CSL CHRISTIANSBURG EXPANSION

201 WHEATLAND CT N.E.

SHAWSVILLE MAGISTERIAL DISTRICT
TOWN OF CHRISTIANSBURG

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PROJECT SUMMARY:

1. OWNER: IVQ CHRISTIANSBURG PROPCO LLC, C/O INVESQUE, INC., 915 E HIGH ST, STE. 600, CHARLOTTESVILLE, VA 22902, TAX MAP #:436-9-1/PID:001652
   WHEATLAND COURT, LLC, C/O COMMONWEALTH ASSISTED LIVING, LLC, PO BOX 2064, CHARLOTTESVILLE, VA 22902, TAX MAP #:436-9-1A/PID:180027

   DEVELOPER: MCAP CHRISTIANSBURG, LLC, 915 E HIGH ST, STE. 600, CHARLOTTESVILLE, VA 22902

   PROJECT LOCATION: 201 WHEATLAND COURT NE, CHRISTIANSBURG, VA 24073, TAX MAP #:436-9-1/PID:001652
   210-235 WHEATLAND COURT NE, CHRISTIANSBURG, VA 24073, TAX MAP #:436-9-1A/PID:180027

2. TAX MAP NUMBER: 436-9-1; 436-9-1A
   PARCEL ID: 001652; 180027
   * ALL WORK PROPOSED IN THESE PLANS IS TO BE DONE WITHIN THE ABOVE LISTED TAX PARCEL, EASEMENTS OBTAINED, OR PUBLIC RIGHTS-OF-WAY.

3. LEGAL REFERENCE: TAX MAP #:436-9-1/PID:001652, INSTRUMENT NO. 2019006043 (DEED), INSTRUMENT NO. 2011002091 (PLAT)
   TAX MAP #:436-9-1A/PID:180027, INSTRUMENT NO. 2011002827 (DEED), INSTRUMENT NO. 2011002091 (PLAT)

4. PROJECT DESCRIPTION: RENOVATION AND EXPANSION OF SENIOR LIVING BUILDING ALONG NORTH SIDE OF EXISTING BUILDING. COMMERCIAL BUILDING CONSTRUCTION. NEW WORK WILL ADD A NET OF 20 NEW PATIENT BEDS FOR A TOTAL OF 100 PATIENT BEDS PROVIDED AFTER EXPANSION.

ZONING DISTRICT: ZONING B-3
PERMITTED USE: NURSING/HOUSING FOR THE ELDERLY

SETBACKS:
- FRONT= 30' FROM ANY STREET RIGHT-OF-WAY
- SIDE= 20' FROM THE BOUNDARY OF A RESIDENTIAL DISTRICT
- REAR= 20' FROM THE BOUNDARY OF A RESIDENTIAL DISTRICT
- PARKING= 15' FROM RIGHT-OF-WAY
- COMMON AREA= 10' FROM ANY COMMON AREA

5. ZONING/PLANNING AREAS
   - TOTAL PROJECT/PARCEL AREA: *LOT A:132,596 S.F. (3.044 AC.), LOT B:143,269 S.F. (3.289 AC.)*
   - REVISED PARCEL AREAS AFTER LOT LINE REVISION: LOT A:136,608 S.F. (3.136 AC.), LOT B:139,242 S.F. (3.196 AC.)
   - TOTAL DISTURBED AREA: 32,700 S.F. (0.75 AC.)
   - TOTAL BUILDING AREA: 34,427 S.F. (LOT A: FOOTPRINT W/ NEW ADDITION)
   - TOTAL NUMBER OF BUILDINGS: 1 (LOT A)
   - BUILDING HEIGHT: 30.3' (TALLEST BUILDING)
   - LOT A COVERAGE (% IMP): 62,793 S.F. (46%)

6. GREENSPACE AND LANDSCAPING AREAS
   - TOTAL AREA LOT A: 136,608 S.F.
   - IMPERVIOUS SURFACE AREA: 62,793 S.F.
   - GREENSPACE REQUIRED: 27,322 S.F. (20% MIN.)
   - GREENSPACE PROVIDED: 73,815 S.F.
   - LANDSCAPING REQUIRED: 13,661 S.F.
   - LANDSCAPING PROVIDED: 27,200 S.F. (9,400 LANDSCAPED + 17,800 SF TREE CANOPY)
   - TREES REQUIRED: 68 TREES (MIN. 6 FEET TALL, 1 TREE PER 400 SF OF REQ. GREENSPACE)
   - TREES PROVIDED: 79+ TREES (MIN. 6 FEET TALL)

7. INTERIOR PARKING LOT GREENSPACE AND TREE REQUIREMENTS
   LOT A
   - PARKING GREENSPACE REQUIRED: 1,440 S.F. (36 SPACES, 40 SF/SPACE, NET OF NEW AND REMOVED)
   - PARKING GREENSPACE PROVIDED: 2,368 S.F.
   - TREES REQUIRED: 4 TREES (1 PER 10 SPACES, MIN. 6 FEET TALL)
   - TREES PROVIDED: 4 EX. TREES (MIN. 6 FEET TALL)

   LOT B
   NEW PARKING AREA: 7 SPACES + 11 EX SPACES, LESS THAN 20 TOTAL PARKING SPACES: NO PARKING TREES OR GREENSPACE REQUIRED <20 SPACES, PER SEC.#42-9(d)7.

8. PARKING TABULATIONS
   - LOT A PARKING SPACES REQ.: 34 SPACES (1 SPACE PER 3 PATIENT BEDS:100/3)(MIN. 4 INCH STRIPING)
   - LOT A PARKING SPACES PROV.: 36 SPACES (REMAINING AFTER ADDITION)
   - LOT A ACCESSIBLE SPACES REQ.: 2 SPACES
   - LOT A ACCESSIBLE SPACES PROV.: 2 SPACES (EXISTING)
   - LOT B PARKING SPACES PROV.: 7 ADDITIONAL PARKING SPACES ADDED

9. FRONTAGE REQUIREMENT OF ZONING: NO BUSINESS OR COMMERCIAL BUILDING OR STRUCTURE, TEMPORARY OR PERMANENT, SHALL BE LOCATED CLOSER THAN 20 FEET TO THE BOUNDARY OF A RESIDENTIAL DISTRICT OR LOCATED WITHIN ANY EASEMENT OR RIGHT-OF-WAY. RESIDENTIAL DEVELOPMENT SHALL COMPLY WITH ALL FRONTAGE, LOT, YARDS AND DEVELOPMENT STANDARDS FOR SIMILAR DEVELOPMENT IN THE R-3 MULTIPLE-FAMILY RESIDENTIAL DISTRICT, UNLESS SUCH RESIDENCE IS PART OF THE BUSINESS BUILDING OR STRUCTURE.

10. LOT AREA REQUIREMENT OF B-3: NO MINIMUM AREA REQUIRED: EXCEPT THAT THE REQUIRED AREA FOR PERMITTED USES UTILIZING INDIVIDUAL SEWAGE DISPOSAL SYSTEMS SHALL BE APPROVED BY THE HEALTH OFFICIAL AND EXCEPT THAT RESIDENTIAL USES SHALL COMPLY WITH THE LOT AREA AND WIDTH REQUIREMENTS OF THE R-3 DISTRICT.

11. THE SUBJECT PROPERTY IS ENCUMBERED BY EXISTING EASEMENTS. EASEMENTS HAVE BEEN SHOWN HERON BASED ON AVAILABLE PUBLIC RECORDS, HOWEVER, THIS PLAN MAY NOT REFLECT ALL EASEMENTS OR ENCUMBRANCES THAT AFFECT THE SUBJECT PROPERTY.

12. THE TOPOGRAPHY, AS DEPICTED HEREON, IS THE RESULT OF AN ACTUAL FIELD SURVEY CONDUCTED BY WESTWOOD PROFESSIONAL SERVICES ON 07/13/2026.

13. NO GRAVES, STRUCTURES, OR OBJECTS MARKING A PLACE OF HUMAN BURIAL WERE FOUND AT TIME OF SURVEY.

14. THE SUBJECT PROPERTY DOES NOT LIE WITHIN A F.E.M.A. DESIGNATED 100-YEAR FLOOD HAZARD ZONE. THE SUBJECT PROPERTY LIES WITHIN "UNSHADED ZONE X – OTHER AREAS", AS DEFINED BY F.E.M.A & AS SHOWN ON F.I.R.M. MAP NO. 51121C0141C, EFFECTIVE DATE OF SEPTEMBER 25, 2009. THIS DETERMINATION HAS BEEN MADE BY GRAPHIC METHODS ONLY. NO ELEVATION STUDY HAS BEEN PERFORMED AS A PART OF THIS PROJECT.

15. DESIGN DAILY WATER CONSUMPTION RATE: 20,000 GPD (100 BEDROOMS, 200 GPD/NURSING HOME PER BED)
    DESIGN DAILY SEWER DISCHARGE RATE: 20,000 GPD

16. SOLID WASTE COLLECTION :
    DUMPSTER WILL BE PROVIDED FOR GARBAGE COLLECTION. THE DUMPSTER PAD, GATE, AND SCREENING SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 28, "SOLID WASTE" SEC 28-47(B) OF THE CHRISTIANSBURG TOWN CODE.

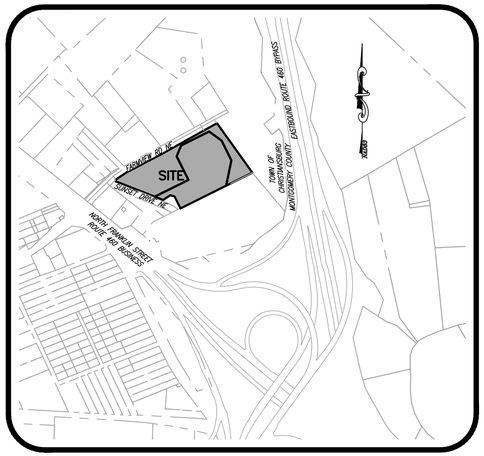
17. PROVIDE HEIGHT AND MATERIAL OF ALL RETAINING WALLS AND/OR FENCES. NOTE: NO NEW RETAINING WALLS ARE PLANNED. 6' WOODEN PRIVACY FENCES ARE INCLUDED IN THE DEVELOPMENT.

18. ALL QUANTITIES ARE ENGINEER'S ESTIMATES FOR TOWN BONDING PURPOSES ONLY. ALL QUANTITIES SHALL BE CONSIDERED PRELIMINARY UNTIL FINAL SITE PLAN APPROVAL.

19. EARTHWORK QUANTITIES MAY BE BASED ON AN EXISTING TOP OF GRADE TO PROPOSED TOP OF GRADE COMPARISON ONLY AND THUS ARE APPROXIMATE. ACTUAL EARTHWORK REQUIRED WILL VARY BASED ON THE PRESENCE OF UNSUITABLE SOILS, TOPSOIL DEPTH, COMPACTION RATE, BASE STONE DEPTH, UTILITY TRENCH EXCAVATION, AND OTHER ENVIRONMENTAL FACTORS.

20. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING THEIR OWN QUANTITIES TAKEOFF FOR BIDDING PURPOSES.

21. NO CONSTRUCTION/FIELD CHANGES ARE PERMITTED WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER, OWNER, AND THE TOWN. ALL CONSTRUCTION/FIELD CHANGES SHALL BE SUBMITTED TO THE TOWN FOR REVIEW AND APPROVAL PRIOR TO INITIATING ANY WORK IN THE FIELD. A PLAN REVISION MAY BE REQUIRED.



VICINITY MAP
SCALE: 1" = 500'

TOWN OF CHRISTIANSBURG PLAN SUBMITTAL LOG		
#	ISSUE DATE	COMMENT
1	9/2/2026	FIRST SUBMITTAL

ENGINEER'S NOTES

WESTWOOD PROFESSIONAL SERVICES, INC. ASSUMES NO RESPONSIBILITY FOR ADEQUACY OF PLANS OR FOR INFORMATION ON PLANS UNTIL SUCH PLANS HAVE BEEN APPROVED BY THE REQUIRED PUBLIC AGENCIES.

ANY WORK COMMENCED ON A PROJECT PRIOR TO PLAN APPROVAL IS AT SOLE RISK OF THE OWNER/DEVELOPER.

WESTWOOD PROFESSIONAL SERVICES, INC. WILL NOT BE RESPONSIBLE FOR THE CONTRACTORS FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE PLANS OR WILL NOT BE RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.

APPROXIMATE EARTHWORK NOTES

CUT: 730 C.Y.
FILL: 235 C.Y. (1.15 COMPACTION RATE),

NET: 495 C.Y. <CUT>

LEGEND

348	EX. INTRMDT. CONTOUR
345	EX. INDEX CONTOUR
+ 35.55	EX. SPOT ELEVATION
8" WL	EX. WATER LINE
8" SAN	EX. SANITARY SEWER
18" STRM	EX. STORM PIPE
	EX. EDGE OF PAVEMENT
	EX. BUILDING
	EX. CONCRETE
	EX. PAVEMENT
	EX. GRAVEL
	PAVEMENT REPLACEMENT
	EX. POWER POLE
SS	EX. SANITARY SEWER MANHOLE
STM	EX. STORM SEWER MANHOLE
CO	CLEANOUT
	EX. LIGHT POLE
	WATER LINE REDUCER
T	EX. TELEPHONE
G	EX. GAS LINE
OHU	EX. OVERHEAD CABLE
X	EX. FENCE
	EX. TREE LINE
	ADJOINING PROPERTY LINE
	EXISTING ROAD MONUMENTS
	WETLAND AREA
	DITCH
RMA	RESOURCE MANAGEMENT AREA

	PROP. INTRMDT. CONTOUR
1320	PROP. INDEX CONTOUR
35.55 / 35.05	PROP. SPOT ELEVATION
8" WL	PROP. WATER LINE
8" SAN	PROP. SANITARY SEWER
	PROP. STORM PIPE
	PROP. EDGE OF PAVEMENT
	PROP. BUILDING
	PROP. CONCRETE
	PROP. ASPHALT PAVEMENT (STANDARD/HEAVY DUTY)
	PROP. GRAVEL
	PROP. PAVERS
	PROP. POWER POLE
	PROP. MANHOLE
	SIGN
WM	WATER METER
	PROP. GATE VALVE
	BLOW-OFF VALVE
	BENCHMARK
G	PROP. GAS LINE
OHU	PROP. OVERHEAD CABLE
P	PROP. UNDERGROUND POWER LINE
	PROP. FENCE
	PROP. TREE LINE
	SITE PROPERTY LINE
	INLET PROTECTION
	CREEK OR STREAM
RPA	RESOURCE PROTECTION AREA

ABBREVIATIONS

AHFH	ARROW HEAD TOP OF FIRE HYDRANT	EVCS	END VERT. CURVE STA.	RR	RAILROAD
APPROX	APPROXIMATE	EW	ENDWALL	RYS	REAR YARD SETBACK
ASPH	ASPHALT	EXIST	EXISTING	SAN	SANITARY
BC	BACK OF CURB	FDN	FOUNDATION	SBL	SOUTH BOUND LANE
BIT	BITUMINOUS	FF	FINISHED FLOOR	SD	STORM DRAIN
BLDG	BUILDING	FG	FINISH GRADE	SECT	SECTION
BLK	BLOCK	GBE	GRADE BREAK ELEVATION	SE	SLOPE EASEMENT
BM	BENCHMARK	GBS	GRADE BREAK STATION	SS	SANITARY SEWER
BS	BOTTOM OF BOTTOM STEP	HOA	HOMEOWNERS ASSOCIATION	SSD	STOPPING SIGHT DISTANCE
BVCE	BEGIN VERT. CURVE ELEV.	HPT	HIGH POINT	SSE	SANITARY SEWER EASEMENT
BVCS	BEGIN VERT. CURVE STA.	HSD	HEADLIGHT SIGHT DISTANCE	STA	STATION
BW	BOTTOM OF WALL	INTX	INTERSECTION	STD	STANDARD
CB	CINDER BLOCK	INV	INVERT	STO	STORAGE
C&G	CURB & GUTTER	IP	IRON PIN	SYS	SIDE YARD SETBACK
CMP	CORRUGATED METAL PIPE	LT	LEFT	TBM	TEMPORARY BENCHMARK
CONC	CONCRETE	LVC	LENGTH OF VERTICAL CURVE	TBR	TO BE REMOVED
COR	CORNER	MH	MANHOLE	TC	TOP OF CURB
DBL	DOUBLE	MIN	MINIMUM	TEL	TELEPHONE
DEFL	DEFLECTION	MBL	MINIMUM BUILDING LINE	TRANS	TRANSFORMER
DI	DROP INLET	MON	MONUMENT	TS	TOP OF TOP STEP
DIA	DIAMETER	NBL	NORTH BOUND LANE	TW	TOP OF WALL
DE	DRAINAGE EASEMENT	PROP	PROPOSED	TYP	TYPICAL
ELEC	ELECTRIC	PUE	PUBLIC UTILITY EASEMENT	VDOT	VIRGINIA DEPARTMENT OF TRANSPORTATION
ELEV	ELEVATION	PVMT	PAVEMENT	VERT	VERTICAL
ENTR	ENTRANCE	R	RADIUS	WBL	WEST BOUND LANE
EP	EDGE OF PAVEMENT	R.O.W.	RIGHT OF WAY	YD	YARD
EVCE	END VERT. CURVE ELEV.	REQD	REQUIRED		

SHEET INDEX

SHEET NUMBER	SHEET TITLE	REVISIONS
C01	COVER	
C02	NOTES	
C03	EXISTING CONDITIONS & DEMOLITION PLAN	
C04	LAYOUT & UTILITIES PLAN	
C05	GRADING PLAN	
C06	UTILITY PROFILES	
C07	STORMWATER MANAGEMENT PLAN	
C08	PRE-DEVELOPMENT DRAINAGE MAP	
C09	POST-DEVELOPMENT DRAINAGE MAP	
C10	EROSION CONTROL PLAN - STAGE 1	
C11	EROSION CONTROL PLAN - STAGE 2	
C12	EROSION CONTROL NOTES & DETAILS	
C13	DETAILS	
C14	DETAILS	

OWNER/OWNER'S AGENT CERTIFICATION

I, _____ , HEREBY ACKNOWLEDGE THE SITE IMPROVEMENTS IMPOSED BY THIS PLAN AND THE *CHRISTIANSBURG TOWN CODE* AND *THE CODE OF VIRGINIA*. I HEREBY AGREE TO DEVELOP THE SUBJECT PROPERTY IN COMPLIANCE WITH THIS PLAN AND WILL SUBMIT ANY PLAN REVISIONS TO THE TOWN OF CHRISTIANSBURG FOR APPROVAL PRIOR TO INITIATING ANY WORK IN THE FIELD. I AGREE TO POST AND MAINTAIN ALL REQUIRED BONDS WITH THE TOWN FOR THIS DEVELOPMENT, AND FURTHER ACKNOWLEDGE ALL IMPROVEMENTS MUST BE COMPLETED TO THE TOWN'S SATISFACTION PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

WHEATLAND COURT, LLC TITLE DATE

I, _____ , HEREBY ACKNOWLEDGE THE SITE IMPROVEMENTS IMPOSED BY THIS PLAN AND THE *CHRISTIANSBURG TOWN CODE* AND *THE CODE OF VIRGINIA*. I HEREBY AGREE TO DEVELOP THE SUBJECT PROPERTY IN COMPLIANCE WITH THIS PLAN AND WILL SUBMIT ANY PLAN REVISIONS TO THE TOWN OF CHRISTIANSBURG FOR APPROVAL PRIOR TO INITIATING ANY WORK IN THE FIELD. I AGREE TO POST AND MAINTAIN ALL REQUIRED BONDS WITH THE TOWN FOR THIS DEVELOPMENT, AND FURTHER ACKNOWLEDGE ALL IMPROVEMENTS MUST BE COMPLETED TO THE TOWN'S SATISFACTION PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

IVQ CHRISTIANSBURG PROPCO LLC TITLE DATE

*IF SIGNING ON BEHALF OF A CORPORATION OR SIGNING AS AGENT ON BEHALF OF OWNER, SIGNATORY SHALL PROVIDE EVIDENCE OF AUTHORITY TO SIGN.

