL MEET THIS CRITERIA.

4.0 SOIL TESTING

COMPACTION TESTING SHALL BE PERFORMED FOR EVERY LIFT ELEVATION REQUIRING GEOGRID OR EVERY 3RD LIFT AS A MINIMUM TEST SHALL BE FILED WITH THE ENGINEER'S OFFICE.

5.0 HYDROSTATIC PRESSURE POTENTIAL

THE ENGINEER SHALL BE NOTIFIED IF ANY OF THE FOLLOWING SHOULD BECOME EVIDENT:

- WATER OR WETNESS FROM OR IN A CUT BANK.
- LOCAL SPRINGS, LOCAL STORM DRAINS, SEWER, WATER LINES UNDER OR BEHIND THE WALL

6.0 ACCEPTABLE BLOCK

SRW UNITS SHALL BE USED & KEPT FREE OF DEFECTS THAT WOULD INTERFERE WITH THE PLACING OR POSITIONING OF THE UNIT OR IMPAIR ITS STRENGTH. MINOR CRACKS INCIDENTAL TO THEIR USUAL METHOD OF MANUFACTURING OR MINOR CHIPPING RESULTING FROM SHIPMENT & DELIVERY ARE NOT GROUNDS FOR REJECTION.

7.0 ACCEPTABLE GEOGRID

GEOGRID SHALL BE REJECTED IF 20% OR MORE OF A STRUCTURAL RIB HAS BEEN CUT OR RIPPED. THE CONTRACTOR SHALL INSPECT ALL GEOGRID DELIVERED TO THE SITE AND REJECT MATERIALS THAT MEET THIS CRITERIA. IF THE GEOGRID IS DAMAGED ON THE CONSTRUCTION SITE, IT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

8.0 DRAINAGE COMPOSITE

(APPLIES TO CUT WALL APPLICATIONS ONLY), WHERE SITE CONDITIONS WARRANT, DRAINAGE COMPOSITE SHALL BE INSTALLED TO COVER 30% OF THE CUT BEHIND THE GEOGRID LAYERS. GRIDLOCK (4 FT. WIDE SECTIONS) PROVIDE 30% COVERAGE WHEN INSTALLED ON 15 FT. CENTERS AND 2/3 THE WALL HEIGHT.

9.0 SPECIAL PROVISIONS

A. GENERAL CONTRACTOR SHALL COORDINATE UPPER GEOGRID LAYERS INSTALLATION WITH PAVING INSTALLATION.

B. MAINTAIN THE DIRECTION OF DRAINAGE AWAY FROM THE WALL FACE AT TIMES DURING CONSTRUCTION OF THE WALL AND FINISH GRADING AS SHOWN ON PLANS.

C. PLACEMENT OF GEOGRID SHALL BE AS PER PLANS REFERENCE TO LENGTH AND ELEVATIONS.

D. THE ENGINEER SHALL BE NOTIFIED BY THE INSTALLING CONTRACTOR SHOULD THE EMBEDMENT DEPTH OF THE BLOCK BE LESS THAN 8" FOR WALLS UNDER OR EQUAL TO 7 FT., 12" FOR WALLS GREATER THAN 7 FT. AND 2'-0" FOR WALLS GREATER THAN OR EQUAL TO 14 FT.

E. THE REINFORCED SOIL IS ASSUMED TO BE SANDY TYPE MATERIAL.

10.0 QUALIFICATION OF DESIGN

A. STABILITY OF ANY TEMPORARY SLOPES REQUIRED BY THE INSTALLATION OF A SEGMENTAL RETAINING WALL SHALL BE ADDRESSED BY A QUALIFIED GEOTECHNICAL ENGINEER. RESPONSIBILITY OF THESE TEMPORARY SLOPES RESTS WITH THE OWNER AND/OR ARCHITECT OF THIS PROJECT AND THE SLOPES SHALL MEET ALL OSHA STANDARDS. SLOPES STEEPNESS = 1.5H:1V.

B. HANDRAIL/GUARDRAIL REQUIREMENTS SHALL BE DETERMINED BY THE CIVIL SITE ENGINEER OF RECORD, NOT VENTURE ENGINEERING, P.A.

