

FRANKLIN COUNTY
SPECIAL USE PERMIT APPLICATION

I/We Westlake Apartment Homes, LLC as Owner(s), Contract Purchasers, or Owner's Authorized Agent of the property described below, hereby apply to the Franklin County Board of Supervisors for a special use permit on the property described below:

Petitioner's Name: Westlake Apartment Homes, LLC

Petitioner's Address: POB 7038, Roanoke, VA 24019

Petitioner's Phone Number: 540-204-4247 or 540-537-5907

Petitioner's Email Address: kviar@rpfralininc.com

Property Owner's Name: Westlake Apartment Homes, LLC

Property Owner's Address: POB 7038, Roanoke, VA 24019

Property Owner's Phone Number: 540-204-4247 or 540-537-5907

Property Owner's Email Address: kviar@rpfralininc.com

Property Information:

A. Proposed Property Address: 200-240 Village Springs Drive, Hardy, VA 24101

B. Tax Map and Parcel Number: 0300000103A + 0300000103CC

C. Election District: Gills Creek

D. Size of Property: ~~5.86 acres~~ 9.43 acres

E. Existing Zoning: PCD

F. Existing Land Use: Apartment complex

G. Is the property located within any of the following overlay zoning districts:

☐ Corridor District ☐ Westlake Overlay District ☐ Smith Mountain Lake Surface District

H. Is any land submerged under water or part of Smith Mountain Lake? ☐ YES ☒ NO

I. If yes, please explain: _____

Proposed Special Use Permit Information:

J. Proposed Land Use: Petitioner wishes to amend condition 4 of the existing Special Use Permit as follows:
change the number allowable building permits for multi-family dwelling units from 72 to 96.

K. Size of Proposed Use: 5.86 acres

L. Other Details of Proposed Use: _____

Checklist for Completed Items:

- Application Form
- Letter of Application
- Concept Plan
- Application Fee

I certify that this application for a special use permit and the information submitted is herein complete and accurate.

Petitioner's Name (Printed): Robert P. Fralin

Petitioner's Signature: 

Date: 09-05-2023

Mailing Address: POB 7038, Roanoke, VA 24019

Phone Number: 540-204-4247 or 540-537-5907

Email Address: kviar@rpfralininc.com

Owner's consent, if petitioner is not property owner:

Owner's Name: _____

Owner's Signature: _____

Date: _____

Date Received by Planning Staff: _____

September 5, 2023

Department of Planning and Community Development
Lisa Cooper and Tina Franklin
1255 Franklin Street, Suite 103
Rocky Mount, VA 24151

Re: Tax Map Parcels 0300000103A and 0300000193C

Dear Ms. Cooper and Ms. Franklin:

Please accept this Letter of Application to amend condition 4 of the existing Special Use Permit, as follows: change the number allowable building permits for multi-family dwelling units from 72 to 96.

At the time of the amendment in 2019, the Franklin County and, more specifically, the Smith Mountain Lake rental apartment housing market was unproven. Thus far, based on the demand for our initial 48 apartment homes, the market for quality workforce housing has exceeded expectations. It is imperative to finish Phase 1 of the project now, as demand for units remains high (we have a waiting list), nearly all of the approved development work is complete, and the site is ready for the final 24 units. In addition, long-term financing from federally backed home mortgage lenders is unavailable to the developer until the parcel is fully built out. This type of financing is critical for multi-family housing developers and landlords to stabilize a community.

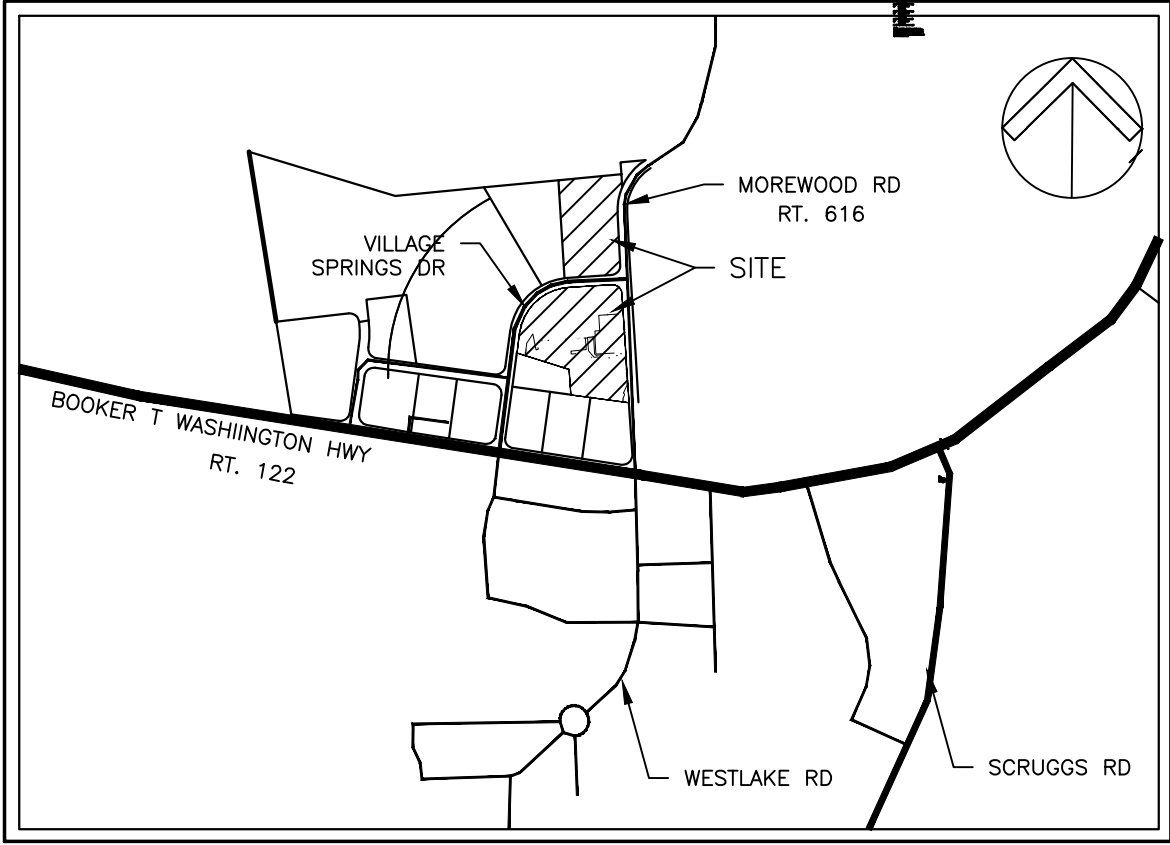
The intent of the amendment is to allow completion of Phase 1 of the project, while simultaneously protecting the interests of Franklin County. We hope Franklin County finds the amendment to be a practical solution and allows all parties to reach their mutual goals.

Please notify me if there are questions. Thank you for considering this amendment.

Sincerely,



Robert P. Fralin, Manager
Westlake Apartment Homes, LLC



VICINITY MAP
1" = 1000'

STANDARD FRANKLIN COUNTY CONSTRUCTION NOTES

- FRANKLIN COUNTY CASE #16266 – PARCEL #0300000103 & 0300000103A
- THE FRANKLIN COUNTY DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT MUST BE NOTIFIED IN WRITING FIVE (5) BUSINESS DAYS PRIOR TO COMMENCING WITH CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING. SEE THE SEQUENCE OF CONSTRUCTION FOR DETAILS. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED PLANS.
- THE REGISTERED LAND DISTURBER (RLD) OR THEIR SITE REPRESENTATIVE WILL BE REQUIRED TO MAINTAIN AND UPDATE THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS NECESSARY. THE SWPPP MUST REMAIN AVAILABLE FOR INSPECTION AT ALL TIMES.
- THE FRANKLIN COUNTY DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT EROSION AND SEDIMENT CONTROL/STORMWATER MANAGEMENT (ESC/SWM) SITE INSPECTOR MUST BE NOTIFIED IN WRITING FORTY-EIGHT (48) HOURS IN ADVANCE OF THE CONSTRUCTION OF ANY CRITICAL COMPONENTS OF ALL ESC/SWM INSTALLATIONS (AND NOTED DATES IN THE SWPPP).
- FRANKLIN COUNTY DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT RESERVES THE RIGHT TO ALTER THESE PLANS, DURING THE CONSTRUCTION PHASE AND AS FIELD CONDITIONS MAY WARRANT. CHANGES TO THE CONSTRUCTION PLANS MUST HAVE FRANKLIN COUNTY APPROVAL PRIOR TO THE WORK BEING DONE (AND NOTED CHANGES/DATES WILL BE ADDED TO THE SWPPP).
- APPROVAL OF THESE PLANS BY FRANKLIN COUNTY DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT IS NOT A REPRESENTATION, GUARANTEE OR WARRANTY OF ANY KIND AND SHALL CREATE NO LIABILITY UPON THE COUNTY, ITS OFFICIALS OR EMPLOYEES.
- APPROVED PLANS REMAIN VALID FOR THE CURRENT 2014 VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY PERMIT CYCLE ONLY (5 YEAR PERMIT CYCLE).
- WHERE APPLICABLE, AN AS-BUILT/RECORD PLAN SHALL BE PROVIDED TO THE FRANKLIN COUNTY DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT WITHIN SIXTY (60) DAYS AFTER COMPLETION OF CONSTRUCTION FOR APPROVAL. THE ESC/SWM SURETY (LETTER OF CREDIT, PERFORMANCE BOND, OR ESCROW ACCOUNT) WILL NOT BE FULLY RELEASED UNTIL ALL ITEMS HAVE BEEN APPROVED AS CONSTRUCTED.

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	PROF	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	RT	RIGHT	YD	YARD
EVCE	END VERT. CURVE ELEV.	R.O.W.	RIGHT OF WAY		
		REQD	REQUIRED		

OWNER / DEVELOPER CERTIFICATION

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

OWNER / DEVELOPER

APPROVAL BLOCK

FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT

WESTLAKE VILLAGE APARTMENTS, PHASE 1

VILLAGE SPRINGS DRIVE
GILLS CREEK DISTRICT
FRANKLIN COUNTY, VA

SHEET INDEX

- C1 COVER SHEET
- C2 EXISTING CONDITIONS & DEMO. PLAN
- C3 LAYOUT PLAN
- C4 UTILITY PLAN
- C5 GRADING PLAN
- C6 ESC PLAN - PHASE 1
- C7 ESC PLAN - PHASE 2
- C8 ESC NOTES
- C9 ESC DETAILS
- C10 SANITARY PROFILES
- C11 OFF-SITE S.S. EXTENSION
- C12 STORM PROFILES
- C13 LANDSCAPE PLAN
- C14 SITE DETAILS 1
- C15 SITE DETAILS 2
- C16 WATER & SEWER DETAILS
- C17 LIFT STATION SPECIFICATIONS
- C18 GENERAL NOTES
- C19 LIGHTING PLAN

LEGEND

-----348-----	EX. INTRMDT. CONTOUR	-----	PROP. INTRMDT. CONTOUR
---345---	EX. INDEX CONTOUR	1320	PROP. INDEX CONTOUR
+ 35.55	EX. SPOT ELEVATION	35.55 35.05	PROP. SPOT ELEVATION
--- 8" WL ---	EX. WATER LINE	--- 8" WL ---	PROP. WATER LINE
--- 8" SAN ---	EX. SANITARY SEWER	--- 8" SAN ---	PROP. SANITARY SEWER
--- 18" RCP ---	EX. STORM PIPE	--- --- ---	PROP. STORM PIPE
--- --- ---	EX. EDGE OF PAVEMENT	--- --- ---	PROP. EDGE OF PAVEMENT
--- --- ---	EX. BUILDING	--- --- ---	PROP. BUILDING
~ ~ ~ ~ ~	EX. CONCRETE	~ ~ ~ ~ ~	PROP. CONCRETE
~ ~ ~ ~ ~	EX. PAVEMENT	~ ~ ~ ~ ~	PROP. ASPHALT PAVEMENT (STANDARD/HEAVY DUTY)
~ ~ ~ ~ ~	EX. GRAVEL	~ ~ ~ ~ ~	PROP. GRAVEL
~~~~~	PAVEMENT REPLACEMENT	~~~~~	PROP. PAVERS
●	EX. POWER POLE	●	PROP. POWER POLE
⊙	EX. SANITARY SEWER MANHOLE	⊙	PROP. MANHOLE
⊙	EX. STORM SEWER MANHOLE	+	SIGN
⊙	CLEANOUT	⊙	WATER METER
⊙	EX. LIGHT POLE	⊙	PROP. GATE VALVE
▷	WATER LINE REDUCER	⊙	BLOW-OFF VALVE
⊙	EX. TELEPHONE	☆	BENCHMARK
--- G ---	EX. GAS LINE	--- G ---	PROP. GAS LINE
--- OHU ---	EX. OVERHEAD CABLE	--- OHU ---	PROP. OVERHEAD CABLE
--- X ---	EX. FENCE	--- P ---	PROP. UNDERGRND POWER LINE
~~~~~	EX. TREE LINE	--- X ---	PROP. FENCE
--- - - -	ADJOINING PROPERTY LINE	~~~~~	PROP. TREE LINE
■	EXISTING ROAD MONUMENTS	--- - - -	SITE PROPERTY LINE
--- A ---	WETLAND AREA	⊙	INLET PROTECTION

SITE INFORMATION

OWNER:	WESTLAKE HOLDINGS, LLC 1617 A CRYSTAL SHORES DRIVE MONETA, VA 24121
DEVELOPER:	WESTLAKE APARTMENT HOMES, LLC P.O. BOX 20886 ROANOKE, VA 24018 PHONE: (540) 204-4247 EMAIL: rfralin@firecorp.com
EXISTING USE:	VACANT
ZONING:	PCD – PLANNED COMMERCIAL DEVELOPMENT *MULTI FAMILY SPECIAL USE PERMIT *WESTLAKE VILLAGE CENTER OVERLAY DISTRICT
PARCEL ID:	0300000103 & 0300000103A
TOTAL PROPERTY AREA:	5.86 AC (PHASE 1)
TOTAL DISTURBED AREA:	279,000 SF (±6.4 AC)
TOTAL MULTI-FAMILY AREA (PER REZONING):	15.8 AC

ZONING REGULATIONS

PROPOSED USE:	MULTI-FAMILY DWELLINGS
MIN. LOT AREA:	NONE
MAXIMUM NUMBER OF UNITS (PER REZONING):	250 UNITS (15.8 UNITS/AC)
PROPOSED NUMBER OF UNITS:	96 UNITS (16.3 UNITS/AC)
MINIMUM LOT WIDTH:	100 FT
MINIMUM YARDS: FRONT: 55' TO CENTERLINE OF PUBLIC R.O.W., 30' TO EDGE OF PUBLIC R.O.W. FOR NON-PRIMARY ROAD SIDE: NONE REAR: NONE	
MAXIMUM BUILDING HEIGHT:	70'
PROPOSED BUILDING HEIGHT:	36'
PARKING CALCULATIONS:	
PARKING REQUIRED:	1.5 SPACES PER UNIT 96 UNITS PROPOSED = 144 SPACES REQUIRED
PARKING PROPOSED:	144 TOTAL SPACES PROPOSED
HANDICAP PARKING REQUIRED:	5 SPACES
HANDICAP PARKING PROPOSED:	8 SPACES

