

202514071



VICINITY MAP SCALE: 1"=1000'

STANDARD STORMWATER NOTES FOR JAMES CITY COUNTY, VIRGINIA REVISED JULY 2024

- All the provisions of Virginia Erosion and Stormwater Management Regulations, the Virginia Best Management Practice (BMP) Clearinghouse, Virginia Erosion and Sediment Control Handbook (VESCH), Virginia Stormwater Management Handbook, and any associated technical bulletins and guidance documents as published by the State Water Control Board, the Virginia Department of Environmental Quality (DEQ), and the local VESMP authority shall apply to the project.
- Minimum Standards Numbers 1 through 19 of the Virginia Erosion and Stormwater Management Regulations 9VAC25-875 shall apply to the project.
- The operator shall be responsible to register for Construction General Permit (CGP) coverage, as applicable, in accordance with the General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharge of Stormwater from Construction Activities (VAR10) Chapter 880; the Virginia Erosion and Stormwater Management Regulations Chapter 875; and in accordance with the current requirements of the State Water Control Board, the Virginia DEQ, Chapter 8 of the County Code, and the local VESMP authority.
- The operator shall provide the name of an individual holding a valid Responsible Land Disturber (RLD) certificate issued by DEQ signifying who is responsible for carrying out the land-disturbing activity in accordance with the approved ESM plan. The RLD must be designated on the erosion and sediment control plan, ESM plan, or permit as a prerequisite for engaging in land disturbance. The RLD is required to attend the pre-construction meeting for the project.
- The contractor is responsible to contact Virginia 811 (<https://va811.com/> or 1-800-552-3120) prior to any utility or site work excavations.
- All erosion and sediment control measures shall be planned, designed, implemented, installed, and maintained in accordance with the provisions of the latest edition of the VESCH or the Virginia Stormwater Management Handbook. The Contractor shall maintain, inspect, and repair all erosion and sediment control measures as needed throughout the life of the project to ensure continued acceptable performance.
- A pre-construction conference (meeting) shall be held on-site and include representatives from the local VESMP authority, the owner/operator/permittee, the RLD, the contractor, engineer, and other responsible agencies, as applicable, prior to authorization and issuance of a local land disturbing or stormwater construction permit. The owner/operator/permittee is required to coordinate scheduling of the pre-construction conference with the James City County (JCC) SRP Division. The contractor shall submit a Sequence of Construction and a revised Pollution Prevention Plan, if applicable, to the local VESMP authority for review and approval prior to the preconstruction meeting.
- A Pollution Prevention Plan, if required, shall be developed, implemented, and updated as necessary and must detail the design, installation, implementation, and maintenance of effective pollution prevention measures to minimize the discharge of pollutants as specified in Section 8-10 of the County Code. Measures must be designed, installed, implemented, and maintained to: minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters; treated wash waters in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge; minimize exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater; minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures. The plan should also include effective best management practices to prohibit discharges of wastewater from washout of concrete, unless managed by an appropriate control; wastewater from washout and cleanup of stucco, paint, form release oils, curing compounds, and other construction materials; fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; soaps or solvents used in vehicle and equipment washing; discharges from dewatering activities, including discharges from dewatering of trenches and excavations unless managed by appropriate controls in accordance with 40 CFR 450.21(c). This plan shall be available on-site for review at reasonable times by the local VESMP authority when requested.
- The owner, applicant, operator, or permittee is responsible for all operator self-inspections as required in the Pollution Prevention Plan and as required as part of a developed Stormwater Pollution Prevention Plan (SWPPP). These inspections shall be made available, upon request, by the local VESMP authority.
- All perimeter erosion and sediment control measures shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance activity takes place.
- Erosion and sediment control measures may require minor field adjustments or additional controls may be needed at or following time of construction to ensure their intended purpose is accomplished, to ensure adequate protection of the health, safety, and welfare of the public, or if site conditions change, become apparent or alter significantly following the date of plan approval. Local VESMP authority approval shall be required for any deviation of erosion and sediment control measures from the approved plan. Local VESMP authority written approval shall be required prior to deviations from the approved erosion and sediment measures or sequence of construction. Significant deviations from the approved plan may require the submittal of an amended plan for review and approval.
- Off-site areas shall be approved by the local VESMP authority prior to land disturbing activity at the separate location. Off-site areas shall be included as part of the proposed land disturbing activity or covered by a separate approved ESM plan.
- Temporary soil stockpiles shall comply with the provisions of Section 24-46 of the County Code.
- Local VESMP authority written approval shall be required prior to deviations from the approved erosion and sediment measures, sequence of construction, or stormwater management plan. Significant deviations from the approved plan may require the submittal of an amended plan for review and approval.
- Permanent or temporary stabilization of disturbed soil areas shall comply with Minimum Standard 1 (MS-1) and 3 (MS3) of the Virginia Erosion and Stormwater Management Regulations. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year. Irrigation, if necessary, shall comply with all applicable seasonal water use restrictions of the James City Service Authority.
- Final stabilization will be defined as the completion of all soil disturbing activities at the site and the establishment of a permanent vegetative cover on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform (e.g., evenly distributed), mature enough to survive, and will inhibit erosion.
- Temporary erosion and sediment control measures shall not be removed until all disturbed areas are stabilized. Removal shall not occur without written authorization by the local VESMP authority. Disturbances associated with the removal of temporary erosion and sediment control measures shall be properly stabilized.
- Sediment traps and sediment basins shall not be removed without written authorization of the local VESMP authority.
- Design and construction of private storm drainage systems, outside of any Virginia Department of Transportation right-of-way, shall be performed in accordance with the current version of the County's Stormwater Drainage Conveyance Systems (Non-BMP related) General Design and Construction Guidelines.
- Record Drawings (As-builts) and Construction Certifications are required for all applicable stormwater facilities, including stormwater management/BMP facilities and storm drainage systems, and private streets. The final project certification process shall include an internal closed-circuit television camera (CCTV) post installation inspection performed by the owner in accordance with the County Administrative Guidelines for CCTV Post Installation Inspection. Record drawings and construction certifications must meet established program requirements of the County Code and the VESMP authority.
- All stormwater facilities including BMPs, storm drainage pipes, stormwater conveyances, inlets, manholes, outfalls, and roadside and other open channels shall be inspected by the local VESMP authority, the owner, and the applicant/operator/permittee designated geotechnical engineer for the project in accordance with the established County stormwater facility inspection program requirements. The purpose of the erosion control measures shown on these plans shall be to preclude the transport of all waterborne sediments resulting from construction activities from entering onto adjacent properties or state waters. If field inspection reveals the inadequacy of the plan to confine sediment to the project site, appropriate modifications will be made to correct any plan deficiencies. In addition to these notes, all provisions of the Erosion and Sediment Control Ordinance of the City of Williamsburg (Chapter 7, Article II of Code of the City of Williamsburg) and the Virginia Erosion and Sediment Control Regulations (9VAC25-840 et. seq.) shall apply to this project.