C. NOTIFY VENTURE ENGINEERING, P.A. PRIOR TO MODIFYING IF EXISTING SITE TOPOGRAPHY DOES NOT MATCH CONDITIONS OUTLINED ON RETAINING WALL PROFILE.

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REVISIONS

DESCRIPTIONS	DATE

NORTH CAROLINA PROFESSIONAL SEAL 44480 ENGINEER MARK MAGRATH 09/05/24

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PROVIDENCE CREEK SUBDIVISION

PHASE 3 - RETAINING WALLS

1370, 1800 & 1820 BALLARD ROAD
HARNETT COUNTY, NC

SPECIFICATIONS
PROVIDENCE CREEK SUBDIVISION - PHASE 3 - HARNETT COUNTY, NC

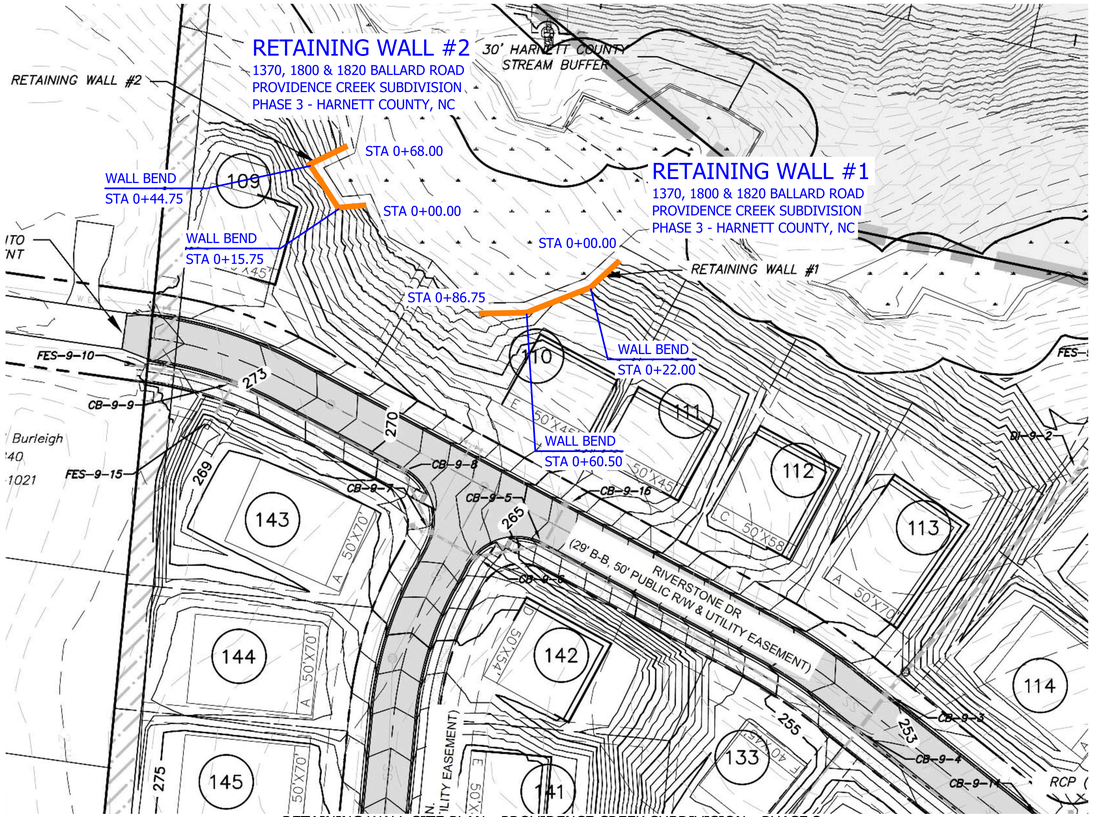
DATE: September 05, 2024
DES: TLH
CHECKED: KLY
APPROVED: MJM

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

DRAWING NUMBER
C-1

VE PROJECT NO: 00240001 *PROVIDENCE CREEK SUBDIVISION - PHASE 3*

PROVIDENCE CREEK SUBDIVISION - PHASE 3 RETAINING WALL CONSTRUCTION - HARNETT COUNTY, NORTH CAROLINA



RETAINING WALL SITE PLAN - PROVIDENCE CREEK SUBDIVISION - PHASE 3

SCALE: 1" = 40'

1370, 1800 & 1820 BALLARD ROAD

PROVIDENCE CREEK SUBDIVISION - PHASE 3 - HARNETT COUNTY, NC

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NOTE:

THIS CIVIL SITE GRADING PLAN SHOWN HERE & PLAN VIEWS WERE DONE BY McKIM & CREED SEALED 07/16/24.
VENTURE ENGINEERING, P.A. IS NOT RESPONSIBLE FOR ERRORS/OMMISIONS ON CIVIL ENGINEERING GRADING PLAN.