SPECIAL USE PERMIT CONDITIONS

- THE PROJECT SHALL GENERALLY CONFORM TO THE DESIGN ELEMENTS AND STANDARDS PRESENTED AS A PART OF THE SUBMITTED PCD CONCEPT PLAN (REZONING EXHIBITS A-C), DATED AUGUST 3, 2018 AND THE WESTLAKE VILLAGE CENTER OVERLAY DISTRICT. HOWEVER, MAXIMUM ALLOWED SINGLE-FAMILY UNITS SHALL BE 25 UNITS. WHERE CONFLICTS MAY EXIST BETWEEN THESE TWO DOCUMENTS, THE MORE STRINGENT STANDARD SHALL APPLY.
- NO TRAFFIC GENERATED BY MULTI-FAMILY UNITS SHALL HAVE DIRECT VEHICLE ACCESS TO MOREWOOD ROAD (STATE ROUTE 616). ALL INTERNAL MULTI-FAMILY TRAFFIC WILL USE VILLAGE SPRING DRIVE AS A POINT OF INGRESS AND EGRESS.
- WALKWAYS WILL BE DESIGNED AND DEVELOPED TO (1) INTERCONNECT BUILDINGS AND OPEN SPACE AREAS IN THE MULTI-FAMILY AREAS (2) CONNECT THE MULTI-FAMILY AND SINGLE FAMILY AREAS, AND (3) CONNECT THE RESIDENTIAL AREAS WITH THE COMMERCIAL AREAS ALONG ROUTE 122. WALKWAYS WITHIN OR ADJACENT TO A PUBLIC RIGHT-OF-WAY SHALL BE CONCRETE SIDEWALKS WITH A WIDTH CONSISTENT WITH OTHER SIDEWALKS IN THE AREA. WALKWAYS THAT INTERCONNECT BUILDINGS AND OPEN SPACE AREAS SHALL BE CONSTRUCTED OF A LOW MAINTENANCE SURFACE MATERIAL SUCH AS COMPACTED GRAVEL OR PAVEMENT.
- SURETY IN THE FORM OF A BOND OR LETTER OF CREDIT FOR ROAD IMPROVEMENTS WILL BE POSTED FOR THE PORTION OF VILLAGE SPRINGS DRIVE LOCATED BETWEEN MOREWOOD ROAD AND BROOKVIEW LANE BASED ON AN ENGINEER'S ESTIMATE FOR IMPROVING ROAD AND PROVIDING CONCRETE SIDEWALKS TO CURRENT VDOT STANDARDS BEFORE ANY BUILDING PERMIT IS ISSUED ON PROPERTY DESCRIBED AS TAX ID #0300000103A OR TAX ID # 0300000103CC. WITHIN THREE MONTHS OF THE FIRST CERTIFICATE OF OCCUPANCY BEING ISSUED THE PROPERTY OWNER SHALL PETITION VDOT TO ACCEPT THIS PORTION OF VILLAGE SPRINGS DRIVE INTO THE STATE MAINTENANCE PROGRAM. BUILDING PERMITS SHALL BE LIMITED TO NO MORE THAN 72 MULTI-FAMILY DWELLING UNITS UNTIL SUCH TIME AS THIS PORTION OF VILLAGE SPRINGS DRIVE IS ACCEPTED BY VDOT. ADDITIONAL BUILDING PERMITS FOR TWENTY-FOUR (24) ADDITIONAL DWELLING UNITS MAY BE ISSUED DURING THE WARRANTY PERIOD FOR THE ROADWAY. BUILDING PERMITS FOR DWELLING UNITS ABOVE NINETY-SIX (96) WILL NOT BE APPROVED UNTIL SUCH TIME AS AN UPDATED TRAFFIC STUDY HAS BEEN COMPLETED TO DETERMINE ANY NECESSARY ROAD IMPROVEMENTS AND THE REMAINDER OF VILLAGE SPRINGS DRIVE HAS BEEN ACCEPTED INTO THE VDOT SYSTEM. PHYSICAL TURNING RESTRICTIONS OF PHASE 1 DEVELOPMENT SHALL BE REMOVED BY OWNER WITHIN SIX (6) MONTHS OF ALL OF VILLAGE SPRINGS DRIVE BEING ACCEPTED IN THE VDOT SYSTEM.
- TWENTY-FIVE PERCENT (25%) OF ALL GROUND LEVEL MULTI-FAMILY AND SINGLE-FAMILY DWELLINGS SHALL INCORPORATE AT LEAST (3) THREE FEATURES OF THE UNIVERSAL VISIBILITY STANDARDS OR INCLUDE AT LEAST (3) THREE ACCESSIBILITY FEATURES IN ACCORDANCE WITH THE VIRGINIA LIVABLE HOME TAX CREDIT PROGRAM. ALL ACCESSIBILITY AND UNIVERSAL VISIBILITY FEATURES MUST BE COMPLETED IN CONFORMITY WITH THE PROVISIONS OF VIRGINIA'S UNIFORM STATEWIDE BUILDING CODE. THIS DEVELOPMENT SHALL MEET THE FOLLOWING STANDARDS OF VISIBILITY:
 - ACCESSIBLE ROUTE TO ZERO-STEP ENTRANCE ON A FIRM SURFACE NO STEEPED THAN 1:12 FROM A DRIVEWAY OR PUBLIC SIDEWALK
 - ZERO-STEP ENTRANCE
 - DOORS WITH AT LEAST 32 INCHES OF CLEAR WIDTH
 - HALLWAYS AND PASSAGES WITH AT LEAST 36 INCHES OF CLEAR WIDTH
 - ACCESSIBLE LIGHT SWITCHES, ELECTRICAL OUTLETS, AND ENVIRONMENTAL CONTROLS
 - ACCESSIBLE BATHROOM
 - ACCESSIBLE AND USABLE KITCHEN FACILITIES
- ARCHITECTURAL PROFFERS:
 - ALL "STREETSCAPES" SHALL BE DEVELOPED IN GENERAL CONFORMITY WITH THE "ILLUSTRATIVE ARCHITECTURAL STYLE" AS SHOWN IN REZONING EXHIBIT "C" DATED 8/3/18.
 - THE BUILDING SHALL HAVE ARCHITECTURAL FACADES LIKE THE EXISTING WESTLAKE TOWNE CENTER.
 - VERTICAL METAL SIDING SHALL BE PROHIBITED ON ANY FACADE.
 - THE DESIGN OF ANY FUTURE BUILDING SHALL RELATE TO ADJACENT DEVELOPMENT THAT IS CONTRIBUTING TO THE CHARACTER OF WESTLAKE-HALES FORD VILLAGE AREA USING COMPLEMENTING FORMS AND MATERIALS TO CREATE CONTINUITY WITHIN THE VILLAGE AREA. MATERIALS FOR EXTERIOR WALLS MAY INCLUDE (BUT NOT LIMITED TO) MASONRY, COMMERCIAL GRADE VINYL AND OTHER LOW MAINTENANCE FACADES. STRUCTURES SHALL CONTAIN MASONRY MATERIALS ON AT LEAST TWENTY PERCENT (20%) OF THE ENTIRE STRUCTURE AND ALL SIDES OF STRUCTURES FACING PUBLIC STREETS SHALL HAVE MASONRY MATERIALS.
 - ROOFING MATERIALS FOR PITCHED ROOFS SHALL BE METAL OR COMPOSITE SHINGLE. FLAT ROOFS SHALL HAVE A PARAPET WALL TALL ENOUGH IN HEIGHT TO SCREEN ANY ROOF MOUNTED MECHANICAL EQUIPMENT. BUILDINGS WITH FLAT ROOFS SHALL HAVE A DECORATIVE CORNICE AT THE TOP OF ALL WALLS.
 - ARCHITECTURAL DETAILS SHALL CLOSELY RESEMBLE THOSE SHOWN IN EXHIBIT "C" OR PROVIDE SIMILAR FEATURES.
 - BUILDING ELEVATIONS SHALL BE INCLUDED WITH ANY SITE PLAN SUBMISSION.
- PROPERTY OWNER SHALL SUBMIT A PLAN TO ENSURE THE PERPETUAL AND PROPER CARE AND MAINTENANCE OF PROPERTY, PARKING AREAS, BUILDINGS, LANDSCAPING AND STORM WATER MANAGEMENT FACILITIES PRIOR TO SITE PLAN APPROVAL. SUCH PLAN SHALL BE REVIEWED AND APPROVED BY THE ZONING ADMINISTRATOR PRIOR TO APPROVAL OF SITE PLAN. PLAN SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
 - GRASS AND VEGETATION, IN AREAS OF THE SITE THAT HAVE BEEN DEVELOPED OR USED FOR RECREATION, ARE KEPT AT A HEIGHT NO GREATER THAN (8) EIGHT INCHES.
 - NO INOPERABLE OR UNLICENSED VEHICLES SHALL BE LOCATED ON THE PROPERTY.
 - BUILDINGS, SIDEWALKS AND PARKING LOTS ARE ALWAYS IN GOOD REPAIR AND SAFE FOR PUBLIC.



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg
www.balzer.cc

1208 Corporate Circle
Roanoke, VA 24018
540.772.9580



WESTLAKE VILLAGE APARTMENTS

PHASE 1
COVER SHEET

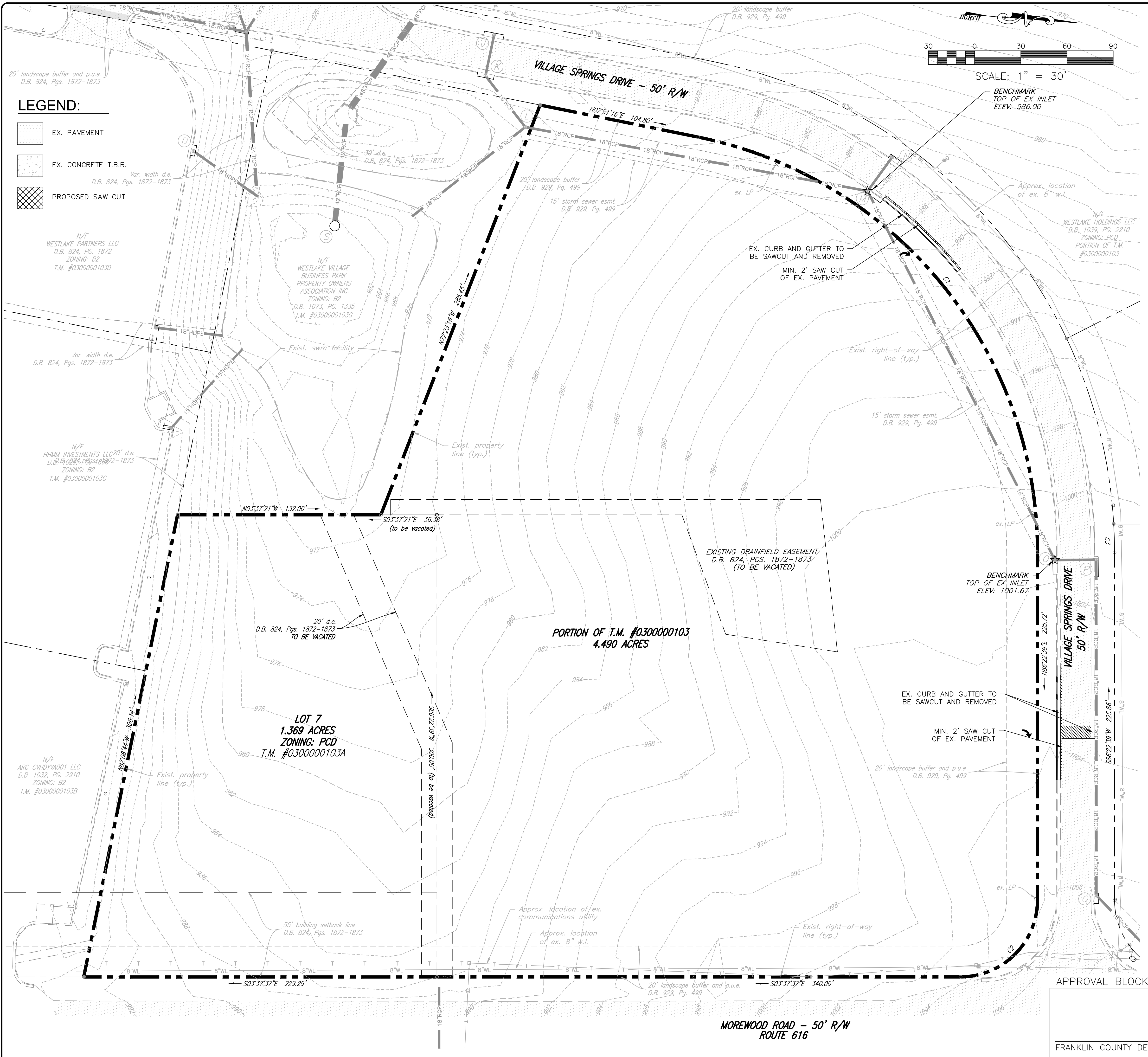
GILLS CREEK DISTRICT
FRANKLIN COUNTY, VIRGINIA

DRAWN BY CPB
DESIGNED BY CPB
CHECKED BY BTC
DATE 4/30/2019
SCALE N/A

REVISIONS
7/11/2019
8/30/2019
10/30/2019
12/31/2019
3/24/2020
9/28/2020

C1

PROJECT NO 04180116.00



DEMOLITION NOTES

- DEMOLITION SHALL INCLUDE, UNLESS OTHERWISE NOTED ON DRAWINGS, REMOVAL OF EXISTING OBJECTS OR IMPROVEMENTS, WHETHER INDICATED ON THE DRAWINGS OR NOT, THAT WOULD IN THE OPINION OF THE OWNER, PREVENT OR INTERFERE WITH THE PROGRESS OR COMPLETION OF THE PROPOSED WORK.
- PERMITS, FEES AND LICENSES SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR, INCLUDING DISPOSAL CHARGES AS REQUIRED.
- 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.
- CONTRACTOR SHALL SAW-CUT ALL JOINTS WHERE EXISTING CURBING, PAVEMENT AND SIDEWALK IS TO BE DEMOLISHED AND NEW CONSTRUCTION JOINS THE EXISTING. 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.
- 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.
- CONTRACTOR SHALL PROVIDE THE FOLLOWING PROTECTIONS AT THE JOB SITE:

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 OVERGROUND 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.

ENSURE SAFE PASSAGE OF PERSONS AROUND ALL AREAS OF DEMOLITION. CONDUCT OPERATIONS TO PREVENT DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, OTHER FACILITIES, OR INJURY TO PERSONS.

PROMPTLY REPAIR DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS AT NO ADDITIONAL COST TO THE OWNER.

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.

USE WATER SPRINKLING AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN AIR TO LOWEST PRACTICAL LEVEL.

COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

- G.C. TO VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION & NOTIFY THE ENGINEER OF ANY CONFLICTS PRESENT.

Existing Storm Sewer Schedule

(A) Ex. curb inlet Top=995.22 18"rcp Inv. In=985.71 18"rcp Inv. Out=985.61	(J) Ex. curb inlet Top=975.91 18"rcp Inv. Out=971.75
(B) Ex. curb inlet Top=993.69 18"rcp Inv. In=984.96 18"rcp Inv. In=984.96 18"rcp Inv. Out=984.86	(K) Ex. curb inlet Top=976.00 18"rcp Inv. In=971.70 18"rcp Inv. Out=971.35
(C) Ex. curb inlet Top=996.51 18"rcp Inv. In=991.20 18"rcp Inv. Out=989.20	(L) Ex. storm m.h. Top=972.71 18"rcp Inv. In=968.76 18"rcp Inv. In=968.76 18"rcp Inv. Out=968.49
(D) Ex. curb inlet Top=986.64 18"hdpe Inv. Out=978.84	(M) Ex. curb inlet Top=986.00 18"rcp Inv. In=981.62 18"rcp Inv. In=981.60 18"rcp Inv. Out=981.58
(E) Ex. curb inlet Top=979.48 18"rcp Inv. In=972.98 18"rcp Inv. In=973.20 18"rcp Inv. In=973.18 24"rcp Inv. Out=971.23	(N) Ex. curb inlet Top=986.02 18"rcp Inv. Out=981.84
(F) Ex. curb inlet Top=980.79 18"rcp Inv. Out=976.61	(O) Ex. curb inlet Top=1001.67 18"rcp Inv. In=994.58 18"rcp Inv. Out=994.58
(G) Ex. storm m.h. Top=979.29 18"rcp Inv. In=973.79 12"rcp Inv. In=973.89 18"rcp Inv. Out=973.79	(P) Ex. curb inlet Top=1001.72 18"rcp Inv. In=995.22 18"rcp Inv. Out=995.22
(H) Ex. curb inlet Top=979.06 18"rcp Inv. In=974.26 18"rcp Inv. In=974.31 18"rcp Inv. Out=974.16	(Q) Ex. curb inlet Top=1006.42 18"rcp Inv. In=998.73 18"rcp Inv. Out=998.69
(I) Ex. curb inlet Top=979.11 18"rcp Inv. Out=975.04	(R) Ex. curb inlet Top=1011.04 18"rcp Inv. Out=1001.32
	(S) Ex. SWM riser Top=966.00 Inv. Out=960.0±

CURVE TABLE					
CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH	DELTA ANGLE
C1	275.00'	376.88'	N47°06'58"E	348.07'	78°31'19"
C2	50.00'	78.54'	S48°37'21"E	70.71'	89°59'56"

APPROVAL BLOCK

FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT DATE



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
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Roanoke, VA 24018
540.772.9580



WESTLAKE VILLAGE APARTMENTS
PHASE 1
EXISTING CONDITIONS & DEMO. PLAN
GLIS CREEK DISTRICT
FRANKLIN COUNTY, VIRGINIA




DRAWN BY CPB
DESIGNED BY CPB
CHECKED BY BTC
DATE 4/30/2019
SCALE 1"=30'
REVISIONS
7/11/2019
8/30/2019
10/30/2019
12/31/2019
3/24/2020
9/28/2020

C2
PROJECT NO 04180116.00

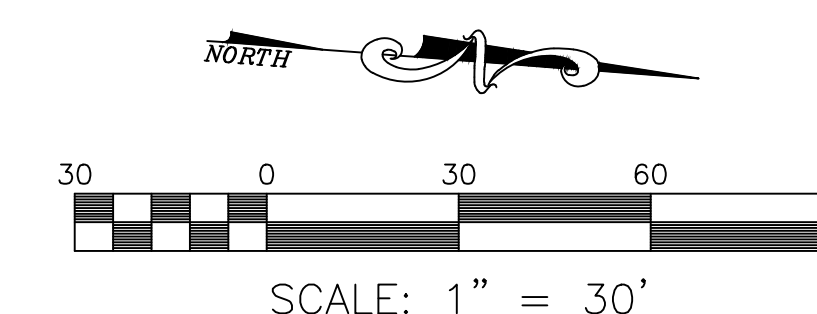
GENERAL SITE NOTES:

1. NO CONSTRUCTION/FIELD CHANGES WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER, OWNER, VDOT, AND FRANKLIN COUNTY.
2. G.C. TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION OF PROPOSED IMPROVEMENTS.
3. ANY PAVEMENT TO REMAIN THAT IS DISTURBED OR DESTROYED DURING THE CONSTRUCTION PROCESS SHALL BE REPAIRED/REPLACED AS NECESSARY TO PRE-CONSTRUCTION CONDITIONS AT NO COST TO THE OWNER.
4. ALL BUILDING DIMENSIONS AND UTILITY TIE IN LOCATIONS AND UTILITY SIZING SHALL BE COORDINATED WITH THE ARCHITECTURAL & M.E.P. PLANS.
5. ALL ROOF LEADERS SHALL DISCHARGE TO SPLASH BLOCKS ON GRADE AND ALL RUNOFF SHALL BE DIRECTED TO THE PROPOSED STORM SEWER INLETS ON-SITE.
6. G.C. SHALL COORDINATE WITH ALL LOCAL UTILITY PROVIDERS IN REGARDS TO CONNECTION LOCATIONS & SERVICE AVAILABILITY AND REQUIREMENTS OF THE PROPOSED SITE.
7. THE SITE CONTRACTOR MUST COORDINATE THE TIMING AND INSTALLATION OF ALL UTILITIES AND MAKE ALL NECESSARY SCHEDULE ARRANGEMENTS FOR TEMPORARY OR PERMANENT UTILITIES PER THE PROJECT SCHEDULE.
8. ALL SIGNAGE PROPOSED AS PART OF THIS PROJECT WILL REQUIRE A SEPARATE PERMIT FROM FRANKLIN COUNTY.
9. ALL EXTERIOR LIGHTING FIXTURES SHALL BE GLARE SHIELDED AND DESIGNED TO PREVENT ILLUMINATION BEYOND THE PROPERTY LINE. IN NO INSTANCE SHALL LIGHT POLES EXCEED TWENTY-FIVE (25) FEET IN HEIGHT. NO EXTERIOR LIGHTING SHALL RADIATE ABOVE A LEVEL THAT IS FIVE DEGREES (5°) BELOW HORIZONTAL.
10. ALL REFUSE SERVICE (DUMPSTERS/CONTAINERS), OUTDOOR STORAGE AREAS, AND GROUND LEVEL AND ROOFTOP MECHANICAL EQUIPMENT SHALL BE SCREENED FROM SURROUNDING VIEWS PER SECTION 25-495, OF THE FRANKLIN COUNTY ZONING ORDINANCE. PRIOR TO ANY DUMPSTER ENCLOSURE CONSTRUCTION, THE G.C. SHALL VERIFY THE SIZE OF THE PROPOSED DUMPSTER TO ENSURE THE PROPOSED ENCLOSURE IS ADEQUATELY SIZED FOR THE DUMPSTER. G.C. SHALL ENSURE THAT ALL GROUND MOUNTED ELECTRICAL/MECHANICAL EQUIPMENT IS INSTALLED IN SUCH A WAY AS TO ALLOW FOR THE INSTALLATION OF VEGETATIVE SCREENING AS REQUIRED.
11. G.C. SHALL PROVIDE MINIMUM 1" SAW CUT AND SHALL TACK COAT ALL VERTICAL SURFACES WHERE THE PROPOSED PAVEMENT ABUTS THE EXISTING MAINLINE PAVEMENT. THE SAW CUT SHALL BE ALONG THE FULL DEPTH PAVEMENT, NOT THE SHOULDER PORTION OF THE ROADWAY. NO CONVEYANCE OF RUNOFF WILL BE PERMITTED ALONG A SEAM IN THE PAVEMENT.
12. THE PROPOSED FIRE DEPARTMENT CONNECTION (F.D.C.) SHALL BE W/1 50' OF THE PROPOSED FIRE HYDRANT INDICATED ON THE CIVIL SITE PLANS. G.C. SHALL COORDINATE THE F.D.C. CONNECTION LOCATION WITH THE ARCH. & M.E.P. PLANS AS REQUIRED. THE F.D.C.'S SHALL BE LOCATED DOWNSTREAM OF THEIR ASSOCIATED BACKFLOW PREVENTION ASSEMBLIES.
13. G.C. SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED CONDUIT FOR ALL EXTERIOR ELECTRICAL AND LIGHT POLES CONNECTIONS.
14. ALL PROPOSED UTILITIES SHALL BE PLACED UNDERGROUND.
15. G.C. SHALL ENSURE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
16. G.C. SHALL COORDINATE ANY TRAFFIC CONTROL MEASURES WITH VDOT AND/OR FRANKLIN COUNTY FOR ANY WORK WITHIN THE PUBLIC R.O.W.
17. ALL PARKING SPACE STRIPING SHALL BE 4" WIDE WHITE TRAFFIC PAINT (TWO COATS).