APPROVED: Engineering Date

APPROVED: Planning Date

TOC COVER AND NOTES REVISION FEB 2026

Westwood
Westwood Professional Services, Inc.
80 COLLEGE STREET, STE H
CHRISTIANSBURG, VA 24073
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REVISIONS
10/28/2026

CSL CHRISTIANSBURG EXPANSION
COVER
SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

DATE: 9/2/2026
SCALE: NTS
DRAFTER: AWC/MSL
DESIGNER: AWC/MSL
CHECKED: JRT
PROJECT NO. R0077371.00

COMMONWEALTH OF VIRGINIA
JAMES RICHARD TAYLOR
Lic. No. 55142
10/28/26
PROFESSIONAL ENGINEER

C01

Last Saved by: Mlamche
Last Saved: 10/28/2026 4:58 PM
Plot Date: 10/28/2026 5:05 PM
Drawing: N:\0077371.00\06 CAD\05civil\ae design\Sheets\NOTES AND DETAILS SHEETS

GENERAL NOTES:

1. THESE PLANS SHALL BE USED WITH STRICT CONFORMANCE TO THE PROJECT SPECIFICATIONS AND APPROVED STORMWATER / ESC PLAN AND NARRATIVE.
2. DISTANCES AND RADII REFERRED TO ARE TO THE EDGE OF PAVEMENT, OR FACE OF CURB, UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL VERIFY BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS, PRIOR TO STAKING BUILDING.
4. CONTRACTOR SHALL CALL "MISS UTILITY" AT 811 OR VA811.COM AT LEAST 72 HOURS PRIOR TO ANY EARTHWORK BEGINNING. ACCURACY OF UTILITY MARKS ARE ±2 FEET HORIZONTAL FROM THE ACTUAL LOCATION OF THE BURIED UTILITY. VDOT DOES NOT RESPOND TO MISS UTILITY TICKETS. TO LOCATE VDOT FACILITIES, THE CUSTOMER SERVICE CENTER MUST BE CONTACTED AT (800) 367-7623 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. THE CONTRACTOR SHALL NOTIFY THE TOWN IN ADVANCE OF COMMENCING WORK AND SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH TOWN STAFF, OWNER / DEVELOPER, GRADING CONTRACTOR AND THE GEOTECHNICAL ENGINEER OF RECORD WHO WILL BE PROVIDING GRADING, FILLING AND COMPACTION OVERSIGHT FOR THE OWNER/DEVELOPER.
6. ALL CONSTRUCTION WILL BE IN ACCORDANCE WITH TOWN OF CHRISTIANSBURG STANDARDS AND SPECIFICATIONS.
7. ALL TRANSPORTATION INFRASTRUCTURE AND THE DESIGN AND CONSTRUCTION OF STORM DRAINS AND MANHOLES WILL BE IN ACCORDANCE WITH VDOT ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS, LATEST EDITION, THE VDOT DRAINAGE MANUAL, LATEST EDITION, AND TOWN OF CHRISTIANSBURG STANDARDS AND SPECIFICATIONS UNLESS SPECIFICALLY NOTED ON THE PLANS OR BY TOWN POLICY.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MEET COMPLIANCE REQUIREMENTS WITH SECTION 59.1-406, ET SEQ. OF THE CODE OF VIRGINIA (OVERHEAD HIGH VOLTAGE LINES SAFETY ACT).
9. ALL NECESSARY PERMITS (e.g., USACOE, VADEQ, VDOT, NORFOLK SOUTHERN, TOWN OF CHRISTIANSBURG) MUST BE OBTAINED BEFORE BEGINNING CONSTRUCTION.
10. ALL ACTIVITIES IN PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE VIRGINIA WORK AREA PROTECTION MANUAL. (MOST RECENT EDITION)
11. PAVEMENT WORK WITHIN THE RIGHT-OF-WAY REQUIRES THE FOLLOWING INSPECTIONS:
    A. SUBGRADE PRIOR TO PLACEMENT OF BASE STONE
    B. BASE STONE PRIOR TO PLACEMENT OF PAVEMENT
    C. PAVEMENT
12. MINIMUM PAVEMENT SHALL BE IN ACCORDANCE WITH DETERMINED CBR RESULTS AND OR THE PAVING DETAILS AS SHOWN ON THE PLANS, WHICHEVER IS MORE SUBSTANTIAL. CONTRACTOR TO ENSURE SMOOTH TRANSITION BETWEEN ALL PROPOSED AND EXISTING ASPHALT. CERTIFIED COMPACTION TESTING SHALL BE PERFORMED ON ALL BITUMINOUS CONCRETE LAYERS IN ACCORDANCE WITH VDOT ROAD AND BRIDGE SPECIFICATIONS, LATEST EDITION.
13. RIGHTS-OF-WAY, LOT LINES AND EASEMENTS ARE DEDICATED ON PLATS SEPARATE FROM THESE PLANS.
14. ALL PARKING SPACES, INCLUDING ADA COMPLIANT SPACES, SHALL BE SIGNED AND STRIPED ACCORDING WITH CHAPTER 42, "ZONING" OF THE CHRISTIANSBURG TOWN CODE.
15. FOR ALL HANDICAP ACCESSIBLE PARKING SPACES, ADA SIGNAGE SHALL BE PROVIDED ACCORDING TO TOWN STANDARD DETAIL HS-1 AND CODE OF VIRGINIA SECTION 36-99.11.
16. SIGNAGE IS PERMITTED SEPARATELY IN ACCORDANCE WITH CHAPTER 42, "ZONING" OF THE CHRISTIANSBURG TOWN CODE.
17. CONTRACTOR SHALL ENSURE THAT INGRESS/EGRESS FOR EMERGENCY SERVICES VEHICLES IS MAINTAINED AT ALL TIMES.
18. CONTRACTOR SHALL MAINTAIN ACCESS TO SURROUNDING BUSINESSES AND RESIDENCES.
19. LIGHTING FACILITIES SHALL BE ARRANGED AND INSTALLED, AND THE LIGHT SOURCE SHIELDED, TO MINIMIZE GLARE ON ADJACENT PROPERTY OR STREETS AND NO LIGHTING FIXTURE SHALL EXCEED A HEIGHT OF 15 FEET IN A RESIDENTIAL DISTRICT OR 30 FEET IN A BUSINESS DISTRICT. FOR MIXED USE DISTRICTS, LIGHTING FIXTURES SHALL NOT EXCEED 15 FEET FOR A RESIDENTIAL USE OR 30 FEET FOR A BUSINESS USE OR MIXED USE.
20. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN THE DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THE OWNER'S REPRESENTATIVE, WHO SHALL PROMPTLY CORRECT SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR WITHOUT DIRECTION AFTER HIS DISCOVERY OF SUCH INCONSISTENCIES OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
21. PER ARTICLE III SECTION 40-60 OF THE TOWN CODE, THE TOWN WILL REQUIRE AS-BUILT PLANS AND SPECIFICATIONS PREPARED BY AN ENGINEER OR SURVEYOR FOR ALL REQUIRED PHYSICAL IMPROVEMENTS AFTER INSTALLATION.

GENERAL GRADING, FILLING, COMPACTION AND TESTING NOTES

1. THESE NOTES SHALL APPLY TO ALL GRADING, EXCAVATION, AND CONTROLLED FILL NECESSARY FOR THE CONSTRUCTION OF FILL SLOPES AND THE SUBGRADE FOR FOUNDATIONS, FOOTINGS, UTILITIES, ROADS, AND ALL OTHER TOWN MAINTAINED INFRASTRUCTURE.
2. ALL TESTING AND REPORTING SHALL BE THE RESPONSIBILITY OF THE OWNER / DEVELOPER AND SHALL BE CONDUCTED BY A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA AND SHALL BE THE GEOTECHNICAL ENGINEER OF RECORD.
3. DEVIATIONS FROM THE REQUIREMENTS LISTED HEREON SHALL BE SUPPORTED BY A GEOTECHNICAL REPORT AND ENGINEERING DATA PREPARED BY THE PROJECT'S GEOTECHNICAL ENGINEER OF RECORD AND SHALL BE PROVIDED TO THE TOWN FOR REVIEW AND APPROVAL, PRIOR TO COMMENCING WORK.
4. THE CONTRACTOR SHALL USE ALL MEANS NECESSARY TO PROTECT ALL NEWLY GRADED INFRASTRUCTURE SUBGRADES FROM DISTURBANCE FROM TRAFFIC, EROSION, OR SETTLEMENT.
5. IN THE EVENT OF DAMAGE OR DISTURBANCE OF PREPARED AREAS, ALL REPAIRS AND RE-GRADING OF THE AREA SHALL BE APPROVED AND REPORTED BY THE GEOTECHNICAL ENGINEER OF RECORD.
6. COPIES OF ALL LABORATORY AND FIELD TEST REPORTS SHALL BE SUBMITTED TO THE TOWN WITHIN 72 HOURS OF TEST COMPLETION.
7. ONLY THAT PORTION OF THE WORK AREA ACTUALLY NEEDED FOR CONSTRUCTION SHALL BE CLEARED OR USED BY HEAVY EQUIPMENT UNLESS DIRECTED OTHERWISE BY THE TOWN. IN NO CASE SHALL CLEARING OR DEBRIS FROM CLEARING OPERATIONS BE TAKEN PAST THE APPROVED LIMITS OF DISTURBANCE, RIGHT-OF-WAY LINES, OR PERMANENT EASEMENT LINES ONTO PRIVATE PROPERTY.
8. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES AND HAVE UTILITIES LOCATED PRIOR TO STARTING CONSTRUCTION. LOCATIONS OF EXISTING FACILITIES SHOULD BE DETERMINED BY THE CONTRACTOR FAR ENOUGH IN ADVANCE OF THE CONSTRUCTION TO PROVIDE FOR MODIFICATION TO THE DESIGN, IF REQUIRED.
9. WORK NOT DEFINED IN THE NOTES HEREIN SHALL FOLLOW GUIDANCE OF THE PROJECT'S GEOTECHNICAL ENGINEER OF RECORD IN ACCORDANCE WITH THE TOWN'S STANDARDS AND SPECIFICATIONS AS APPROVED BY THE TOWN.

DEFINITIONS

1. CONTROLLED FILL IS REQUIRED BENEATH ALL AREAS ON WHICH FINAL SUBGRADE OR GRADE IS NOT PLACED ON ORIGINAL EXCAVATED SOIL NECESSARY FOR CONSTRUCTION OF AND CONTROLLED FILL FOR FOUNDATIONS, FOOTINGS, UTILITIES, ROADS, AND ALL OTHER INFRASTRUCTURE.
2. MATERIALS CLASSIFIED BY ASTM D 2487 AS GW, GP, GM, GC, SW, SP, SM, SC, ML, AND CL ARE SATISFACTORY AS FILL FOR OVER-LOT GRADING AND ARE SATISFACTORY IN-SITU. OWNER SHALL PERFORM SOIL ANALYSIS AS REQUIRED BY THE TOWN FOR REVIEW AND APPROVAL.
3. MATERIALS CLASSIFIED BY ASTM D 2487 AS OL, OH, MH, CH, AND PT ARE UNSATISFACTORY IN-SITU AND AS FILL. UNSATISFACTORY MATERIALS ALSO INCLUDE THOSE MATERIALS CONTAINING ROOTS AND OTHER ORGANIC MATTER, TRASH DEBRIS, FROZEN MATERIALS, AND STONES LARGER THAN 6 INCHES. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN-MADE FILLS, REFUSE, OR BACKFILLS FROM PREVIOUS CONSTRUCTION.
4. COHESIVE MATERIALS INCLUDE MATERIALS CLASSIFIED BY ASTM D 2487 AS GC, SC, ML, CL, MH, AND CH. COHESIONLESS MATERIALS INCLUDE MATERIALS CLASSIFIED IN ASTM D 2487 AS GW, GP, SW, AND SP. MATERIALS CLASSIFIED AS GM AND SM WILL BE IDENTIFIED AS ONLY WHEN THE FINES HAVE PLASTICITY INDEX OF ZERO.
5. DEGREE OF COMPACTION IS A PERCENTAGE OF THE MAXIMUM DENSITY OBTAINED BY THE TEST PROCEDURE PRESENTED IN ASTM D 698, ABBREVIATED BELOW AS A PERCENT OF LABORATORY MAXIMUM DENSITY.
6. MATERIAL OBTAINED FROM EXCAVATIONS, SUITABLE FOR TOPSOILS, IS DEFINED AS THE UPPER 6 INCHES OF EXISTING SOIL COVER. TOPSOIL SHALL CONSIST OF FRIABLE CLAY LOAM, FREE FROM ROOTS, STONES, AND OTHER UNDESIRABLE MATERIAL AND SHALL BE CAPABLE OF SUPPORTING A GOOD GROWTH OF GRASS.
7. ROCK SHALL CONSIST OF BOULDERS MEASURING ½ CUBIC YARD OR MORE AND MATERIALS THAT CANNOT BE REMOVED WITHOUT SYSTEMATIC DRILLING AND BLASTING SUCH AS ROCK MATERIAL IN LEDGES, BEDDED DEPOSITS, UNSTRATIFIED MASSES AND CONGLOMERATE DEPOSITS, AND BELOW GROUND CONCRETE OR MASONRY STRUCTURES, EXCEEDING ½ CUBIC YARD IN VOLUME. PAVEMENTS WILL NOT BE CONSIDERED AS ROCK.
8. UNYIELDING MATERIAL SHALL CONSIST OF ROCK AND GRAVELLY SOILS WITH STONES GREATER THAN 18 INCHES IN ANY DIMENSION OR AS DEFINED BY THE WORK PERFORMED, WHICHEVER IS SMALLER.
9. UNSTABLE MATERIAL SHALL CONSIST OF MATERIALS TOO WET TO PROPERLY SUPPORT THE UTILITY PIPE, CONDUIT, OR APPURTENANT STRUCTURE.
10. SELECT GRANULAR MATERIAL SHALL CONSIST OF WELL-GRADED SAND, GRAVEL, OR CRUSHED STONE, AND SHALL NOT CONTAIN MORE THAN 10 PERCENT BY WEIGHT OF MATERIAL PASSING A NO. 200 MESH SIEVE. THE MAXIMUM ALLOWABLE AGGREGATE SIZE SHALL BE 1 INCH, OR THE MAXIMUM SIZE RECOMMENDED BY THE PIPE MANUFACTURER, WHICHEVER IS SMALLER.

EXCAVATION AND PREPARATION

1. WET OR OTHERWISE UNSUITABLE SOIL AT THE SUBGRADE SHALL BE REMOVED AND REPLACED WITH APPROVED, SOUND MATERIALS. EXCESS OR UNSUITABLE MATERIALS SHALL BE DISPOSED OF PROPERLY BY THE CONTRACTOR.
2. LEDGE ROCK, BOULDERS, AND LARGE STONES SHALL BE REMOVED TO PROVIDE A CLEARANCE OF AT LEAST 6-INCHES BELOW AND ON EACH SIDE OF ALL PIPE, MANHOLES, VALVES, OR OTHER APPURTENANCES AND OVER DEPTH SHALL BE BACKFILLED WITH 6-INCHES OF ASTM D 448 #10 (PVC) OR #26 (DUCTILE IRON) AGGREGATE BEDDING.
3. LEDGE ROCK, BOULDERS, AND LARGE STONES ENCOUNTERED IN EXCAVATIONS FOR OTHER STRUCTURES SHALL BE REMOVED AND/OR OVER-EXCAVATED AS DEFINED IN THE PROPOSED SCOPE OF WORK IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER OF RECORD.
4. TOPSOIL SHALL BE STRIPPED FROM EXCAVATION AREA AND STOCKPILED SEPARATELY FROM OTHER BACKFILL MATERIAL IN APPROVED AREA UNTIL NEEDED FOR FINISH BACKFILL AND GRADING.
5. THE CONTRACTOR SHALL REMOVE BY APPROPRIATE MEANS ANY WATER WHICH MAY ACCUMULATE OR BE FOUND IN THE TRENCHES OR OTHER EXCAVATIONS AND SHALL KEEP THE EXCAVATIONS CLEAR OF WATER WHILE WORK IS BEING INSTALLED, UNLESS APPROVAL TO THE CONTRARY IS GRANTED BY THE TOWN.
6. BLASTING WILL NOT NORMALLY BE ALLOWED. WHERE APPROVED BY THE TOWN, BLASTING SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY, THE VIRGINIA STATEWIDE FIRE PROTECTION ACT, VIRGINIA ADMINISTRATIVE CODE AND ALL AMENDMENTS OR REVISIONS THEREOF. THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE TOWN OF CHRISTIANSBURG, SHALL OBTAIN ALL REQUIRED PERMITS AND SHALL NOTIFY THE TOWN PRIOR TO ANY BLASTING. DAMAGE OF ANY NATURE RESULTING FROM BLASTING OPERATIONS SHALL BE SATISFACTORILY CORRECTED BY THE CONTRACTOR.
7. NO CLEATED EQUIPMENT SHALL BE USED ON PAVEMENTS. ROAD DRAINAGE SHALL NOT BE CLOGGED, AND SHOULDERS, DITCHES, ROADSIDE DRAINAGE, AND FACILITIES AND PAVEMENT AFFECTED BY EXCAVATION OPERATIONS SHALL BE MAINTAINED IN CONDITION SATISFACTORY TO THE TOWN. ENTRANCES SHALL NOT BE BLOCKED EXCEPT FOR SHORT PERIOD AS ARRANGED WITH THE PROPERTY OWNER, AND INGRESS AND EGRESS TO ADJACENT PROPERTY SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGED DRAINAGE STRUCTURES. PRIVATE ROADS SHALL BE RESTORED TO AN EQUAL OR BETTER CONDITION OF THAT PRIOR TO CONSTRUCTION.
8. DISPOSE OF UNSUITABLE AND SURPLUS MATERIAL AT DESIGNATED WASTE AREAS.

UTILITY TRENCH BACKFILLING

1. ALL BACKFILL MATERIALS SHALL BE FREE FROM MUD, REFUSE, CONSTRUCTION DEBRIS, ORGANIC MATERIAL, BOULDERS, FROZEN, OR OTHERWISE UNSUITABLE MATERIAL – SELECT INITIAL BACKFILL SHALL BE FREE FROM STONES OVER 3/4 INCH.
2. INITIAL BACKFILL SHALL BE WITH SELECT MATERIAL AS STATED ABOVE AND COMPACTED PRIOR TO PLACEMENT OF REMAINING BACKFILL. BACKFILLING SHALL BE CARRIED UP EVENLY IN INCREMENTS OF ONE FOOT. MINIMUM REQUIRED DENSITY SHALL BE THE SAME DENSITY AS THE ADJACENT UNDISTURBED MATERIAL. BACKFILL OUTSIDE OF PROPOSED PAVEMENT AREAS OR STREET RIGHTS-OF-WAY, OR IN OTHER AREAS WHEN ALLOWED, SHALL BE COMPACTED TO A DRY DENSITY EQUAL TO OR GREATER THAN THE DENSITY OF THE UNDISTURBED SOIL SURROUNDING THE TRENCH. EACH LAYER OF EARTH SHALL BE COMPACTED INTO PLACE BY TAMPING BEFORE THE NEXT LAYER IS APPLIED.
3. A HYDRO-HAMMER SHALL NOT BE USED FOR COMPACTION.
4. ALL PIPELINES SHALL HAVE A MINIMUM OF 18-INCHES OF COVER BEFORE ANY ROLLING EQUIPMENT IS USED. CARE SHALL BE TAKEN TO PREVENT DAMAGE TO PIPE OR OTHER STRUCTURES DURING COMPACTION. DAMAGE TO PIPELINES OR OTHER STRUCTURES RESULTING FROM COMPACTION SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT EXPENSE TO THE TOWN.
5. SELECT BACKFILL SHALL EXTEND AT LEAST ONE FOOT ABOVE THE TOP OF THE PIPE AND OTHER APPURTENANCES AND SHALL BE COMPACTED PRIOR TO PLACEMENT AND COMPACTION OF REMAINING BACKFILL MATERIAL. THE CONTRACTOR MAY BACKFILL WITH THE EXCAVATED MATERIAL, PROVIDED IT MEETS THE CONDITIONS AS STATED ABOVE.
6. BACKFILL UNDER PAVEMENT, PROPOSED PAVEMENT, OR IN AREAS WITHIN TOWN RIGHT-OF-WAY SHALL BE IN LAYERS OF SELECTED EARTH NOT MORE THAN 6-INCHES IN THICKNESS, AND EACH LAYER SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DENSITY WHEN TESTED IN ACCORDANCE WITH ASTM D 698. COMPACTION SHALL BE BY PNEUMATIC TAMPERS OR BY HAND AND IN ACCORDANCE WITH INSTRUCTIONS IN THIS SECTION AS MODIFIED HEREIN. THE TOP COURSE OF BACKFILL DIRECTLY UNDER PAVEMENT SHALL CONSIST OF AGGREGATE BASE MATERIAL MEETING THE REQUIREMENTS OF VDOT #21 A STONE. THE DEPTH OF THIS COURSE SHALL BE AT LEAST 12-INCHES, EXCEPT WHERE OTHERWISE REQUIRED BY THE TOWN. MOISTURE CONTENT SHALL BE WITHIN 20 PERCENT OF OPTIMUM.
7. UNIFORMLY SMOOTH GRADING OF DISTURBED AREAS SHALL BE REQUIRED AFTER BACKFILL AND COMPACTION. ROAD SHOULDERS SHALL HAVE A MINIMUM DEPTH OF 6-INCHES OF VDOT #25 OR #26 CRUSHER RUN AGGREGATE, COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DENSITY AS MEASURED BY ASTM D 698. DITCHES AND GUTTERS SHALL BE FINISHED TO DRAIN READILY. IN GRASS OR LAWN AREAS, THE LAST 4-INCHES OF COMPACTED FILL WILL CONSIST OF TOPSOIL OR AN APPROVED SOIL WHICH WILL SUPPORT TURF GROWTH AFTER FERTILIZING AND SEEDING. SETTLEMENT OR OTHER DAMAGE THAT OCCURS PRIOR TO ACCEPTANCE OF THIS WORK SHALL BE REPAIRED AND GRADES SATISFACTORILY RE-ESTABLISHED.
8. THE CONTRACTOR WILL BE RESPONSIBLE FOR AND SHALL REPAIR ANY SETTLEMENT IN THE BACKFILL OR PAVEMENT FOR A PERIOD OF ONE YEAR AFTER COMPLETION OF THE WORK.

FILLS

1. UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER OF RECORD, FILLS SHALL COMPLY WITH THIS SECTION.
2. THE GROUND SURFACE SHALL BE PREPARED TO RECEIVE FILL BY REMOVING VEGETATION, TOPSOIL, AND OTHER UNSUITABLE MATERIALS, AND SCARIFYING THE GROUND TO PROVIDE A BOND WITH THE FILL MATERIAL.
3. WHERE EXISTING GRADE IS AT A SLOPE STEEPER THAN 5:1 (H:V, 20%) AND THE DEPTH OF THE FILL EXCEEDS 5 FEET, BENCHING SHALL BE PROVIDED. A KEY SHALL BE PROVIDED THAT IS AT LEAST 10 FEET IN WIDTH AND 2 FEET IN DEPTH.
4. FILL MATERIAL SHALL NOT INCLUDE ORGANIC, FROZEN, OR OTHER DELETERIOUS MATERIALS. NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL GREATER THAN 12 INCHES IN ANY DIMENSION SHALL BE INCLUDED IN FILLS.
5. BACKFILL UNDER PAVEMENT, PROPOSED PAVEMENT, OR IN AREAS WITHIN TOWN RIGHT-OF-WAY SHALL BE IN LAYERS OF SELECTED EARTH NOT MORE THAN 6-INCHES IN THICKNESS, AND EACH LAYER SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DENSITY WHEN TESTED IN ACCORDANCE WITH ASTM D 698. MOISTURE CONTENT SHALL BE WITHIN 20 PERCENT OF OPTIMUM.
6. BACKFILL OUTSIDE OF PROPOSED PAVEMENT AREAS OR STREET RIGHTS-OF-WAY, OR IN OTHER AREAS WHEN ALLOWED, SHALL BE COMPACTED TO 90 PERCENT OF MAXIMUM DENSITY AS MEASURED BY ASTM D 698, IN LIFTS NOT EXCEEDING 12 INCHES IN DEPTH.
7. THE SLOPE OF THE FILL SURFACES SHALL BE NO STEEPER THAN IS SAFE FOR THE INTENDED USE. FILL SLOPES STEEPER THAN 2:1 (H:V, 50%) SHALL BE JUSTIFIED BY A GEOTECHNICAL REPORT OR ENGINEERING DATA BY THE GEOTECHNICAL ENGINEER OF RECORD.
8. THE CONTRACTOR SHALL SELECT THE PROPER COMPACTION METHOD AND EQUIPMENT TO PROPERLY COMPACT THE FILL TO THE REQUIRED DENSITY.
9. THE OWNER / DEVELOPER SHALL BE RESPONSIBLE FOR AND SHALL REPAIR ANY SETTLEMENT IN THE BACKFILL OR PAVEMENT, RELATED TO PUBLIC IMPROVEMENTS, FOR A PERIOD OF ONE YEAR AFTER COMPLETION OF THE WORK.