NORTH

40' 0 40' 80'

SCALE: 1"= 40' (Horiz.)

DESCRIPTIONS	DATE
REVISIONS	

NORTH CAROLINA PROFESSIONAL SEAL 4480 ENGINEER MARK MAGRATH 09/05/24

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HARNETT COUNTY, NC

RETAINING WALL SITE PLAN
PROVIDENCE CREEK SUBDIVISION - PHASE 3 - HARNETT COUNTY, NC

DATE: September 05, 2024
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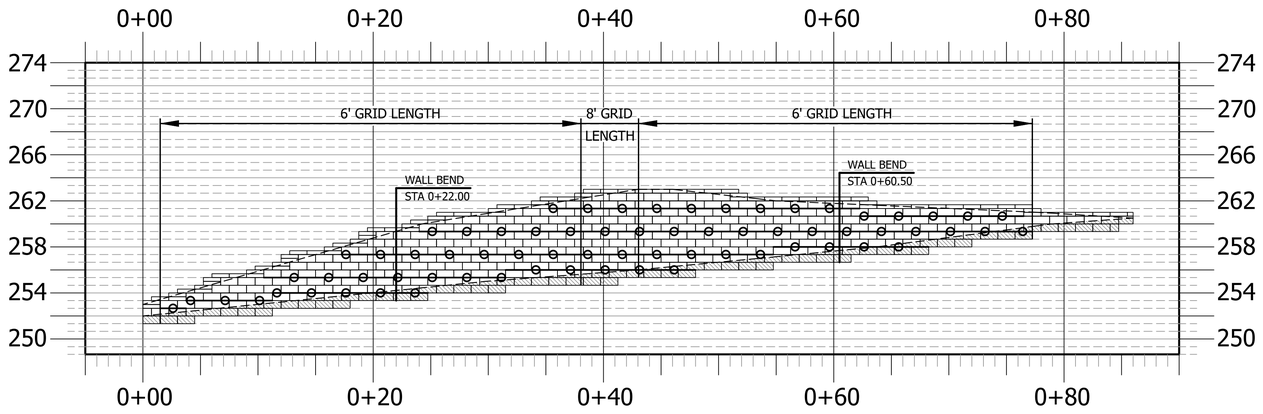
CHECKED: KLY
APPROVED: MJM