STATISTICAL INFORMATION:

ZONING: R4 RESIDENTIAL PLANNED COMMUNITY
PARCEL ID: 3131500023
CURRENT OWNER: JAMES C & MARY P KIM
DEED REFERENCE: INSTR. #202213450
PLAT REFERENCE: INSTR. #080011618
UTILITIES: WATER PUBLIC (JCSA)
SEWER PRIVATE
TOTAL PARCEL AREA: 0.58 AC.
FLOOD HAZARD MAP: PROPERTY IS LOCATED IN ZONE X PER FEMA FIRM COMMUNITY MAP NUMBER 51095C0116D EFFECTIVE 12/16/2015.

PROJECT DESCRIPTION

PROPOSED PROJECT CONSISTS OF A DRYSTONE PLANTER WALL LOCATED ON NORTHERN SIDE OF THE RESIDENCE.

SEQUENCE OF CONSTRUCTION

- DEMOLISH EXISTING RETAINING WALL AND PATIO.
- EXCAVATE FOR STONE FOUNDATION.
- COMPACT SOIL FOR STONE FOUNDATION.
- INSTALL STONE FOUNDATION.
- CONSTRUCT RETAINING WALL PER MANUFACTURERS (NOMA) SPEC. *SEE SHEET 3 OF 3.
- UPON COMPLETE STABILIZATION OF THE PROJECT AREA AND AFTER APPROVAL BY THE COUNTY ENVIRONMENTAL INSPECTOR ALL TEMPORARY ESC MEASURES MAY BE REMOVED FROM THE SITE.

CONTRACTOR SHALL NOTIFY MISS UTILITY @ 811 OR (800) 552-7001 PRIOR TO STARTING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND DETERMINING SIZES OF ALL UTILITIES PRIOR TO CONSTRUCTION. IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, CONTACT THE ENGINEER BEFORE PROCEEDING

** SEE SHEET 2 OF 3 FOR FENCE POST DETAIL **

- LEGEND
- HVAC UNIT
 - IPF = IRON PIPE FOUND
 - IRF = IRON ROD FOUND
 - EC = EXISTING CONCRETE ELEVATION
 - ⊗ WATER VALVE
 - ⊕ FIRE HYDRANT
 - ⊙ SOIL BORING
 - GP = GRINDER PUMP
 - (P) = PROPOSED ELEVATION
 - (TW) = PROPOSED TOP OF WALL ELEVATION
 - (BW) = PROPOSED BOTTOM OF WALL GRADE

EROSION AND SEDIMENT CONTROL MEASURE	SYMBOL	LEGEND
C-SSM-10 PERMANENT SEEDING	PS	PS
C-PCM-04 SILT FENCE	SF	X X X X

E&SC LEGEND

GENERAL NOTES

- A TITLE REPORT HAS NOT BEEN FURNISHED TO THIS FIRM.
- THIS FIRM MADE NO ATTEMPT TO LOCATE UNDERGROUND UTILITIES EXCEPT THOSE SHOWN.
- ELEVATIONS AS SHOWN HEREON ARE IN FEET AND ARE RELATED TO JAMES CITY COUNTY VIRGINIA GIS MAPPING NAVD88.
- WETLANDS, IF ANY, WERE NOT LOCATED FOR THIS SURVEY.
- THIS FIRM IS NOT RESPONSIBLE FOR THE LOCATION OF ANY STRUCTURE, MANHOLE, VALVE, ETC., HIDDEN OR OBSTRUCTED AT THE TIME THE FIELD SURVEY WAS PERFORMED.
- LOT LIES IN F.I.R.M. ZONE "X" ACCORDING TO FLOOD INSURANCE RATE MAP #5109C0202D, DATED DECEMBER 16, 2015.
- THIS SURVEY WAS COMPLETED BY LANDTECH RESOURCES, INC. UNDER THE DIRECT AND RESPONSIBLE CHARGE OF MATTHEW H. CONNOLLY, L.S., LICENSE NO. 2053, FROM AN ACTUAL GROUND SURVEY MADE UNDER HIS SUPERVISION; THE INFORMATION SHOWN HEREON WAS OBTAINED ON 08-21-2025 AND MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

3 Large/Small Plat(s) Recorded
herewith as # 202514071

City of Williamsburg & County of James City
Circuit Court: This PLAT was recorded on
October 1, 2025
at 1:49 AM (P.M.) PG 1
Document # 202514071
ELIZABETH E. O'CONNOR, CLERK
Elizabeth E. O'Connor, Clerk

LOT 3

121155'
D122851'

KINGSPPOINT DRIVE

RETAINING WALL PLAN
FOR
LOT 3, SECTION 1
KINGSPPOINT
103 KINGSPPOINT DRIVE

JAMESTOWN DISTRICT JAMES CITY COUNTY VIRGINIA

Scale:
Date: 09/12/2025
Job Number: 25-307
Designed By: MHC
Sheet Title:

RETAINING WALL
PLAN

Sheet Number:
1 OF 3

REVISION / COMMENT / NOTE

DATE NO



GENERAL NOTES:

THE FOLLOWING NOTES APPLY, UNLESS OTHERWISE NOTED OR SHOWN ON PLANS.

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO STARTING WORK OR FABRICATION OF NEW STRUCTURAL MEMBERS. NOTIFY THE OWNER OF ANY CONFLICTS IN WRITING. DO NOT PROCEED WITH AFFECTED WORK UNTIL CONFLICTS HAVE BEEN RESOLVED.
2. WORK SHALL COMPLY WITH THE FOLLOWING:
THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC): 2021 EDITION
THE INTERNATIONAL BUILDING CODE (IBC): 2021 EDITION AS AMENDED BY THE VUSBC
ALL APPLICABLE STATE AND LOCAL CODES, ORDINANCES AND REGULATIONS.
3. SECTIONS AND DETAILS SHOWN ON DRAWINGS ARE SITE SPECIFIC AND MAY NOT BE USED AT OTHER PROJECT LOCATIONS.
4. INSTALL MATERIALS PER MANUFACTURERS' RECOMMENDATIONS AND SPECIFICATIONS (SEE SHEET 3 OF 3 OF THIS PLAN)

STRUCTURAL DESIGN NOTES (VCC 2021 & ASCE/SEI 7-22):

DESIGN CRITERIA:

STRUCTURAL DESIGN OF CONCRETE MASONRY RETAINING WALL SYSTEM

- A. RISK CATEGORY = II (TABLE 1.5-1 ASCE/SEI 7-22/VCC TABLE 1604.5)
- B. GROUND SNOW LOAD: $P_g = 20$ PSF, $P_f = 14$ PSF
SNOW EXPOSURE FACTOR: $C_e = 1.0$
SNOW LOAD IMPORTANCE FACTOR I
THERMAL FACTOR: $C_t = 1.0$
- C. ULTIMATE WIND SPEED = 115 MPH (EXPOSURE B)
- D. UNIFORM LIVE LOAD FOR YARDS/TERRACES = 100 PSF
- E. SOIL DENSITY = 120 PCF

SEISMIC DESIGN LOADS: (ASCE 7-22 CHAPTER 11 & ASCE HAZARD TOOL WEBSITE)

SEISMIC IMPORTANCE FACTOR = 1
 MAPPED SPECTRAL RESPONSE ACCELERATION $S_s = 0.16$
 MAPPED SPECTRAL RESPONSE ACCELERATION $S_1 = 0.044$
 SITE SOIL CLASS = D
 SPECTRAL COEFFICIENT - $S_{ds} = 0.13$
 SPECTRAL COEFFICIENT - $S_{d1} = 0.063$
 SEISMIC DESIGN CATEGORY = B