TESTING

1. UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER OF RECORD, TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY QUALIFIED TO PERFORM SUCH TESTS AND SHALL BE AT THE EXPENSE OF THE OWNER / DEVELOPER.
2. THE OWNER / DEVELOPER SHALL FURNISH ALL EQUIPMENT, TOOLS, AND LABOR TO CONDUCT THE TESTING.
3. ALL TESTING SHALL BE WITNESSED BY A DESIGNATED TOWN OFFICIAL. THE TEST SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED AS OUTLINED IN THIS SECTION.
4. THE CONTRACTOR SHALL DEMONSTRATE THE ADEQUACY OF BACKFILL COMPACTION BY PERFORMING DENSITY TESTING OF THE COMPLETED BACKFILL AREAS AS DESIGNATED BY THE TOWN OR THE GEOTECHNICAL ENGINEER OF RECORD.
5. DENSITY TESTING SHALL BE PERFORMED USING NUCLEAR FIELD DENSITY EQUIPMENT OR CONVENTIONAL WEIGHT-VOLUME METHODS. IF THE WEIGHT-VOLUME METHOD IS USED, VOLUME SHALL BE DETERMINED BY USING THE SAND REPLACEMENT TEST (ASTM D 1556) OR LIQUID DISPLACEMENT METHODS (ASTM D 2167). IF NUCLEAR METHODS ARE USED WITHIN TRENCHES, THE TRENCH CORRECTION EFFECT SHALL BE ACCOUNTED FOR BY RECALIBRATING THE NUCLEAR GAUGE ON ITS CALIBRATION BLOCK AT THE LOCATION OF EACH TEST PRIOR TO TAKING THE DENSITY MEASUREMENT.
6. BACKFILL AND COMPACTION TESTING FOR AREAS WITHIN THE RIGHT-OF-WAY AND UTILITY TRENCHES SHALL CONFORM TO VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS AND SOILS AND AGGREGATE COMPACTION, LATEST EDITION.
7. BACKFILL AND COMPACTION TESTING FOR AREAS OUTSIDE OF THE RIGHT-OF-WAY SHALL BE PERFORMED AS DIRECTED BY THE GEOTECHNICAL ENGINEER OF RECORD.

STEEP SLOPES

1. IF THE GRADE OF A SITE IS MORE THAN THIRTY-THREE AND ONE-THIRD (33.3) PERCENT, REFER TO R403.1.7 OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, LATEST EDITION, FOR STEEP SLOPE DEVELOPMENT REQUIREMENTS FOR SITING STRUCTURES RELATIVE TO SLOPES.
2. WHERE THE GRADE OF A SITE IS MORE THAN THIRTY-THREE AND ONE-THIRD (33.3) PERCENT AND THE AREA IS TO BE STABILIZED BY VEGETATION, REFER TO VSMH SPECIFICATION C-SSM-03 SURFACE ROUGHENING, FOR FINISHED GRADING REQUIREMENTS.
3. ALL EMBANKMENTS FOR TEMPORARY ESC OR PERMANENT SWM STRUCTURES SHALL MEET APPLICABLE VESMP AND DCR DAM SAFETY CONSTRUCTION AND MAINTENANCE STANDARDS.
4. CUT SLOPES OR FILL SLOPES SHALL NOT BE GREATER THAN 2:1 (H:V, 50%), UNLESS A GEOTECHNICAL REPORT IS PROVIDED FOR THE PROPOSED SLOPES.
5. CUT SLOPES OR FILL SLOPES SHALL NOT BE GREATER THAN TWENTY-FIVE VERTICAL FEET IN HEIGHT, UNLESS A GEOTECHNICAL REPORT IS PROVIDED FOR THE PROPOSED SLOPES. CUT SLOPES OR FILL SLOPES LESS THAN OR EQUAL TO 3:1 (H:V, 33%) MAY EXCEED TWENTY-FIVE (25) VERTICAL FEET IN HEIGHT AND SHALL NOT REQUIRE A GEOTECHNICAL REPORT.
6. FOR ANY CUT SLOPES OR FILL SLOPES GREATER THAN OR EQUAL TO 2:1 (H:V, 50%) AND GREATER THAN OR EQUAL TO TWENTY-FIVE (25) VERTICAL FEET IN HEIGHT, AS-BUILT PLANS SHOWING THAT THE FINISHED GEOMETRY IS IN SUBSTANTIAL CONFORMITY WITH THE DESIGN SHALL BE PROVIDED TO THE TOWN.
7. FILL MATERIALS, COMPACTION METHODS AND DENSITY SPECIFICATIONS SHALL BE INDICATED ON THE SITE DEVELOPMENT PLANS. FILL AREAS INTENDED TO SUPPORT STRUCTURES SHALL ALSO BE INDICATED ON THE SITE DEVELOPMENT PLANS. COMPACTION TEST RESULTS (PER VDOT STANDARDS) SHALL BE SUBMITTED TO THE TOWN.
8. DEVELOPMENT PLANS FOR ALL NEW SUBDIVISIONS SHALL SHOW PROPOSED LOT GRADES TO ENSURE POSITIVE DRAINAGE. ALTERNATIVELY, LOT GRADING PLANS CAN BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION AND SHALL BE CERTIFIED BY A DESIGN PROFESSIONAL.

GENERAL ESC AND DRAINAGE NOTES:

1. ALL STORMWATER INFRASTRUCTURE SHALL BE CONSTRUCTED IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.
2. AN APPROVED SET OF PLANS AND A TOWN OF CHRISTIANSBURG (TOWN) LAND DISTURBANCE PERMIT SHALL BE AVAILABLE ONSITE FOR INSPECTION AT ALL TIMES AS REQUIRED.
3. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND A VIRGINIA STORMWATER MANAGEMENT PROGRAM CONSTRUCTION GENERAL PERMIT COVERAGE LETTER MUST BE AVAILABLE AT ALL TIMES FOR PROJECTS WHERE LAND DISTURBANCE THRESHOLDS WARRANT THESE ITEMS.
4. EVIDENCE OF PERMIT COVERAGE AND EVIDENCE OF FUNCTIONING CONTROLS SHALL BE PROVIDED TO TOWN STAFF FOR ANY OFFSITE BORROW OR FILL AREAS PRIOR TO TRANSPORT OF MATERIALS TO OR FROM THESE SITES.
5. ALL PERMANENT STABILIZATION AREAS SHALL BE MONITORED AND MAINTAINED AS NECESSARY FOR THE DURATION OF PERMIT COVERAGE AND ANY POSTCONSTRUCTION PERIOD SPECIFIED IN THE PLANS OR NARRATIVE.
6. ALL DESIGN AND CONSTRUCTION OF STORMWATER BEST MANAGEMENT PRACTICE (BMP) FACILITIES WILL BE IN ACCORDANCE WITH THE VIRGINIA BMP CLEARINGHOUSE AND THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK UNLESS SPECIFICALLY NOTED ON THE PLANS OR BY TOWN POLICY. ALL STORMWATER DETENTION AND RETENTION PONDS MUST MEET APPLICABLE FEDERAL AND STATE DAM SAFETY STANDARDS AND REQUIREMENTS.
7. ALL BELOW GRADE INFRASTRUCTURES TO BE MAINTAINED UNDER STORMWATER BMP MAINTENANCE AGREEMENT SHALL BE INSPECTED BY THE TOWN INSPECTOR PRIOR TO COVERING.
8. RECORD DRAWINGS ARE REQUIRED FOR PERMANENT BMP AND STORMWATER CONVEYANCE INFRASTRUCTURE IN ACCORDANCE WITH TOWN DEVELOPMENT HANDBOOK.
9. THIS PLAN IDENTIFIES THE LOCATION OF EACH OUTFALL, BUILDING DOWNSPOUT, AND ANY OTHER LOCATION WHERE CONCENTRATED STORMWATER IS DISCHARGED. CHANGES TO THESE DISCHARGE POINTS REQUIRES REVIEW AND APPROVAL BY TOWN STAFF.
10. ALL INLETS, MANHOLE LIDS, CLEANOUTS, ETC., SHALL BE INSTALLED ON GRADE UNLESS SPECIFICALLY NOTED ON THE PLANS.
11. ANY/ALL OFF-SITE DRAINAGE EASEMENTS SHALL BE RECORDED PRIOR TO FINAL PLAN APPROVAL.
12. INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE TOWN MAY BE REQUIRED.
13. FOR THE PURPOSES OF PLAN APPROVAL, THE ENGINEER OF RECORD FOR THE EROSION AND SEDIMENT CONTROL PLAN AND NARRATIVE SHALL BE THE CERTIFIED RESPONSIBLE LAND DISTURBER FOR THE PROJECT UP TO THE AWARD OF CONTRACT. UPON AWARD OF CONTRACT, THE CONTRACTOR SHALL HAVE A CERTIFIED RESPONSIBLE LAND DISTURBER AND QUALIFIED PERSONNEL FOR THE PROJECT.
14. STORE EXCAVATED TOPSOIL IN TOPSOIL STOCKPILES WITHIN THE LIMITS OF CONSTRUCTION WITH SILT FENCE ON THE DOWN SLOPE SIDE IN ACCORDANCE WITH VSMH (LATEST EDITION).
15. STABILIZATION BLANKETS AND MATTING SHALL BE INSTALLED ON ALL CUT OR FILL SLOPES 3:1 OR STEEPER. ALL BLANKET MATTING APPLICATIONS SHALL BE TREATMENT TYPE-2 AND CONFORM TO VSMH (LATEST EDITION).
16. ALL CUT AND FILL SLOPES & CHANNEL SIDES SLOPES WHICH ARE NOT TO BE PAVED SHALL BE SEEDED UNTIL A GOOD STAND OF GRASS IS OBTAINED IN ACCORDANCE WITH VSMH (LATEST EDITION).
17. ALL CULVERT INLET PROTECTION AND STORM DRAIN INLET PROTECTION MUST REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
18. BASE STONE SHALL BE PLACED IN ALL PROPOSED ASPHALT AREAS WITHIN 30 DAYS OF FINAL GRADING.
19. PROPERTIES AND RIGHTS-OF-WAY ADJOINING THE SITE SHALL BE KEPT CLEAN OF MUD OR SILT CARRIED FROM THE SITE BY VEHICULAR TRAFFIC OR RUNOFF.
20. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MAINTAINED SO THAT SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORMWATER DRAINAGE FACILITIES.
21. ANY SITE-SPECIFIC NOTES THAT DEVIATE FROM GENERAL OR EROSION AND SEDIMENT CONTROL NOTES CAN BE FOUND ON THE EROSION AND SEDIMENT CONTROL PLAN SHEET.
22. EROSION AND SEDIMENT CONTROL MEASURES SHOWN ARE TO BE CONSTRUCTED, INSPECTED AND MAINTAINED IN CONFORMANCE WITH THESE PLANS AND THE APPROVED PLAN NARRATIVE.
23. ALL JURISDICTIONAL WATERS, DITCHES, AND SWALES SHALL BE INSPECTED TO ENSURE COMPLIANCE WITH MINIMUM STANDARD 19.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STAN

STANDARD DEMOLITION NOTES

1. DEMOLITION SHALL INCLUDE, UNLESS OTHERWISE NOTED ON PLAN, THE REMOVAL OF EXISTING OBJECTS AND IMPROVEMENTS, WHETHER INDICATED ON THE DRAWINGS OR NOT, THAT WOULD, IN THE OPINION OF THE CONTRACTOR, PREVENT OR INTERFERE WITH THE PROGRESS OR COMPLETION OF THE PROPOSED WORK.
2. PERMITS, FEES AND LICENSES SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR, INCLUDING DISPOSAL CHARGES AS REQUIRED.
3. WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITIES IN DEMOLITION OF EXISTING PAVEMENT, CURBS AND GUTTERS, DRAINAGE STRUCTURES AND UTILITIES AS MAY BE REQUIRED.
4. ALL EXISTING UTILITY SERVICE LINES SHALL BE DISCONNECTED, PLUGGED, OR CAPPED PER TOWN OR UTILITY STANDARDS PRIOR TO REMOVAL.
5. CONTRACTOR SHALL SAW-CUT ALL JOINTS WHERE EXISTING CURBING, PAVEMENT AND SIDEWALK IS TO BE DEMOLISHED AND NEW CONSTRUCTION JOINS THE EXISTING.
6. CONTRACTOR SHALL COMPLETELY FILL BELOW GRADE AREAS AND VOIDS FROM DEMOLITION OR REMOVAL OF STRUCTURES (UNDERGROUND FUEL STORAGE TANK, BASEMENTS, WELLS, ETC.) USING APPROVED SELECT FILL MATERIAL.
7. ALL EXISTING CURBING, CONCRETE SIDEWALK, ENTRANCES, BUILDING FOUNDATIONS AND TREES AND BRUSH THAT ARE DEMOLISHED SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR. BUILDING DEBRIS, ETC. SHALL NOT BE USED AS FILL MATERIAL ON THE SITE.
8. CONTRACTOR TO INSTALL SAFETY FENCE AROUND PERIMETER OF CONSTRUCTION AREA PRIOR TO BEGINNING WORK AS NECESSARY.
9. CONTRACTOR SHALL ENSURE SUFFICIENT AREA IS RESERVED FOR BYPASSING VEHICULAR TRAFFIC WHEN WORKING WITHIN SHARED ACCESS DRIVES OR TOWN RIGHT-OF-WAY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL MEASURES NECESSARY TO DIRECT TRAFFIC SAFELY AND EFFICIENTLY AROUND THE CONSTRUCTION AREA. ROAD/LANE CLOSURE & SAFETY PLANS ARE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE TO THE TOWN IF REQUIRED OR REQUESTED AT ANY POINT OF DEMOLITION OR CONSTRUCTION.
10. WHERE INDICATED ON THE DRAWINGS, PAVEMENT MARKINGS SHALL BE REMOVED BY GRINDING, BLASTING, OR A COMBINATION THEREOF, OR OTHER METHODS, WITH THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH VDOT ROAD AND BRIDGE SPECIFICATION SECTION 512.03 (j). CARE SHALL BE EXERCISED DURING MARKING REMOVAL NOT TO SCAR, DISCOLOR OR OTHERWISE DAMAGE THE PAVEMENT SURFACE. OVERPAINTING OR OTHER METHODS OF COVERING MARKINGS IN LIEU OF REMOVAL SHALL NOT BE PERMITTED.
11. CONTRACTOR SHALL PROVIDE THE FOLLOWINGS PROTECTIONS AT THE JOB SITE:
    - 11.1. MAKE ARRANGEMENTS, BEFORE INITIATING DEMOLITION, FOR RELOCATING, DISCONNECTION, REROUTING, ABANDONING, OR SIMILAR ACTION AS MAY BE REQUIRED RELATIVE TO UTILITIES AND OTHER UNDERGROUND PIPING, TO PERMIT WORK TO PROCEED WITHOUT DELAY. ARRANGEMENTS SHALL BE MADE IN ACCORDANCE WITH REGULATIONS OF AUTHORITIES OF UTILITIES MENTIONED, SUCH AS OVERHEAD AND UNDERGROUND POWER AND TELEPHONE LINES AND EQUIPMENT, GAS PIPING, STORM SEWERS, SANITARY SEWERS, OR WATER PIPING. CONTRACTOR SHALL NOT USE WATER WHEN IT MAY CREATE HAZARDOUS OR OBJECTIONABLE CONDITIONS, SUCH AS ICE, FLOODING AND/ OR POLLUTION.
    - 11.2. ENSURE SAFE PASSAGE OF PERSONS AROUND ALL AREAS OF DEMOLITION.
    - 11.3. CONDUCT OPERATIONS TO PREVENT DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, OTHER FACILITIES, OR INJURY TO PERSONS.
    - 11.4. PROMPTLY REPAIR DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS AT NO COST TO THE OWNER.
    - 11.5. MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. PREVENT INTERRUPTION OF EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES AS ACCEPTABLE TO GOVERNING AUTHORITIES.
    - 11.6. USE WATER SPRINKLING AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN AIR TO LOWEST PRACTICAL LEVEL.
    - 11.7. COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
12. OWNER OR CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF ANY STRUCTURES PROPOSED FOR REMOVAL CONTAIN ANY ENVIRONMENTAL HAZARDS SUCH AS ASBESTOS. ANY ABATEMENT REQUIRED SHALL BE THE RESPONSIBILITY OF THE OWNER.

SURVEY DATA

HORIZONTAL AND VERTICAL CONTROL SURVEYS WERE PERFORMED ON JULY 13, 2026. ADJACENT PROPERTIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND NOT NECESSARILY THE RESULT OF A FIELD SURVEY.

HORIZONTAL DATUM: NAD83 (VIRGINIA SOUTH ZONE)
VERTICAL DATUM: NAVD88

SOURCE OF TOPOGRAPHIC MAPPING:
ON SITE – WESTWOOD PROFESSIONAL SERVICES, INC, MAY 2026 – AUGUST 2026
OFF-SITE (REGIONAL PLAN) – TOWN OF CHRISTIANSBURG

BOUNDARY SURVEY WAS COMPLETED BY: WESTWOOD PROFESSIONAL SERVICES, INC. JULY, 2026

BENCHMARK INFORMATION: SEE THIS SHEET

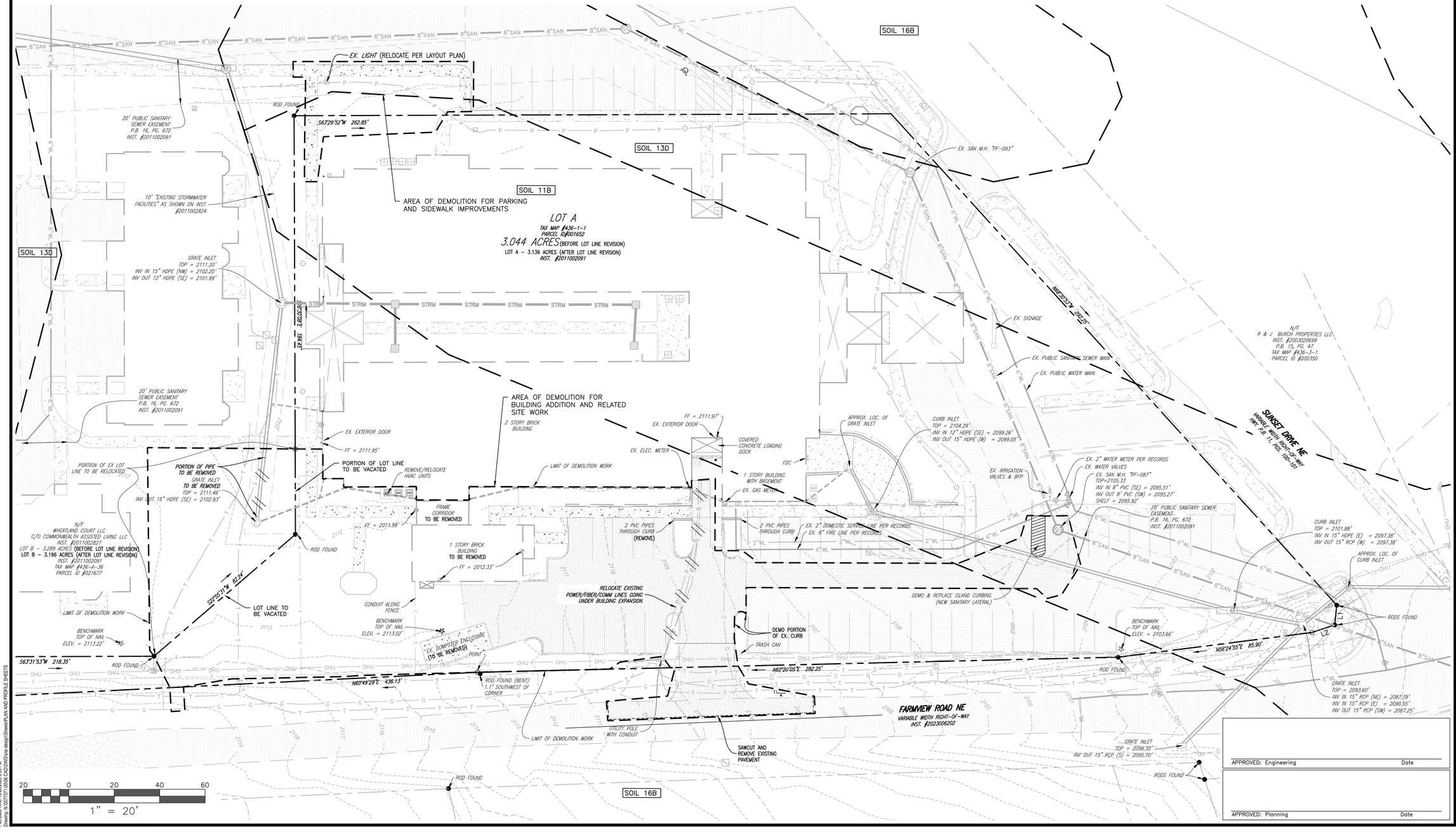
SOILS INFORMATION

11B – DUFFIELD–ERNEST COMPLEX, 2 TO 7 PERCENT SLOPES
K–FACTOR: 0.28
PH: 6.2
TEXTURE: SILT LOAM
HYDROLOGIC SOIL GROUP: B
11C – DUFFIELD–ERNEST COMPLEX, 7 TO 15 PERCENT SLOPES
K–FACTOR: 0.28
PH: 6.2
TEXTURE: SILT LOAM
HYDROLOGIC SOIL GROUP: B
13D – FREDERICK AND VERTREES GRAVELLY SILT LOAMS, 15 TO 25 PERCENT SLOPES
K–FACTOR: 0.24
PH: 5.3
TEXTURE: GRAVELLY SILT LOAM
HYDROLOGIC SOIL GROUP: B
16B – GROSECLOSE AND POPLIMENTO SOILS, 2 TO 7 PERCENT SLOPES
K–FACTOR: 0.32
PH: 4.6
TEXTURE: LOAM
HYDROLOGIC SOIL GROUP: C

LEGEND

SOIL BOUNDARY

LINE TABLE		
LINE #	LENGTH	BEARING
L1	8.73'	N20°21'44"W
L2	10.63'	N45°22'38"E



APPROVED: Engineering Date

APPROVED: Planning Date

Westwood
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REVISIONS
10/28/2026

CSL CHRISTIANSBURG EXPANSION

EXISTING CONDITIONS & DEMOLITION PLAN

SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

DATE: 9/2/2026
SCALE: 1" = 20'
DRAFTER: AWC/MSL
DESIGNER: AWC/MSL
CHECKED: JRT
PROJECT NO.
R0077371.00

COMMONWEALTH OF VIRGINIA
JAMES RICHARD TAYLOR
Lic. No. 55142
10/28/26
PROFESSIONAL ENGINEER

C03

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STANDARD UTILITIES NOTES

1. G.C. SHALL COORDINATE THE EXACT SANITARY SEWER LATERAL BUILDING TIE IN LOCATIONS WITH THE ARCHITECTURAL PLANS.
2. DOMESTIC WATER IS PROVIDED FROM WITHIN EXISTING BUILDING. NO NEW EXTERIOR WATER LATERALS PROPOSED, SEE ARCHITECTURAL PLANS.
3. ALL UTILITY SERVICE LATERALS OR LINES, INCLUDING ELECTRIC, SHALL BE INSTALLED UNDERGROUND. WATER & SEWER CONNECTIONS SHALL CONFORM TO THE TOWN OF CHRISTIANSBURG UTILITY STANDARDS AND SPECIFICATIONS AND INTERNATIONAL BUILDING CODE, LATEST EDITIONS.
4. THE G.C. IS RESPONSIBLE FOR PROVIDING AND INSTALLING ALL CONDUIT ASSOCIATED WITH REQUIRED UTILITIES FOR THE PROPOSED BUILDING AND ANY NECESSARY UTILITIES ON-SITE SUCH AS LIGHTING, ELECTRICAL, ETC.
3. THE G.C. SHALL COORDINATE TEMPORARY POWER FOR THE PROPOSED BUILDING ADDITION.
4. PUBLIC UTILITY INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH TOWN SPECIFICATIONS, LATEST EDITION.
5. SANITARY WASTE LINES BEYOND THE PUBLIC CLEANOUT SHALL BE A MINIMUM 6" PVC (MIN. SLOPE 1.04%) PER THE VIRGINIA PLUMBING CODE.