PAVEMENT LEGEND:

-  STANDARD DUTY PAVEMENT
 HEAVY DUTY PAVEMENT
 CONCRETE

- VDOT CG-12 WITH DETECTABLE WARNING (TYP)
- REPLACE EX. CURB AND GUTTER AS NECESSARY
- CONCRETE ISLAND WITH STD. VDOT CG-3 MOUNTABLE CURB (TYP)
- VDOT CG-9D LEFT IN RIGHT OUT ENTRANCE (TYP)
- STOP SIGN (R1-1) AND RIGHT TURN ONLY SIGN (R3-5R)
- APPROXIMATE LOCATION OF FREESTANDING SIGN (SEPARATE PERMIT REQUIRED)



SCALE: 1" = 3'

WESTLAKE VILLAGE APARTMENTS

PHASE 1

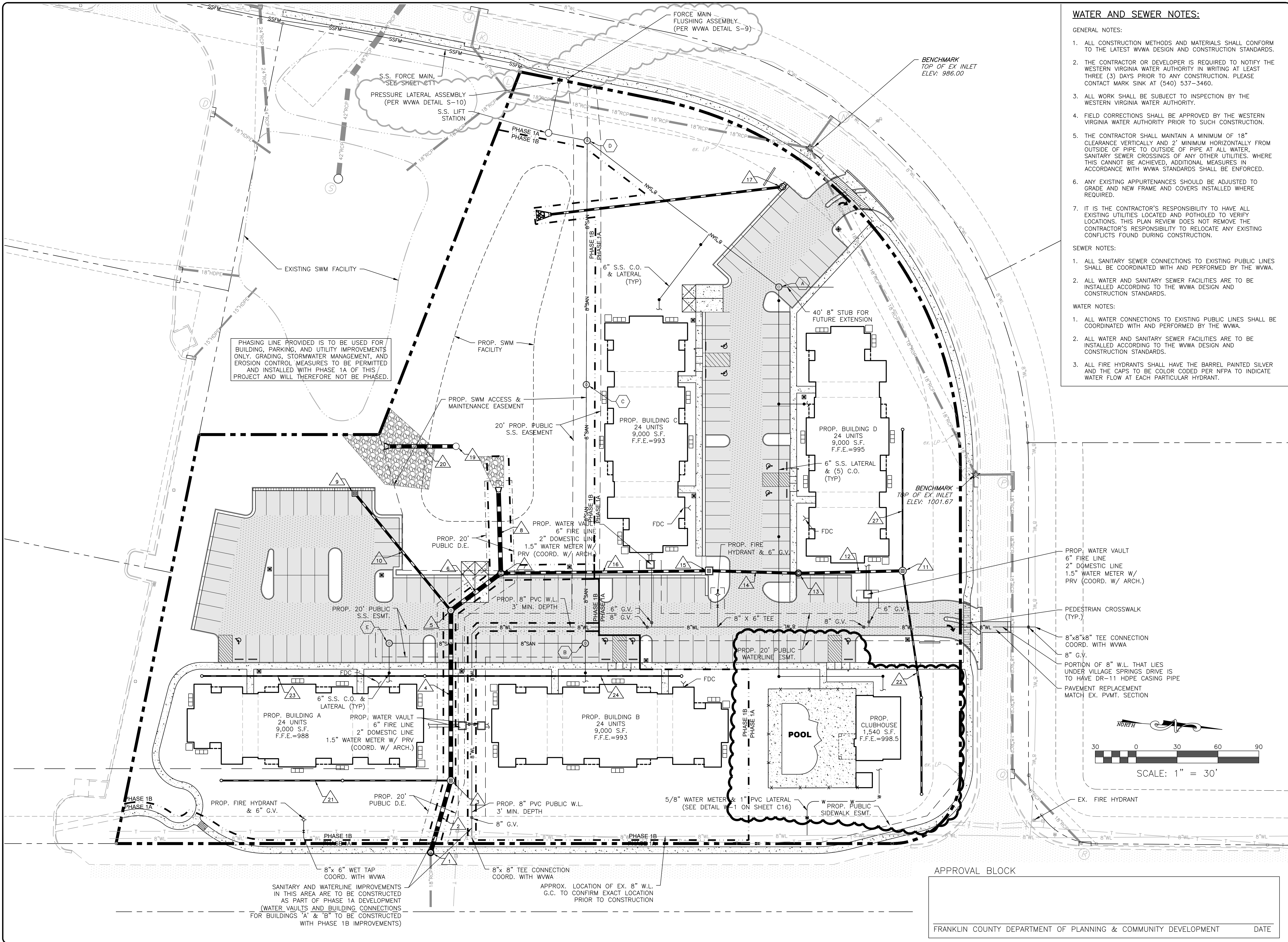
LAYOUT PLAN

CREEK DISTRICT

DRAWN BY	C
DESIGNED BY	C
CHECKED BY	E
DATE	4/30/2019
SCALE	1"
REVISIONS	
7/11/2019	
8/30/2019	
10/30/2019	
12/31/2019	
1/27/2020	
9/28/2020	
3/9/2021	
10/28/2021	

C3

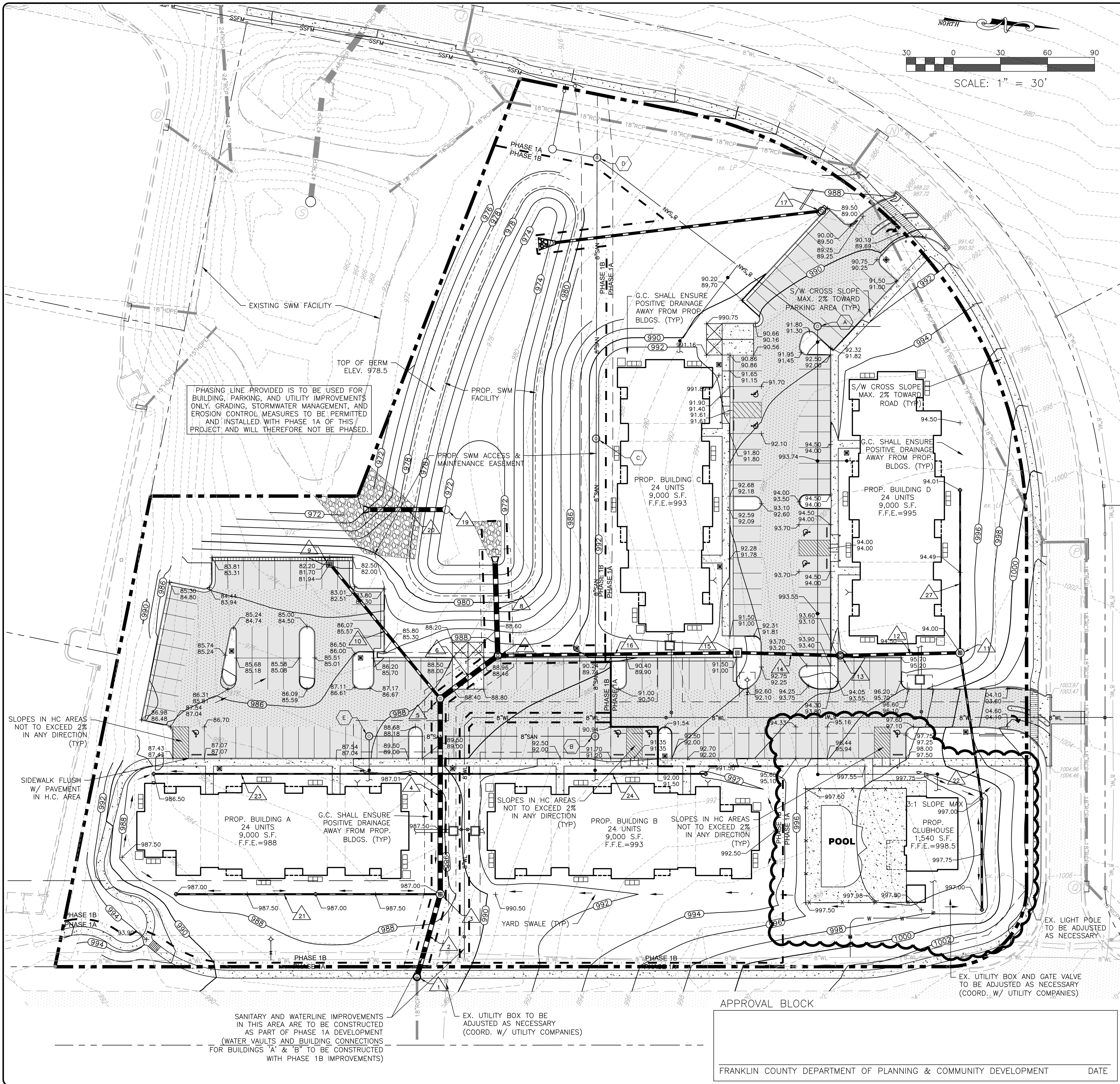
PROJECT NO. 04180116



WESTLAKE VILLAGE APARTMENTS
PHASE 1
UTILITY PLAN

GLIS CREEK DISTRICT
FRANKLIN COUNTY, VIRGINIA

DRAWN BY	CPB
DESIGNED BY	CPB
CHECKED BY	BTC
DATE	4/30/2019
SCALE	1"=30'
REVISIONS	
	7/11/2019
	8/30/2019
	10/30/2019
	12/31/2019
	3/24/2020
	9/28/2020
	6/18/2021
	10/28/2021



GRADING NOTES

- 1. G.C. SHALL ENSURE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS.
- 2. G.C. SHALL ENSURE MAX. 2% SLOPE IN ANY DIRECTION IN ALL HANDICAP PARKING AREAS.
- 3. ADA ACCESSIBLE ROUTES FROM PARKING AREAS TO BUILDINGS SHALL HAVE MAX. 2% CROSS SLOPE AND MAX. 5% LONGITUDINAL SLOPE.
- 4. G.C. SHALL VERIFY THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

PROPOSED STORM SEWER SCHEDULE

- 1 VDOT ST'D MH-2 TOP=989.10 INV. OUT=985.09
- 2 55 LF OF 30" TYPE S HDPE PIPE AT 6.92%
- 3 VDOT ST'D DI-1 TOP=987.00 INV. IN=981.30 (STR. #2) INV. IN=983.34 (STR. #21) INV. OUT=981.20
- 4 125 LF OF 30" TYPE S HDPE PIPE AT 5.53%
- 5 VDOT ST'D MH-2 TOP=988.6 INV. IN=976.80 (STR. #3) INV. IN=976.80 (STR. #10) INV. OUT=976.70
- 6 46 LF OF 30" TYPE S HDPE PIPE AT 1.11%
- 7 VDOT ST'D DI-38 6' THROAT TOP=989.04 INV. IN=982.60 (STR. #16) INV. IN=976.19 (STR. #6) INV. OUT=976.09
- 8 59 LF OF 30" TYPE S HDPE PIPE AT 6.98% WITH END SECTION INV. OUT=972.00
- 9 VDOT ST'D DI-1 TOP=981.94 INV. OUT=977.91
- 10 111 LF OF 15" TYPE S HDPE PIPE AT 1.00%
- 11 VDOT ST'D DI-1 TOP=994.00 INV. IN=990.90 (STR. #27) INV. IN=990.65 (STR. #22) INV. OUT=989.00
- 12 76 LF OF 18" TYPE S HDPE PIPE AT 1.05%
- 13 VDOT STD. DI-3A TOP=983.85 6' THROAT INV. IN=988.20 INV. OUT=988.10
- 14 63 LF OF 18" TYPE S HDPE PIPE AT 3.78%
- 15 VDOT ST'D DI-1 TOP=991.59 INV. IN=985.70 INV. OUT=985.60
- 16 150 LF OF 18" TYPE S HDPE PIPE AT 2.00%
- 17 VDOT ST'D DI-3C 8' THROAT TOP=989.50 INV. OUT=984.50
- 18 172 LF OF 15" TYPE S HDPE PIPE AT 5.83% WITH END SECTION INV. OUT=974.50
- 19 48" CONC. RISER TOP=976.25 (NOT INC. TRASH RACK) (2) 15"x 15" DRIFES AT INV.=973.9 (1) 14" DRIFES AT INV.=971.5 INV. OUT=971.5 BOTTOM OF STRUCTURE=970.0 STRUCTURE TO BE FILLED WITH CONCRETE TO ELEV. 971.5
- 20 48 LF OF 24" RCP WITH RUBBER GASKET WATERTIGHT JOINTS AT 1.05% WITH VDOT STD. ES-1 INV. OUT=971.0
- 21 165 LF OF 10" TYPE S HDPE AT MIN. 1% SLOPE W/ (2) NYLOPLAST 12" STD. GRATE INLETS UPPER INV.=985.00 LOWER INV.=983.34
- 22 160 LF OF 12" TYPE S HDPE AT MIN. 1% SLOPE W/ (2) NYLOPLAST 12" STD. GRATE INLETS. UPPER INV.=995.00 LOWER INV.=990.65
- 23 181 LF OF 10" TYPE S HDPE AT MIN. 1% SLOPE W/ (2) NYLOPLAST 12" STD. GRATE INLETS UPPER INV.=984.5 LOWER INV.=980.8
- 24 168 LF OF 8" TYPE S HDPE AT MIN. 1% SLOPE W/ (1) NYLOPLAST 12" STD. GRATE INLET UPPER INV.=989.5 LOWER INV.=980.8
- 25 OMITTED
- 26 OMITTED
- 27 101 LF OF 8" TYPE S HDPE AT MIN. 1% SLOPE W/ (1) NYLOPLAST 12" STD. GRATE INLET UPPER INV.=992.0 LOWER INV.=990.9

- NOTES:
- 1. G.C. SHALL PROVIDE VDOT STANDARD IS-1 INLET SHAPING WITHIN ALL PROPOSED STORM STRUCTURES.
 - 2. ALL PIPE CONNECTIONS TO STRUCTURES SHALL BE IN ACCORDANCE WITH VDOT STANDARDS.
 - 3. ALL PROPOSED YARD DRAINS SHALL BE 12" NYLOPLAST STANDARD GRATE OR APPROVED EQUAL.
 - 4. ROOF DRAIN CONNECTIONS TO DOWNSPOUTS SHALL BE MADE WITH SCH. 40 PVC PIPE AS REQUIRED BY THE BUILDING CODE.

PROPOSED SANITARY SEWER SCHEDULE

- A S.S. MANHOLE (PRIVATE) TOP=991.21 INV. OUT=985.21
- A-D 177 LF OF 8" SDR-35 AT 7.22%
- B S.S. MANHOLE (PUBLIC) TOP=991.26 INV. IN=982.10 INV. OUT=982.00
- B-C 190 LF OF 8" SDR-35 AT 1.53%
- C S.S. MANHOLE (PUBLIC) TOP=991.45 INV. IN=979.1 INV. OUT=979.0
- C-D 179 LF OF 8" SDR-35 AT 3.66%
- D S.S. MANHOLE (PUBLIC) TOP=978.67 INV. IN=972.45 INV. IN=972.45 INV. OUT=972.35
- D-LS 27 LF OF 8" SDR-35 AT 2.08%
- E S.S. MANHOLE (PUBLIC) TOP=987.78 INV. OUT=983.7
- E-B 142 LF OF 8" SDR-35 AT 1.13%

- NOTES:
- 1. G.C. TO CONFIRM & COORDINATE ALL BUILDING TIE-IN LOCATIONS WITH M.E.P. AND ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION OF LATERALS.
 - 2. G.C. TO CONFIRM ALL TIE-IN LOCATIONS TO EXISTING LINES PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
 - 3. 6" S.S. LATERALS SHALL BE CONSTRUCTED AT MIN. SLOPE OF 1.04% PER THE BUILDING CODE.