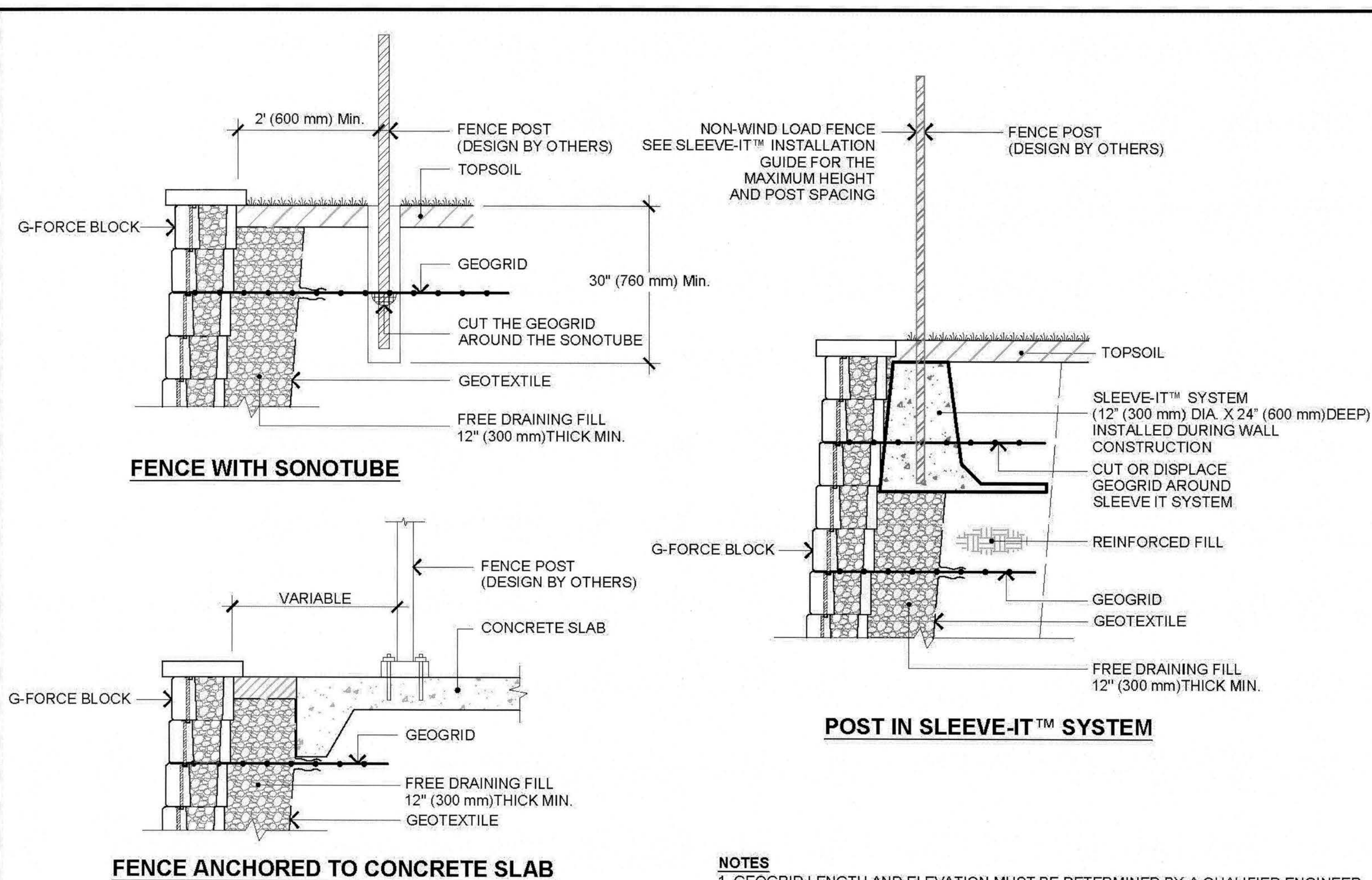
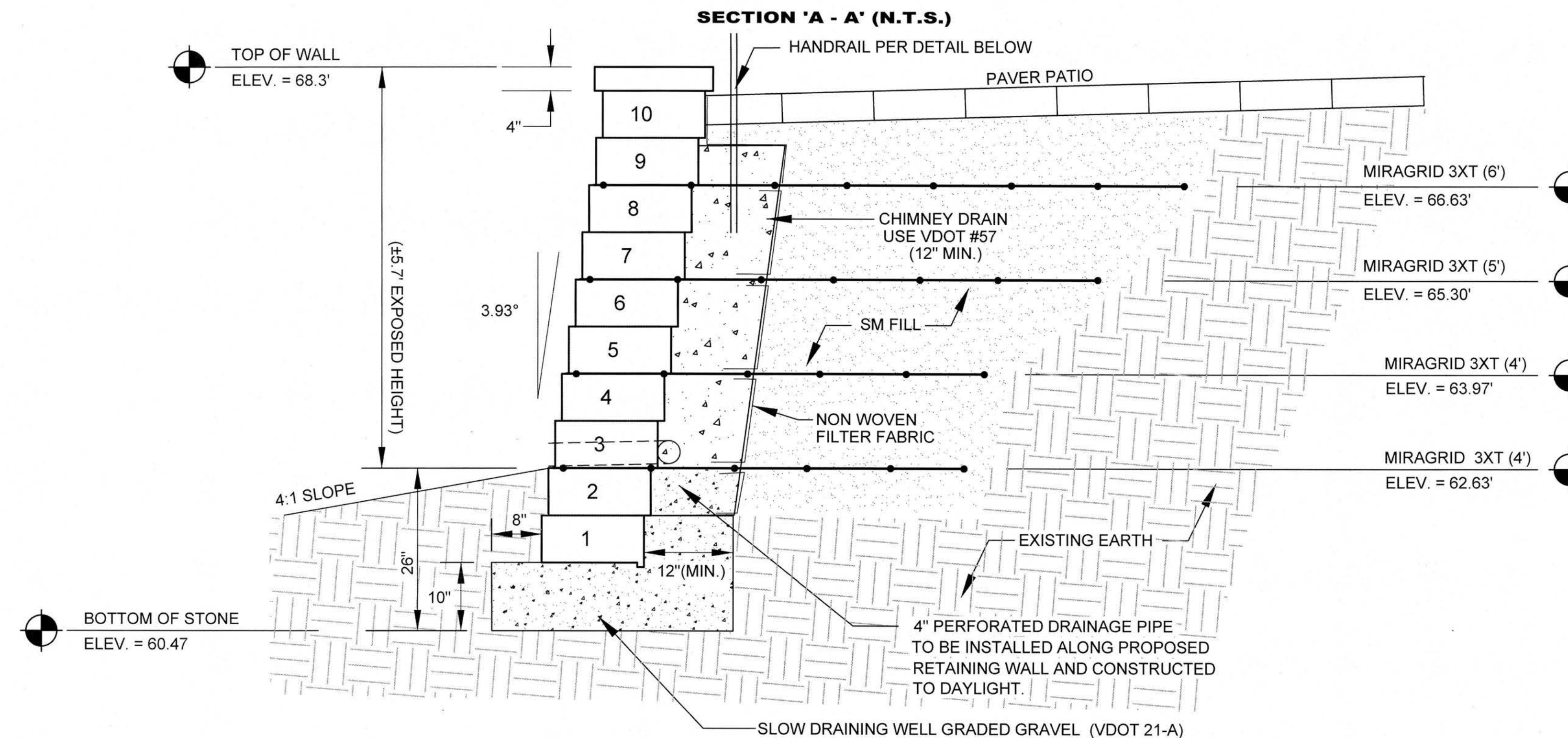
GRAVEL FOUNDATION NOTES