LIGHT DUTY ASPHALT PAVING
HEAVY DUTY ASPHALT PAVING
CONCRETE
HEAVY DUTY CONCRETE

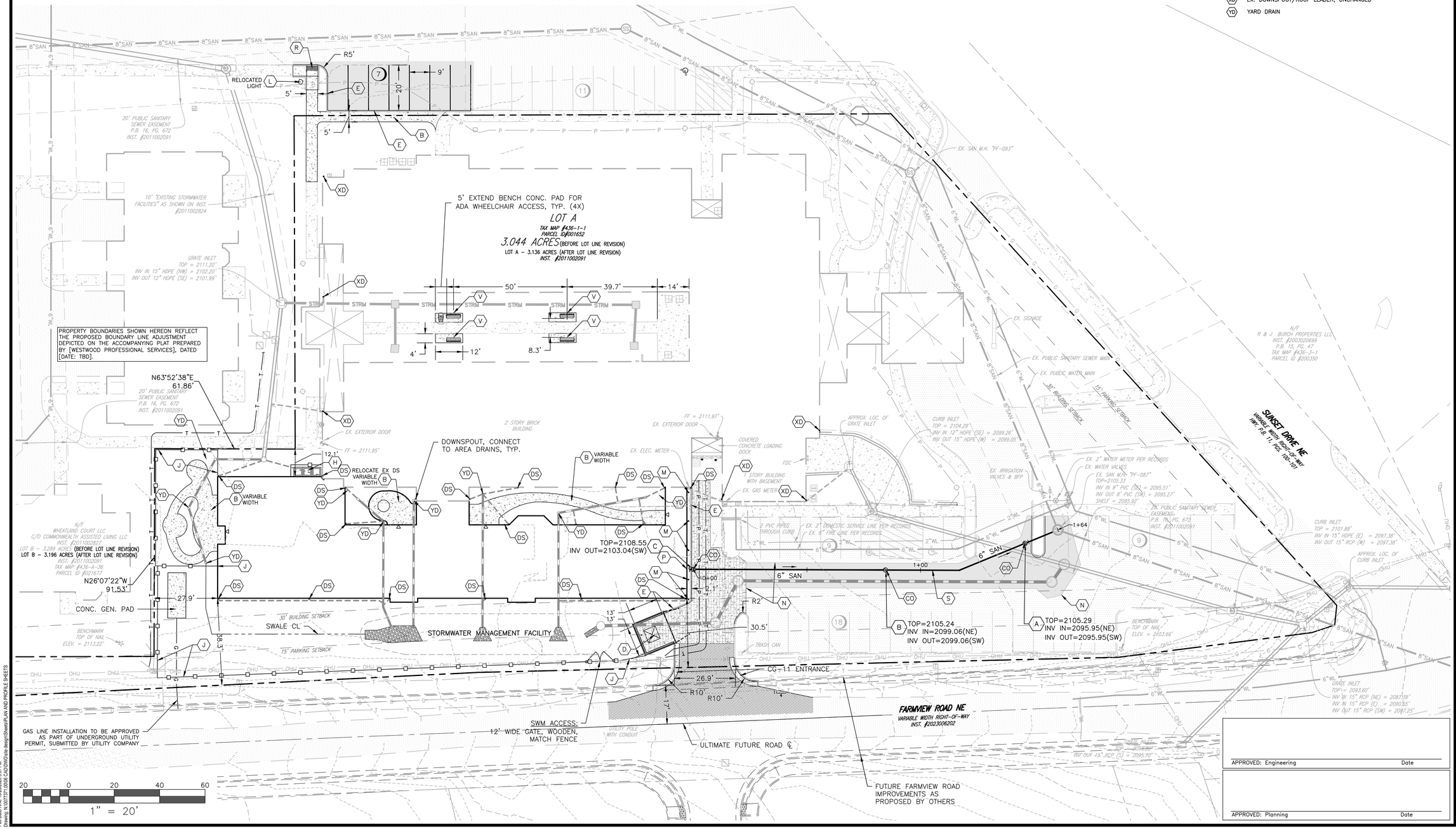
PAVEMENT MARKING NOTES

STANDARD PARKING STRIPING:
1. SURFACES SHOULD BE CLEAN AND DRY
2. STRIPING SHALL BE 4" WIDE, COLOR WHITE

NOTE: UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH MINIMUM STANDARD 16. SEE SHEET C12.

LEGEND

- (B) CONCRETE SIDEWALK, 5' WIDE UNLESS NOTED OTHERWISE
- (D) DUMPSTER W/ ENCLOSURE
- (E) VDOT CG-2 CURB
- (H) HVAC UNITS
- (J) NEW FENCING (BOARD ON BOARD PRIVACY)
- (L) LIGHT POLE (NEW OR RELOCATED, SEE PLAN)
- (N) SAWCUT PAVEMENT JOINT DETAIL
- (R) HC CURB RAMP
- (S) SEWER LATERAL 6"
  - X — UTILITY CONTR.
  - —— EXISTING
- (CO) SANITARY CLEANOUT
- (P) PLUMBER CONNECTION
- (V) 6' L. BENCH, (U-LINE H-4337C, 6' LENGTH, COLOR: CEDAR)
- (M) 6" STEEL SAFETY YELLOW BOLLARD, SEE DETAILS
- (DS) NEW AND ADJUSTED DOWNSPOUT/ROOF LEADERS
- (XD) EX. DOWNSPOUT/ROOF LEADER, UNCHANGED
- (YD) YARD DRAIN



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REVISIONS

10/28/2026

CSL CHRISTIANSBURG EXPANSION

LAYOUT & UTILITIES PLAN

SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

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C04

STANDARD GRADING NOTES

1. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
2. REFER TO BUILDING PLANS FOR SUBGRADE AND UTILITY TRENCHES WITHIN 5' OF THE BUILDING ENVELOPE.
3. FINISH LAWN AREAS TO WITHIN ONE INCH ABOVE OR BELOW REQUIRED SUBGRADE ELEVATIONS. SHAPE SURFACE UNDER WALKS AND PAVEMENTS TO LINE, GRADE, AND CROSS SECTION, WITH NOT MORE THAN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE ELEVATION.
4. SPREAD TOPSOIL TO A UNIFORM COMPACTED DEPTH OF 2" ON 3:1 OR STEEPER SLOPES AND 4" OVER ALL OTHER DISTURBED AREAS NOT RECEIVING WALKS, PAVEMENT, WALLS OR BUILDING, INCLUDING TRENCHES (SEE TABLE 3.30-A). CARE SHALL BE TAKEN ENSURE PROPER BONDING AND NOT TO APPLY TOPSOIL TO SUBSOIL IF THE TWO SOILS HAVE CONTRASTING TEXTURES (CLAYEY VS. SANDY). IMMEDIATELY FOLLOWING PLACEMENT OF TOPSOIL, DISK THE ENTIRE TOPSOILED AREA AND RAKE FREE OF STONES AND DEBRIS OVER 1/2" IN ANY DIMENSION. PROVIDE A FINISHED SURFACE FREE OF DEPRESSIONS OR HIGH SPOTS. SEED IMMEDIATELY.
5. YARD DRAINS SHALL BE INSTALLED WHEN POSITIVE DRAINAGE (5.0% MINIMUM SLOPE) AWAY FROM BUILDINGS CAN NOT BE ACHIEVED OR IS IN DOUBT. DRAINS TO OUTFALL INTO PROPOSED STORM SEWER. CONTRACTOR MAY ADD ADDITIONAL DRAINS IF SITE CONDITIONS ALLOW/REQUIRE AS NEEDED.
6. ROOF LEADER DOWNSPOUT INSTALLED LOCATIONS ARE SUBJECT TO CHANGE FROM WHAT IS SHOWN ON THE SITE PLANS. ALL ROOF DOWNSPOUTS SHALL DISCHARGE TO A 6" HDPE ROOF DRAIN. ROOF DRAINS SHALL CONNECT UNDERGROUND TO AN 8" MIN. HDPE COLLECTION PIPE. DRAIN PIPES SHALL HAVE A MINIMUM SLOPE OF 1.0% AND DISCHARGE INTO STORM SEWER.
7. YARD DRAINS SHALL BE 12" NYLOPLAST INLINE DRAINS WITH STANDARD GRATE OR EQUIVALENT.
8. MINIMUM COVER OVER COLLECTION PIPES SHALL CONFORM TO MANUFACTURER'S STANDARD.
9. STORM DRAIN WITHIN PUBLIC RIGHT-OF-WAY SHALL BE MAINTAINED BY THE TOWN OF CHRISTIANSBURG. ALL OTHER STORM DRAIN SHALL BE PRIVATELY MAINTAINED.

STORM DRAIN STRUCTURE SCHEDULE

X1 — *EXISTING GRATE INLET*
TOP=2111.20'
INV IN 15" HDPE=2102.20'
INV OUT 12" HDPE=2101.99

X2 — *EXISTING 15" HDPE @ 0.75%*
INV. UPPER=2102.72 INV. LOWER=2102.20

3 — 24" NYLOPLAST DRAIN BASIN
WITH 12" DUCTILE IRON STANDARD GRATE
TOP=2111.28 H=9.06' (INCL. 6" SUMP)
8" HDPE IN=2102.82 (STR. 4)
15" HDPE OUT=2102.72 (STR. X2)

4 — 21.37 LF OF 8" HDPE (TYPE S) @ 17.81%
INV. UPPER=2106.63 INV. LOWER=2102.82

5 — 12" NYLOPLAST DRAIN BASIN
WITH 12" DUCTILE IRON STANDARD GRATE
TOP=2111.28 H=5.15' (INCL. 6" SUMP)
8" HDPE IN=2106.63 (STR. 6)
8" HDPE OUT=2106.63 (STR. 4)

6 — 24.34 LF OF 8" HDPE (TYPE S) @ 2.05%
INV. UPPER=2107.13 INV. LOWER=2106.63

7 — 12" NYLOPLAST DRAIN BASIN
WITH 12" DUCTILE IRON STANDARD GRATE
TOP=2111.28 H=4.65' (INCL. 6" SUMP)
8" HDPE IN=2107.13 (STR. 8)
8" HDPE OUT=2107.13 (STR. 6)

8 — 25.64 LF OF 8" HDPE (TYPE S) @ 1.96%
INV. UPPER=2107.63 INV. LOWER=2107.13

9 — 12" NYLOPLAST DRAIN BASIN
WITH 12" DUCTILE IRON STANDARD GRATE
TOP=2111.28 H=4.15' (INCL. 6" SUMP)
8" HDPE OUT=2107.63 (STR. 8)

10 — 48" MH-2 W ST-1;
TOP=2104.64 H=6.48'
12" HDPE IN=2098.26 (STR. 11)
15" HDPE IN=2098.26 (STR. EX3)
15" HDPE OUT=2098.16 (STR. EX2)

11 — 9.52 LF OF 12" HDPE (TYPE S) @ 1.89%
INV. UPPER=2098.44 INV. LOWER=2098.26

12 — 48" MH-2 W ST-1;
TOP=2104.62 H=6.18'
12" HDPE IN=2098.54 (STR. 13)
12" HDPE OUT=2098.44 (STR. 11)

13 — 138.07 LF OF 12" HDPE (TYPE S) @ 2.26%
INV. UPPER=2101.67 INV. LOWER=2098.54

14 — 48" MH-2 W ST-1;
TOP=2107.69 H=6.02'
12" HDPE IN=2101.77 (STR. 15)
12" HDPE OUT=2101.67 (STR. 13)

15 — 21.00 LF OF 12" HDPE (TYPE S) @ 1.50%
INV. UPPER=2102.08 INV. LOWER=2101.77

16 — 48" MH-2 W ST-1;
TOP=2108.40 H=4.50'
12" HDPE IN=2102.18 (STR. 17)
12" HDPE OUT=2102.08 (STR. 15)

17 — 50.64 LF OF 12" ADS "HP STORM" (DUAL WALL PP PIPE) @ 6.37%
INV. UPPER=2105.40 INV. LOWER=2102.18

18 — SWM OUTFALL STRUCTURE:
36" RISER STRUCTURE W/ TRASH RACK
TOP=2108.20 (SEE DETAIL, SHEET C07)
IN-TAKE 1" ORIFICE: 2105.50
12" ADS "HP STORM" (DUAL WALL PP PIPE)
OUT=2105.40 (STR. 17)

19 — 50.39 LF OF 8" HDPE (TYPE S) @ 2.00%
INV. UPPER=2106.67 INV. LOWER=2105.66

20 — 8" NYLOPLAST DRAIN BASIN
WITH 12" DUCTILE IRON STANDARD GRATE
TOP=2110.95 H=4.78' (INCL. 6" SUMP)
8" HDPE IN=2106.67 (STR. 21)
8" HDPE OUT=2106.67 (STR. 19)

21 — 38.97 LF OF 8" HDPE (TYPE S) @ 6.06%
INV. UPPER=2109.03 INV. LOWER=2106.67

22 — 12" NYLOPLAST DRAIN BASIN
WITH 12" DUCTILE IRON STANDARD GRATE
TOP=2111.28 H=2.75' (INCL. 6" SUMP)
8" HDPE OUT=2109.03 (STR. 21)

23 — 58.70 LF OF 8" HDPE (TYPE S) @ 2.01%
INV. UPPER=2107.17 INV. LOWER=2105.99

24 — 12" NYLOPLAST DRAIN BASIN
WITH 12" DUCTILE IRON STANDARD GRATE
TOP=2111.28 H=4.61' (INCL. 6" SUMP)
8" HDPE OUT=2107.17 (STR. 23)

25 — 55.88 LF OF 8" HDPE (TYPE S) @ 2.00%
INV. UPPER=2107.42 INV. LOWER=2106.30

26 — 12" NYLOPLAST DRAIN BASIN
WITH 12" DUCTILE IRON STANDARD GRATE
TOP=2111.28 H=4.36' (INCL. 6" SUMP)
8" HDPE OUT=2107.42 (STR. 25)

27 — 49.68 LF OF 8" HDPE (TYPE S) @ 2.13%
INV. UPPER=2107.46 INV. LOWER=2106.40

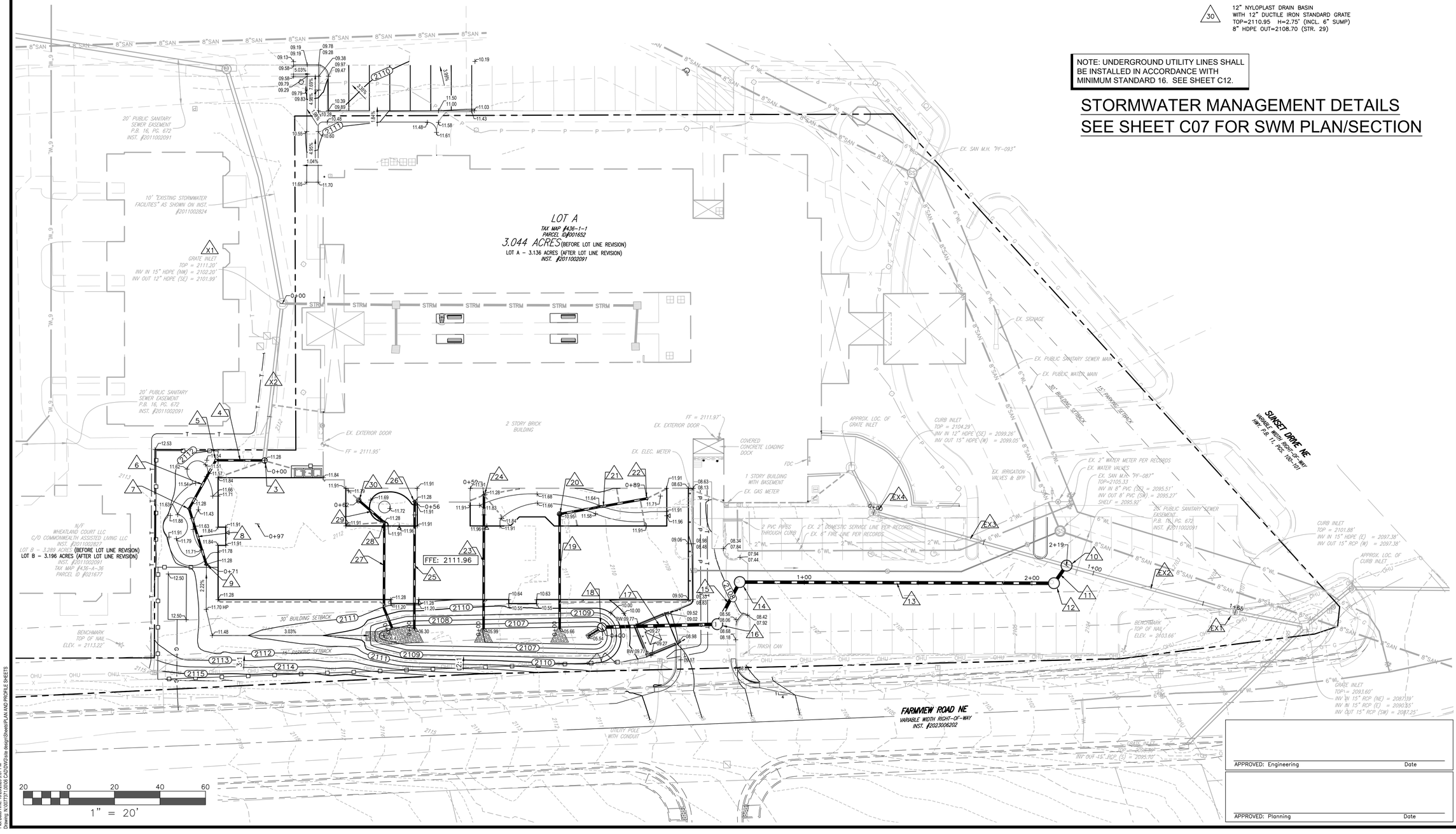
28 — 12" NYLOPLAST DRAIN BASIN
WITH 12" DUCTILE IRON STANDARD GRATE
TOP=2111.28 H=4.32' (INCL. 6" SUMP)
8" HDPE IN=2107.46 (STR. 29)
8" HDPE OUT=2107.46 (STR. 27)

29 — 14.87 LF OF 8" HDPE (TYPE S) @ 8.34%
INV. UPPER=2108.70 INV. LOWER=2107.46

30 — 12" NYLOPLAST DRAIN BASIN
WITH 12" DUCTILE IRON STANDARD GRATE
TOP=2110.95 H=2.75' (INCL. 6" SUMP)
8" HDPE OUT=2108.70 (STR. 29)

NOTE: UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH MINIMUM STANDARD 16. SEE SHEET C12.