BALZER & ASSOCIATES
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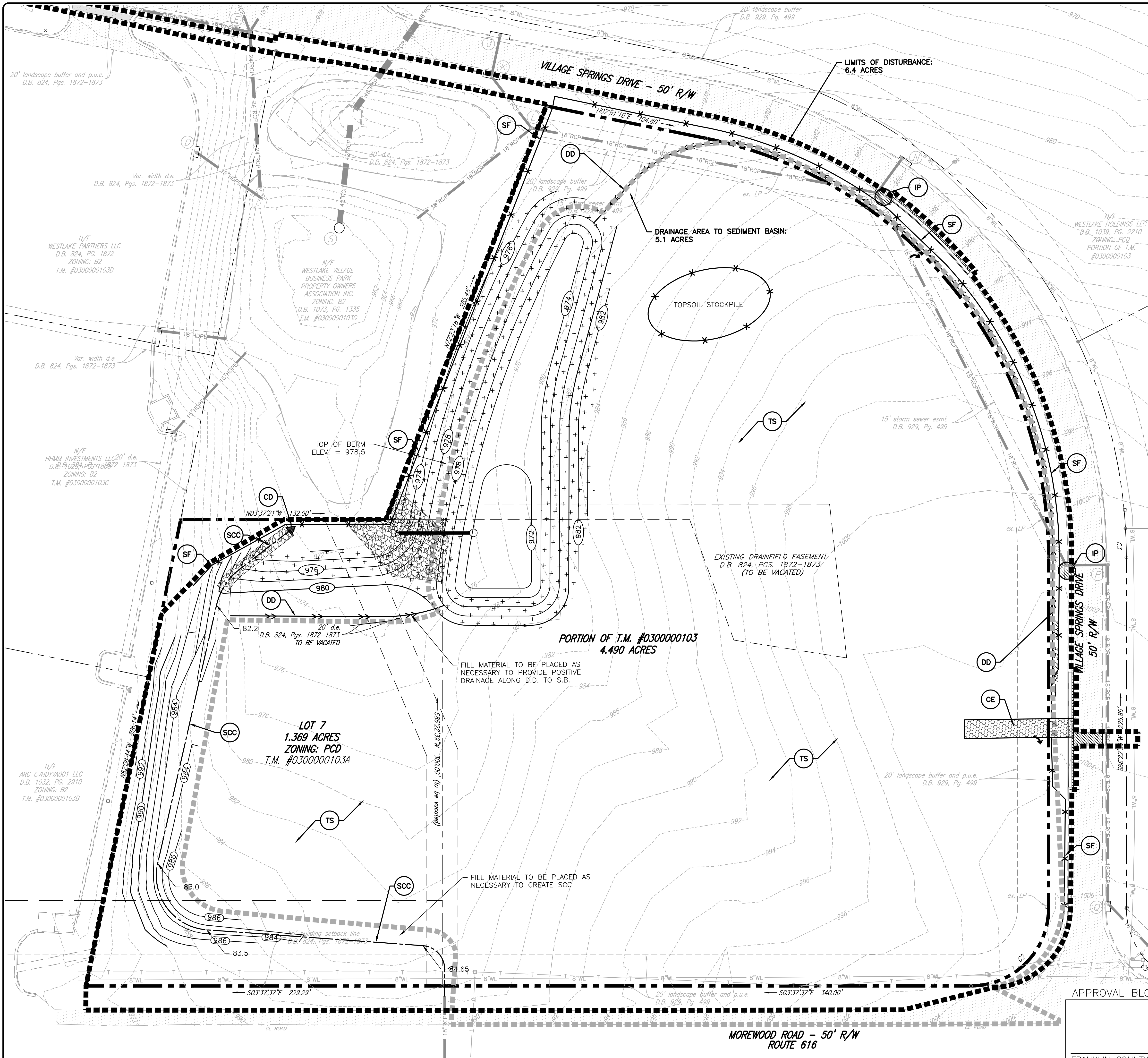


WESTLAKE VILLAGE APARTMENTS
PHASE 1
GRADING PLAN

DRAWN BY	CPB
DESIGNED BY	CPB
CHECKED BY	BTC
DATE	4/30/2019
SCALE	1"=30'
REVISIONS	
	7/11/2019
	8/30/2019
	10/30/2019
	12/31/2019
	3/24/2020
	9/28/2020
	3/9/2021
	10/28/2021

C5

PROJECT NO 04180116.00



PHASE 1 CONSTRUCTION SEQUENCE:

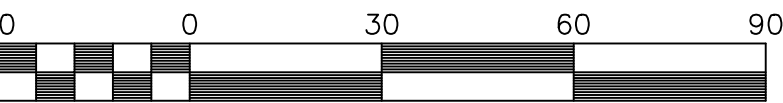
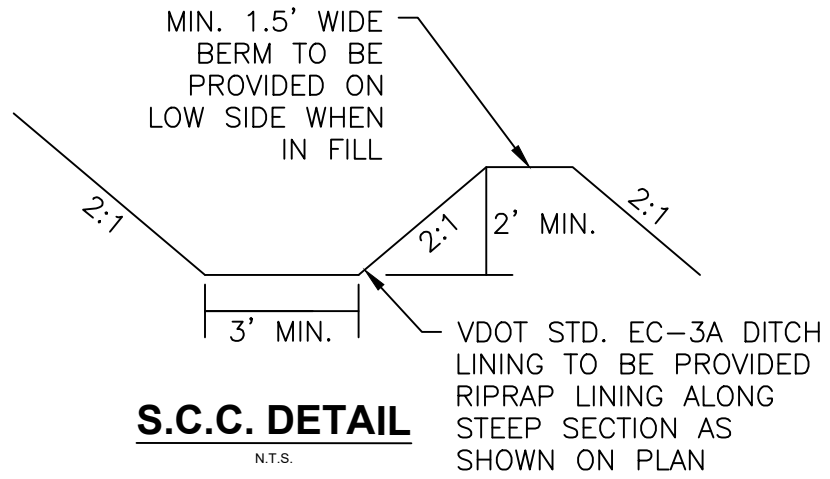
1. THE SWPPP SHALL BE PROVIDED ON-SITE AND ALL REGULATIONS, INSPECTIONS, AND PROCEEDURES FOLLOWED FOR THE ENTIRE DURATION OF THE PROJECT. SEE GENERAL PERMIT DETAILS FOR ADDITIONAL INFORMATION AND SWPPP FOR SITE SPECIFIC REQUIREMENTS AND INSPECTIONS.
2. THE CONTRACTOR SHALL CONTACT FRANKLIN COUNTY DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT - SEDIMENT AND EROSION CONTROL INSPECTOR IN WRITING A MINIMUM OF FIVE (5) BUSINESS DAYS IN ADVANCE OF THE PRE-CONSTRUCTION MEETING. FAILURE TO DO SO MAKES IS A VIOLATION OF APPROVED PLAN AND IS A FINABLE OFFENSE. CONTACT INFORMATION IS AS FOLLOWS:
EMAIL: TINA.FRANKLIN@FRANKLINCOUNTYVA.GOV
PHONE: (540) 463-3027 (EXT. 2427)
3. THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS A FIRST STEP IN CONSTRUCTION. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. G.C. SHALL PAY SPECIAL ATTENTION TO ENSURE SEDIMENT LADEN RUNOFF IS NOT DIRECTED TOWARDS VILLAGE SPRINGS DRIVE AND THERE SHALL BE NO MUD 'TRACKING' FROM THE SITE INTO THE PUBLIC RIGHT OF WAY.
4. INLET PROTECTION SHALL BE INSTALLED FOR THE EXISTING INLETS UNTIL SUCH TIME THAT THE PROJECT IS COMPLETE OR INLET IS REMOVED. THE PIPE SYSTEM SHALL BE PROTECTED FOR THE DURATION OF THE PROJECT FROM SEDIMENT LADEN RUNOFF.
5. SILT FENCE TO BE INSTALLED AS SHOWN. THE SILT FENCE SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. THE R.L.D. ASSIGNED TO THE PROJECT SHALL ENSURE ALL REGULATIONS ARE FOLLOWED AND DOCUMENTED THROUGHOUT THE ENTIRE PROJECT TO PREVENT THE EXCESSIVE BUILD-UP OF SEDIMENT.
6. THE SEDIMENT BASIN SHALL BE INSTALLED AS SHOWN. SEE DETAILS ON SHEET C9. THE DIVERSION DIKES SHALL BE INSTALLED AS SHOWN TO DIRECT ON-SITE RUNOFF TO THE SEDIMENT TRAPS.
7. THE STORMWATER CONVEYANCE CHANNEL SHALL BE INSTALLED TO DIRECT OFF-SITE RUNOFF AROUND THE PERIMETER OF THE SITE. THIS RUNOFF SHALL NOT BE CONVEYED TO THE SEDIMENT BASIN. CHECK DAM SHALL BE PROVIDED AT OUTLET.
8. THE DIVERSION DIKES SHALL BE INSTALLED AS SHOWN. FILL MATERIAL SHALL BE PROVIDED AS NECESSARY TO ENSURE POSITIVE DRAINAGE TO THE SEDIMENT BASIN.
9. STRIP TOPSOIL AND STORE IN LOCATION SHOWN.
10. TEMPORARY SEEDING SHALL BE PROVIDED FOR ALL AREAS THAT WILL NOT RECEIVE PAVEMENT OR OTHER PERMANENT IMPROVEMENTS WITHIN SEVEN DAYS.
11. G.C. SHALL ENSURE THAT THE LIMITS OF DISTURBANCE ARE STRICTLY ADHERED TO DURING THE PROJECT.
12. NO DEVIATIONS FROM THE PLANS SHALL TAKE PLACE UNLESS PRIOR APPROVAL FROM THE OWNER, PROJECT ENGINEER, AND THE APPROPRIATE REVIEW AGENCIES.
13. SEE SHEET C7 FOR PHASE II OF THE EROSION AND SEDIMENT CONTROL PLAN.

E&SC MEASURES

3.02	TEMPORARY STONE CONSTRUCTION ENTRANCE	CE
3.05	SILT FENCE	SF
3.07	STORM DRAIN INLET PROTECTION	IP
3.09	TEMPORARY DIVERSION DIKE	DD
3.14	TEMPORARY SEDIMENT BASIN	SB
3.17	STORMWATER CONVEYANCE CHANNEL	SCC
3.18	OUTLET PROTECTION	OP
3.20	ROCK CHECK DAM	CD
3.31	TEMPORARY SEEDING	TS
3.36	SOIL STABILIZATION BLANKETS & MATTING	B/M

E&SC LEGEND

- LIMITS OF DISTURBANCE
- DIVERSION DIKE
- SILT FENCE



SCALE: 1" = 30'

APPROVAL BLOCK

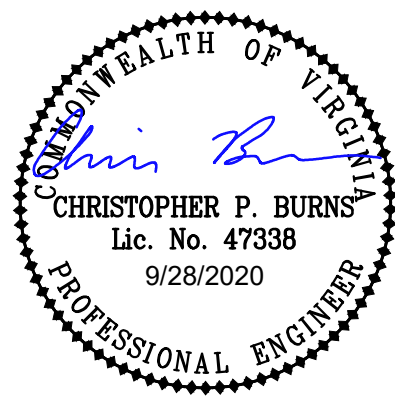
FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT DATE



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

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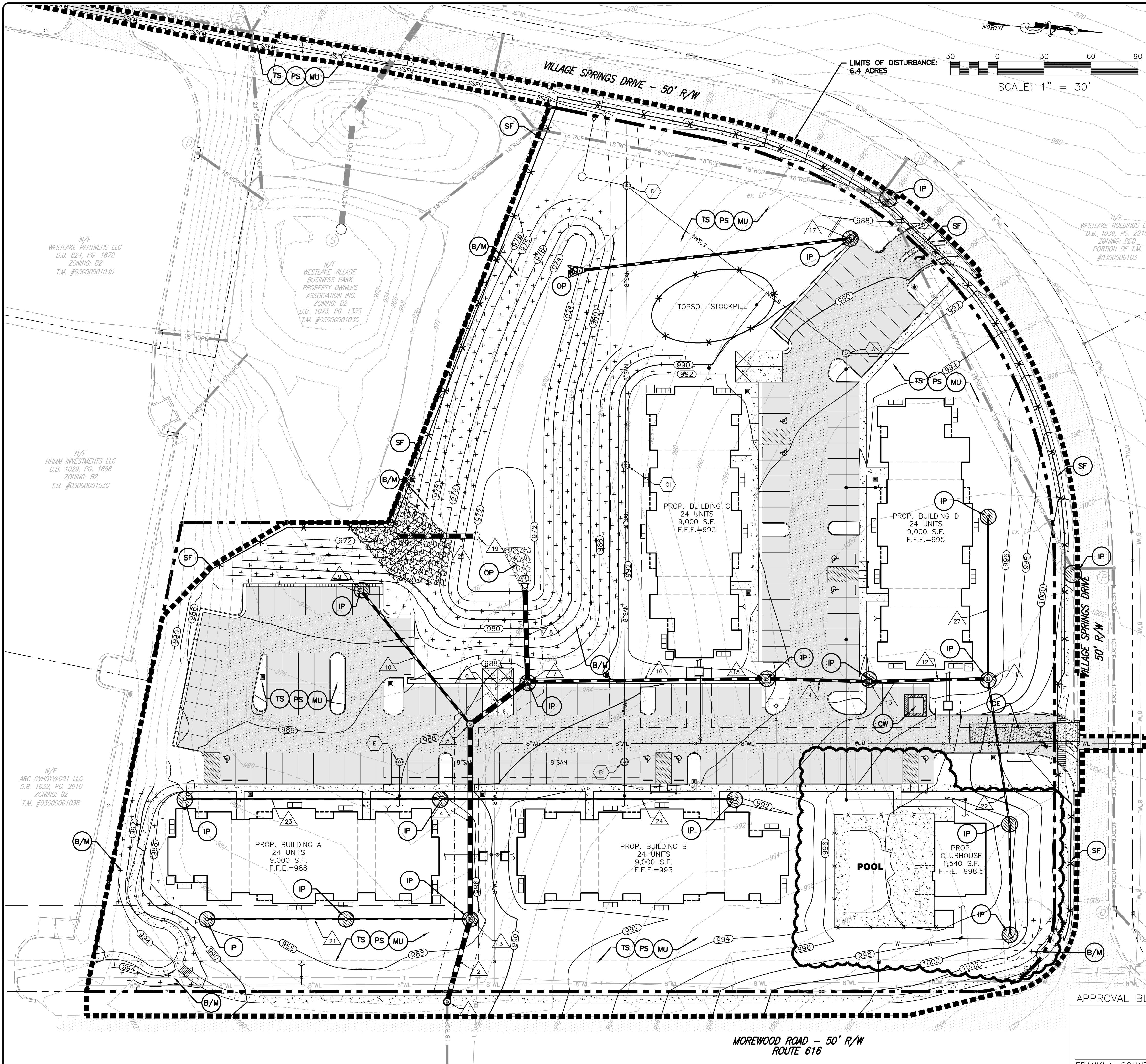
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580



WESTLAKE VILLAGE APARTMENTS
PHASE 1
ESC PLAN - PHASE 1

DRAWN BY CPB
DESIGNED BY CPB
CHECKED BY BTC
DATE 4/30/2019
SCALE 1"=30'
REVISIONS
7/11/2019
8/30/2019
10/30/2019
12/31/2019
3/24/2020
9/28/2020

C6
PROJECT NO 04180116.00



PHASE 2 CONSTRUCTION SEQUENCE:

1. THE SWPPP SHALL BE PROVIDED ON-SITE AND ALL REGULATIONS, INSPECTIONS, AND PROCEDURES FOLLOWED FOR THE ENTIRE DURATION OF THE PROJECT. SEE GENERAL PERMIT DETAILS FOR ADDITIONAL INFORMATION AND SWPPP FOR SITE SPECIFIC REQUIREMENTS AND INSPECTIONS.
2. THE SILT FENCE SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
3. MAJOR GRADING OPERATIONS SHALL COMMENCE ONCE THE SEDIMENT BASIN AND DIVERSION DIKES HAVE BEEN INSTALLED. THIS INCLUDES THE GRADING OF THE PARKING LOTS, BUILDING PADS, AND ALL OTHER ASSOCIATED GRADING OPERATIONS ON-SITE.
4. THE CONCRETE WASHOUT SHALL BE INSTALLED AND MADE FUNCTIONAL PRIOR TO ANY CONCRETE IMPROVEMENTS ON-SITE.
5. BUILDING CONSTRUCTION MAY BEGIN AT THIS TIME.
6. PROPOSED STORM SEWER SHALL BE INSTALLED AT THIS TIME WITH INLET PROTECTION AS EACH INLET BECOMES FUNCTIONAL. OUTLET PROTECTION TO BE INSTALLED AT ALL OUTFALLS.
7. THE STORMWATER CONVEYANCE CHANNEL SHALL BE MAINTAINED AS LONG AS POSSIBLE AND STORM SEWER PIPE #2 SHALL NOT BE INSTALLED UNTIL SUCH TIME AS THE S.C.C. IS REMOVED.
8. ALL UTILITIES FOR THE SITE SHALL BE INSTALLED AT THIS TIME AND AREAS TEMPORARILY OR PERMANENTLY SEEDED AFTER COMPLETION OF INSTALLATION.
9. AS STORM SEWER IS INSTALLED AND PROPOSED DRAINAGE PATTERNS ARE ESTABLISHED, DIVERSION DIKES SHALL BE REMOVED.
10. ONCE THE MAJORITY OF UPSTREAM AREAS ARE STABILIZED, THE SEDIMENT BASIN SHALL BE CONVERTED TO A PERMANENT STORMWATER MANAGEMENT FACILITY WHICH WILL ENTAIL THE REMOVAL OF THE EXISTING DEWATERING DEVICE ALONG WITH THE CLOSURE OF THE CORRESPONDING 8" ORIFICE AND THE INSTALLATION OF THE TWO 15" SQUARE ORIFICE OPENINGS AS REQUIRED.
11. STORM SEWER PIPE #2 TO BE INSTALLED AT THIS TIME AND THE STORMWATER CONVEYANCE CHANNEL AND CHECK DAM SHALL BE REMOVED AND FINAL GRADES ESTABLISHED IN THESE AREAS.
12. THE CONTRACTOR SHALL SURVEY AND RECORD THE EXCAVATED AREA(S) FOR EACH STORM WATER DESIGN FACILITY. THE SURVEYED VOLUME INFORMATION WILL BE PART OF THE AS-BUILT/RECORD DRAWING TO VERIFY THE STORM WATER MANAGEMENT AREA TO BE FILLED WITH MEDIA MEETING THE DESIGNED WATER QUALITY/QUANTITY VOLUME. (NOTE: THIS INFORMATION WILL BE PART OF THE AS-BUILT SUBMITTAL)
13. CURBING TO BE INSTALLED AT THIS TIME. THE CONCRETE WASHOUT SHALL BE UTILIZED IN ACCORDANCE WITH D.E.Q. REGULATIONS.
14. PAVEMENT, LANDSCAPING, ETC. SHALL BE INSTALLED AT THIS TIME. CONSTRUCTION ENTRANCE TO BE REMOVED.
15. PERMANENT SEEDING AND MULCHING SHALL BE APPLIED AT THIS TIME TO ALL AREAS AT FINAL GRADE.
16. CONTRACTOR SHALL CONTACT FRANKLIN COUNTY FOR A FINAL SITE INSPECTION AT THIS TIME.
17. AFTER FRANKLIN COUNTY APPROVAL, SILT FENCE AND INLET PROTECTION CAN BE REMOVED.
18. G.C. SHALL ENSURE THAT THE LIMITS OF DISTURBANCE ARE STRICTLY ADHERED TO DURING THE PROJECT.
19. NO DEVIATIONS TO THE PLANS SHALL TAKE PLACE UNLESS PRIOR APPROVAL FROM THE OWNER, PROJECT ENGINEER, AND THE APPROPRIATE REVIEW AGENCIES.