1. PLACE FOUNDATIONS ON FIRM, UNDISTURBED BEARING SOILS UNLESS FOUNDATIONS ARE PLACED ON COMPACTED FILL. (GEOTECHNICAL ENGINEER TO VERIFY 2,000 PSF BEARING CAPACITY)
2. BACKFILL 12" MINIMUM BEHIND WALL AS SPECIFIED ON SHEET 2 OF 3 OF THIS PLAN.
3. COMPACTED BACKFILL: BACKFILL AND COMPACT TO NOT LESS THAN 95 PERCENT OF MAXIMUM DRY DENSITY ACCORDING TO ASTM D 1557. PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH.
4. RETAINING WALL DESIGN IS BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 2,000 PSF.

City of Williamsburg & County of James City
Circuit Court: This PLAT was recorded on
October 1, 2025
at 1:44 AM (PM), PB - PG -
Document # 202514071
ELIZABETH E. O'CONNOR, CLERK
Elizabeth E. O'Connor Clerk

3 Large Small Plat(s) Recorded
here with as # 202514071

TECHO BLOC (G-FORCE) RETAINING WALL SYSTEM



NOTES

1. GEOGRID LENGTH AND ELEVATION MUST BE DETERMINED BY A QUALIFIED ENGINEER.

THESE GRAPHICAL REPRESENTATIONS ARE INTENDED FOR PRELIMINARY DESIGN PURPOSES ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION. FINAL DESIGN SHOULD BE APPROVED BY A QUALIFIED, LICENSED PROFESSIONAL ENGINEER.

TECHO—BLOC

TOLL FREE:
1877-832-4625
WWW.TECHO-BLOC.COM

G-FORCE BLOCK FENCE DETAIL

TECHO-BLOC RETAINING WALL SYSTEMS
TYPICAL WALL DETAILS

DATE:	2019-11-27
DRAWN BY:	L.P.
SCALE:	NONE
SHEET:	1/1
FILE:	TS-DET-GFORCE-IN-15.1

RETAINING WALL PLAN
FOR
LOT 3, SECTION 1
KINGSPONT
103 KINGSPONT DRIVE

JAMESTOWN DISTRICT	JAMES CITY COUNTY	VIRGINIA
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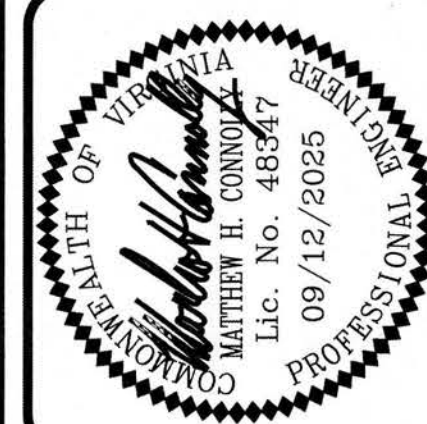
Scale:
Date: 09/12/2025
Job Number: 25-307
Designed By: MHC
Sheet Title:

RETAINING
PLAN

Sheet Number:
2 OF 3

1000000

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SPECIFICATIONS

MATERIALS SPECIFICATIONS

PER THE NATIONAL CONCRETE MASONRY ASSOCIATION'S DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, 3rd EDITION (2010)

PART 1: GENERAL

1.1 DESCRIPTION

ALL WORK SHALL CONSIST OF FURNISHING ALL MATERIALS, LABOR, EQUIPMENT, AND SUPERVISION TO INSTALL A SEGMENTAL RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN AND DIMENSIONS SHOWN ON THE PLANS OR AS ESTABLISHED BY THE OWNER OR OWNER'S ENGINEER.

1.2 REFERENCE STANDARDS

1.2.1 ENGINEERING DESIGN

- ACI 318M-11 - STANDARD TEST METHOD FOR DETERMINING THE CONNECTION STRENGTH BETWEEN GEOSYNTHETICS REINFORCEMENT AND SEGMENTAL CONCRETE UNITS
- ASTM D 6916 - STANDARD TEST METHOD FOR DETERMINING THE SHEAR STRENGTH BETWEEN SEGMENTAL CONCRETE UNITS

1.2.2 SEGMENTAL RETAINING WALL UNITS

- ASTM D 4596 - STANDARD TEST METHODS FOR SAMPLING AND TESTING CONCRETE MASONRY UNITS AND RELATED UNITS
- ASTM C 1262 - STANDARD TEST METHOD FOR EVALUATING THE FREEZE-THAW DURABILITY OF MANUFACTURED CONCRETE MASONRY UNITS AND RELATED CONCRETE UNITS
- ASTM C 1372 - STANDARD SPECIFICATION FOR DRY-CAST SEGMENTAL RETAINING WALL UNITS

1.2.3 GEOSYNTHETIC REINFORCEMENT

- ASTM D 4596 - STANDARD TEST METHOD FOR TENSILE PROPERTIES OF GEOTEXTILES BY THE WIDE-WIDTH STRIP METHOD
- ASTM D 5262 - STANDARD TEST METHODS FOR EVALUATING THE UNCONFINED TENSION CREEP AND CREEP RUPTURE BEHAVIOR OF GEOSYNTHETICS
- ASTM D 5321 - STANDARD TEST METHOD FOR DETERMINING THE COEFFICIENT OF SOIL AND GEOSYNTHETIC OR GEOSYNTHETIC AND GEOSYNTHETIC FRICTION BY THE DIRECT SHEAR METHOD
- ASTM D 5818 - STANDARD TEST METHOD FOR EXPOSURE AND RETRIEVAL OF SAMPLES TO EVALUATE INSTALLATION DAMAGE OF GEOSYNTHETICS
- ASTM D 6637 - STANDARD TEST METHOD FOR DETERMINING TENSILE PROPERTIES OF GEOTEXTILES BY THE SINGLE OR MULTI-RIB TENSILE METHOD
- ASTM D 6706 - STANDARD TEST METHOD FOR MEASURING GEOSYNTHETIC PULLOUT RESISTANCE IN SOIL
- ASTM D 6992 - STANDARD TEST METHOD FOR ACCELERATED TENSILE CREEP AND CREEP-RUPTURE OF GEOSYNTHETIC MATERIALS BASED ON TIME-TEMPERATURE SUPERPOSITION USING STEPPED ISOTHERMAL METHOD