SCALE
HORIZONTAL: 1" = 40'
VERTICAL: N/A

DRAWING NUMBER
C-2

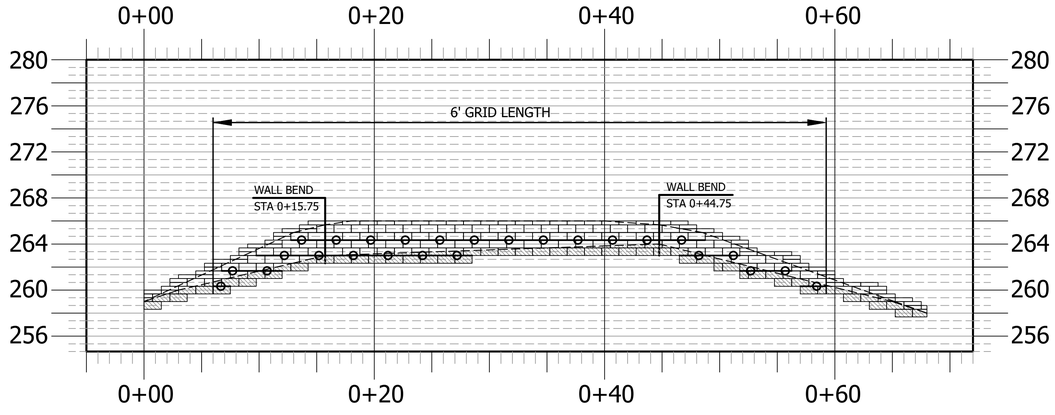


RETAINING WALL PROFILE #1

NOT TO SCALE

1370, 1800 & 1820 BALLARD ROAD

PROVIDENCE CREEK SUBDIVISION - PHASE 3 - HARNETT COUNTY, NC



RETAINING WALL PROFILE #2

NOT TO SCALE

1370, 1800 & 1820 BALLARD ROAD

PROVIDENCE CREEK SUBDIVISION - PHASE 3 - HARNETT COUNTY, NC

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LEGEND

GRIDLOK 370

DESCRIPTIONS	DATE

REVISIONS

NORTH CAROLINA PROFESSIONAL SEAL 44480 ENGINEER MARK MAGRATH 09/05/24

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HARNETT COUNTY, NC

RETAINING WALL PROFILE #1 & #2
PROVIDENCE CREEK SUBDIVISION - PHASE 3 - HARNETT COUNTY, NC

DATE: September 05, 2024
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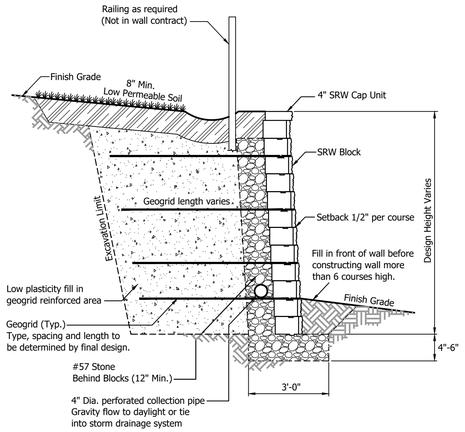
APPROVED: MJM

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

DRAWING NUMBER
C-3

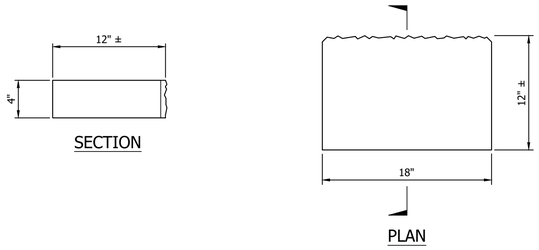
PROVIDENCE CREEK SUBDIVISION - PHASE 3 RETAINING WALL CONSTRUCTION - HARNETT COUNTY, NORTH CAROLINA

VE PROJECT NO: 00240001 PROVIDENCE CREEK SUBDIVISION - PHASE 3



SRW RETAINING WALL
TYPICAL CROSS SECTION

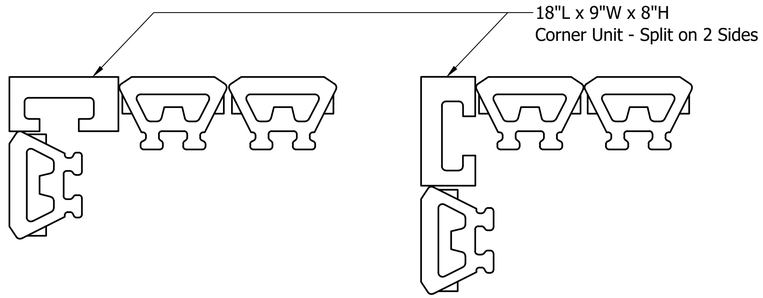
SRW DETAIL	1 of 1 SHEET NO.	DATE



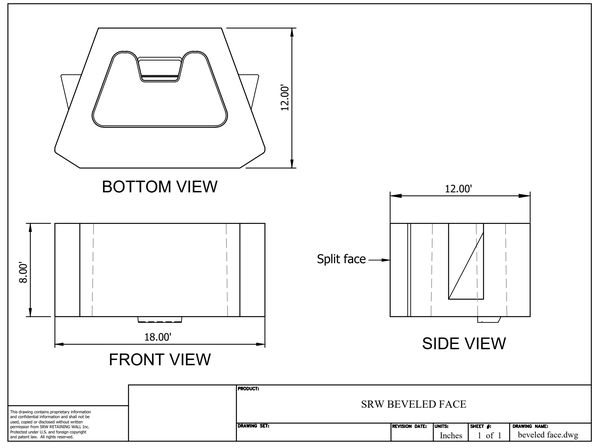
SRW CAP UNIT DETAILS

SRW DETAILS	1 of 1 SHEET NO.	2/2008 DATE

Note:
Trim Face block to fit
to accomodate setback.