E&SC MEASURES

3.02	TEMPORARY STONE CONSTRUCTION ENTRANCE	CE
3.05	SILT FENCE	SF
3.07	STORM DRAIN INLET PROTECTION	IP
3.09	TEMPORARY DIVERSION DIKE	DD
3.18	OUTLET PROTECTION	OP
3.31	TEMPORARY SEEDING	TS
3.32	PERMANENT SEEDING	PS
3.35	MULCHING	MU
3.36	SOIL STABILIZATION BLANKETS & MATTING	B/M

E&SC LEGEND

- LIMITS OF DISTURBANCE
- DIVERSION DIKE
- SILT FENCE
- CONCRETE WASHOUT BASIN

APPROVAL BLOCK

FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT

DATE

BALZER & ASSOCIATES
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Roanoke, VA 24018
540.772.9580

COMMONWEALTH OF VIRGINIA

CHRISTOPHER P. BURNS
Lic. No. 47338
10/28/2021
PROFESSIONAL ENGINEER

WESTLAKE VILLAGE APARTMENTS

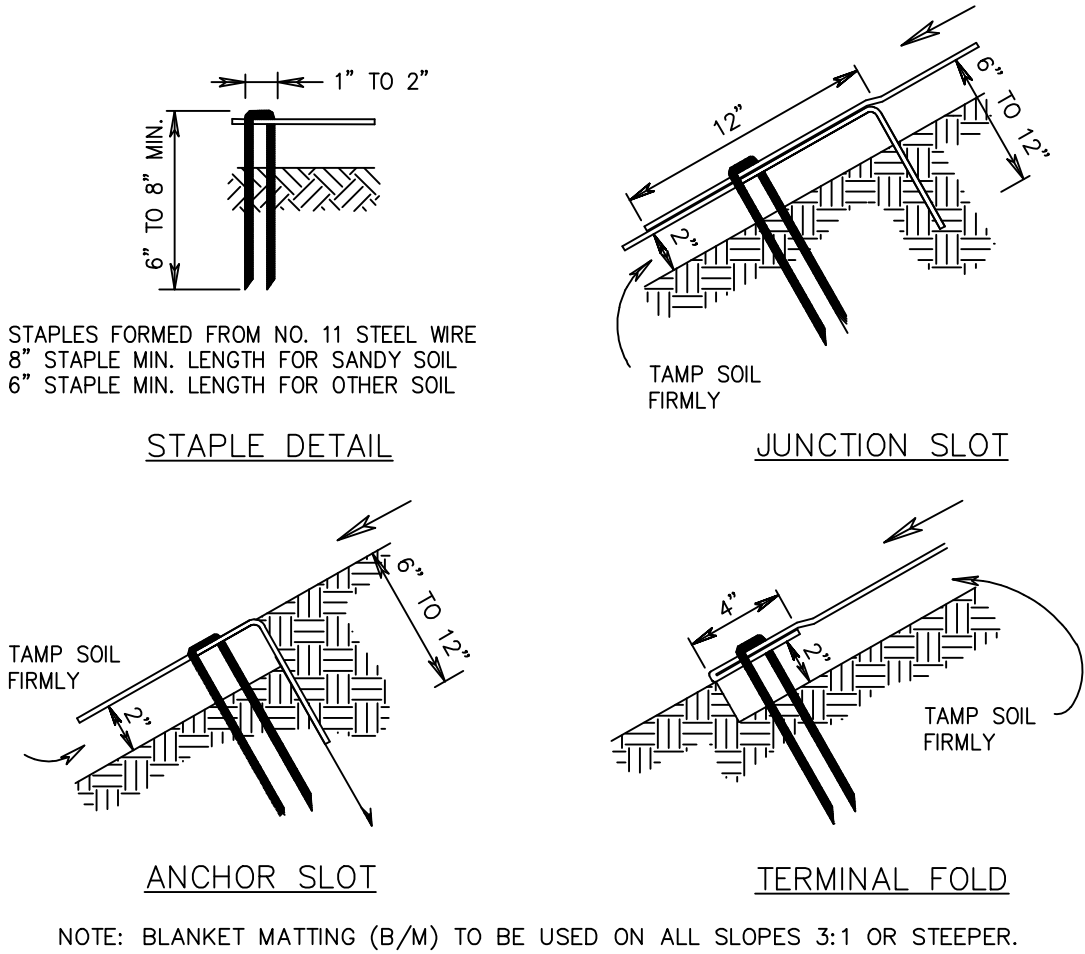
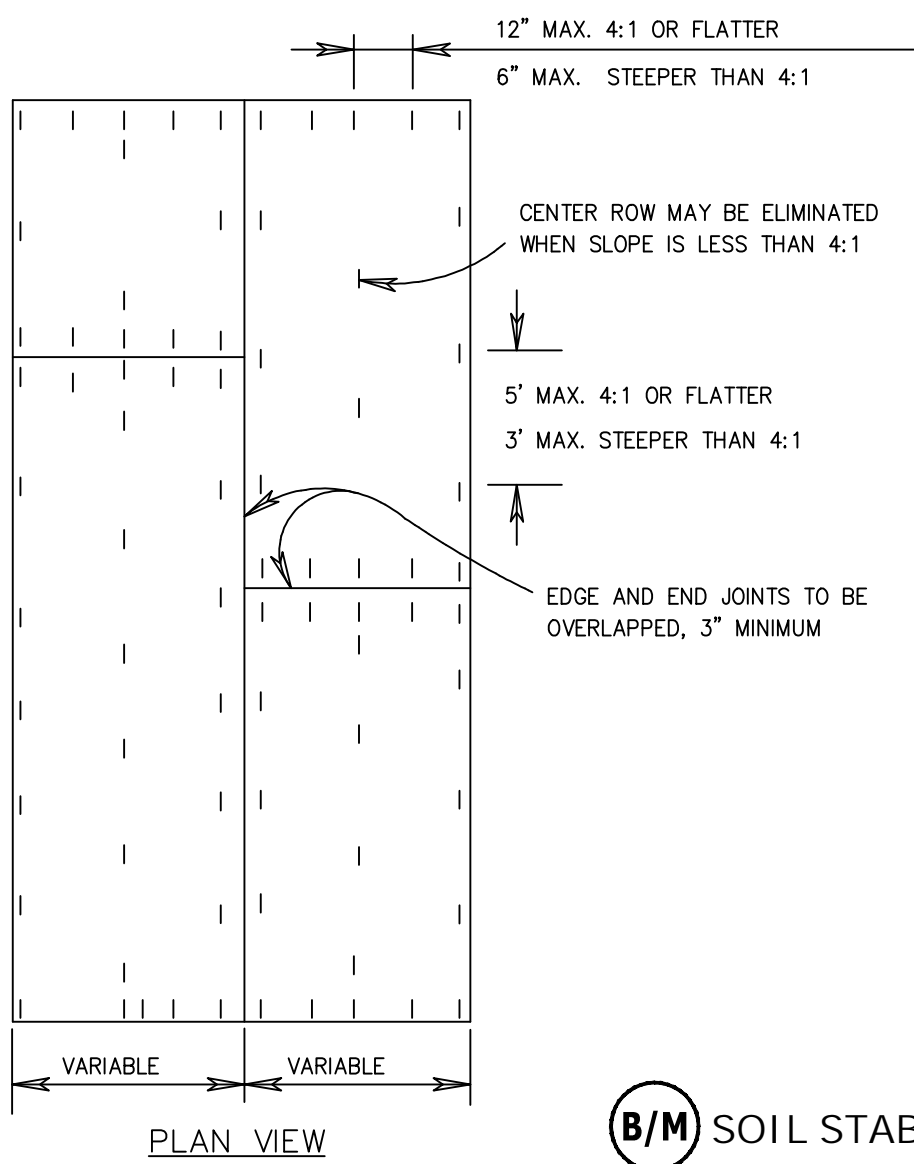
PHASE 1
ESC PLAN - PHASE 2

GLS CREEK DISTRICT
FRANKLIN COUNTY, VIRGINIA

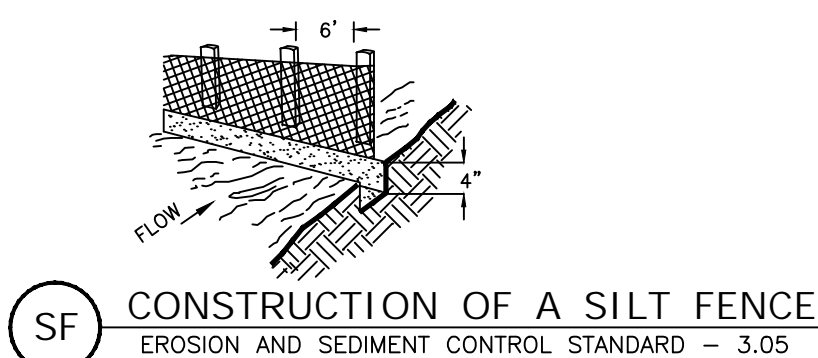
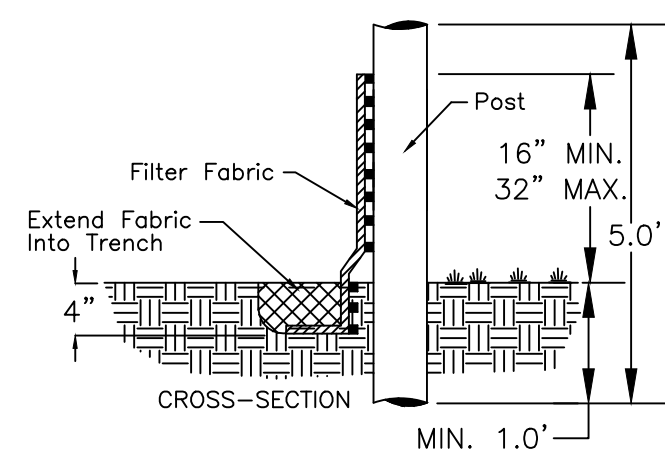
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DATE: 4/30/2019
SCALE: 1"=30'
REVISIONS:
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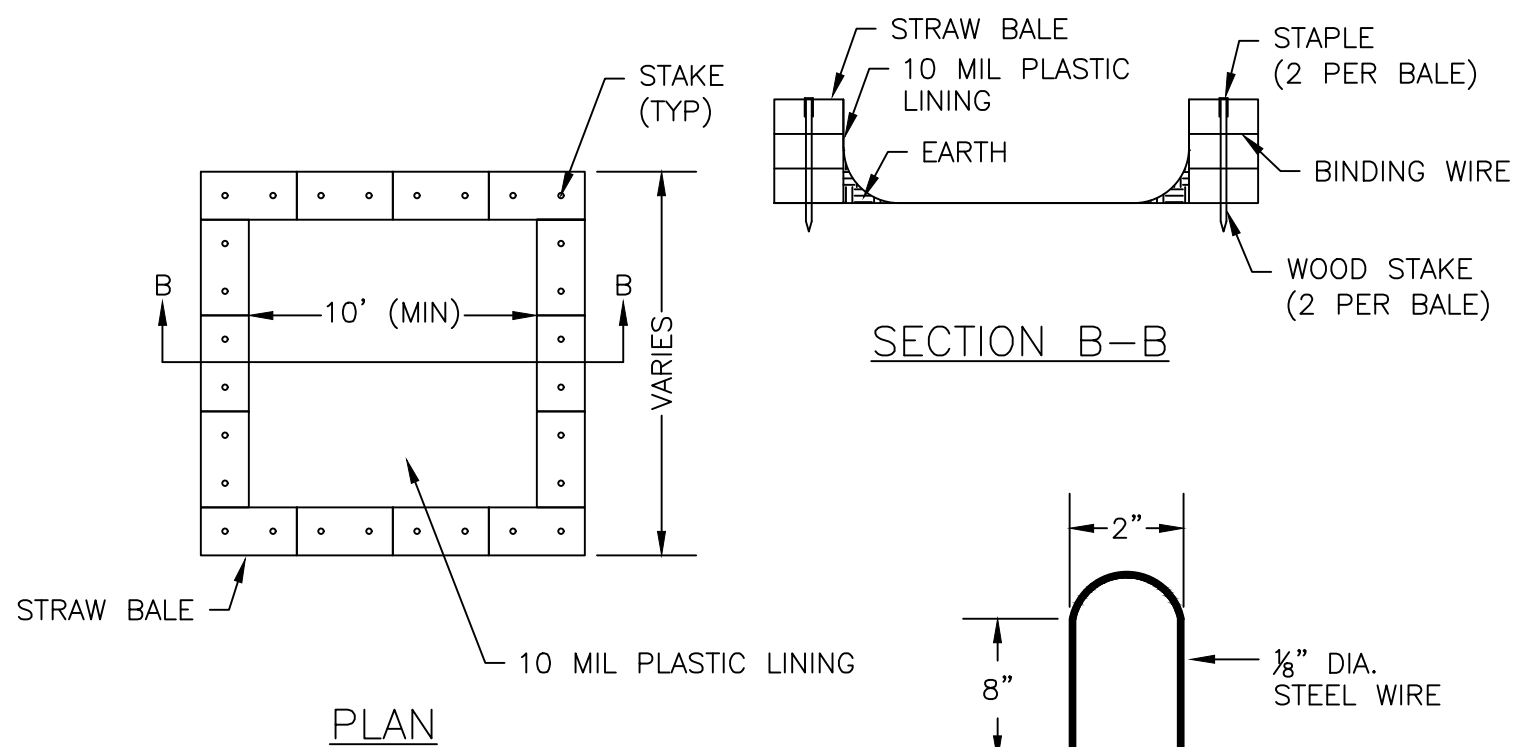
PROJECT NO 04180116.00



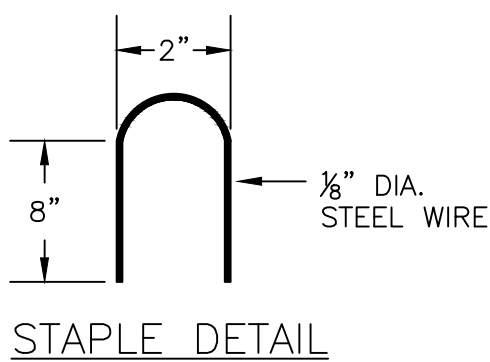
(B/M) SOIL STABILIZATION BLANKET



(SF) CONSTRUCTION OF A SILT FENCE
EROSION AND SEDIMENT CONTROL STANDARD - 3.05



SECTION B-B



STAPLE DETAIL

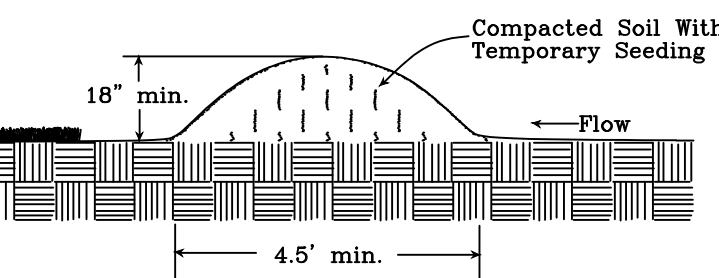
(CWO) CONCRETE TRUCK WASHOUT DETAIL
NTS

GENERAL NOTES:

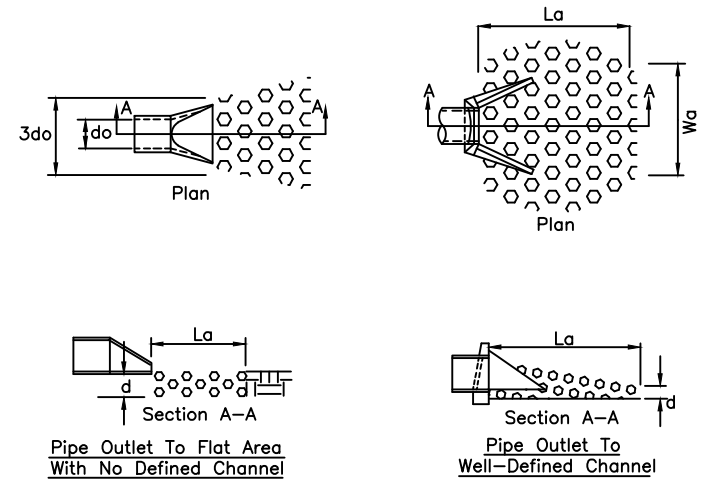
1. ACTUAL SIZE TO BE DETERMINED IN FIELD. A MINIMUM OF 10' WIDE BY 10' LONG AND SIZED TO CONTAIN ALL LIQUID AND SOLID WASTE. A MINIMUM OF 12" FREEBOARD SHALL BE INCLUDED.
2. THE CONCRETE WASHOUT SHALL NOT BE PLACED WITHIN 50' OF STORM DRAINS.
3. EXCESS AND SLUMP TEST SOLIDS SHALL BE PLACED ON PLASTIC LINER UNTIL HARDENED. CONTRACTOR MAY CONSIDER INSTALLING WIRE OR REBAR HOOD FOR LATER PICKUP REMOVAL.
4. INSPECTORS SHALL USE THE WASHOUT FACILITY OR PLASTIC FOR CLEANING OF THEIR TOOLS.