1.2.4 SOILS

- ASTM D 422 - STANDARD TEST METHOD FOR PARTICLE-SIZE ANALYSIS OF SOILS
- ASTM D 698 - STANDARD TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT (12 400 ft-lb/ft³ (2,700 kN-m/m³))
- ASTM D 1556 - STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL IN PLACE BY THE SAND-CONE METHOD
- ASTM D 1557 - STANDARD TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING MODIFIED EFFORT (56,000 ft-lb/ft³ (2,700 kN-m/m³))
- ASTM D 2487 - STANDARD PRACTICE FOR CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)
- ASTM D 6938 - STANDARD TEST METHOD FOR IN-PLACE DENSITY AND WATER CONTENT OF SOIL AND SOIL-AGGREGATE BY NUCLEAR METHODS (SHALLOW DEPTH)
- ASTM D 4318 - STANDARD TEST METHODS FOR LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS
- ASTM D 6913 - STANDARD TEST METHODS FOR PARTICLE-SIZE DISTRIBUTION (GRADATION) OF SOILS USING SIEVE ANALYSIS
- ASTM G 51 - STANDARD TEST METHOD FOR MEASURING pH OF SOIL FOR USE IN CORROSION TESTING

1.2.5 DRAIN PIPE

- ASTM F 405 - STANDARD SPECIFICATION FOR CORRUGATED POLYETHYLENE (PE) PIPE AND FITTINGS
- ASTM F 758 - STANDARD SPECIFICATION FOR SMOOTH-WALL POLY(VINYL CHLORIDE) (PVC) PLASTIC UNDERDRAIN SYSTEMS FOR HIGHWAY, AIRPORT, AND SIMILAR DRAINAGE

- WHERE SPECIFICATIONS AND REFERENCE DOCUMENTS CONFLICT, THE OWNER'S ENGINEER SHALL MAKE THE FINAL DETERMINATION OF THE APPLICABLE DOCUMENT.

1.3 APPROVED SEGMENTAL RETAINING WALL SYSTEMS

1.3.1 SEGMENTAL WALL UNITS

- DIAMOND PRO 100 SYSTEM

1.3.2 GEOSYNTHETIC REINFORCEMENTS

- MIRAFI MIRAGRID 3XT

1.4 SUBMITTALS

1.4.1 MATERIAL SUBMITTALS

- THE CONTRACTOR SHALL SUBMIT MANUFACTURER'S CERTIFICATIONS, 30 DAYS PRIOR TO THE START OF WORK, STATING THAT THE SRW UNITS, GEOSYNTHETIC REINFORCEMENT, REINFORCED BACKFILL, AND GRAVEL FILL MEET THE REQUIREMENTS OF **PART 2** OF THIS SPECIFICATION. THE CONTRACTOR SHALL PROVIDE A LIST OF SUCCESSFUL PROJECTS SHOWING THAT THE INSTALLER FOR THE SEGMENTAL RETAINING WALL IS QUALIFIED AND HAS A RECORD OF SUCCESSFUL PERFORMANCE.

1.5 DELIVERY, STORAGE & HANDLING

- THE CONTRACTOR SHALL INSPECT THE MATERIALS UPON DELIVERY TO ASSURE THAT PROPER TYPE AND GRADE OF MATERIAL HAS BEEN RECEIVED.
- THE CONTRACTOR SHALL STORE AND HANDLE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN A MANNER TO PREVENT DETERIORATION OR DAMAGE DUE TO MOISTURE, TEMPERATURE CHANGES, CONTAMINANTS, CORROSION, BREAKING, CHIPPING OR OTHER CAUSES.
- THE CONTRACTOR SHALL PROTECT THE MATERIALS FROM DAMAGE. DAMAGED MATERIAL SHALL NOT BE INCORPORATED INTO RETAINING WALLS SHOWN WITHIN THESE PLANS.

PART 2: MATERIAL

2.1 CONCRETE SEGMENTAL RETAINING WALL UNITS

- CONCRETE SEGMENTAL UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 1372 AND HAVE A MINIMUM NET AVERAGE 28 DAYS COMPRESSIVE STRENGTH OF 3,000 PSI AND A MAXIMUM ABSORPTION OF 13 pcf (FOR NORMAL WEIGHT) AS DETERMINED IN ACCORDANCE WITH ASTM C 140. FOR AREAS SUBJECT TO DETRIMENTAL FREEZE-THAW CYCLES, AS DETERMINED BY THE OWNER OR OWNER'S ENGINEER, THE CONCRETE SHALL HAVE ADEQUATE FREEZE/THAW PROTECTION AND MEET THE REQUIREMENTS OF ASTM C 1372 WHEN TESTED IN ACCORDANCE WITH ASTM C 1262.
- ALL UNITS SHALL BE SOUND AND FREE OF CRACKS OR OTHER DEFECTS THAT WOULD INTERFERE WITH THE PROPER PLACING OF THE UNIT OR SIGNIFICANTLY IMPAIR THE STRENGTH OR PERMANENCE OF THE CONSTRUCTION. ANY CRACKS OR CHIPS OBSERVED DURING CONSTRUCTION SHALL FALL WITHIN THE GUIDELINES OUTLINED IN ASTM C 1372.
- SRW UNITS DIMENSIONS SHALL NOT DIFFER MORE THAN $\pm 1/8$ in., AS MEASURED IN ACCORDANCE WITH ASTM C 140. THIS TOLERANCE DOES NOT APPLY TO ARCHITECTURAL SURFACES, SUCH AS SPLIT FACES.
- SRW UNITS SHALL MATCH THE COLOR, SURFACE FINISH, AND DIMENSION FOR HEIGHT, WIDTH, DEPTH, AND BATTER AS SHOWN ON THE PLANS.
- IF PINS OR CLIPS ARE USED BY THE RETAINING WALL SUPPLIER TO INTERCONNECT SRW UNITS, THEY SHALL CONSIST OF A NONDEGRADING POLYMER OR GALVANIZED STEEL AND BE MADE FOR THE EXPRESS USE WITH THE SRW UNITS SUPPLIED.
- CAP ADHESIVE SHALL MEET THE REQUIREMENTS OF THE SRW UNIT MANUFACTURER.

2.2 GEOSYNTHETIC REINFORCEMENTS

- GEOSYNTHETIC REINFORCEMENTS SHALL CONSIST OF HIGH TENACITY PET GEOGRIDS, HDPE GEOGRIDS, OR GEOTEXTILES MANUFACTURED FOR SOIL REINFORCEMENT APPLICATIONS. THE TYPE, STRENGTH AND PLACEMENT LOCATION OF THE REINFORCING GEOSYNTHETIC SHALL BE AS SHOWN ON THE PLANS. THE DESIGN PROPERTIES OF THE REINFORCEMENT SHALL BE DETERMINED ACCORDING TO THE PROCEDURES OUTLINED IN THIS SPECIFICATION AND THE NCM DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, 3rd EDITION (2009). DETAILED TEST DATA SHALL BE SUBMITTED TO THE OWNER'S ENGINEER FOR APPROVAL AT LEAST 30 DAYS PRIOR TO CONSTRUCTION AND SHALL INCLUDE TENSILE STRENGTH (ASTM D 4595 OR ASTM D 6637), CREEP (ASTM D 5262), SITE DAMAGE (ASTM D 5818), DURABILITY (FHWA GUIDANCE (FHWA NHI-00-045, FHWA NHI-00-044)), PULLOUT (ASTM D 6706), DIRECT SHEAR (ASTM D 5321 AND) AND CONNECTION (ASTM D 6638) TEST DATA.