STORMWATER MANAGEMENT DETAILS
SEE SHEET C07 FOR SWM PLAN/SECTION



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REVISIONS
10/28/2026

CSL CHRISTIANSBURG EXPANSION

GRADING PLAN

SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

DATE: 9/2/2026
SCALE: 1" = 20'
DRAFTER: AWC/MSL
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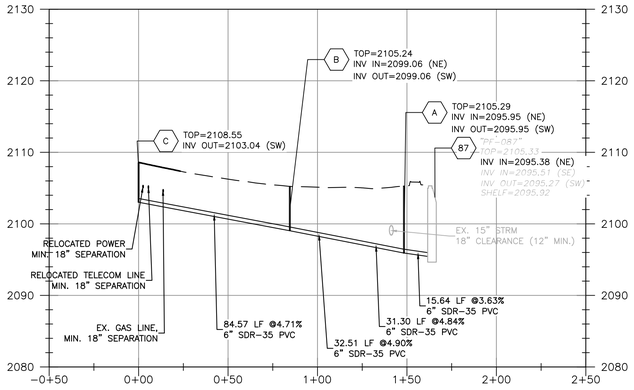
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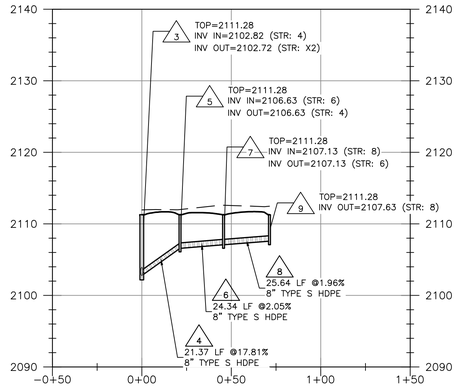
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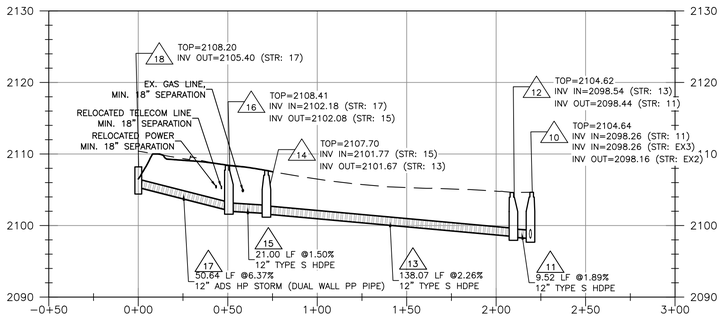
SANITARY LATERAL PROFILE



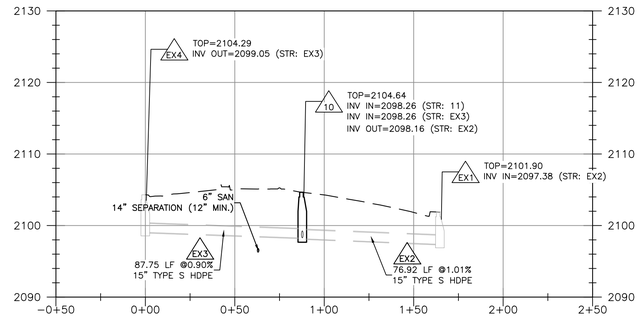
STORM 3 - 9 PROFILE



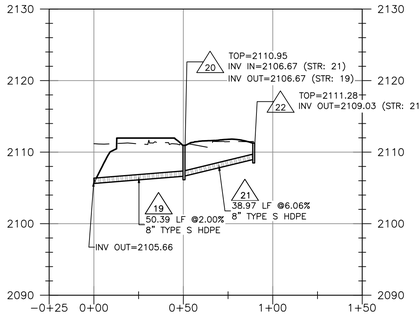
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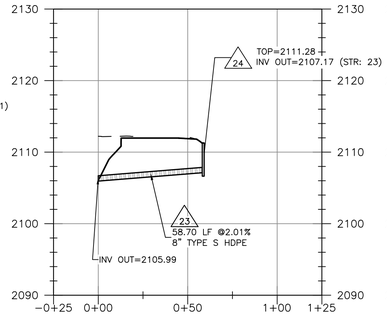
EX STORM FRONT PROFILE



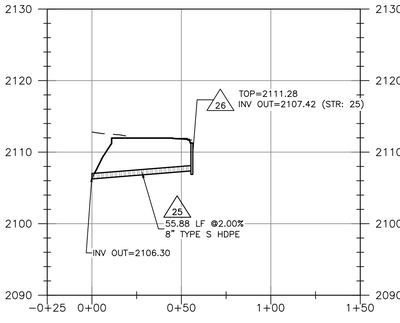
STORM COURTYARD 1A PROFILE



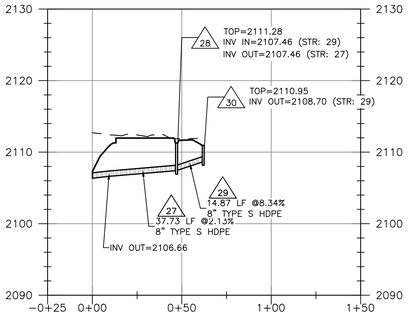
STORM COURTYARD 1 PROFILE



STORM COURTYARD 2A PROFILE



STORM COURTYARD 2 PROFILE



10 0 10 20 30

VERTICAL SCALE: 1" = 10'

40 0 40 80 120

1" = 40'

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CSL CHRISTIANSBURG EXPANSION

UTILITY PROFILES

SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

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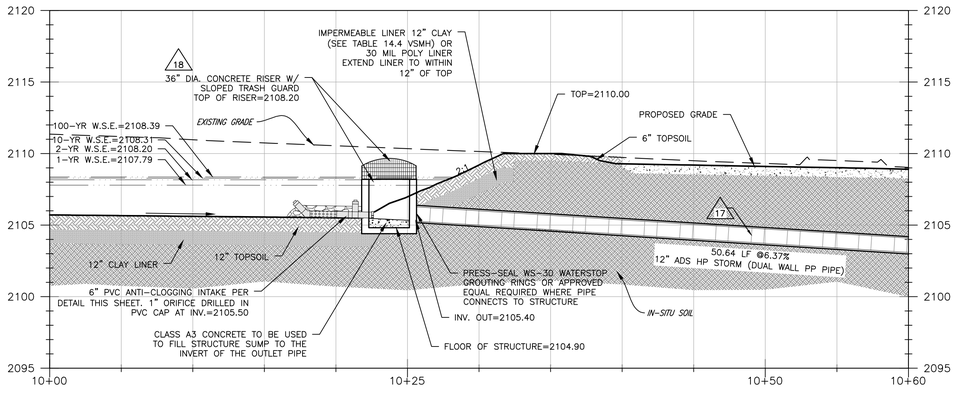
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STORMWATER MANAGEMENT FACILITY #1
OUTFALL PROFILE
HORZ. SCALE: 1"=5' VERT. SCALE: 1"=5'

STORMWATER MANAGEMENT FACILITY CONSTRUCTION STANDARDS AND SPECIFICATIONS

SITE AND SUBGRADE PREPARATION

AREAS DESIGNATED FOR BORROW SITES, EMBANKMENT CONSTRUCTION, AND STRUCTURAL WORK SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE EMBANKMENT AND RESERVOIR, AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL SHALL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

LANDSCAPING

THE PLACEMENT OF TREES OR SHRUBS ON AN EMBANKMENT IS PROHIBITED. THE ROOT SYSTEM OF LARGE TREES AND SHRUBS CAN THREATEN THE STRUCTURAL INTEGRITY OF THE EMBANKMENT AND POSSIBLY CAUSE ITS FAILURE.

HDPE OUTLET PIPE

THE FOLLOWING CRITERIA SHALL APPLY:

1. **MATERIALS:** WATERTIGHT HDPE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM F2648.
2. **BEDDING:** THE PIPE SHOULD BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS LENGTH. WHERE ROCK OR SOFT, SPONGY, OR OTHER UNSTABLE SOIL IS ENCOUNTERED, IT SHOULD BE REMOVED AND REPLACED WITH SUITABLE EARTH THAT IS SUBSEQUENTLY COMPACTED TO PROVIDE ADEQUATE SUPPORT.
3. **LAYING PIPE:** BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE PER RECOMMENDATIONS FROM THE MANUFACTURER. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE RUN OF PIPE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE TAKEN TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE.

STRUCTURE AND CONDUIT BACKFILL

BACKFILL THAT IS BESIDE PIPES OR STRUCTURES SHALL BE OF THE SAME TYPE AND QUALITY AS SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 4 INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL SHALL COMPLETELY FILL ALL SPACES UNDER AND BESIDE THE PIPE. DURING THE BACKFILLING OPERATION, EQUIPMENT SHALL NOT BE DRIVEN CLOSER THAN 4 FEET, AS MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. ALSO, EQUIPMENT SHALL **NEVER** BE DRIVEN OVER ANY PART OF A STRUCTURE OR PIPE, UNLESS COMPACTED FILL HAS BEEN PLACED TO A DEPTH SPECIFIED BY THE STRUCTURAL LIVE LOAD CAPACITY OF THE STRUCTURE OR PIPE IN ORDER TO ADEQUATELY DISTRIBUTE THE LOAD.

STORMWATER MANAGEMENT FACILITIES MAINTENANCE PLAN

GENERALLY

1. THE OWNER IS RESPONSIBLE FOR PROVIDING OR COORDINATING ALL FACILITY INSPECTIONS AND ANY REQUIRED MAINTENANCE THAT MAY RESULT FROM SUCH INSPECTIONS.
2. REQUIREMENTS LISTED HERE ARE TO BE TAKEN AS A MINIMUM AND DO NOT REPRESENT THE LIMIT OF RESPONSIBILITY.
3. ANY STANDING WATER PUMPED DURING THE MAINTENANCE OPERATION MUST BE DISPOSED OF PER THE VESCH, 1992 EDITION AND ANY LOCAL REQUIREMENTS.

REQUIRED ACTION

STANDARD (DRY) DETENTION PONDS:

1. EVERY (12) TWELVE MONTHS THE RESPONSIBLE PARTY SHALL COMPLETE AND DOCUMENT A VISUAL INSPECTION OF THE ACCESS ROAD, DETENTION POND FACILITY, AND IT'S OUTLET STRUCTURE AND MAKE ANY REPAIRS NECESSARY TO AREAS OF FAILURE/CONCERN DISCOVERED DURING INSPECTION. TYPICAL MAINTENANCE TASKS INCLUDE:
   - 1.1. INSPECT POND OUTFALL CHANNEL FOR EROSION, UNDERCUTTING, RIP-RAP DISPLACEMENT, WOODY GROWTH, ETC.
   - 1.2. INSPECT CONDITION OF PRINCIPAL SPILLWAY AND RISER FOR EVIDENCE OF SPALLING, JOINT FAILURE, LEAKAGE, CORROSION, ETC.
   - 1.3. INSPECT INTERNAL AND EXTERNAL SIDE SLOPES OF THE POND FOR EVIDENCE OF SPARSE VEGETATIVE COVER, EROSION, OR SLUMPING, AND MAKE NEEDED REPAIRS IMMEDIATELY.
   - 1.4. GRASSED AREAS SHALL BE MAINTAINED SO AS TO PROMOTE SOIL STABILIZATION OF POND BANKS AND PROPER FUNCTIONING OF OUTFALL STRUCTURES. THE POND BANKS SHALL BE MOWED A MINIMUM OF TWICE A YEAR TO DISCOURAGE WOODY GROWTH.
   - 1.5. EROSION REPAIR AND TRASH REMOVAL AROUND THE INLET AND OUTLET STRUCTURES AND POND BANKS SHALL BE PERFORMED TWICE DURING THE GROWING SEASON (APRIL-OCTOBER).
2. EVERY (6) MONTHS AND AFTER EACH MAJOR RUNOFF PRODUCING STORM EVENT, THE FOLLOWING MAINTENANCE TASKS SHALL BE PERFORMED:
   - 2.1. INSPECT CONDITION OF ALL OPENINGS AND TRASH RACKS FOR EVIDENCE OF CLOGGING, LEAKAGE, DEBRIS ACCUMULATION, ETC THAT MAY COMPROMISE THE PERFORMANCE OF THE STRUCTURE. SUCH DEBRIS OR SEDIMENTS SHALL BE REMOVED IMMEDIATELY.

OUTLET:

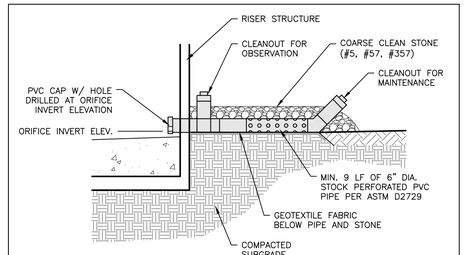
THE FOLLOWING CRITERIA SHALL APPLY:

1. OPENINGS FOR TRASH GUARDS SHALL BE NO LARGER THAN ONE-HALF THE MINIMUM OPENING DIMENSION. TRASH GUARD SHALL BE FABRICATED TO FIT THE SHAPE/DIAMETER OF THE RISER STRUCTURE. **FLAT GRATES FOR TRASH RACKS ARE NOT ACCEPTABLE.** METAL TRASH RACKS AND HARDWARE SHALL BE CONSTRUCTED OF GALVANIZED OR STAINLESS STEEL METAL. TRASH GUARDS ON RISER TOPS SHALL HAVE A HINGED, LOCKABLE ACCESS DOOR WITH A MINIMUM 2'x2' CLEAR OPENING. OPENINGS SHALL ALIGN WITH STEPS IF STEPS ARE PRESENT.

BMP SUMMARY TABLE

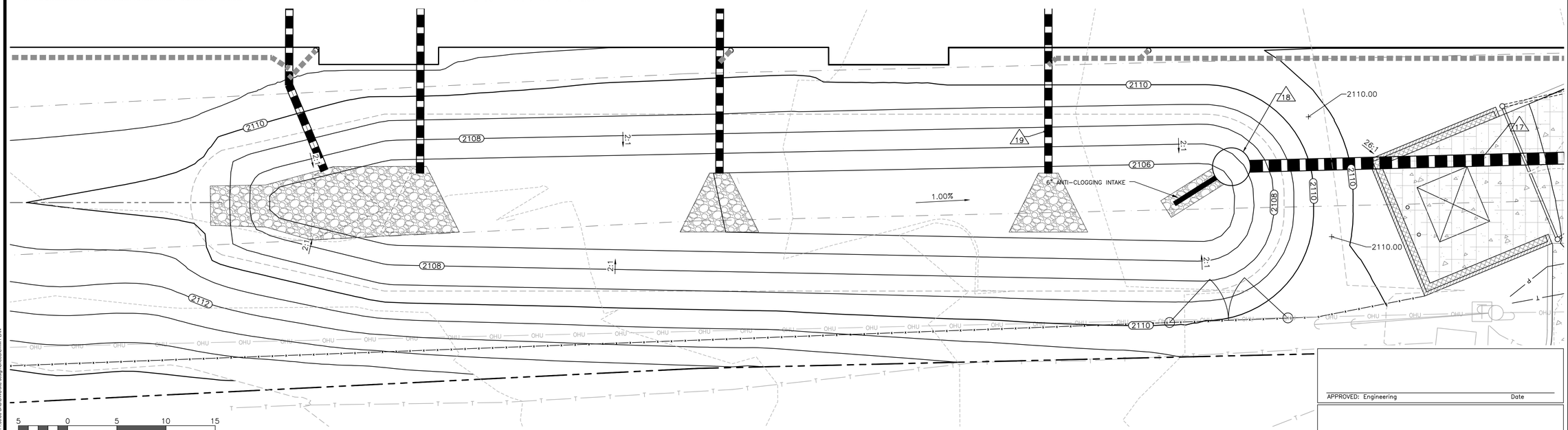
BMP ID	FACILITY TYPE	LAT/LONG	RECEIVING WATERS	HUC CODE	SITE DRAINAGE AREA	IMPERVIOUS AREA	MANAGED TURF AREA
SWM-1	DETENTION ONLY POND	37.1590°N, 80.4166°W	STROUBLES CREEK – NEW RIVER	NE59	0.36 AC.	0.20 AC.	0.16 AC.

TABLE 14.4 VSMH - Clay Liner Specifications		
Property	Test Method (or equal)	Specification
Permeability	ASTM D-2434	$1x10^{-6}$ CM/SEC
Plasticity Index of Clay	ASTM D-423 & D-424	Not less than 15%
Liquid Limit of Clay	ASTM D-2216	Not less than 30%
Clay Particles Passing	ASTM D-422	Not less than 30%
Clay Compaction	ASTM D-2216	95% Std. Proctor



NOTES:
1. PVC CLEANOUTS AND CAPS SHALL BE SCREW-ON TYPE TO FACILITATE ACCESS.
2. PVC PIPE CONNECTION TO RISER STRUCTURE SHALL BE WATERTIGHT.
3. STOCK PERFORATED PIPE MAY BE SUBSTITUTED WITH STANDARD PVC PIPE DRILLED IN FIELD WITH A MINIMUM OF FORTY-TWO ¼" PERFORATIONS SPACED AT 3" ON CENTER.

SMALL ORIFICE ANTI-CLOGGING INTAKE - DETAIL
N.T.S.



5 0 5 10 15
1" = 5'

STORMWATER MANAGEMENT FACILITY #1
SCALE: 1"=5'

APPROVED: Engineering Date

APPROVED: Planning Date

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REVISIONS
10/28/2026

CSL CHRISTIANSBURG EXPANSION
STORMWATER MANAGEMENT PLAN
SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT NE.

DATE: 9/2/2026
SCALE: 1" = 5'
DRAFTER: AWC/MSL
DESIGNER: AWC/MSL
CHECKED: JRT
PROJECT NO.
R0077371.00

COMMONWEALTH OF VIRGINIA
JAMES RICHARD TAYLOR
Lic. No. 55142
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PROFESSIONAL ENGINEER

C07

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"SITE AREA" - PRE-DEVELOPMENT				
LAND COVER TYPE	HSG A	HSG B	HSG C	HSG D
FOREST	0.00 AC	0.00 AC	0.00 AC	0.00 AC
MIXED OPEN	0.00 AC	0.00 AC	0.00 AC	0.00 AC
MANAGED TURF	0.00 AC	0.10 AC	0.29 AC	0.00 AC
IMPERVIOUS	0.00 AC	0.06 AC	0.30 AC	0.00 AC

NATIVE SOIL GROUPS LEGEND

HSG B SOILS

HSG C SOILS

WATER QUANTITY CURVE NUMBER ADJUSTMENTS

ALL AREAS ARE CONSIDERED PREVIOUSLY DEVELOPED AND HSG HAVE BEEN STEPPED FROM THEIR NATIVE RATING
(HSG B ASSUMED AS HSG C)
(HSG C ASSUMED AS HSG D)

EXISTING STORMWATER MANAGEMENT FACILITY

APPROXIMATE LOCATION / DIRECTION

SITE AREA TO EXISTING SWM FACILITY 0.44 AC CN=82

LIMITS OF DISTURBANCE: ±0.75 ACRES

Tc1 100 LF OLF @ 3.00%

Tc2 282 LF SCF @ 5.30%

DA #1 1.97 AC CN=87

Tc3 165 LF CF @ 5.50%

POA #1

30 0 30 60 90

1" = 30'

APPROVED: Engineering Date

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REVISIONS

10/28/2026

CSL CHRISTIANSBURG EXPANSION

PRE-DEVELOPMENT DRAINAGE MAP

SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

DATE: 9/2/2026

SCALE: 1" = 30'

DRAFTER: AWC/MSL

DESIGNER: AWC/MSL

CHECKED: JRT

PROJECT NO.
R0077371.00

COMMONWEALTH OF VIRGINIA
JAMES RICHARD TAYLOR
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"SITE AREA" - POST-DEVELOPMENT				
LAND COVER TYPE	HSG A	HSG B	HSG C	HSG D
FOREST	0.00 AC	0.00 AC	0.00 AC	0.00 AC
MIXED OPEN	0.00 AC	0.00 AC	0.00 AC	0.00 AC
MANAGED TURF	0.00 AC	0.07 AC	0.24 AC	0.00 AC
IMPERVIOUS	0.00 AC	0.09 AC	0.35 AC	0.00 AC

NATIVE SOIL GROUPS LEGEND

HSG B SOILS

HSG C SOILS

WATER QUANTITY CURVE NUMBER ADJUSTMENTS
ALL AREAS ARE CONSIDERED PREVIOUSLY DEVELOPED AND HSG HAVE BEEN STEPPED FROM THEIR NATIVE RATING
(HSG B ASSUMED AS HSG C)
(HSG C ASSUMED AS HSG D)

EXISTING STORMWATER MANAGEMENT FACILITY

APPROXIMATE LOCATION / DIRECTION

SITE AREA TO EXISTING SWM FACILITY 0.26 AC CN=88

DA #1A (TO SWM FACILITY) 0.55 AC CN=90

LIMITS OF DISTURBANCE: ±0.75 ACRES

DA #1B (BYPASS) 1.75 AC CN=86

POA #1

Tc1 100 LF OLF @ 3.00%

Tc2 282 LF SCF @ 5.30%

Tc3 165 LF CF @ 5.50%

Tc4 63 LF OLF @ 1.60%

Tc5 122 LF SCF @ 7.40%

30 0 30 60 90

1" = 30'

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10/28/2026

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POST-DEVELOPMENT DRAINAGE MAP

SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

DATE: 9/2/2026

SCALE: 1" = 30'

DRAFTER: AWC/MSL

DESIGNER: AWC/MSL

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PROJECT NO.
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COMMONWEALTH OF VIRGINIA
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STANDARD EROSION & SEDIMENT CONTROL NOTES