MAINTENANCE NOTES:

1. CHECK ALL CONCRETE WASHOUT FACILITIES DAILY TO DETERMINE IF THEY HAVE BEEN FILLED TO 75% CAPACITY. THE FACILITY SHALL BE CLEANED OUT OR CHANGED WHEN 75% FULL.
2. INSPECT LINERS DAILY TO ENSURE THAT LINERS ARE INTACT AND SIDEWALLS HAVE NOT BEEN DAMAGED BY CONSTRUCTION ACTIVITIES. LINERS SHALL BE REPLACED IF THERE ARE HOLES OR TEARS OBSERVED.
3. CONCRETE WASTE SHALL BE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN. THE HARDENED CONCRETE SHALL BE BROKEN UP AND DISPOSED OF OFFSITE PER APPLICABLE VA. DEQ RULES AND REGULATIONS. LIQUIDS SHALL NOT BE DISCHARGED DIRECTLY INTO WATERWAYS, STORM DRAINS, SWALES, OR DIRECTLY ONTO THE GROUND.
4. REMOVE LIQUIDS OR COVER STRUCTURE BEFORE PREDICTED STORMS TO PREVENT OVERFLOWS.
5. INSTALL A NEW PLASTIC LINER AFTER EVERY CLEANING.



(DD) TEMPORARY DIVERSION DIKE



OUTLET PROTECTION STRUCTURE DATA:

OUTLET PROTECTION (PIPE #8)
EC-1 CLASS 1 RIP RAP
LENGTH OF APRON=24' (Lo)
WIDTH OF APRON=26' (Wo)
MIN. STONE SIZE=9"

OUTLET PROTECTION (PIPE #18)
EC-1 CLASS 1 RIP RAP
LENGTH OF APRON=4' (Lo)
WIDTH OF APRON=6' (Wo)
MIN. STONE SIZE=6"

OUTLET PROTECTION (PIPE #20)
EC-1 CLASS 1 RIP RAP
LENGTH OF APRON=16' (Lo)
WIDTH OF APRON=18' (Wo)
MIN. STONE SIZE=7"

(OP) OUTLET PROTECTION

NOTES:
1. Apron lining may be rip-rap, grouted rip-rap, or concrete.
2. Lo is the length of the rip-rap apron as calculated using plots 1.36d and 1.35e.
3. d = 1.5 times the maximum stone diameter, but not less than 6".

TABLE 3.32-C (Revised June 2003) PERMANENT SEEDING SPECIFICATIONS FOR APPALACHIAN/MOUNTAIN AREA		
LAND USE	SEED ¹ SPECIES	APPLICATION RATES
Minimum Care Lawn (Commercial or Residential)	Tall Fescue ¹	90-100%
	Perennial Ryegrass ²	0-10%
	Kentucky Bluegrass ³	0-10%
		TOTAL: 200-280 lbs.
High-Maintenance Lawn	Minimum of three (3) up to five (5) varieties of Kentucky Bluegrass from approved list for use in Virginia ¹	TOTAL: 125 lbs.
General Slope (3:1 or less)	Tall Fescue ¹	125 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurse Crop ³	20 lbs.
		TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue ¹	100 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurse Crop ³	20 lbs.
		TOTAL: 120 lbs.
		TOTAL: 150 lbs.

1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at <http://www.ces.vt.edu/html/turfgrasspublicationspublications2.html>
2 - Perennial Ryegrass will germinate faster and at lower soil temperatures than Tall Fescues, thereby providing cover and erosion resistance for seedbeds.
3 - Use seasonal nurse crop in accordance with seeding dates as stated below:
March, April - May 15th Annual Rye
May 16th - August 15th Fescue
August 16th - September, October Annual Rye
November - February Winter Rye
4 - All legume seed must be properly inoculated. If Flatpea is used, increase to 30 lbs/acre. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30-40 lbs/acre.

FERTILIZER & LIME

- Apply 10-20-10 fertilizer at a rate of 500 lbs. / acre (or 12 lbs. / 1,000 sq. ft.)
- Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 - 6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin #4, 2003 Nutrient Management for Development Sites at <http://www.dcr.state.va.us/esw/esa.htm#pubs>

(PS) PERMANENT SEEDING SPECIFICATIONS

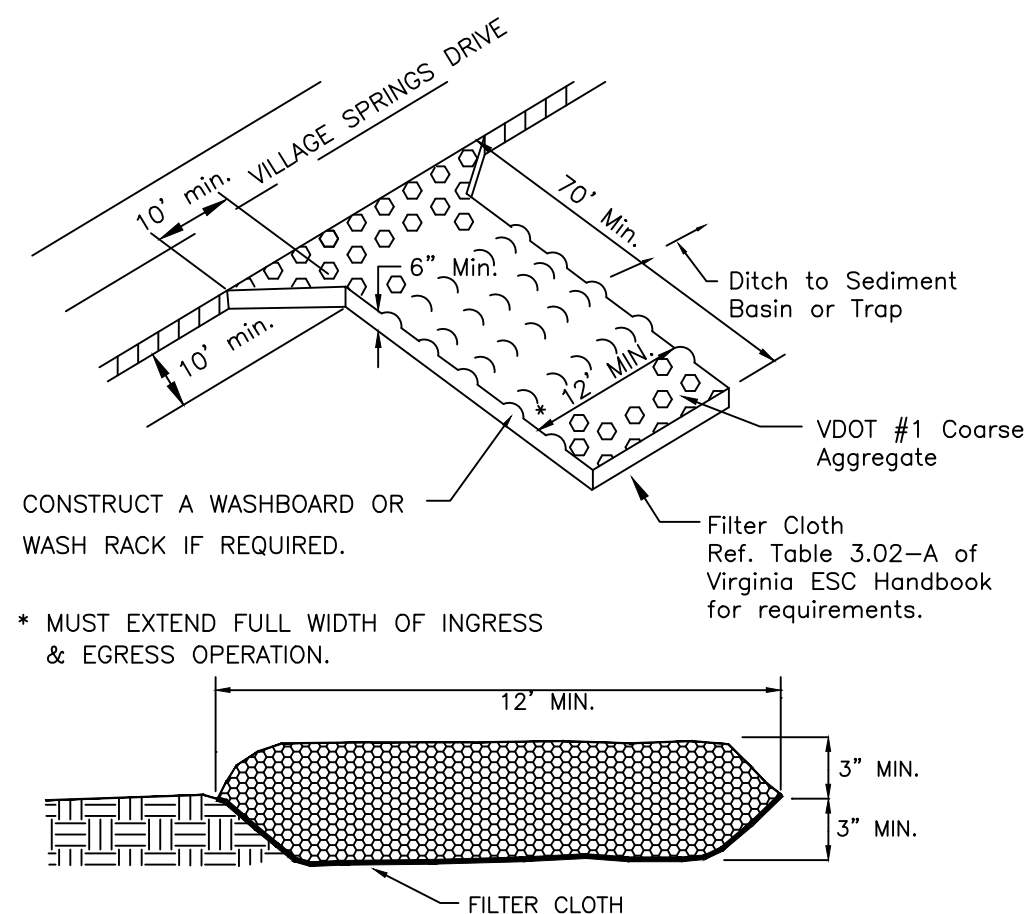
Erosion & Sediment Control Technical Bulletin No. 4 Nutrient Management for Development Sites

C. When applying maintenance fertilizer on established sod,

Month	Type of Grass			
	Tall Fescue Perennial Rye	Kentucky Bluegrass	Bermudagrass	Zoysiagrass
September	1	1	0	0
October	1	1	0	0
Early November	0	0	0	0
April	0	0	1	0
May	0-0.5	0-0.05	1	1
June	0	0	1	0
July/August	0	0	0	1
Yearly Lbs. N/1000 sf	2.5	2.5	2	2

Month	Type of Grass			
	Tall Fescue Perennial Rye	Kentucky Bluegrass	Bermudagrass	Zoysiagrass
August 15	1.5	1.5	0	0
October 1	1.5	1.5	0	0
April	0	0	1.5	1.5
May 15	0	0	0	0
June	0	0	1.5	1.5
Yearly Lbs. N/1000 sf	3	3	3	3

FERTILIZER SPECIFICATIONS AND RATES FOR MANAGEMENT



(CE) TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

TABLE 3.31-B (Revised June 2003) TEMPORARY SEEDING SPECIFICATIONS QUICK REFERENCE FOR ALL REGIONS		
APPLICATION DATES	SEED SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (olium multi-florum) & Cereal (Winter) Rye (Socale cereale)	50 - 100 (lb/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (olium multi-florum)	60 - 100 (lb/acre)
May 1 - Aug. 31	German Millet	50 (lb/acre)

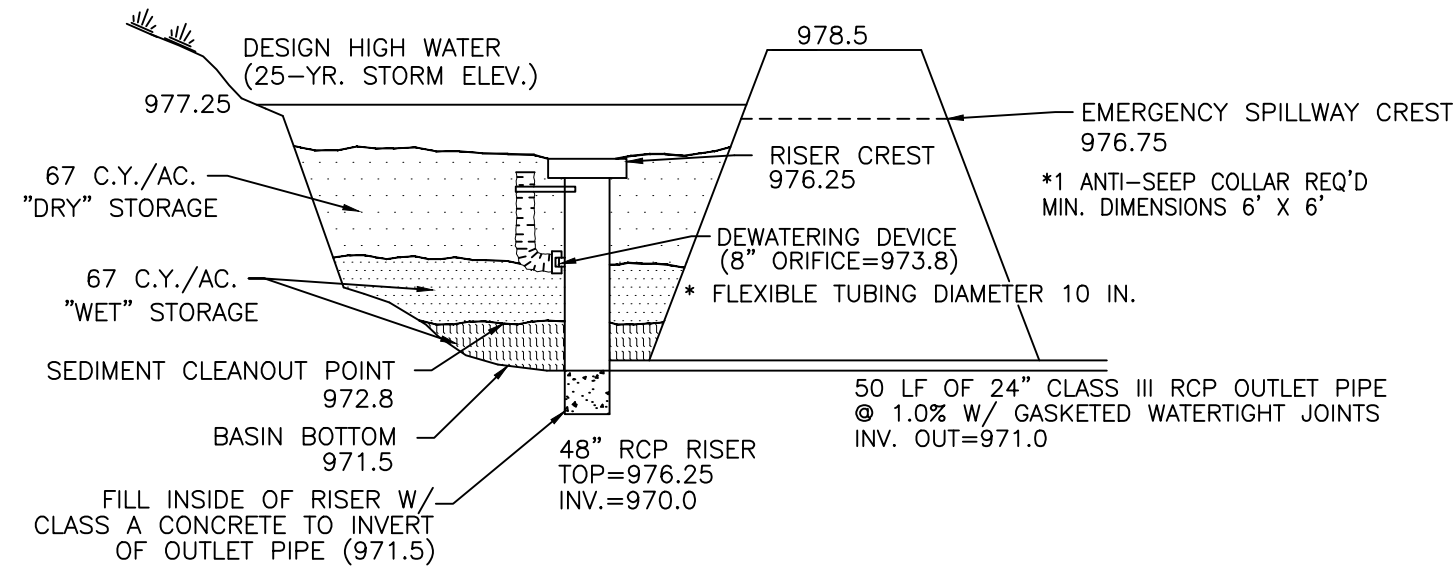
FERTILIZER & LIME

- Apply 10-10-10 fertilizer at a rate of 450 lbs. / acre (or 10 lbs. / 1,000 sq. ft.)
- Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
2 - Incorporate the lime and fertilizer into the top 4 - 6 inches of the soil by disking or by other means.
3 - When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin #4, 2003 Nutrient Management for Development Sites at <http://www.dcr.state.va.us/esw/esa.htm#pubs>

(TS) TEMPORARY SEEDING SPECIFICATIONS

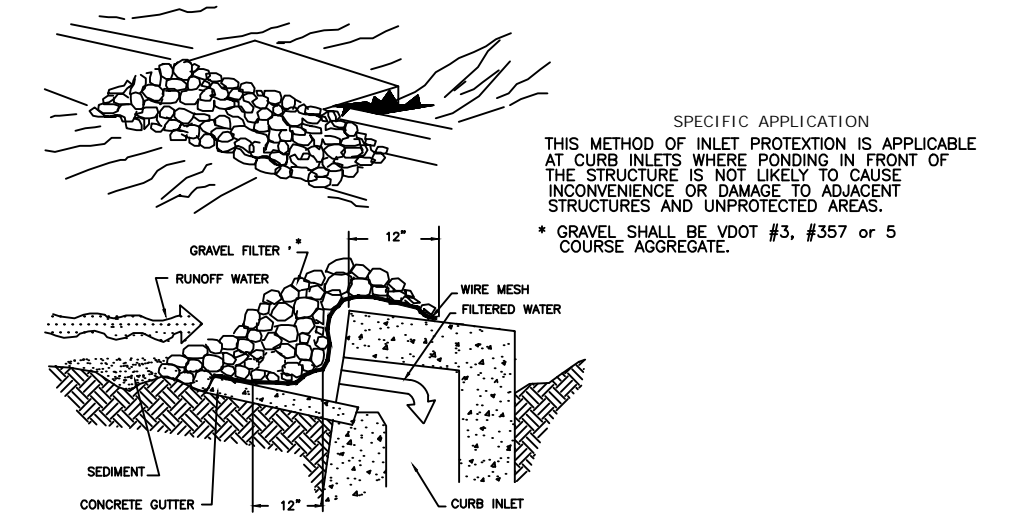
SEDIMENT BASIN SCHEMATIC ELEVATIONS



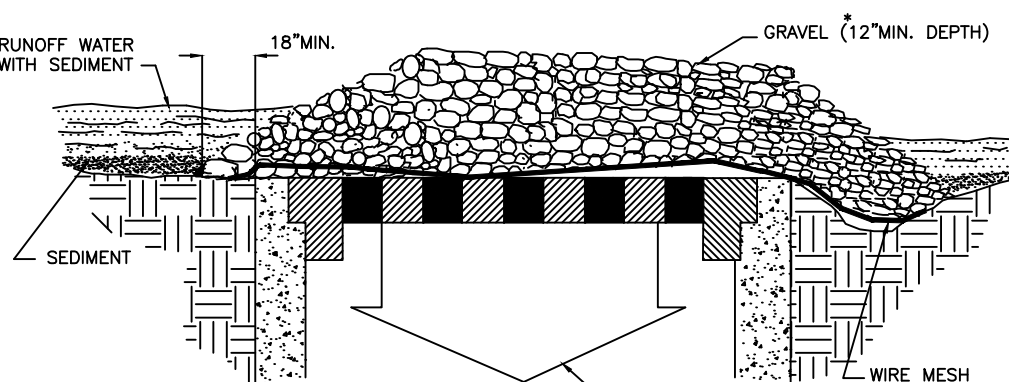
DESIGN ELEVATIONS WITH EMERGENCY SPILLWAY (RISER PASSES 2-YR. EVENT)

SEDIMENT BASIN

N.T.S.



(IP) GRAVEL CURB INLET SEDIMENT FILTER



SPECIFIC APPLICATION
This method of inlet protection is applicable where heavy concentrated flows are expected, but not where ponding around the structure might cause excessive inconvenience or damage to adjacent structures and unprotected areas.

- * Gravel shall be VDOT #3, #357 or #5 coarse aggregate.

(IP) GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

APPROVAL BLOCK

FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT		DATE
--	--	------



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Roanoke, VA 24018
540.772.9580