2.3 DRAINAGE PIPE

- THE DRAINAGE COLLECTION PIPE SHALL BE A PERFORATED OR SLOTTED PVC OR CORRUGATED HDPE PIPE. THE PIPE AND GRAVEL FILL MAY BE WRAPPED WITH A GEOTEXTILE THAT WILL FUNCTION AS A FILTER.
- DRAINAGE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM F 405 OR ASTM F 758.

2.4 GRAVEL FILL

- GRAVEL FILL SHALL BE A VDOT #57 STONE OR CLEAN CRUSHED STONE OR GRANULAR FILL MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D 422:

SIEVE SIZE	PERCENT PASSING
1 in.	100
3/4 in.	75-100
No. 4	0-60
No. 200	0-5

2.5 REINFORCED BACKFILL

- THE REINFORCED BACKFILL SHALL BE FREE OF DEBRIS AND CONSIST OF ONE OF THE FOLLOWING INORGANIC SOILS: GW, SW, SP, SM, MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D 422.

SIEVE SIZE	PERCENT PASSING
1 in.	100
3/4 in.	100-20
No. 4	0-60
No. 200	0-35(0)

- COHESIONLESS, COARSE-GRAINED SOILS ARE PREFERRED; FINER SOILS WITH LOW-PLASTICITY (PI OF FINES<20) MAY BE USED ONLY WITH THE CONSENT OF THE OWNER'S ENGINEER FIRST. WITH THE CONSENT, THE ENGINEER SHALL GIVE ADDITIONAL DESIGN CRITERIA TO BE IMPLEMENTED.
- THE pH OF THE BACKFILL MATERIAL SHALL BE BETWEEN 3 AND 9 WHEN TESTED IN ACCORDANCE WITH ASTM G 51.

2.6 GEOTEXTILE FILTER

- DRAINAGE GEOTEXTILE SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES OR SHALL MEET THE CRITERIA RECOMMENDED BY THE WALL DESIGNER'S ENGINEER:
 - AOS: ASTM D 4751
 - GRAB TENSILE: ASTM D 4632
 - TRAP TEAR: ASTM D 4533
 - WATER FLOW RATE: ASTM D 4491
 - PUNCTURE: ASTM D 4833

PART 3: CONSTRUCTION

3.1 CONSTRUCTION OBSERVATION

- THE OWNER OR OWNER'S ENGINEER SHOULD VERIFY THE MATERIALS SUPPLIED BY THE CONTRACTOR MEET ALL THE REQUIREMENTS OF THE SPECIFICATION. THIS INCLUDES ALL SUBMITTALS AND PROPER INSTALLATION OF THE SYSTEM.

- THE CONTRACTOR'S FIELD CONSTRUCTION SUPERVISOR SHALL HAVE DEMONSTRATED EXPERIENCE AND BE QUALIFIED TO DIRECT ALL WORK AT THE SITE.

3.2 EXCAVATION

- THE CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE PLANS. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE OVER-EXCAVATION. EXCAVATION SUPPORT, IF REQUIRED, SHALL BE DESIGNED BY THE CONTRACTOR.

3.3 FOUNDATION PREPARATION

- FOLLOWING EXCAVATION FOR THE LEVELING PAD AND THE REINFORCED SOIL ZONE, FOUNDATION SOIL SHALL BE EXAMINED BY THE OWNER'S GEOTECHNICAL ENGINEER TO ASSURE THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THE ASSUMED DESIGN BEARING STRENGTH. SOILS NOT MEETING THE REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH SOIL MEETING THE DESIGN CRITERIA, AS DIRECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.

3.4 LEVELING PAD PREPARATION

- A MINIMUM 6 in. THICK LAYER OF COMPACTED GRANULAR MATERIAL SHALL BE PLACED FOR USE AS A LEVELING PAD UP TO THE GRADES AND LOCATIONS AS SHOWN ON THE CONSTRUCTION DRAWINGS. THE GRANULAR BASE SHALL BE COMPACTED TO PROVIDE A FIRM, LEVEL BEARING PAD ON WHICH TO PLACE THE FIRST COURSE OF CONCRETE SRW UNITS. A LEVELING PAD CONSISTING OF 6 in. (MINIMUM) THICK LEAN, UNREINFORCED CONCRETE MAY BE USED AT THE WALL CONTRACTOR'S OPTION, OR IF SO DETAILED ON THE PLANS. THE LEVELING PAD SHOULD EXTEND A MINIMUM OF 6 in. FROM THE TOE AND HEEL OF THE SRW UNIT.

3.5 SRW AND GEOSYNTHETIC REINFORCEMENT PLACEMENT

- ALL MATERIALS SHALL BE INSTALLED AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN IN THE WALL DETAILS ON THE CONSTRUCTION PLANS OR AS DIRECTED BY THE OWNER'S ENGINEER. THE CONCRETE SEGMENTAL WALL UNITS AND GEOSYNTHETIC REINFORCEMENT SHALL BE INSTALLED IN GENERAL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE DRAWINGS SHALL GOVERN IN ANY CONFLICT BETWEEN THE TWO REQUIREMENTS.
- OVERLAP OR SPLICE CONNECTIONS OF THE GEOSYNTHETIC IN THE DESIGN STRENGTH DIRECTION SHALL NOT BE PERMITTED. THE DESIGN STRENGTH DIRECTION IS THAT LENGTH OF GEOSYNTHETIC REINFORCEMENT PERPENDICULAR TO THE WALL FACE AND SHALL CONSIST OF ONE CONTINUOUS PIECE OF MATERIAL. ADJACENT SECTIONS OF GEOSYNTHETIC SHALL BE PLACED IN A MANNER TO ASSURE THAT THE HORIZONTAL COVERAGE SHOWN ON THE PLANS IS PROVIDED.
- GEOSYNTHETIC REINFORCEMENT SHOULD BE INSTALLED UNDER TENSION. A NOMINAL TENSION SHALL BE APPLIED TO THE REINFORCEMENT AND MAINTAINED BY STAPLES, STAKES, OR HAND TENSIONING UNTIL THE REINFORCEMENT HAS BEEN COVERED BY AT LEAST 6 in. OF SOIL FILL.
- BROKEN, CHIPPED, STAINED OR OTHERWISE DAMAGED UNITS SHALL NOT BE PLACED IN THE WALL UNLESS THEY ARE REPAIRED, AND THE REPAIR METHOD AND RESULTS ARE APPROVED BY THE SRW DESIGN ENGINEER.