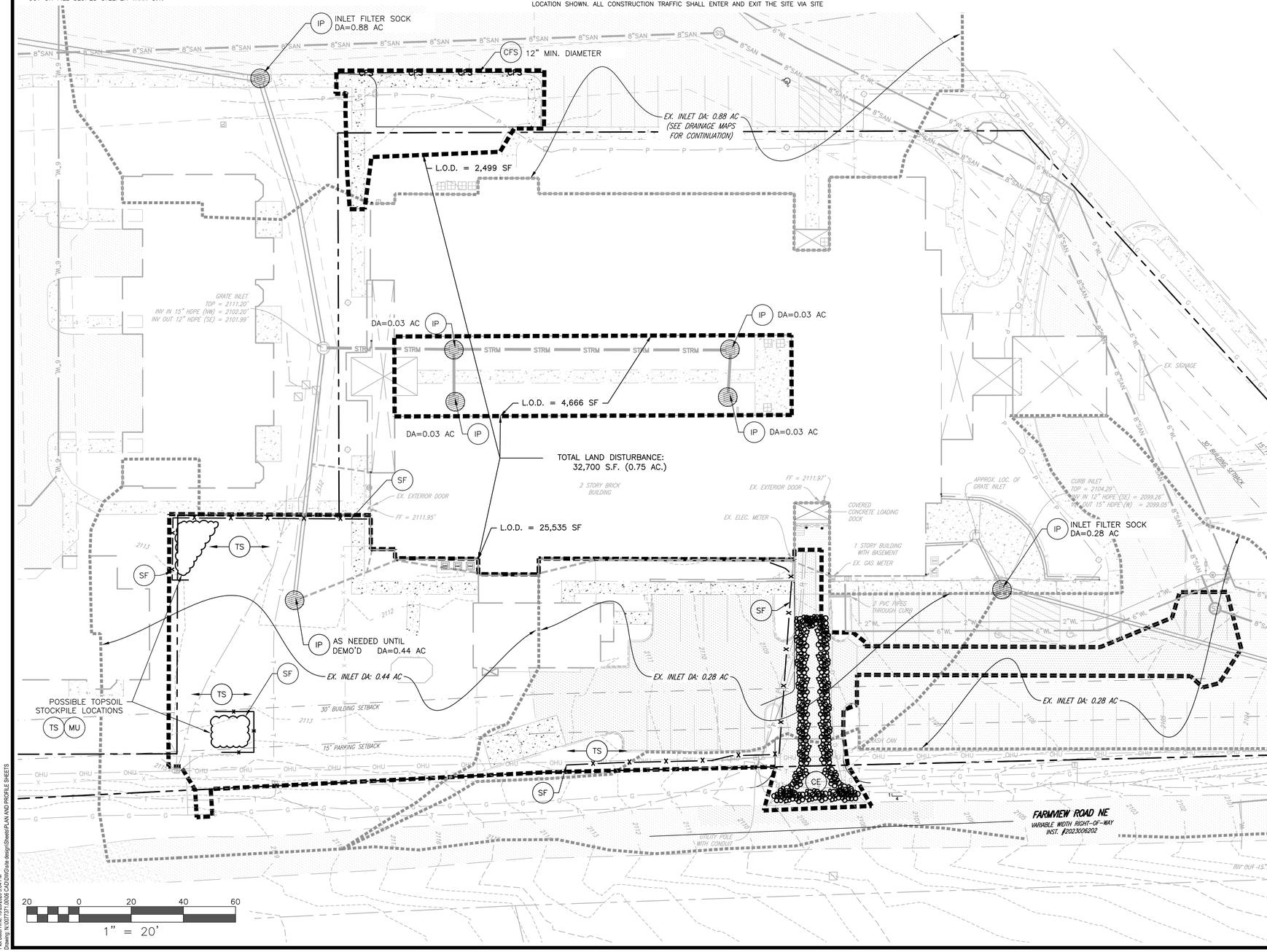
1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
2. THE TOWN ENGINEER AND OTHER INTERESTED AGENCIES SHALL MAKE A CONTINUING REVIEW AND EVALUATION OF THE METHODS USED FOR THE OVERALL EFFECTIVENESS OF THE EROSION CONTROL PROGRAM. AN APPROVED EROSION AND SEDIMENT CONTROL PLAN MAY BE AMENDED BY THE PLAN APPROVING AUTHORITY IF AN ON SITE INSPECTION INDICATED THAT THE APPROVED CONTROL MEASURES ARE NOT EFFECTIVE IN CONTROLLING EROSION AND SEDIMENTATION OR IF BECAUSE OF CHANGED CIRCUMSTANCES, THE APPROVED PLAN CANNOT BE CARRIED OUT.
3. ANY/ALL OFF-SITE DRAINAGE EASEMENTS MUST BE RECORDED PRIOR TO ISSUANCE OF A LAND DISTURBANCE PERMIT FOR THIS PROJECT.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OR PROVISION OF A SEPARATE EROSION CONTROL PLAN REQUIRED FOR EXCAVATED MATERIAL REMOVED FROM THE SITE AND DEPOSITED AT AN OFF-SITE LOCATION. THE CONTRACTOR SHALL GAIN TOWN APPROVAL OF THESE LOCATIONS PRIOR TO STOCKPILING MATERIAL.
5. STABILIZATION BLANKETS AND MATTING SHALL BE INSTALLED ON ALL CUT OR FILL SLOPES STEEPER THAN 3:1.
6. ALL CUT AND FILL SLOPES & CHANNEL SIDE SLOPES WHICH ARE NOT TO BE PAVED SHALL BE SEEDED UNTIL A GOOD STAND OF GRASS IS OBTAINED IN ACCORDANCE WITH VESCH STANDARDS AND SPECIFICATIONS 3.30, 3.31, 3.32 3.35 AND 3.36.
7. PLACE SILT FENCE ALONG CONTOUR TO PREVENT RUNNELS AND CHANNELIZATION BEHIND SILT FENCE.
8. PROPERTIES AND RIGHTS-OF-WAYS ADJOINING THE SITE SHALL BE KEPT CLEAN OF MUD OR SILT CARRIED FROM THE SITE BY VEHICULAR TRAFFIC OR RUNOFF.
9. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MAINTAINED SO THAT SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORMWATER DRAINAGE FACILITIES.
10. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS, SPECIFICATIONS AND DETAILS OF THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) BY THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION (DCR).
11. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE ENGINEERING & GIS DEPARTMENT.
12. IN ADDITION TO THE APPROVED PLAN, A SEPARATE EROSION AND SEDIMENT CONTROL PERMIT IS REQUIRED BEFORE ANY LAND DISTURBING ACTIVITIES CAN COMMENCE. THIS PERMIT WILL BE ISSUED AT THE FIRST PRE-CONSTRUCTION MEETING UPON SUBMITTAL OF THE CONSTRUCTION INSPECTION FEE AND THE EROSION AND SEDIMENT CONTROL SECURITY.

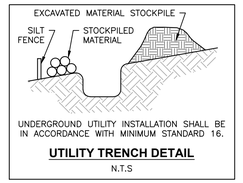
STAGE I CONSTRUCTION SEQUENCE

1. AS THE FIRST STEP IN IMPLEMENTATION OF THIS EROSION AND SEDIMENT CONTROL PLAN, IT SHALL BE THE GENERAL CONTRACTOR'S (GC) RESPONSIBILITY TO REVIEW THIS PLAN IN DETAIL WHILE FAMILIARIZING THEMSELVES WITH THE SITE PRIOR TO COMMENCING ANY WORK.
2. **NOTE: FAILURE TO FOLLOW THE SEQUENCE OF CONSTRUCTION OF THE APPROVED PLANS SHALL BE CONSIDERED A VIOLATION AND WILL RESULT IN FURTHER ENFORCEMENT INCLUDING, BUT NOT LIMITED TO, STOP WORK ORDERS AND CIVIL PENALTIES.**
3. A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE OWNER/DEVELOPER, GC, ENGINEER, TOWN STAFF, AND ANY OTHER NECESSARY AGENCIES IN ATTENDANCE. ATTENDEES SHALL BE GIVEN AT LEAST ONE WEEK NOTICE PRIOR TO THE PRECONSTRUCTION MEETING. NO LAND DISTURBING ACTIVITY SHALL OCCUR PRIOR TO THIS MEETING OR THE ISSUANCE OF THE LAND DISTURBANCE PERMIT.
4. IT SHALL BE THE GC'S RESPONSIBILITY TO READ AND ADHERE TO THE STORMWATER POLLUTION PLAN AND THE RECOMMENDATIONS OF THE ONSITE GEOTECHNICAL ENGINEER.
5. THE CONTRACTOR SHALL CONTACT THE CHRISTIANSBURG ENGINEERING DEPARTMENT ((540) 382-6120) IN WRITING A MINIMUM FIVE (5) BUSINESS DAYS IN ADVANCE OF THE PRE-CONSTRUCTION MEETING.
6. GC SHALL COORDINATE WITH ENGINEER TO HAVE LIMITS OF DISTURBANCE, PERIMETER CONTROLS AND PROPERTY CORNERS CLEARLY MARKED BY FLAGGING OR PAINT. TREES TO BE REMOVED SHOULD BE MARKED CLEARLY WITH FLAGGING OR PAINT TO DISTINGUISH THEM FROM TREES TO REMAIN. TREES LOCATED WITHIN THE LIMITS OF DISTURBANCE INTENDED TO REMAIN SHOULD BE PROTECTED WITH TREE PROTECTION FENCING. NO TREES OUTSIDE OF THE LIMITS OF DISTURBANCE SHOULD BE REMOVED.
7. GC SHALL CONTACT MISS UTILITY TO HAVE THE LOCATION OF ANY AND ALL EXISTING UTILITIES MARKED. GC SHALL COORDINATE ANY RELOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, ELECTRIC AND TELECOMMUNICATION LINES AS REQUIRED.
8. GC SHALL IDENTIFY AND PROPERLY MARK ALL AREAS DENOTED AS "CRITICAL" PRIOR TO COMMENCING ANY CONSTRUCTION. CAUTION SHOULD BE EXERCISED THROUGHOUT CONSTRUCTION TO ENSURE NO ADVERSE EFFECTS ARE CREATED TO ANY CRITICAL AREAS.
9. CLEAR AREAS AROUND THE PROPOSED CONSTRUCTION ENTRANCE AND INSTALL IN THE LOCATION SHOWN. ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE SITE VIA SITE CONSTRUCTION ENTRANCE ONLY. DURING WET WEATHER CONDITIONS, DRIVERS OF CONSTRUCTION VEHICLES SHALL BE REQUIRED TO WASH THEIR WHEELS BEFORE ENTERING HIGHWAY. CONTRACTOR SHALL ENSURE ADEQUATE WASHING FACILITIES FOR CONSTRUCTION TRAFFIC.
10. **ONCE THE CONSTRUCTION ENTRANCE IS INSTALLED AND FUNCTIONING, THE CONTRACTOR SHALL ACCESS THE REMAINDER OF THE SITE. INSTALL THE PERIMETER EROSION AND SEDIMENT CONTROL MEASURES ON THE APPROVED PLAN.**
11. **NOTIFY TOWN STAFF AND DESIGN PROFESSIONAL OF INTENT TO BEGIN GENERAL SITE CONSTRUCTION. TOWN STAFF SHALL BE AFFORDED THE OPPORTUNITY TO INSPECT INSTALLED EROSION AND SEDIMENT CONTROL MEASURES AND PROVIDE APPROVAL PRIOR TO COMMENCING WITH FULL LAND DISTURBANCE.**
12. AS THE DEMOLITION & GRADING PROGRESSES, THE CONTRACTOR SHALL WORK TOWARDS TRANSITIONING TO STAGE II OF THE OVERALL EROSION AND SEDIMENT CONTROL PLAN.
13. CONTINUE TO STAGE II OF THE CONSTRUCTION SEQUENCE.

LEGEND

C-PCM-04	SILT FENCE	SF
C-SCM-03	TEMPORARY STONE CONSTRUCTION ENTRANCE	CE
C-SCM-04	INLET PROTECTION	IP
C-SCM-02	CONSTRUCTION ROAD STABILIZATION	CRS
C-PCM-05	COMPOST FILTER SOCK	CFS
C-SSM-09	TEMPORARY SEEDING	TS





CRITICAL AREAS

THE FOLLOWING AREAS ARE IDENTIFIED AS CRITICAL EROSION AREAS AND SHALL BE STABILIZED AND MONITORED DURING CONSTRUCTION PER THE EROSION AND SEDIMENT CONTROL PRACTICES SPECIFIED ON THE PLAN. PARTICULAR CARE SHALL BE EXERCISED IN THESE AREAS TO PREVENT DAMAGE TO DOWNSTREAM PROPERTIES:

1. PUBLIC RIGHT-OF-WAY: PREVENT MUD FROM TRACKING ONTO EXISTING PUBLIC STREETS
2. ADJACENT PROPERTIES: ENSURE RUNOFF FROM SITE DOES NOT DAMAGE DOWNSTREAM PROPERTIES

INLET PROTECTION NOTES

1. ALL INLET PROTECTION SHALL BE **C-SCM-04-1** PER **VSMH** UNLESS NOTED OTHERWISE.
2. ALL INLET PROTECTION DRAINAGE AREAS ARE LESS THAN 1 ACRE

APPROVED: Engineering Date

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REVISIONS

10/28/2026

CSL CHRISTIANSBURG EXPANSION

EROSION CONTROL PLAN - STAGE 1

SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

DATE: 9/2/2026
SCALE: 1" = 20'
DRAFTER: AWC/MSL
DESIGNER: AWC/MSL
CHECKED: JRT
PROJECT NO.
R0077371.00

COMMONWEALTH OF VIRGINIA
JAMES RICHARD TAYLOR
Lic. No. 55142
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PROFESSIONAL ENGINEER

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STAGE II CONSTRUCTION SEQUENCE

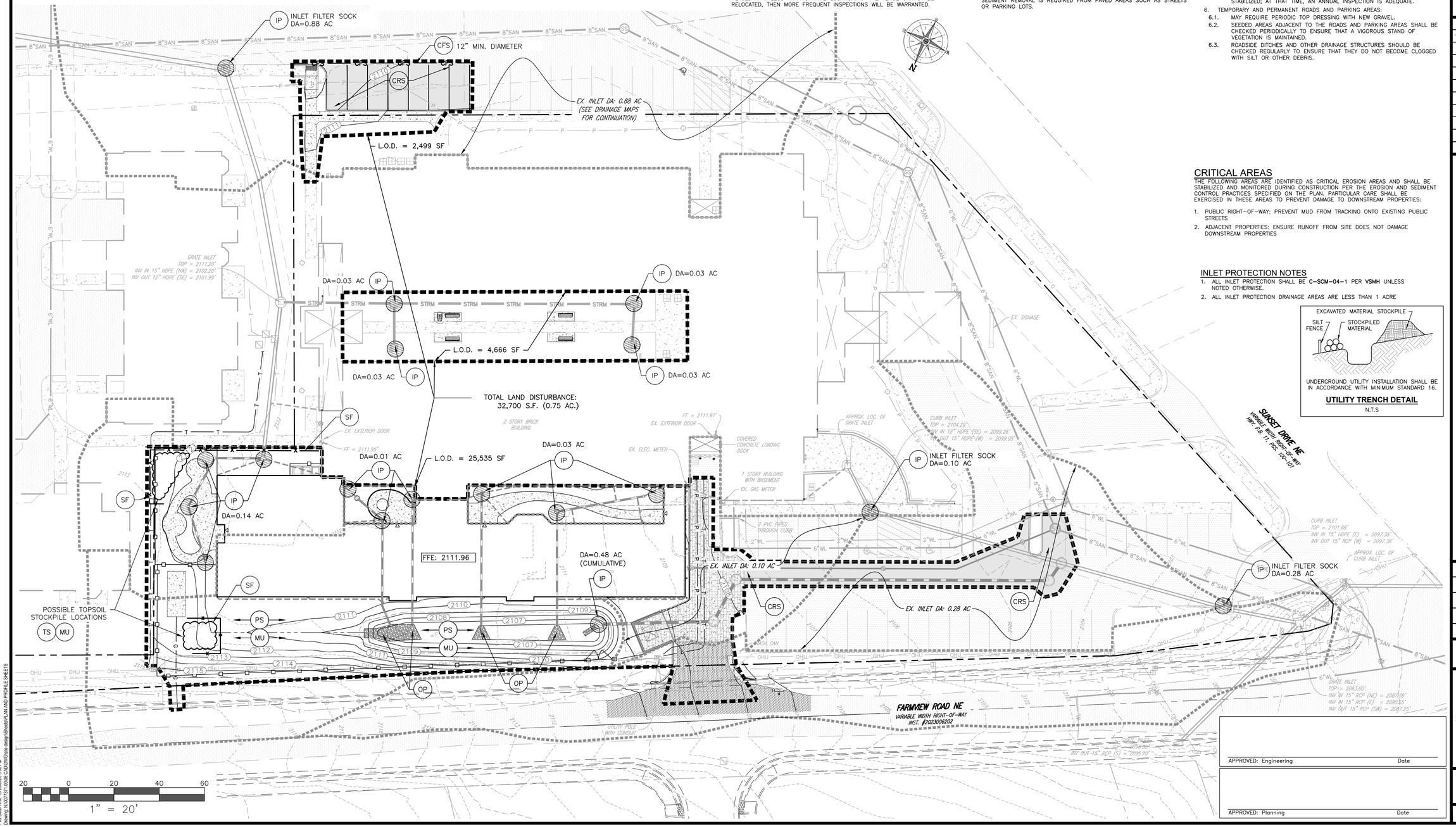
1. THE CONTRACTOR SHALL CONTINUALLY MONITOR THE SITE ENSURING THAT ALL NECESSARY EROSION AND SEDIMENT CONTROL DEVICES INSTALLED AS PART OF THE STAGE I PLAN ARE FUNCTIONAL, MAINTAINED, AND PHASED OUT AT THE PROPER TIME FRAME. NO SEDIMENT AND EROSION CONTROL DEVICE SHALL BE PHASED OUT WITHOUT APPROVAL FROM TOWN EROSION AND SEDIMENT CONTROL INSPECTION PERSONNEL.
2. ALL DENUDED AREAS WITHIN THE LIMITS OF DISTURBANCE TO REMAIN DORMANT MORE THAN 14 DAYS SHALL HAVE TEMPORARY SEEDING APPLIED. SODDING, MULCH AND TOPSOIL SHALL ALSO BE APPLIED AS NECESSARY TO ESTABLISH VEGETATIVE GROWTH. ALL GRADING OPERATIONS SHALL BE COMPLETED IN A MANNER CONDUCIVE TO MAXIMIZING THE OPERATIONAL PERIOD OF THE SEDIMENT TRAPS. AREAS BROUGHT TO GRADE WITH SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH SODDING.
3. STOCKPILE TOPSOIL OUT OF THE WAY OF STORMWATER MANAGEMENT FACILITY, PARKING AND BUILDING PAD OPERATIONS. PROVIDE SILT FENCE, SEEDING, AND MULCHING WHERE USED.
4. INSTALL STORM SEWER AS AS GRADING ALLOWS, MOVING FROM DOWNSTREAM TO UPSTREAM. INSTALL MANHOLE BASES AND RISERS. RUNOFF SHOULD BE DIVERTED AROUND UNTIL GRADING REACHES SUBGRADE BY LEAVING UNFINISHED MANHOLE TOP HIGHER THAN SURROUNDING GRADE. INSTALL INLET PROTECTION IMMEDIATELY ON ANY STRUCTURE WITHOUT A SOLID TOP PRIOR TO ACCEPTING ANY STORMWATER RUNOFF.
5. INSTALL SANITARY SEWER AND SERVICE LATERALS AS BUILDING AND GRADING ALLOWS.
6. BEGIN CONSTRUCTION OF STORMWATER POND BEFORE BUILDING CONSTRUCTION. INSTALL OUTLET CONTROL STRUCTURE, ESTABLISH SEEDING ON ALL 2:1 SLOPES BEFORE STARTING BUILDING CONSTRUCTION. INSTALL COURTYARD STORM DRAIN PIPES BEFORE BUILDING PADS AND FOUNDATIONS.
7. BUILDING CONSTRUCTION MAY BEGIN AFTER SWM FACILITY IS MOSTLY COMPLETE AND ONCE THE BUILDING PADS HAVE BEEN BROUGHT TO SUBGRADE.
8. CONNECT ALL DOWNSPOUTS TO AREA DRAIN PIPES LEADING TO SWM FACILITY.
9. COMPLETE REMAINING EARTHWORK AS SHOWN ON THIS SHEET.
10. INSTALL CURBS AND GUTTER. ENSURE INLET PROTECTION REMAINS IN PLACE AND FUNCTIONING FOR ALL INLETS.
11. AN AS-BUILT SURVEY OF THE STORMWATER MANAGEMENT FACILITY SHALL BE PERFORMED TO ENSURE IT HAS BEEN CONSTRUCTED ACCORDING TO THE SITE PLAN. CONTRACTOR TO NOTIFY TOWN STAFF AND THIRD PARTY STAFF TO BE PRESENT FOR VISUAL SURVEY, PHOTOGRAPHIC RECORDATION, AND PHYSICAL SURVEY (AS NEEDED) FOR THE STORMWATER BMP.
12. SURVEYED STORAGE VOLUME AND ELEVATION WILL BE PART OF THE AS BUILT/RECORD DRAWING TO VERIFY STORMWATER MANAGEMENT AREAS. IF SUBSTANTIAL DIFFERENCES ARE DISCOVERED, THE CONTRACTOR AND DESIGN ENGINEER SHALL COORDINATE ANY MODIFICATIONS REQUIRED TO MAKE THE FACILITY FUNCTION AS INTENDED.
13. BEGIN ASPHALT/CONCRETE PAVING. COMPLETE ALL PARKING AND SIDEWALK AREAS.
14. ONCE PAVING IS COMPLETE AND FINAL GRADES ARE ACHIEVED, IMMEDIATELY TOPSOIL, AND SODDING.
15. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE PERMANENTLY STABILIZED.
16. THE CONTRACTOR SHALL CONTACT THE TOWN OF CHRISTIANSBURG ENGINEERING DEPARTMENT STAFF FOR FINAL SITE INSPECTION.
17. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE REMOVED FROM THE SITE, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR TOWN OFFICIALS.
18. ALL DEVIATIONS FROM THIS SEQUENCE SHALL BE COORDINATED WITH THE ENGINEER AND THE TOWN OF CHRISTIANSBURG'S EROSION AND SEDIMENT CONTROL INSPECTION PERSONNEL.