WESTLAKE VILLAGE APARTMENTS

PHASE 1
ESC DETAILS

GLS CREEK DISTRICT
FRANKLIN COUNTY, VIRGINIA

DRAWN BY CPB
DESIGNED BY CPB
CHECKED BY BTC
DATE 4/30/2019
SCALE AS SHOWN

REVISIONS

7/11/2019

8/30/2019

10/30/2019

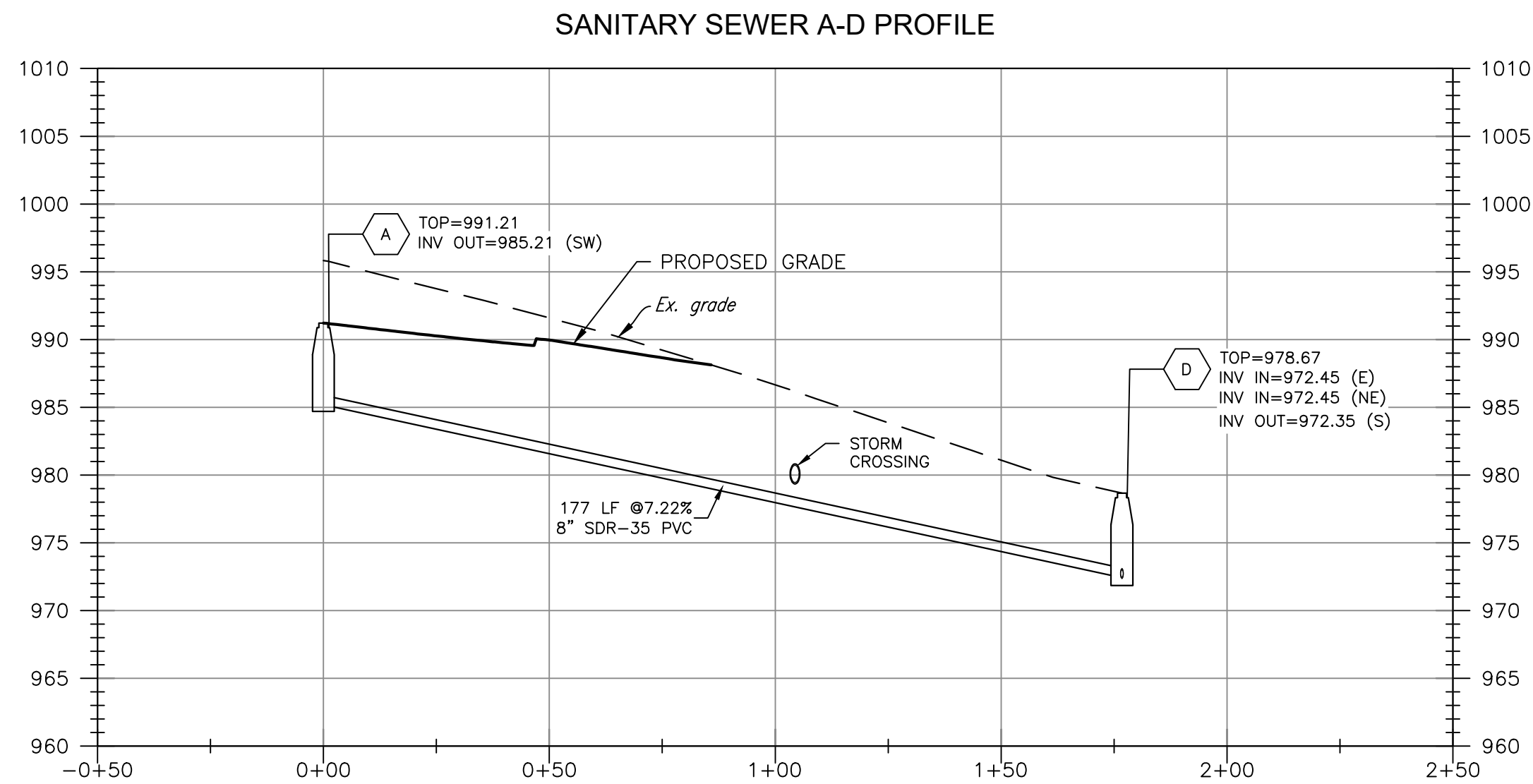
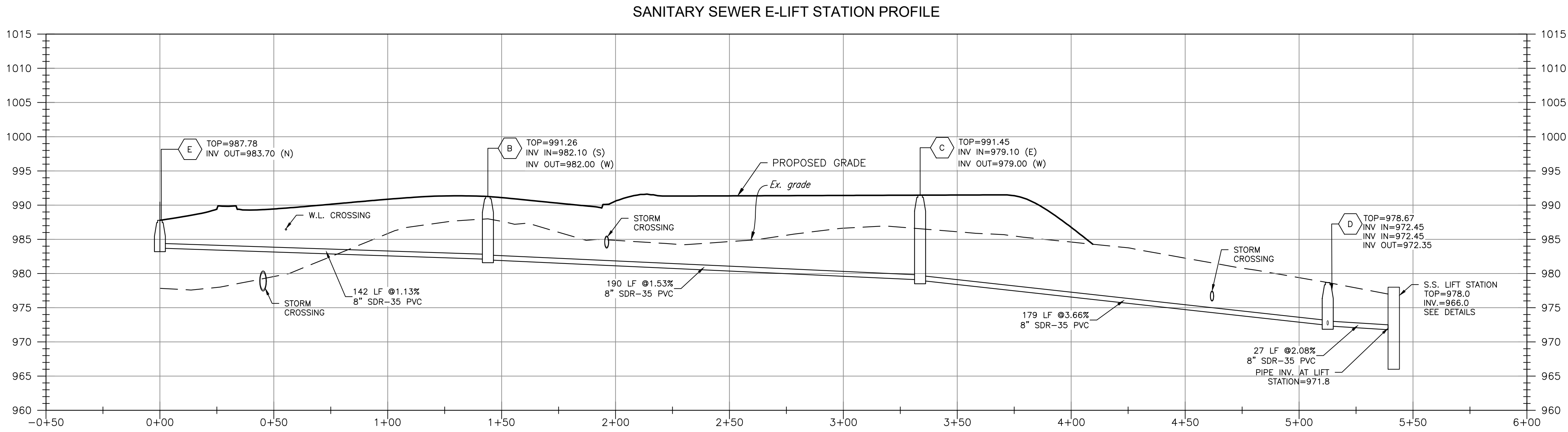
12/31/2019

3/24/2020

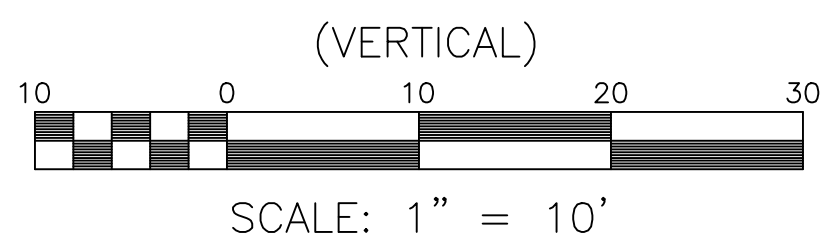
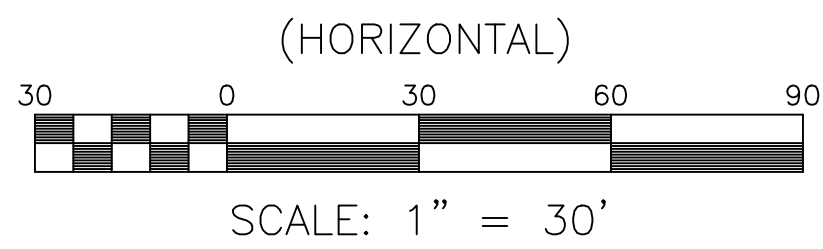
9/28/2020

C9

PROJECT NO 04180116.00



PROFILE SCALES:



PROPOSED SANITARY SEWER SCHEDULE

- (A) S.S. MANHOLE (PRIVATE)
TOP=991.21
INV. OUT=985.21
- (A)-(D) 177 LF OF 8" SDR-35 AT 7.22%
- (B) S.S. MANHOLE (PUBLIC)
TOP=991.26
INV. IN=982.10
INV. OUT=982.00
- (B)-(C) 190 LF OF 8" SDR-35 AT 1.53%
- (C) S.S. MANHOLE (PUBLIC)
TOP=991.45
INV. IN=979.1
INV. OUT=979.0
- (C)-(D) 179 LF OF 8" SDR-35 AT 3.66%
- (D) S.S. MANHOLE (PUBLIC)
TOP=978.67
INV. IN=972.45
INV. OUT=972.35
- (D)-(LS) 27 LF OF 8" SDR-35 AT 2.08%
- (E) S.S. MANHOLE (PUBLIC)
TOP=987.78
INV. OUT=983.7
- (E)-(B) 142 LF OF 8" SDR-35 AT 1.13%

- NOTES:
- G.C. TO CONFIRM & COORDINATE ALL BUILDING TIE-IN LOCATIONS WITH M.E.P. AND ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION OF LATERALS.
 - G.C. TO CONFIRM ALL TIE-IN LOCATIONS TO EXISTING LINES PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
 - 6" S.S. LATERALS SHALL BE CONSTRUCTED AT MIN. SLOPE OF 1.04% PER THE BUILDING CODE.



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Roanoke, VA 24018
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WESTLAKE VILLAGE APARTMENTS

PHASE 1
SANITARY PROFILES

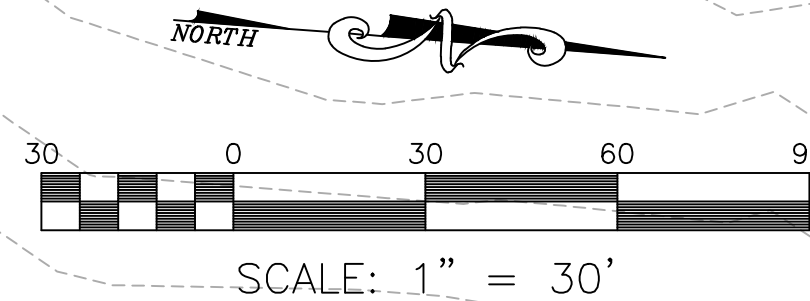
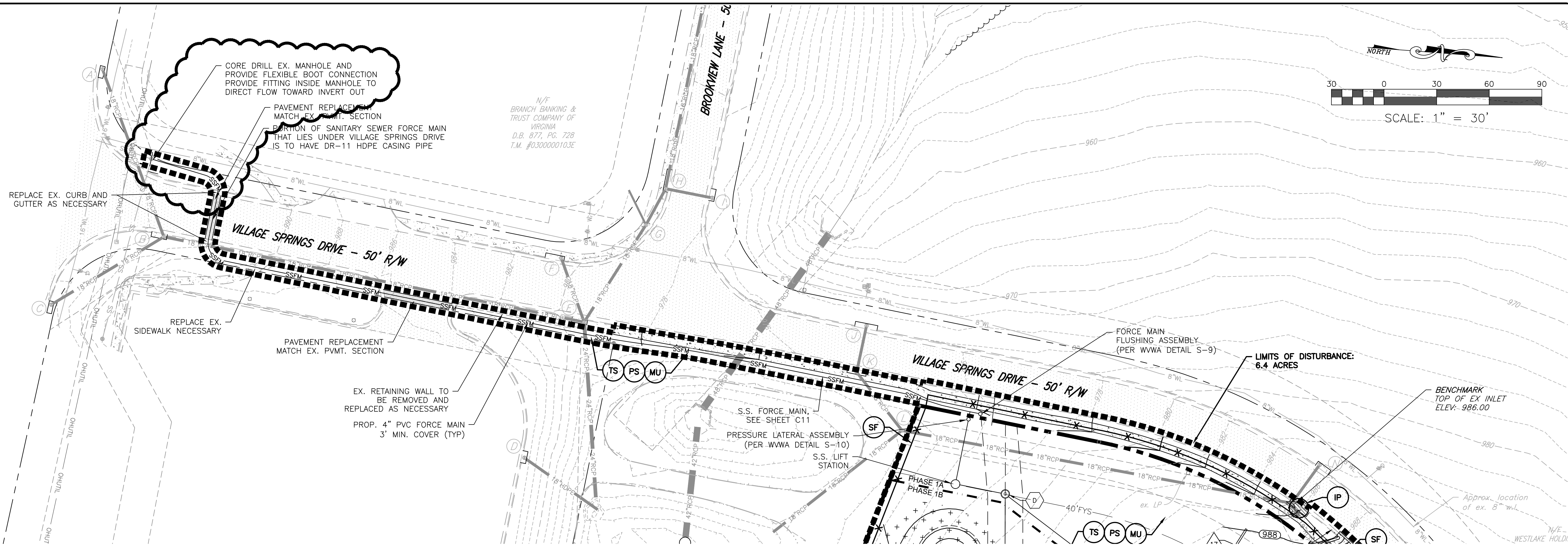
GLUS CREEK DISTRICT
FRANKLIN COUNTY, VIRGINIA

DRAWN BY	CPB
DESIGNED BY	CPB
CHECKED BY	BTC
DATE	4/30/2019
SCALE	AS NOTED
REVISIONS	
	7/11/2019
	8/30/2019
	10/30/2019
	12/31/2019
	3/24/2020
	9/28/2020

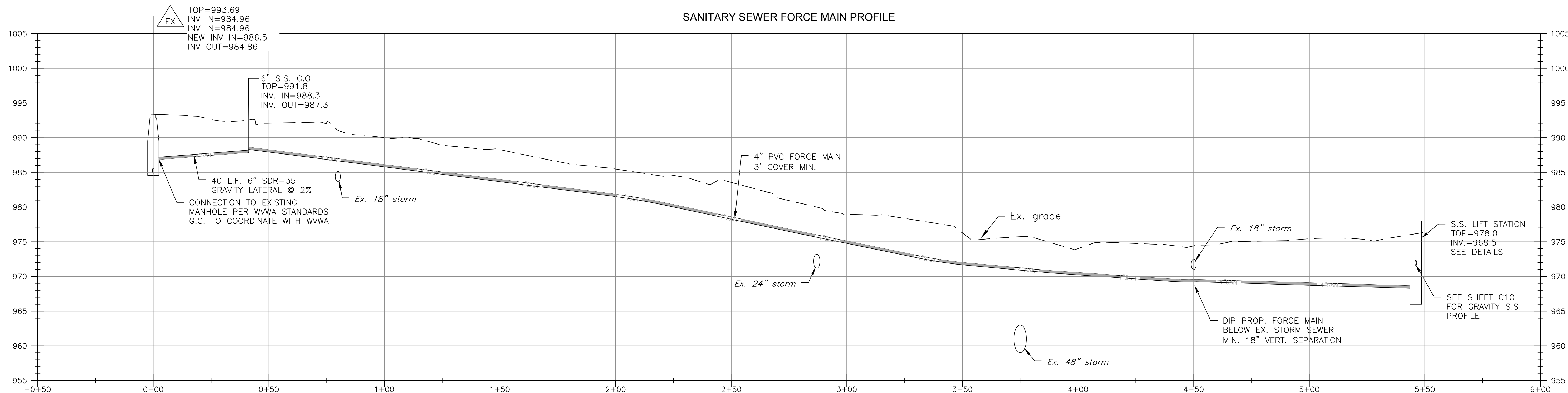
APPROVAL BLOCK

FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT DATE

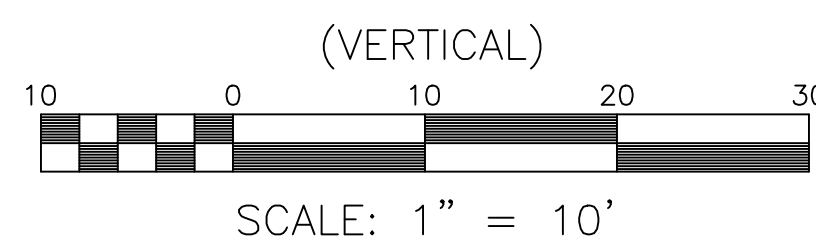
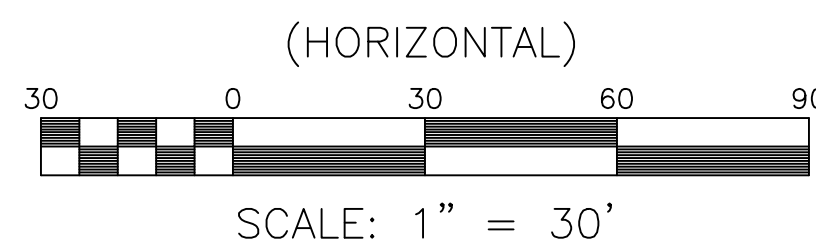
C10
PROJECT NO 04180116.00



SANITARY SEWER FORCE MAIN PROFILE



PROFILE SCALES:



APPROVAL BLOCK

FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT		DATE
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WESTLAKE VILLAGE APARTMENTS

PHASE 1
OFF-SITE S.S. EXTENSION

GLS CREEK DISTRICT
FRANKLIN COUNTY, VIRGINIA

DRAWN BY CPB
DESIGNED BY CPB
CHECKED BY BTC
DATE 4/30/2019
SCALE AS NOTED

REVISIONS
7/11/2019
8/30/2019
10/30/2019
12/31/2019
3/24/2020
9/28/2020
6/18/2021

StormRax™ ROUND SERIES TRASH RACK
VARIOUS RISER PIPE
(CMP, HDPE, PVC, DCP, RCP)
STANDARD 48 INCH RACK SHOWN
DIMENSIONS IN INCHES

PLAN SIDE VIEW ISOMETRIC

Part No.	Dim A	Dim B	Dim C	Min ID	Min OD	Riser Size
RS-24	17 1/4	14 1/4	28	24	30	12, 15, 18
RS-36	21 1/4	14 1/4	40 1/2	36	48	24, 27, 30
RS-48	27 1/4	18	54	48	57	33, 36
RS-60	27 1/4	18 1/4	66 1/2	60	70	48, 54

StormRax™ Round Series for Various Riser Pipe

RISER PIPE STRUCTURE DIMENSIONS
INSIDE STRUCTURE DIMENSION
OUTSIDE STRUCTURE DIMENSION

AVAILABLE OPTION

HDPE ANTI-VORTEX PLATE

Plastic Solutions, Inc.
PO Box 6386, Winchester, VA 22304
238 McChesne Rd., Winchester, VA 22305
(807) 927-9727 phone
(540) 722-2119 fax
http://www.plasticsolution.com

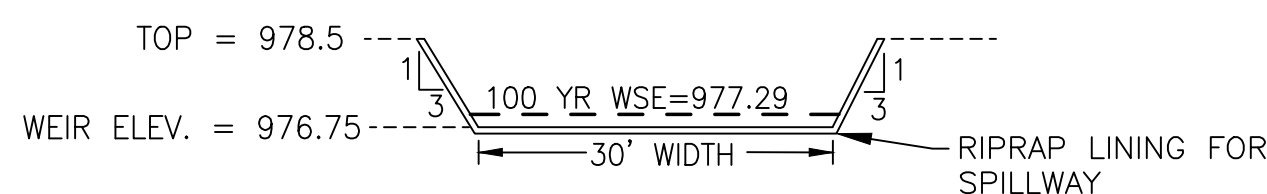
CUSTOMER: DATE: DRAWN BY: PROJECT: APP'D BY: DETAIL:

DETAIL FOR DEBRIS RACK HOLDER

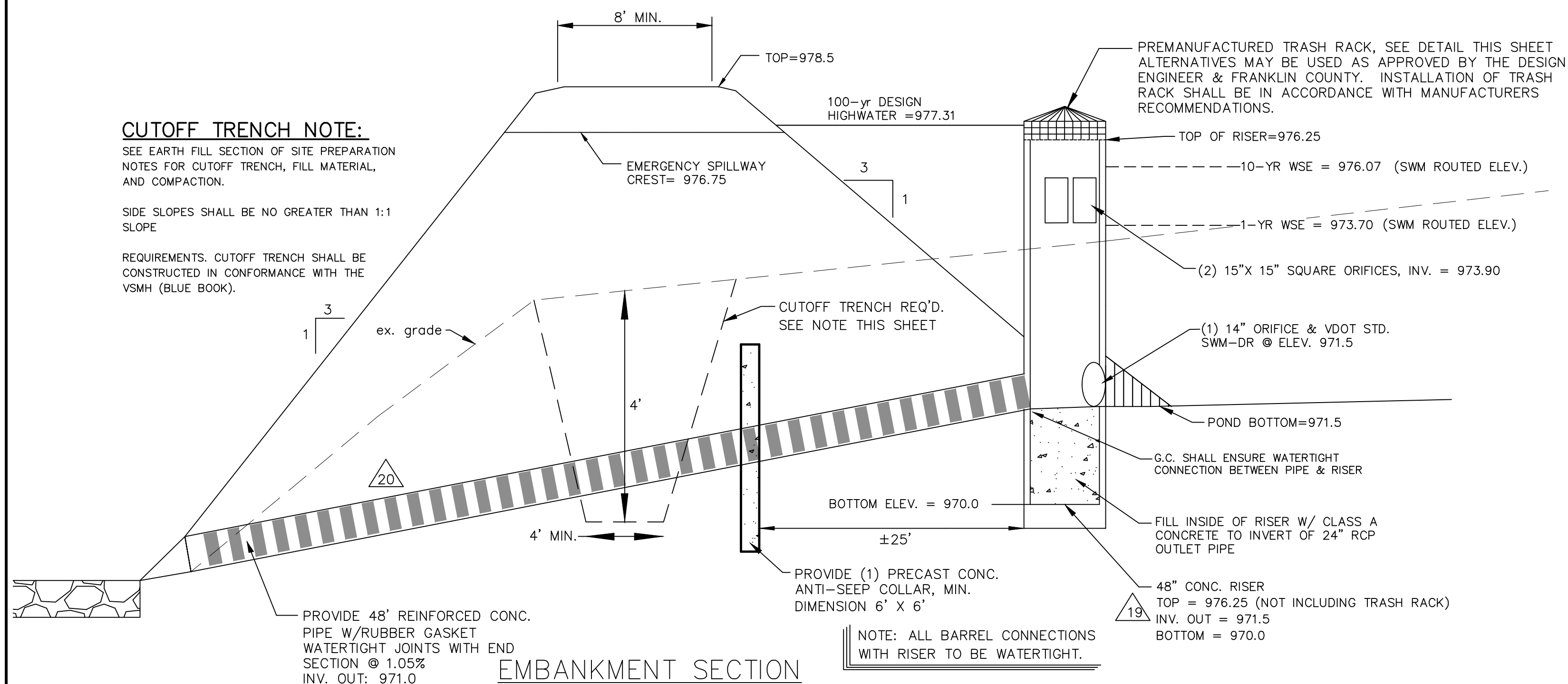
DETAIL FOR DEBRIS RACK

STORMWATER MANAGEMENT (SWM) DETAILS
DEBRIS RACK, METAL PLATE, WATER QUALITY ORIFICE, CONCRETE GRABBLE
(FOR SWM DRAINAGE STRUCTURES, SWM RISER PIPES AND SWM DAMS)
VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT ROAD AND BRIDGE STANDARDS
REVISION DATE: SHEET 2 OF 5
14.05