Typical Outside Corner Formation Detail
Design By Others



PRODUCT: SRW BEVELED FACE

DRAWING SET:	REVISION DATE:	UNITS:	SHEET #:	DRAWING NAME:
		Inches	1 of 1	beveled face.dwg

GEOTECHNICAL GENERAL NOTE:

1. GEOTECHNICAL INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. THEREFORE, ASSUMPTIONS WERE MADE BASED ON SOIL CHARACTERISTICS IN THE AREA (REFER TO SHEET C-1). IF SOILS ARE DIFFERENT IN THE FIELD THAN LISTED IN THE GEOTECHNICAL REPORT, VENTURE ENGINEERING, P.A. MUST BE NOTIFIED IMMEDIATELY BEFORE WORK CAN CONTINUE.
2. A GLOBAL STABILITY ANALYSIS HAS NOT BEEN DONE FOR THIS PROJECT. WE RECOMMEND THAT A GLOBAL STABILITY ANALYSIS BE PERFORMED BY A 3RD PARTY GEOTECHNICAL ENGINEER FOR RETAINING WALLS THAT HAVE SLOPES ABOVE, BELOW, BOTH (SLOPES ABOVE & BELOW THE RETAINING WALL) & MULTI-TIERED RETAINING WALL.

GENERAL DESIGN NOTE:

1. WALL PROFILES WERE CREATED & DESIGNED BY VENTURE ENGINEERING, P.A. PER EXISTING & PROPOSED GRADES AS SHOWN IN PLAN VIEW ON SHEET C-2 AS PROVIDED BY McKIM & CREED SEALED 07/16/24.
2. ALL GRADES SHOWN ON RETAINING WALL SITEPLAN IN THIS SET OF DRAWINGS ARE NOT KNOWN TO BE ORIGINAL DESIGN GRADES OR AS-BUILT GRADES. ALL GRADES TO BE SURVEY STAKED PRIOR TO CONSTRUCTION.

DESCRIPTIONS	DATE
REVISIONS	

NORTH CAROLINA PROFESSIONAL SEAL 34480 ENGINEER MARK MAGRATH 09/05/24

Venture Engineering, P.A.
312 WEST MILLBROOK ROAD SUITE 237
RALEIGH, NC 27609
P: 919-676-0303 F: 919-676-0301
EMAIL ADDRESS: BMONDSCHEIN@VENTURE-E.COM
LICENSE NO. C-2590

PROVIDENCE CREEK SUBDIVISION
PHASE 3 - RETAINING WALLS
1370, 1800 & 1820 BALLARD ROAD
HARNETT COUNTY, NC

DETAIL SHEET - SHEET 1 OF 2
PROVIDENCE CREEK SUBDIVISION - PHASE 3 - HARNETT COUNTY, NC

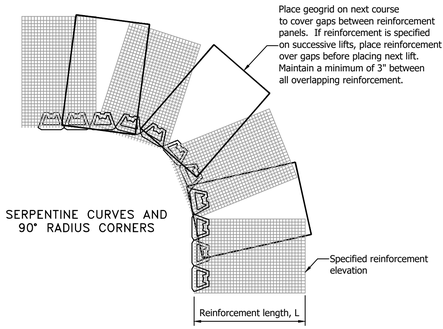
DATE: September 05, 2024
DES: TLH
CHECKED: KLY
APPROVED: MJM

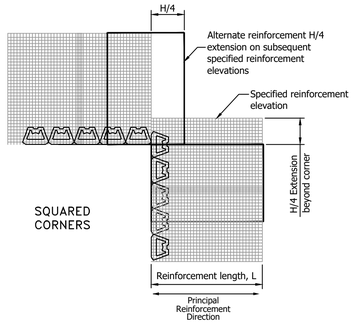
SCALE
HORIZONTAL: N/A
VERTICAL: N/A

DRAWING NUMBER
C-4

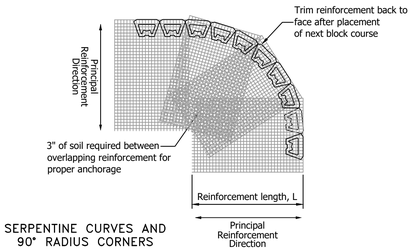
PROVIDENCE CREEK SUBDIVISION - PHASE 3 RETAINING WALL CONSTRUCTION - HARNETT COUNTY, NORTH CAROLINA