3.6 BACKFILL PLACEMENT

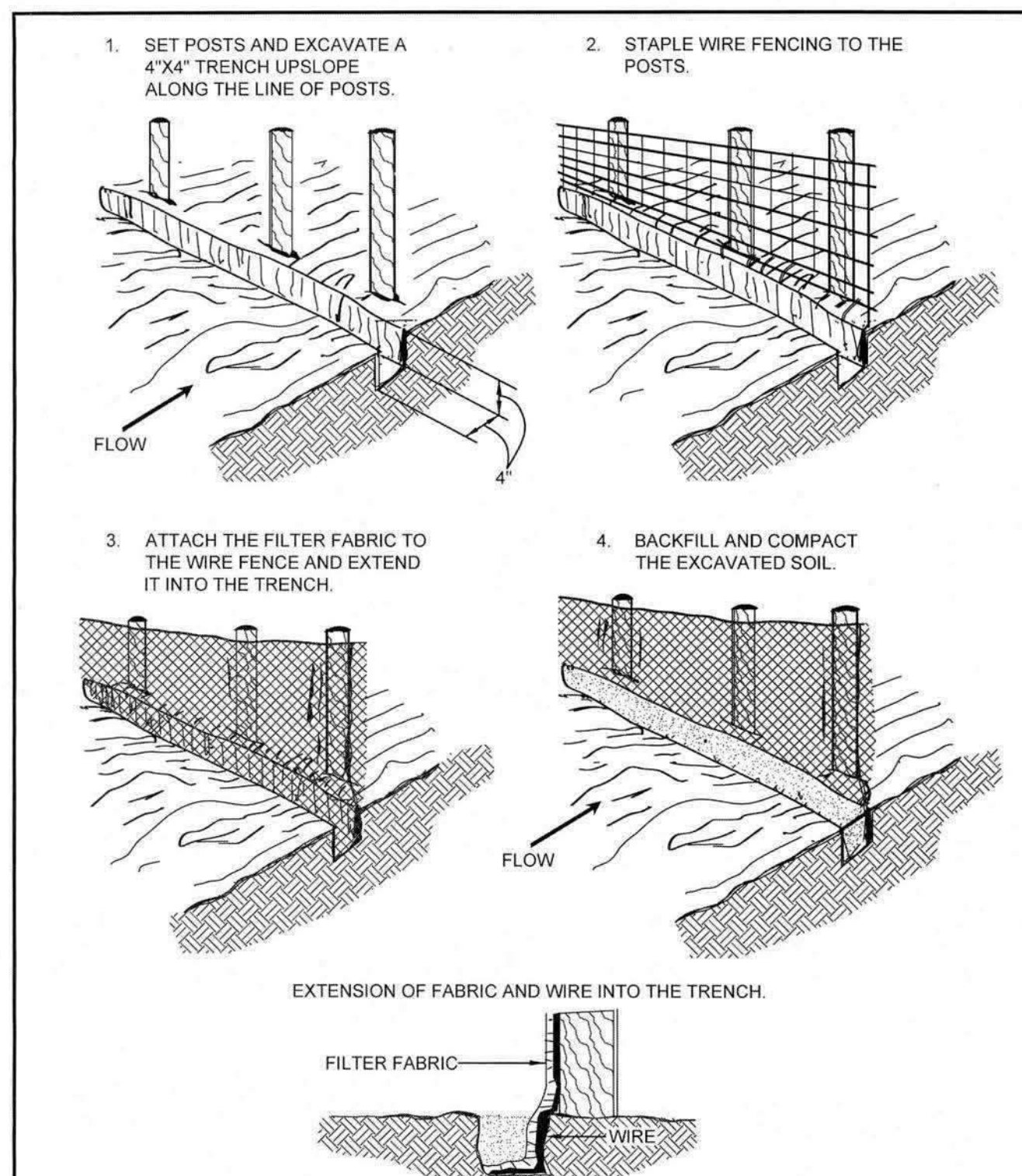
- THE REINFORCED BACKFILL SHALL BE PLACED AS SHOWN IN CONSTRUCTION PLANS IN MAXIMUM COMPACTED LIFT THICKNESS OF 8 in. AND SHALL BE COMPACTED TO A MINIMUM 95% OF STANDARD PROCTOR DENSITY. BACKFILL SHALL BE PLACED SPREAD AND COMPACTED IN SUCH A MANNER THAT MINIMIZED THE DEVELOPMENT OF WRINKLES OR MOVEMENT OF THE GEOSYNTHETIC REINFORCEMENT AND THE WALL FACING UNITS.
- ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 ft. OF THE FRONT OF THE WALL FACE. A MAXIMUM COMPACTED LIFT THICKNESS OF 8 in. SHALL BE USED IN THIS ZONE. SOIL DENSITY TESTING IN THIS AREA SHOULD BE VERIFIED BY FIELD DENSITY TESTING.
- CONSTRUCTION SHALL NOT BE OPERATED DIRECTLY ON THE GEOSYNTHETIC REINFORCEMENT. A MINIMUM BACKFILL THICKNESS OF 6 in. IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOSYNTHETIC REINFORCEMENT. TURNING OF TRACKED VEHICLES SHOULD BE KEPT TO A MINIMUM TO PREVENT DISPLACING THE FILL AND DAMAGING OR MOVING THE GEOSYNTHETIC REINFORCEMENT.
- AT THE END OF EACH DAY'S OPERATION, THE WALL CONTRACTOR SHALL SLOPE THE LAST LEVEL OF BACKFILL AWAY FROM THE WALL FACING TO DIRECT RUNOFF OF RAINWATER AWAY FROM THE WALL FACE. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING SURFACE RUNOFF FROM ADJACENT AREAS IS NOT ALLOWED TO ENTER THE WALL CONSTRUCTION AREA.

3.7 GRAVEL FILL AND DRAINAGE PLACEMENT

- GRAVEL FILL SHALL BE PLACED TO THE MINIMUM FINISHED THICKNESS AND WIDTHS SHOWN ON THE CONSTRUCTION PLANS.
- DRAINAGE COLLECTION PIPES SHALL BE INSTALLED TO MAINTAIN GRAVITY FLOW OF WATER OUTSIDE OF THE REINFORCED SOIL ZONE. DRAINAGE PIPE SHOULD DAYLIGHT INTO A STORM SEWER MANHOLE OR ALONG A SLOPE AT AN ELEVATION LOWER THAN THE LOWEST POINT OF THE PIPE WITHIN THE AGGREGATE DRAIN.
- THE MAIN COLLECTION DRAIN PIPE, JUST BEHIND THE BLOCK FACING, SHALL BE A MINIMUM OF 3 in. IN DIAMETER. THE SECONDARY COLLECTION DRAIN PIPES SHOULD BE SLOPED A MINIMUM OF TWO PERCENT TO PROVIDE GRAVITY FLOW INTO THE MAIN COLLECTION DRAIN PIPE. DRAINAGE LATERALS SHALL BE SPACED AT A MAXIMUM 50 ft. SPACING ALONG THE WALL FACE.

3.8 CAP BLOCK PLACEMENT

- THE CAP BLOCK AND/OR TOP SRW UNIT SHALL BE BONDED TO THE SRW UNITS BELOW USING CAP ADHESIVE DESCRIBED IN PART 2.01F. THE BLOCK SHALL BE DRY AND SWEEP CLEAN PRIOR TO ADHESIVE PLACEMENT.



CONSTRUCTION OF SILT FENCE WITH WIRE SUPPORT INSTALLATION

SOURCE: ADAPTED FROM STRAW & V.T.1 FAB. BARRIERS, SHERWOOD & WYANT

C-PCM-04-2

SITE SPECIFIC SEEDING MIXTURES FOR COASTAL PLAIN AREA

MINIMUM CARE LAWN	TOTAL LBS. PER ACRE
COMMERCIAL OR RESIDENTIAL	
-KENTUCKY 31 OR TURF-TYPE TALL FESCUE	175-200 LBS.
OR	
-COMMON BERMUDA GRASS **	75 LBS.
HIGH-MAINTENANCE LAWN	
-KENTUCKY 31 OR TURF-TYPE TALL FESCUE	200-250 LBS.
OR	
-HYBRID BERMUDAGRASS (SEED)**	40 LBS. (UNHULLED)
OR	
-HYBRID BERMUDAGRASS (BY OTHER VEGETATIVE ESTABLISHMENT METHOD, SEE STD. & SPEC. 3.34)	30 LBS. (HULLED)

GENERAL SLOPE (3:1 OR LESS)	
-KENTUCKY 31 FESCUE	128 LBS.
-RED TOP GRASS	2 LBS.
-SEASONAL NURSE CROP *	20 LBS.
	150 LBS.