LEGEND

C-PCM-04	SILT FENCE	SF
C-SSM-10	PERMANENT SEEDING	PS
C-SSM-11	MULCHING	MU
C-SCM-04	INLET PROTECTION	IP
C-PCM-05	COMPOST FILTER SOCK	CFS
C-ECM-15	OUTLET PROTECTION	OP

ESC MAINTENANCE SCHEDULE

1. CONSTRUCTION ENTRANCES:
   - 1.1. INSPECT THE CONSTRUCTION ENTRANCE WEEKLY AND IMMEDIATELY AFTER EACH RAINFALL.
   - 1.2. MAINTAIN THE ENTRANCE TO PREVENT TRACKING OR FLOW OF DIRT, MUD, OR SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, INCLUDING PERIODIC TOP DRESSING WITH ADDITIONAL STONE AND REPAIR OR CLEANOUT OF STRUCTURES THAT TRAP SEDIMENT OR BOTH. MAINTAIN A STOCKPILE OF ROCK AT THE SITE FOR TOP DRESSING PURPOSES.
   - 1.3. MUD AND SOIL PARTICLES WILL EVENTUALLY CLOG THE VOIDS IN THE STONE AND COMPROMISE THE EFFECTIVENESS OF THE CONSTRUCTION ENTRANCE. WHEN THIS OCCURS, TOP DRESS THE PAD WITH NEW STONE. COMPLETE STONE REPLACEMENT IS NECESSARY WHEN THE PAD BECOMES WHOLLY CLOGGED WITH SEDIMENT AND THE TOPDRESSING IS NO LONGER EFFECTIVE AT REMOVING ACCUMULATED SEDIMENT FROM TIRES. IMMEDIATELY REMOVE ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR STORM DRAINS. DO NOT USE WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS UNDER ANY CIRCUMSTANCES.
   - 1.4. IMMEDIATELY REMOVE STONES FROM THE ADJOINING ROADWAY THAT CONSTRUCTION TRAFFIC DISLODGED FROM THE ENTRANCE. MAINTAIN THE AREA UNDER THE WASH RACK FREE OF ACCUMULATED SEDIMENT. REPAIR OR REPLACE THE WASH RACK IF IT BECOMES DAMAGED.
2. SILT FENCE BARRIER:
   - 2.1. INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. MAKE ANY REPAIRS IMMEDIATELY.
   - 2.2. PAY CLOSE ATTENTION TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING. THIS IS COMMONLY A SIGN THE FENCE HAS EITHER BEEN IMPROPERLY INSTALLED OR IS PLACED IN A LESS THAN OPTIMAL LOCATION. IF THE FENCE CANNOT BE RELOCATED, THEN MORE FREQUENT INSPECTIONS WILL BE WARRANTED.
   - 2.3. REPLACE THE FABRIC PROMPTLY IF THE FABRIC ON A SILT FENCE DECOMPOSES OR BECOMES INEFFECTIVE BEFORE THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY.
   - 2.4. REMOVE TRASH, FLOATABLES, AND LARGE SEDIMENT DEPOSITS AFTER EACH STORM EVENT AND WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
   - 2.5. DRESS TO CONFORM TO EXISTING GRADE, PREPARE, AND SEED ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED.
   - 2.6. WHERE SILT FENCE OR ANY OF ITS DERIVATIVES HAVE FAILED BECAUSE OF CONCENTRATED RUNOFF, A ROCK FILTER OUTLET (SPECIFICATION BMP C-SCM-08) MUST BE PLACED AT THE LOCATION. DO NOT REINSTALL USING THE COMPROMISED PRACTICE.
3. STORM DRAIN INLET PROTECTION:
   - 3.1. ROUTINE INSPECTION AND MAINTENANCE ARE CRITICAL TO ENSURING THE ADEQUATE PERFORMANCE OF INLET PROTECTION. INCLUDE THE FOLLOWING ACTIVITIES AS PART OF ANY MAINTENANCE PROGRAM (MINNESOTA POLLUTION CONTROL AGENCY 2023):
   - 3.2. INSPECT ALL INLET PROTECTION DEVICES AT LEAST TWICE WEEKLY (72 HOURS OR MORE BETWEEN EACH INSPECTION) AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (0.25 INCH OR MORE).
   - 3.3. DURING EXTENDED RAINFALL EVENTS, INSPECT INLET PROTECTION DEVICES AT LEAST ONCE EVERY 24 HOURS.
   - 3.4. REPLACE CLOGGED AGGREGATE OR FILTER FABRIC IMMEDIATELY.
   - 3.5. LOOK FOR DAMAGE OR TEARS TO FABRIC CAUSED BY LARGE FLOWS.
   - 3.6. INSPECT DOWNSTREAM INLETS, PIPES, AND OTHER INFRASTRUCTURE AFTER SEVERE STORMS TO CHECK FOR BYPASSED MATERIAL.
   - 3.7. REMOVE SEDIMENT FROM TEMPORARY INLET PROTECTION METHODS WHEN SEDIMENT REACHES DEPTHS OF 2 OR 3 INCHES. MORE FREQUENT SEDIMENT REMOVAL IS REQUIRED FROM PAVED AREAS SUCH AS STREETS OR PARKING LOTS.
   - 3.8. REMOVE ALL INLET PROTECTION DEVICES WITHIN 30 DAYS AFTER THE SITE IS STABILIZED, OR WHEN THE INLET PROTECTION IS NO LONGER NEEDED.
   - 3.9. BRING THE DISTURBED AREA TO FINAL GRADE AND APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET WITH VEGETATION.
   - 3.10. CLEAN STORM DRAINAGE SYSTEM OF SEDIMENT AND DEBRIS BEFORE FINAL INSPECTION.
   - 3.11. IN KARST AREAS, INSPECT EXCAVATED DROP INLET SEDIMENT TRAPS REGULARLY AND AFTER EACH PRECIPITATION EVENT FOR SUBSIDENCE. SUBSIDENCE IS A CRITERION OF FAILURE. AS SUCH, MITIGATE SUBSIDENCE IMMEDIATELY USING THE APPROPRIATE ENGINEERING PRACTICE.
4. SEEDED AREAS:
   - 4.1. INSPECT SEEDED AREAS EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 0.5 INCH OR MORE OF PRECIPITATION. RESEED ANY BARE AREAS > 500 SQUARE FEET.
   - 4.2. COVER SEEDED AREA WITH STRAW OR MULCH TO MODERATE SOIL MOISTURE AND TEMPERATURE DURING THE INITIAL GERMINATION PERIOD.
   - 4.3. SUPPLY TEMPORARY SEEDING WITH ADEQUATE MOISTURE. SUPPLY WATER AS NEEDED, ESPECIALLY IN ABNORMALLY HOT OR DRY WEATHER OR ON ADVERSE SITES. CONTROL WATER APPLICATION RATES TO PREVENT RUNOFF.
5. SOIL STABILIZATION BLANKETS AND MATTING:
   - 5.1. INSPECT ALL SOIL STABILIZATION BLANKETS AND MATTING PERIODICALLY FOLLOWING INSTALLATION, PARTICULARLY AFTER RAINSTORMS, TO CHECK FOR EROSION AND UNDERMINING. REPAIR ANY DISLOCATION OR FAILURE IMMEDIATELY. IF WASHOUTS OR BREAKAGE OCCURS, REINSTALL THE MATERIAL AFTER REPAIRING DAMAGE TO THE SLOPE OR CHANNEL. CONTINUE TO MONITOR THESE AREAS UNTIL THEY BECOME PERMANENTLY STABILIZED; AT THAT TIME, AN ANNUAL INSPECTION IS ADEQUATE.
6. TEMPORARY AND PERMANENT ROADS AND PARKING AREAS:
   - 6.1. MAY REQUIRE PERIODIC TOP DRESSING WITH NEW GRAVEL.
   - 6.2. SEEDED AREAS ADJACENT TO THE ROADS AND PARKING AREAS SHALL BE CHECKED PERIODICALLY TO ENSURE THAT A VIGOROUS STAND OF VEGETATION IS MAINTAINED.
   - 6.3. ROADSIDE DITCHES AND OTHER DRAINAGE STRUCTURES SHOULD BE CHECKED REGULARLY TO ENSURE THAT THEY DO NOT BECOME CLOGGED WITH SILT OR OTHER DEBRIS.



CRITICAL AREAS

THE FOLLOWING AREAS ARE IDENTIFIED AS CRITICAL EROSION AREAS AND SHALL BE STABILIZED AND MONITORED DURING CONSTRUCTION PER THE EROSION AND SEDIMENT CONTROL PRACTICES SPECIFIED ON THE PLAN. PARTICULAR CARE SHALL BE EXERCISED IN THESE AREAS TO PREVENT DAMAGE TO DOWNSTREAM PROPERTIES:

1. PUBLIC RIGHT-OF-WAY: PREVENT MUD FROM TRACKING ONTO EXISTING PUBLIC STREETS
2. ADJACENT PROPERTIES: ENSURE RUNOFF FROM SITE DOES NOT DAMAGE DOWNSTREAM PROPERTIES

INLET PROTECTION NOTES

1. ALL INLET PROTECTION SHALL BE **C-SCM-04-1** PER **VSMH** UNLESS NOTED OTHERWISE.
2. ALL INLET PROTECTION DRAINAGE AREAS ARE LESS THAN 1 ACRE

UNDERGROUND UTILITY INSTALLATION SHALL BE IN ACCORDANCE WITH MINIMUM STANDARD 16.

UTILITY TRENCH DETAIL

N.T.S

APPROVED: Engineering Date

APPROVED: Planning Date

Westwood
Westwood Professional Services, Inc.
80 COLLEGE STREET, STE H
CHRISTIANSBURG, VA 24073
T: 540.381.4290
F: 540.426.3435
westwoodps.com

REVISIONS

10/28/2026

CSL CHRISTIANSBURG EXPANSION

EROSION CONTROL PLAN - STAGE 2

SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

DATE: 9/2/2026
SCALE: 1" = 20'
DRAFTER: AWC/MSL
DESIGNER: AWC/MSL
CHECKED: JRT
PROJECT NO.
R0077371.00

COMMONWEALTH OF VIRGINIA
JAMES RICHARD TAYLOR
Lic. No. 55142
10/28/26
PROFESSIONAL ENGINEER

C11

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VIRGINIA EROSION AND SEDIMENT CONTROL LAW, REGULATIONS, AND CERTIFICATION REGULATIONS; FY 2024; 9VAC25-875-560.

MINIMUM STANDARDS

1. 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.
2. DURING CONSTRUCTION OF A PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
   A. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.
   B. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS BEING UTILIZED.
7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND THE RECEIVING CHANNEL.
12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED ON NONERODIBLE MATERIAL SHALL BE PROVIDED.
14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.
15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
   A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
   B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
   C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
   D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
   E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
   F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VSMH OR VESMP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:
   A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
   B. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
      1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA.
      2)(a)NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.
      2)(b)ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
      2)(c)PIPES AND STORM SEWER CONVEYANCE SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
   C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
      1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR
      2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES; OR
      3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR
      4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION, OR OTHER MEASURES THAT IS SATISFACTORY TO THE VSMH OR VESMP AUTHORITY TO PREVENT DOWNSTREAM EROSION.
   D. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
   E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT OF THE SUBJECT PROJECT.
   F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, THE APPLICANT SHALL OBTAIN APPROVAL FROM THE VSMH OR VESMP AUTHORITY FOR A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
   G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
   H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
   I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE, OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
   J. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL, OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
   K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL, AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS, AND OTHER WATERS OF THE STATE.
   L. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5-YEAR, TWO-YEAR, AND 10-YEAR 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING THE SITE WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN THE SITE WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN THE SITE'S PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 62.1-44.15:28 OF THE CODE OF VIRGINIA (VESMA) OR § 62.1-44.15:54 OR 62.1-44.15:65 OF THE CODE OF VIRGINIA (ESCL).
   M. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE CODE OF VIRGINIA (ESCL) AND THIS SUBDIVISION 19 SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE VESMA AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES (I) ARE IN ACCORDANCE WITH PROVISIONS FOR TIME LIMITS ON APPLICABILITY OF APPROVED DESIGN CRITERIA IN 9VAC25-875-480 OR GRANDFATHERING IN 9VAC25-875-490, IN WHICH CASE THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE CODE OF VIRGINIA (ESCL) SHALL APPLY; OR (II) ARE EXEMPT PURSUANT TO § 62.1-44.15:34 G 2 OF THE CODE OF VIRGINIA (VESMA).
   N. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-875-600 SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF THIS SUBDIVISION 19.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK AND VIRGINIA REGULATIONS 9VAC25-875 VIRGINIA EROSION AND STORMWATER MANAGEMENT REGULATIONS.

ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

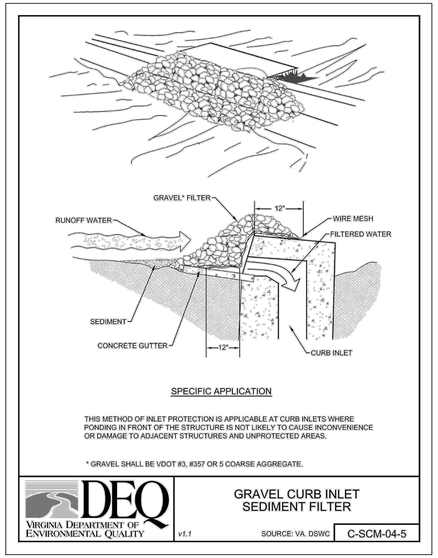
ES-5: PRIOR TO, COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

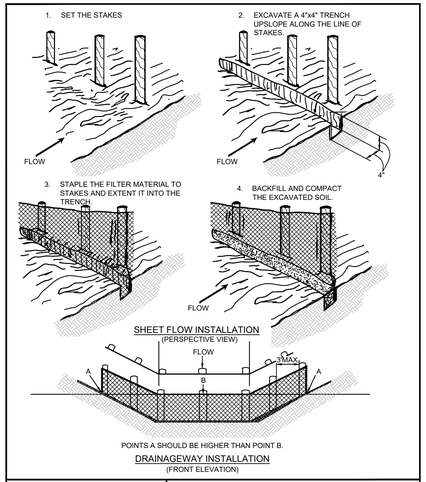


SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

* GRAVEL SHALL BE VDOT #3, #357 OR 5 COARSE AGGREGATE.

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY — v1.1 — GRAVEL CURB INLET SEDIMENT FILTER — SOURCE: VA. DSWC — C-SCM-04-5



VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY — v1.1 — CONSTRUCTION OF SILT FENCE WITHOUT WIRE SUPPORT — SOURCE: ADAPTED FROM STRAW & FAB. BARRIERS, SHERWOOD & WYANT — C-PCM-04-2B

Table C-PCM-05-2 Compost Sock Fabric Minimum Specifications

Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters (inches)	12 18	8 12 18 24 32	12 18 24 32	12 18 24 32	12 18 24 32
Mesh Opening (inches)	0.375	0.375	0.375	0.375	0.125
Tensile Strength	26 psi	26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Orginal Strength (ASTM G-155)	23% at 1,000 hour	23% at 1,000 hour		100% at 1,000 hour	100% at 1,000 hour
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years
Two-ply systems					
Inner Containment Netting	HDPE biaxial net Continuously wound Fusion-welded junctures 0.75-inch x 0.75-inch maximum aperture size				
Outer Filtration Mesh	Composite polypropylene fabric (woven layer and non-woven fleece mechanically fused via needle punch) 0 1875-inch maximum aperture size				

Sock fabrics composed of burlap may be used on projects lasting 6 months or less.

Source: Filtrexx & JMD
" = inch(es)
HDPE = high-density polyethylene
psi = pounds per square inch

Source compost that is a well decomposed, weed-free organic matter derived from agriculture, food, stump grindings, and yard or wood/bark organic matter sources with no objectionable odors.

Ensure the compost is aerobically composted.

Ensure the compost product does not resemble the raw material from which it was derived.

Wood and bark chips, ground construction debris, or reprocessed wood products are not acceptable as the organic component of the mix.

Obtain compost with the physical parameters that comply with the standards in Table C-PCM-05-3.

Provide certification that the compost meets the standards in Table C-PCM-05-3.

Table C-PCM-05-3 Compost Material Standards

Organic Matter Content	25% - 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	6.0 - 8.0
Moisture Content	30% - 60%
Particle Size	99% passing a 2-inch screen and 10 - 50% passing a 0.375-inch screen
Soluble Salt Concentration	5.0 Deci Siemens per meter (dS/m; millimho per centimeter [mmhos/cm]) maximum

Source: SAG / NYS

TableC-SSM-07-5 Lime and Fertilizer Specifications

	Lime and Fertilizer Specifications
Pulverized agricultural limestone	Apply 90 lbs./1,000 sq. ft. (2 tons/acre) of an agricultural grade of limestone
Fertilizer	Apply **10-10-10** fertilizer at a rate of **500** lbs. /acre or 12 lbs. /1,000 ft². Apply additional phosphorus and potassium 30 to 60 days later based on the results of a soil test. Apply an additional equivalent of 1 lb. /1,000 ft² of nitrogen when the phosphorus and potassium are applied. Never apply more than 1 pound of water-soluble nitrogen per 1,000 ft² within a 30-day period and no more than 2 yearly lbs. N/1,000 ft².

Table C-SSM-11-5 Organic Mulch Materials and Application Rates

Mulches	Rate Per Acre	Rate Per 1,000 ft²	Notes
Straw or Hay	1.5 to 2 tons	70 to 90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand. Use a minimum of 2 tons per acre for winter cover.
Fiber Mulch	1,500 lbs.	35 lbs.	Do Not use as mulch for winter cover or during hot, dry periods. Apply as slurry. When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2000 lbs./acre or 45 lbs./1,000 ft²
Corn Stalks	4 to 6 tons	185 to 275 lbs.	Cut or shredded in 4 to 6 inch lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood Chips	4 to 6 tons	185 to 275 lbs.	Free of coarse matter. Air-dried. Treat with 12 lbs. nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark Chips or Shredded Bark	50 to 70 cy	1 to 2 cy	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.

Table C-SSM-10-10 Ground Agricultural Limestone* (lbs./1,000 ft²) needed to Correct pH Level of Acid Soils to 6.5

Existing pH	Soil Texture		
	Sandy Loam	Loam	Clay Loam
5.2	105	120	140
5.0	120	140	160
4.8	125	180	205
4.6	155	210	230
4.0	200	250	300

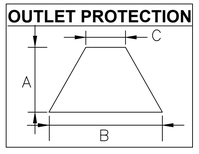
*Apply lime in accordance with the results of a soil test such as may be obtained through the soil testing laboratory at Virginia Tech or through a reputable commercial laboratory.

DUST CONTROL PROCEDURES

DUST CONTROL MEASURES SHALL BE EMPLOYED TO REDUCE SURFACE AND AIR MOVEMENT OF DUST DURING LAND DISTURBING, DEMOLITION, AND CONSTRUCTION ACTIVITIES. THE FOLLOWING MEASURES ARE RECOMMENDED AND ADDITIONAL MEASURES MAY BE USED WHERE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK OR AS APPROVED BY THE VSMH AUTHORITY.

1. VEGETATIVE COVER: PHASE CLEARING AND GRADING OPERATIONS AND UTILIZE TEMPORARY SEEDING IN ACCORDANCE WITH MS #1.
2. IRRIGATION: SPRAY UNTIL SURFACE IS WET; OFFERS FAST PROTECTION.
3. STONE: EFFECTIVE TO STABILIZE ROADS USING CRUSHED STONE OR COARSE GRAVEL.
4. MULCH: NOT RECOMMENDED FOR AREAS WITHIN HEAVY TRAFFIC PATHWAYS. BINDERS OR TACKIFIERS SHOULD BE USED TO TACK ORGANIC MULCHES.

OUTLET PROTECTION



OUTLET PROTECTION DIMENSIONS

STR #	DIM A	DIM B	DIM C	RIPRAP	MIN. d	TYPE
OP #1 (TYP. 4 LOC)	6.0'	8.0'	2'	CL. AI	2'	1

NOTE: MEAN D_{50} FOR CLASS AI RIPRAP IS 0.9 FT; MEAN D_{50} FOR CLASS I RIPRAP IS 1.1' PER VSMH TABLE C-ECM-13-3. PER FHWA GUIDANCE: D_{100} = 1.5 x D_{50}

Table C-SSM-09-3 Plant Material for Temporary Seeding

Acceptable Temporary Seeding Plant Materials "Quick Reference for all Regions"

Planting Dates	Species	Rate (pounds per acre)
Sept. 1 - Feb. 15	50/50 Mix of annual ryegrass (Lolium multi-florum) & cereal (winter) rye (Secale cereale)	50 - 100
Feb. 16 - Apr. 30*	Annual ryegrass (Lolium multi-florum)	60 - 100
May 1 - Aug. 31	German millet (Setaria italica)	50

*The shift date for annual rye to German millet should be April 15 for the Piedmont and Coastal Plain, rather than May 1.

Table C-SSM-10-6 Suggested and Example Site-Specific Seeding Mixtures for Appalachian/Mountain Area

Site Condition	Seed Mix	Application Rate (pounds per acre)
Low-Maintenance Slope (>3:1) or Inaccessible Area***	Tall Fescue****	50 -75
	Red Top or Hard Fescue	10 - 20
	Annual Lespedeza	10 - 15
	White Clover and/or Birdsfoot Trefoil***	10 - 20
	Seasonal Nurse/Cover Crop**	30 - 40

*Perennial ryegrass will germinate faster and at lower soil temperatures than fescue, thereby providing cover and erosion resistance for seedbed.
**Use seasonal nurse crop in accordance with seeding dates as stated below:
March 1 through May 15 - annual/cereal rye
May 16 through August 15 - foxtail/German millet
August 16 through February 28 - annual/cereal rye
***All legume seed must be properly inoculated. Legumes recommended unless periodic N fertilization maintenance intended. Flat pea at 20 lbs/acre may be utilized where warranted. All legume seed must be properly inoculated. Weeping lovegrass may also be included in any slope or low-maintenance mixture during warmer seeding periods; add 10- 20 lbs/acre in mixes.
****Increase seeding rate if Kentucky 31 is used rather than VCIA/VDOT improved varieties.

Note: Seed mixes are suggested and subject to modification based on site-specific conditions by an agronomist or other qualified revegetation professionals. All seed rates expressed as PLS (Pure Live Seed; See Table C-SSM-10-9).