VE PROJECT NO: 00240001 *PROVIDENCE CREEK SUBDIVISION - PHASE 3*





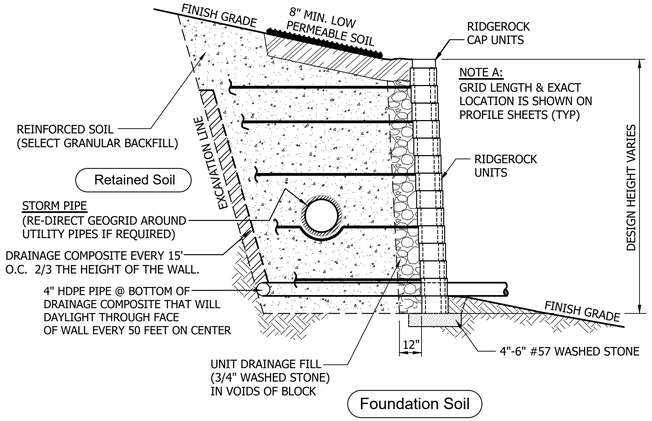
REINFORCEMENT PLACEMENT FOR CONCAVE CORNERS AND RADII



REINFORCEMENT PLACEMENT FOR CONVEX CORNERS AND RADII

SRW RETAINING WALL
GEOGRID PLACEMENT ON CORNERS AND RADII

SRW DETAILS | 1 of 1 SHEET NO.



GEOGRID SHOULD NOT BE TORN, DISPLACED OR AUGURED, WHEN FENCE POSTS OR GUARD RAIL POSTS ARE INSTALLED.

TYPICAL DRAINAGE COMPOSITE DETAIL (For Cut Walls Only)

NOT TO SCALE

GEOTECHNICAL GENERAL NOTE:

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REVISIONS

DESCRIPTIONS	DATE

NORTH CAROLINA PROFESSIONAL SEAL 4480 ENGINEER MARK MAGRATH 09/05/24

Venture Engineering, P.A.
312 WEST MILLBROOK ROAD SUITE 237
RALEIGH, NC 27609
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PROVIDENCE CREEK SUBDIVISION
PHASE 3 - RETAINING WALLS
1370, 1800 & 1820 BALLARD ROAD
HARNETT COUNTY, NC

DETAIL SHEET - SHEET 2 OF 2
PROVIDENCE CREEK SUBDIVISION - PHASE 3 - HARNETT COUNTY, NC

DATE: September 05, 2024
DES: TLH
CHECKED: KLY
APPROVED: MJM

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

DRAWING NUMBER
C-5

PROVIDENCE CREEK SUBDIVISION - PHASE 3 RETAINING WALL CONSTRUCTION - HARNETT COUNTY, NORTH CAROLINA

VE PROJECT NO: 00240001 *PROVIDENCE CREEK SUBDIVISION - PHASE 3*

REV.NO.	DESCRIPTIONS	DATE
A	ISSUED FOR CONSTRUCTION	2024.07.16

REVISIONS

SEAL

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028419 07/16/24 GRANT M. LIVENSGOOD

McKIM & CREED
4300 Edwards Mill Road
Raleigh, North Carolina 27612
Phone: (919)233-8091, Fax: (919)233-8031
F-1222

www.mckimcreed.com

mattamyHOMES

Providence Creek Subdivision Phase 3

GRADING & DRAINAGE PLAN

DATE:	July 16, 2024
MCE PROJ. #	04863-0048
DRAWN	KLT
DESIGNED	AEF / JMK
CHECKED	GML / AEF
PROJ. MGR.	PEHH

SCALE: HORIZONTAL: 1"=50' VERTICAL: N/A

M&C FILE NUMBER: C4.0 Grading Plan.dwg

DRAWING NUMBER: **C4.1**

STATUS: ISSUED FOR CONSTRUCTION

REVISION: A