LOW MAINTENANCE SLOPE (STEEPER THAN 3:1)	
-KENTUCKY 31 TALL FESCUE	93-108 LBS.
-COMMON BERMUDAGRASS **	0-15 LBS.
-RED TOP GRASS	2 LBS.
-SEASONAL NURSE CROP *	20 LBS.
-SERICEA LESPEDEZA **	150 LBS.

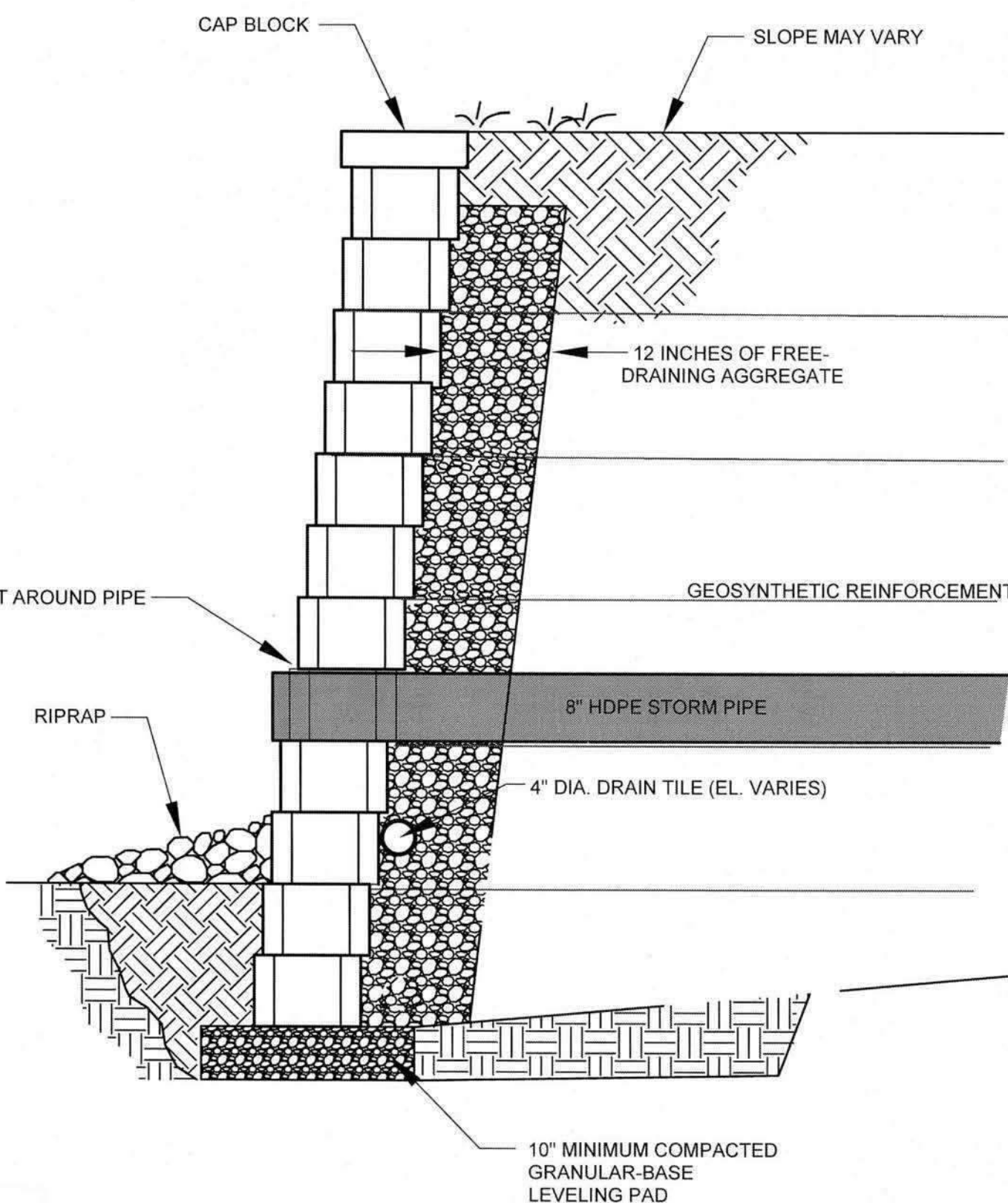
* USE SEASONAL CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:
FEBRUARY, MARCH THROUGH APRIL.....ANNUAL RYE
MAY 1ST THROUGH AUGUST.....FOXTAIL MILLET
SEPTEMBER, OCTOBER THROUGH DECEMBER 15TH.....ANNUAL RYE
NOVEMBER 16TH THROUGH JANUARY.....WINTER RYE

** MAY THROUGH OCTOBER, USE HULLED SEED. ALL OTHER SEEDING PERIODS, USE UNHULLED SEED. WEEPING LOVEGRASS MAY BE ADDED TO ANY SLOPE OR LOW-MAINTENANCE MIX DURING WARMER SEEDING PERIODS; ADD 10-20 LBS./ACRE IN MIXES.

*** NUTRIENTS SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SHALL NOT BE APPLIED DURING RAINFALL EVENTS.

PS

Table 3.32-D



SECTION VIEW (N.T.S.)

City of Williamsburg & County of James City
Circuit Court. This PLAT was recorded on
06/10/2025 at 1:44 AM (PM) PG 1
Document # 202514071
ELIZABETH E. O'CONNOR, CLERK
Elizabeth E. O'Connor, Clerk

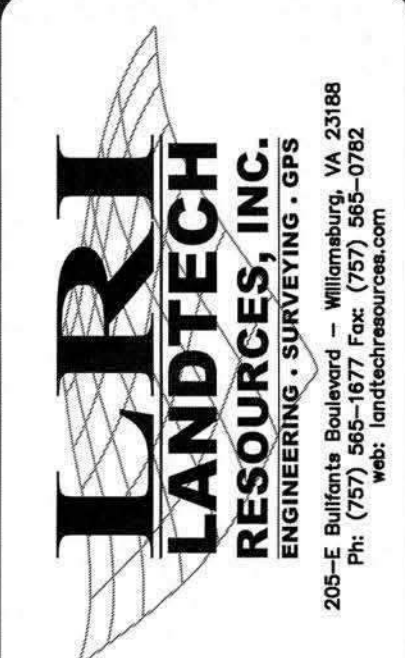
3 Large Small Plat(s) Recorded

herewith as # 202514071

REVISION / COMMENT / NOTE

DATE

NO.



RETAINING WALL PLAN
FOR
LOT 3, SECTION 1
KINGSPONT
103 KINGSPONT DRIVE

JAMES CITY COUNTY

VIRGINIA

JAMESTOWN DISTRICT

Scale: N/A

Date: 09/12/2025

Job Number: 25-307

Designed By: MHC

Sheet Title:

RETAINING WALL
PLAN

Sheet Number:

3 OF 3