APPROVED: Engineering Date

APPROVED: Planning Date

Westwood
Westwood Professional Services, Inc.
80 COLLEGE STREET, STE H
CHRISTIANSBURG, VA 24073
T: 540.381.4290
F: 540.426.3435
westwoodps.com

REVISIONS
10/28/2026

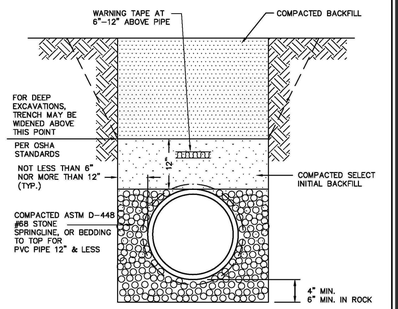
CSL CHRISTIANSBURG EXPANSION
EROSION CONTROL NOTES & DETAILS
SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

DATE: 9/2/2026
SCALE: NTS
DRAFTER: AWC/MSL
DESIGNER: AWC/MSL
CHECKED: JRT
PROJECT NO.
R0077371.00

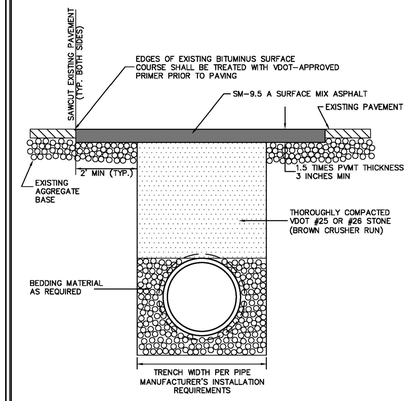
COMMONWEALTH OF VIRGINIA
JAMES RICHARD TAYLOR
Lic. No. 55142
10/28/26
PROFESSIONAL ENGINEER

C12

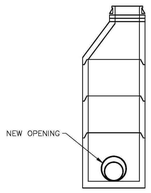
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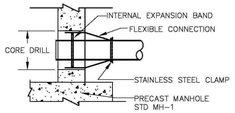
ENGINEERING DEPARTMENT
GRAVITY SEWER
TRENCH BEDDING
DATE: 01 NOV 2004
SCALE: N.T.S.
DETAIL NO. TB-1



ENGINEERING DEPARTMENT
PAVEMENT REPAIR
FOR UTILITY TRENCH
DATE: 11 JUN 2021
SCALE: N.T.S.
DETAIL NO. TB-2



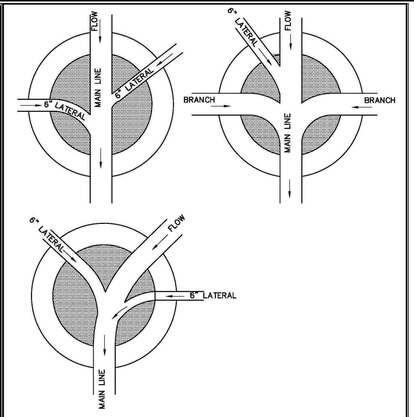
ELEVATION



ENLARGED SECTION

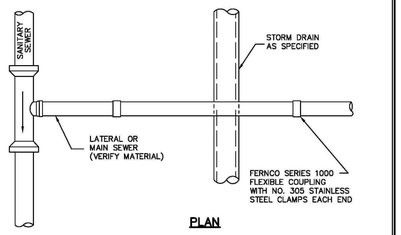
NOTES:
1. CORE DRILL NEW PIPE OPENING.
2. INSERT NEW FLEXIBLE CONNECTOR.
3. PROVIDE RESHAPING OF INVERT IN ACCORDANCE WITH STANDARD DETAIL MH-3.

ENGINEERING DEPARTMENT
CONNECTION TO
EXISTING MANHOLE
DATE: 01 NOV 2004
SCALE: N.T.S.
DETAIL NO. MC-1

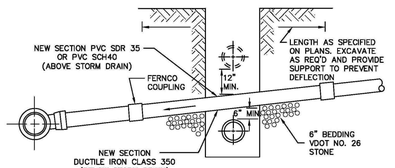


THE INVERT CHANNELS SHALL BE FORMED WITH CONCRETE AS SHOWN AND SHALL BE SMOOTH AND SEMI-CIRCULAR IN SHAPE, CONFORMING TO THE INSIDE OF THE ADJACENT SEWER SECTION. CHANGES IN THE DIRECTION OF FLOW SHALL BE MADE WITH A SMOOTH CURVE OF AS LARGE A RADIUS AS SIZE OF MANHOLE WILL PERMIT.

ENGINEERING DEPARTMENT
MANHOLE
INVERT CHANNELING
DATE: 01 NOV 2004
SCALE: N.T.S.
DETAIL NO. MH-3

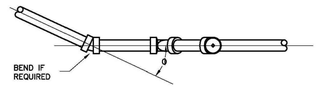


PLAN

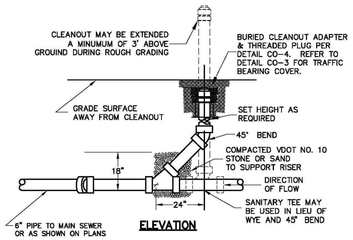


SECTION

ENGINEERING DEPARTMENT
STORM DRAIN/
SANITARY SEWER CROSSING
DATE: 01 NOV 2004
SCALE: N.T.S.
DETAIL NO. HC-2

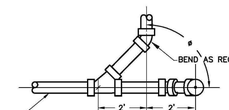


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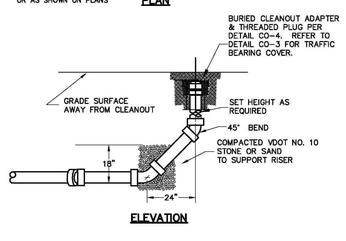


ELEVATION

ENGINEERING DEPARTMENT
SANITARY CLEANOUT
DATE: 01 NOV 2004
SCALE: N.T.S.
DETAIL NO. CO-1

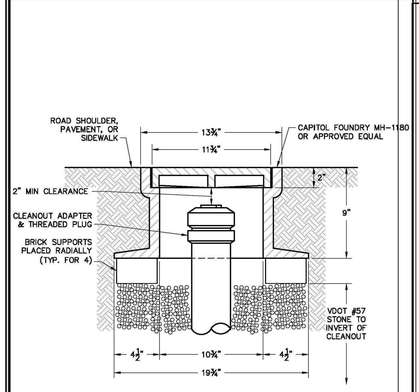


PLAN



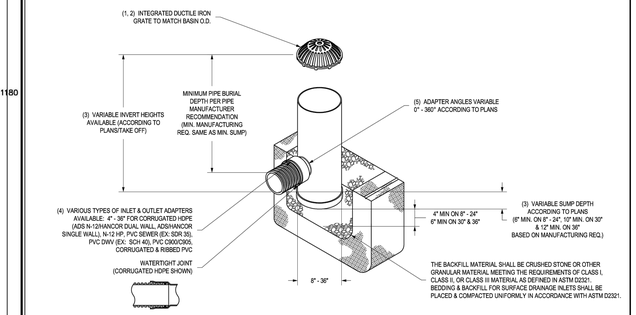
ELEVATION

ENGINEERING DEPARTMENT
SANITARY CLEANOUT
FOR BENDS GREATER THAN 45°
DATE: 01 NOV 2004
SCALE: N.T.S.
DETAIL NO. CO-2



ENGINEERING DEPARTMENT
TRAFFIC BEARING
CLEANOUT COVER
DATE: 01 NOV 2004
SCALE: N.T.S.
DETAIL NO. CO-3

NYLOPLAST DRAIN BASIN WITH DOME GRATE



1 - 8" - 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - 8" & 10" DOME GRATES FIT ONTO THE DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-110-040.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-060.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (EX: SDR 35).
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
6 - 8" - 30" DOME GRATES HAVE NO LOAD RATING.

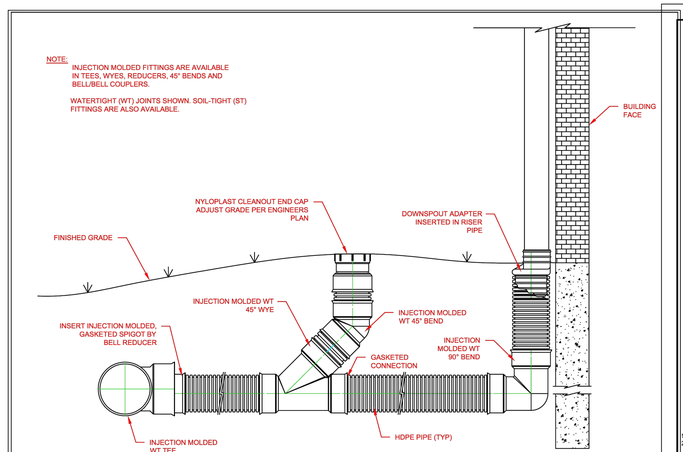
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DATE	03-25-15		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	06-12-15		
DWG SIZE	A	SCALE 1:40	SHEET 1 OF 1

ADS Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-3490
www.nyloplast-us.com

TITLE: DRAIN BASIN WITH DOME GRATE QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-110-387 REV E



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1	UPDATED DRAWING	TJR	01/11/07	OKS
REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D

ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

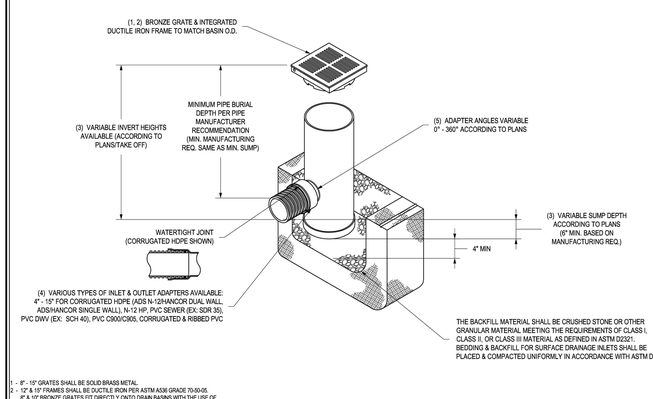
ROOF DRAIN W/45 DEG WYE CLEANOUT

DRAWING NUMBER: STD-1001

4640 TRUEMAN BLVD
HILLIARD, OHIO 43026
ADVANCED DRAINAGE SYSTEMS, INC.

DESIGN: ABK
DATE: 04.02.03
DRAWN: MM
SCALE: N/A
SHEET: 1 OF 1

8" - 15" NYLOPLAST DRAIN BASIN WITH BRONZE GRATE



1 - 8" - 10" GRATES SHALL BE SOLID BRASS METAL.
2 - 12" & 15" FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05. 8" & 10" BRONZE GRATES FIT DIRECTLY ONTO DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-110-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-060.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
6 - 8" - 15" BRONZE GRATES HAVE NO LOAD RATING.

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DATE	03-25-15		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	03-11-16		
DWG SIZE	A	SCALE 1:20	SHEET 1 OF 1

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BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-3490
www.nyloplast-us.com

TITLE: DRAIN BASIN WITH BRONZE GRATE QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-110-396 REV C

APPROVED: Engineering Date

APPROVED: Planning Date

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Westwood Professional Services, Inc.
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CHRISTIANSBURG, VA 24073
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F: 540.426.3435
westwoodps.com

REVISIONS
10/28/2026

CSL CHRISTIANSBURG EXPANSION

DETAILS

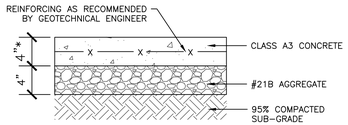
SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

DATE: 9/2/2026
SCALE: NTS
DRAFTER: AWC/MSL
DESIGNER: AWC/MSL
CHECKED: JRT
PROJECT NO. R0077371.00

COMMONWEALTH OF VIRGINIA
JAMES RICHARD TAYLOR
Lic. No. 55142
10/28/26
PROFESSIONAL ENGINEER

C13

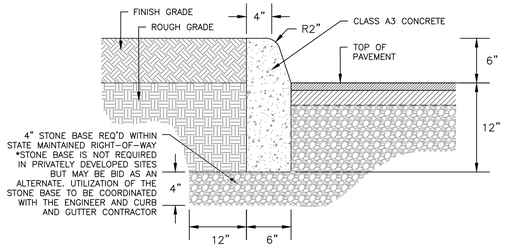
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Drawing: N:\0077371.0006 CAD\DWG\sheet design\Sheets\NOTES AND DETAILS SHEETS



NOTES:
1. FINISH: TROWELED EDGES, BROOM FINISH.
2. CONTRACTION JOINTS SHALL BE PROVIDED BY SCORING AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK, UNLESS PLAN SHOWS OR SPECIFIES OTHERWISE.
3. EXPANSION JOINTS SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 50 FEET, AT JUNCTION POINTS OF CURBS AND ENTRANCES, AND WHERE ADJACENT TO BUILDINGS. PREMOLDED, ½" JOINT FILLER SHALL BE USED EXTENDING FROM BOTTOM OF SLAB TO ½" FROM TOP OF SURFACE.
4. CONCRETE SECTION IS PRELIMINARY, CONSULT GEOTECHNICAL ENGINEER FOR FINAL DESIGN

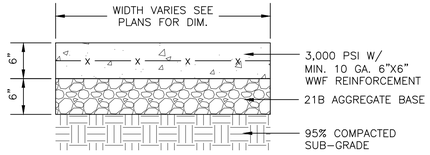
CONCRETE SIDEWALK - DETAIL

NTS



VDOT CG-2 CURB - DETAIL

NTS



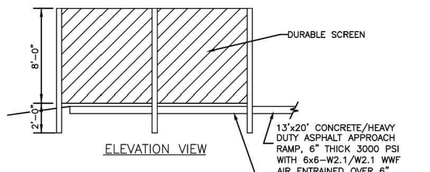
NOTE: PAVEMENT DESIGN IS PRELIMINARY. CONSULT GEOTECHNICAL ENGINEER FOR FINAL DESIGN.

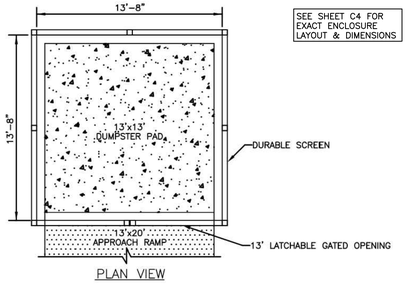
HEAVY DUTY CONCRETE PAVING - SECTION

N.T.S.

NOTE:

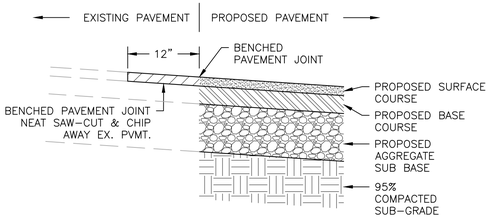
PAVEMENT AND CONCRETE SECTIONS ARE BASED ON TYPICAL CONDITIONS ENCOUNTERED IN THIS AREA AND SHOULD BE EVALUATED BY A GEOTECHNICAL ENGINEER DURING CONSTRUCTION TO ACHIEVE DESIRED DESIGN LIFE. FINAL SECTIONS SHOULD BE BASED ON ACTUAL SOIL/WEATHER CONDITIONS ENCOUNTERED DURING CONSTRUCTION AND THE SCHEDULED DURATION OF UNCOMPLETED EXPOSURE TO CONSTRUCTION TRAFFIC.





SEE SHEET C4 FOR EXACT ENCLOSURE LAYOUT & DIMENSIONS

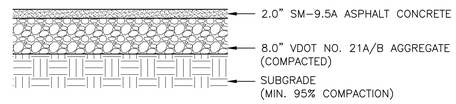
ENGINEERING DEPARTMENT 100 EAST MAIN STREET CHRISTIANSBURG, VA 24073 (540) 382-6120 PHONE (540) 381-7259 FAX	DUMPSTER PAD AND SCREEN DETAIL	DATE: 07 APR 2014 SCALE: N.T.S. DETAIL NO. DP-1



NOTES:
1. G.C. TO ENSURE SOIL SUBGRADE IS COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY PRIOR TO STONE/ASPHALT PLACEMENT.
2. STONE BASE MUST BE PLACED IN LIFTS OF NO MORE THAN 4" EACH.
3. A TACK COAT SHALL BE APPLIED BETWEEN ASPHALT PAVEMENT LAYERS.

PAVEMENT JOINT DETAIL

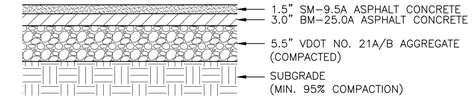
N.T.S.



NOTES:
1. G.C. TO ENSURE SOIL SUBGRADE IS COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY PRIOR TO STONE/ASPHALT PLACEMENT.
2. STONE BASE MUST BE PLACED IN LIFTS OF NO MORE THAN 4" EACH.
3. A TACK COAT SHALL BE APPLIED BETWEEN ASPHALT PAVEMENT LAYERS.
4. PAVEMENT DESIGN IS PRELIMINARY AND MUST BE CONFIRMED BY A GEOTECHNICAL ENGINEER BEFORE SITE IS EXCAVATED TO SUBGRADE LEVEL.

LIGHT DUTY ASPHALT PAVEMENT SECTION

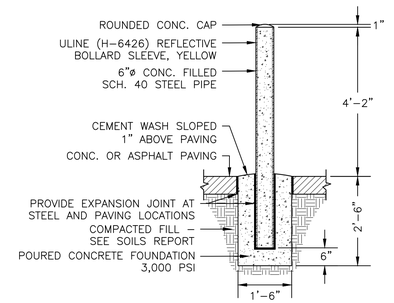
N.T.S.



NOTES:
1. G.C. TO ENSURE SOIL SUBGRADE IS COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY PRIOR TO STONE/ASPHALT PLACEMENT.
2. STONE BASE MUST BE PLACED IN LIFTS OF NO MORE THAN 4" EACH.
3. A TACK COAT SHALL BE APPLIED BETWEEN ASPHALT PAVEMENT LAYERS.
4. PAVEMENT DESIGN IS PRELIMINARY AND MUST BE CONFIRMED BY A GEOTECHNICAL ENGINEER BEFORE SITE IS EXCAVATED TO SUBGRADE LEVEL.

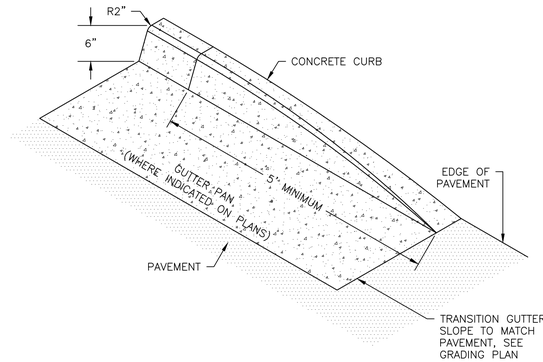
HEAVY DUTY ASPHALT PAVEMENT SECTION

N.T.S.



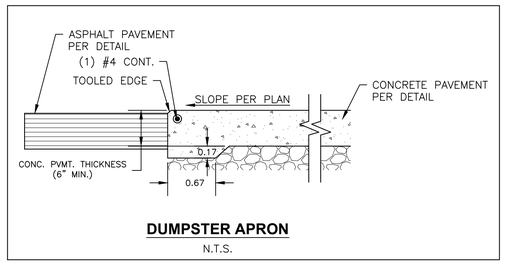
STEEL SAFETY BOLLARD W/ YELLOW SLEEVE

N.T.S.



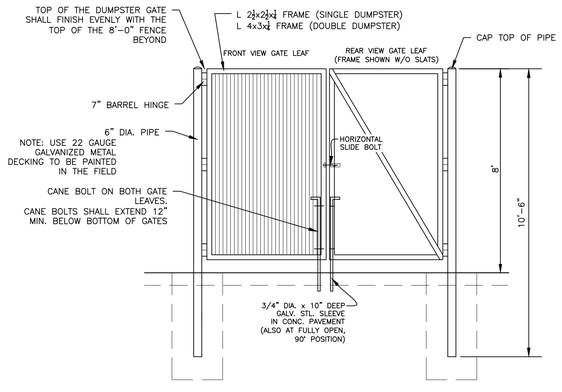
CURB TO PAVEMENT TERMINATION

N.T.S.



DUMPSTER APRON

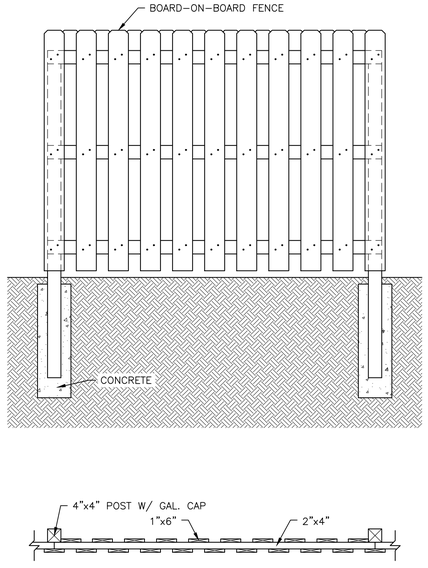
N.T.S.



GATE LEAF W/ LOCK MECHANISM - ELEVATION

N.T.S.

NOTES:
1. ALL LUMBER TO BE PRESSURE TREATED OR CEDAR.
2. GALVANIZED NAILS TO BE USED FOR FASTENING.



BOARD-ON-BOARD PRIVACY FENCE

N.T.S.

CONTRACTOR SHALL REFERENCE AND ADHERE TO ALL NECESSARY VDOT DETAILS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- DETAIL B-1, B-2 — STANDARD PRECAST BASE UNITS
- DETAIL DSB-1 — DRAINAGE STRUCTURE BEDDING FOR DROP INLET, MANHOLE, AND JUNCTION BOX
- DETAIL IS-1 — STANDARD METHOD OF SHAPING MANHOLE & INLET INVERTS
- DETAIL PB-1 — INSTALLATION OF PIPE CULVERTS & STORM SEWERS
- DETAIL R-1,2,3 — STANDARD PRECAST REDUCER AND RISER UNITS
- DETAIL ST-1 — STANDARD STEP
- DETAIL T-MH-2 — STANDARD PRECAST MANHOLE TOP UNITS
- DETAIL CG-12 — CG-12 TYPE B PARALLEL W/ DETECTABLE WARNING SURFACE

APPROVED: Engineering Date

APPROVED: Planning Date

Westwood
Westwood Professional Services, Inc.
80 COLLEGE STREET, STE H
CHRISTIANSBURG, VA 24073
T: 540.381.4290
F: 540.426.3435
westwoodps.com

REVISIONS

10/28/2026

CSL CHRISTIANSBURG EXPANSION

DETAILS

SHAWSVILLE MAGISTERIAL DISTRICT
201 WHEATLAND CT N.E.

DATE: 9/2/2026
SCALE: NTS
DRAFTER: AWC/MSL
DESIGNER: AWC/MSL
CHECKED: JRT
PROJECT NO. R0077371.00

COMMONWEALTH OF VIRGINIA
JAMES RICHARD TAYLOR
Lic. No. 55142
10/28/26
PROFESSIONAL ENGINEER

C14

Last Saved by: Mtanche
Last Saved: 10/28/2026 4:56 PM
Last Plotted: 10/28/2026 4:56:55 PM
Drawing: N:\0077371.0006 CAD\GW\Site design\Sheets\NOTES AND DETAILS SHEETS