EMERGENCY SPILLWAY DETAIL



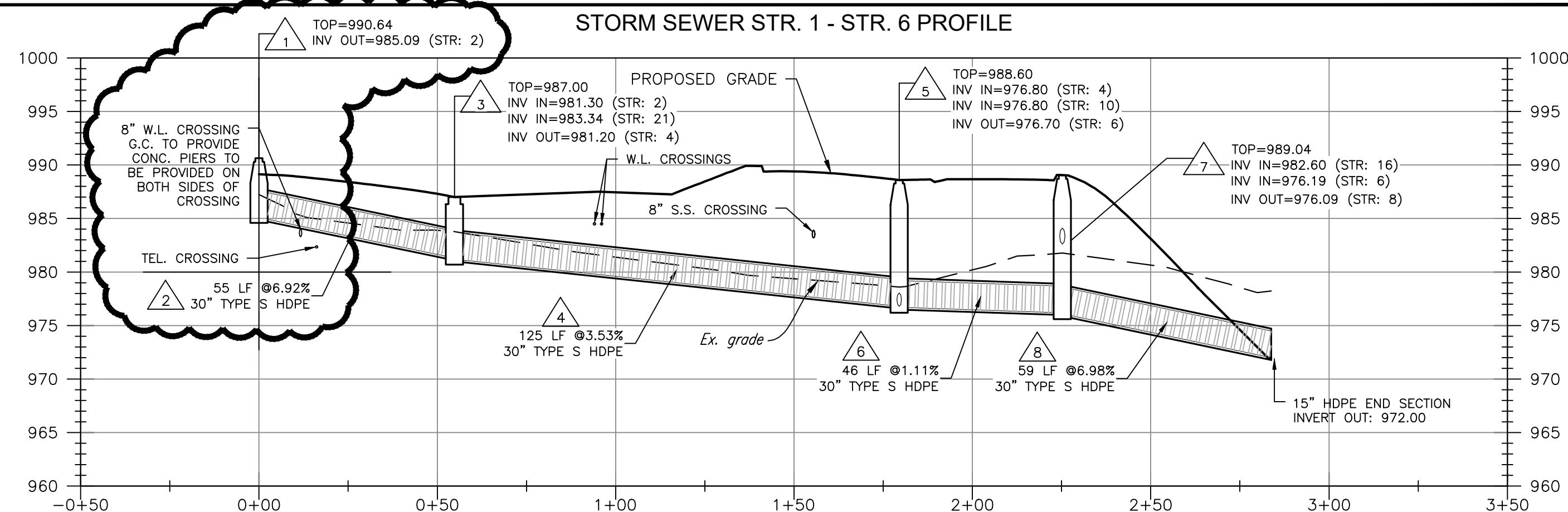
PROPOSED STORM SEWER SCHEDULE

- 1 VDOT ST'D MH-2 TOP=989.10 INV. OUT=985.09
- 2 55 LF OF 30" TYPE S HDPE PIPE AT 6.92%
- 3 VDOT ST'D DI-1 TOP=987.00 INV. IN=981.30 (STR. #2) INV. IN=983.34 (STR. #21) INV. OUT=981.20
- 4 125 LF OF 30" TYPE S HDPE PIPE AT 3.53%
- 5 VDOT ST'D MH-2 TOP=988.6 INV. IN=976.80 (STR. #3) INV. IN=976.80 (STR. #10) INV. OUT=976.70
- 6 46 LF OF 30" TYPE S HDPE PIPE AT 1.11%
- 7 VDOT ST'D DI-3B 6' THROAT TOP=989.04 INV. IN=982.60 (STR. #16) INV. IN=976.19 (STR. #6) INV. OUT=976.09
- 8 59 LF OF 30" TYPE S HDPE PIPE AT 6.98% WITH END SECTION INV. OUT=972.00
- 9 VDOT ST'D DI-1 TOP=981.94 INV. OUT=977.91
- 10 111 LF OF 15" TYPE S HDPE PIPE AT 1.00%
- 11 VDOT ST'D DI-1 TOP=994.00 INV. IN=990.90 (STR. #27) INV. IN=990.65 (STR. #22) INV. OUT=989.00
- 12 76 LF OF 18" TYPE S HDPE PIPE AT 1.05%
- 13 VDOT STD. DI-3A TOP=993.85 6' THROAT INV. IN=988.20 INV. OUT=988.10
- 14 63 LF OF 18" TYPE S HDPE PIPE AT 3.78%
- 15 VDOT ST'D DI-1 TOP=991.59 INV. IN=985.70 INV. OUT=985.60
- 16 150 LF OF 18" TYPE S HDPE PIPE AT 2.00%
- 17 VDOT ST'D DI-3C 8' THROAT TOP=989.50 INV. OUT=984.50
- 18 172 LF OF 15" TYPE S HDPE PIPE AT 5.83% WITH END SECTION INV. OUT=974.50
- 19 48" CONC. RISER TOP=976.25 (NOT INC. TRASH RACK) (2) 15"x 15" ORIFICES AT INV.=973.9 (1) 14" ORIFICE AT INV.=971.5 BOTTOM OF STRUCTURE=970.0 STRUCTURE TO BE FILLED WITH CONCRETE TO ELEV. 971.5
- 20 48 LF OF 24" RCP WITH RUBBER GASKET WATERTIGHT JOINTS AT 1.05% WITH VDOT STD. ES-1 INV. OUT=971.0
- 21 165 LF OF 10" TYPE S HDPE AT MIN. 1% SLOPE W/ (2) NYLOPLAST 12" STD. GRATE INLETS UPPER INV.=985.00 LOWER INV.=983.34
- 22 160 LF OF 12" TYPE S HDPE AT MIN 1% SLOPE W/ (2) NYLOPLAST 12" STD. GRATE INLETS. UPPER INV.=992.25 LOWER INV.=990.65
- 23 181 LF OF 10" TYPE S HDPE AT MIN. 1% SLOPE W/ (2) NYLOPLAST 12" STD. GRATE INLETS UPPER INV.=984.5 LOWER INV.=980.8
- 24 168 LF OF 8" TYPE S HDPE AT MIN. 1% SLOPE W/ (1) NYLOPLAST 12" STD. GRATE INLET UPPER INV.=989.5 LOWER INV.=980.8
- 25 OMITTED
- 26 OMITTED
- 27 101 LF OF 8" TYPE S HDPE AT MIN. 1% SLOPE W/ (1) NYLOPLAST 12" STD. GRATE INLET UPPER INV.=992.0 LOWER INV.=990.9

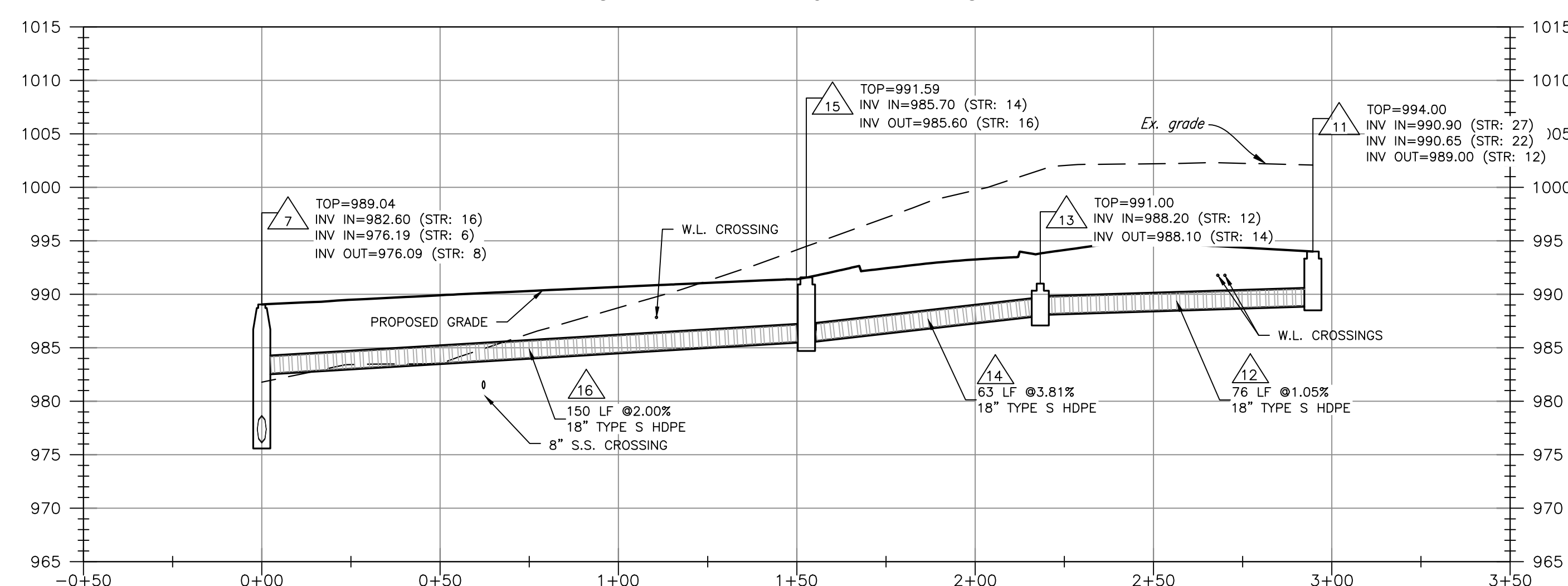
NOTES:

1. G.C. SHALL PROVIDE VDOT STANDARD IS-1 INLET SHAPING WITHIN ALL PROPOSED STORM STRUCTURES.
2. ALL PIPE CONNECTIONS TO STRUCTURES SHALL BE IN ACCORDANCE WITH VDOT STANDARDS.
3. ALL PROPOSED YARD DRAINS SHALL BE 12" NYLOPLAST STANDARD GRATE OR APPROVED EQUIV.

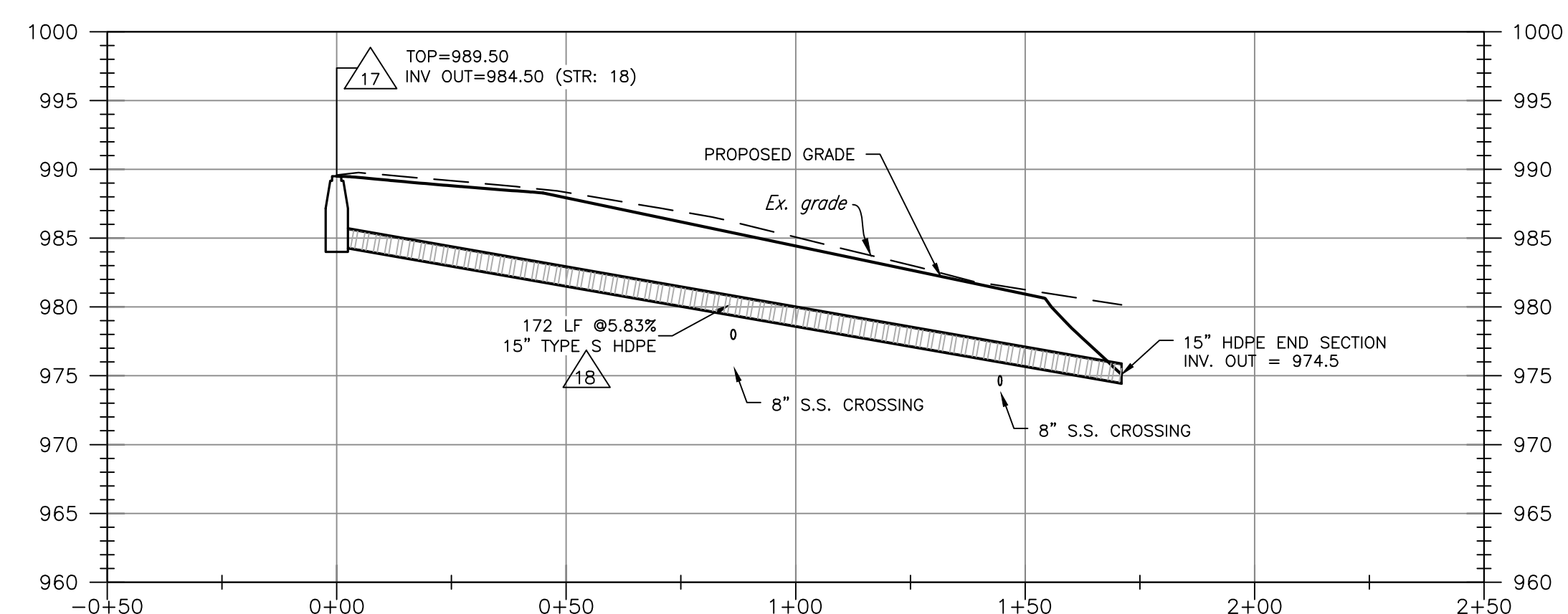
STORM SEWER STR. 1 - STR. 6 PROFILE



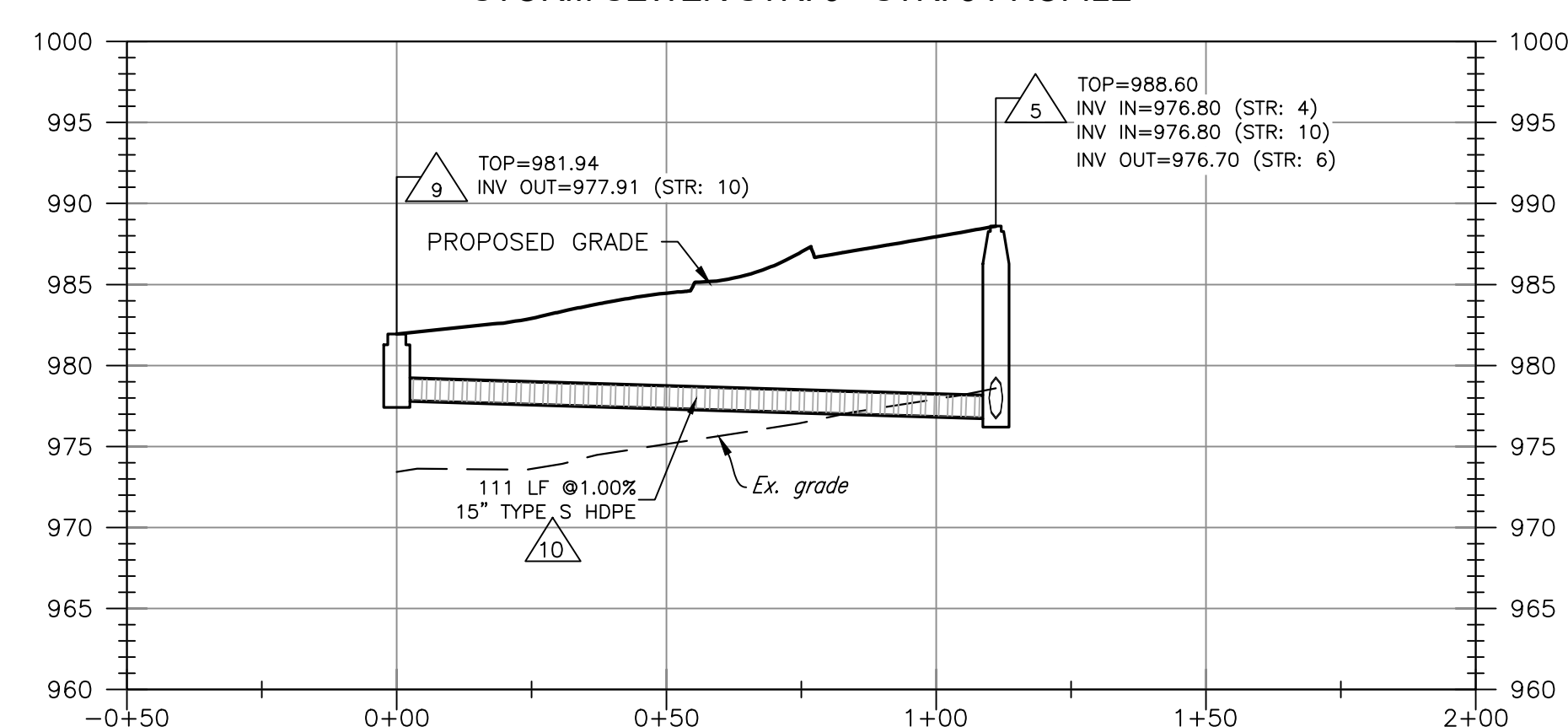
STORM SEWER STR. 13 - STR. 11 PROFILE



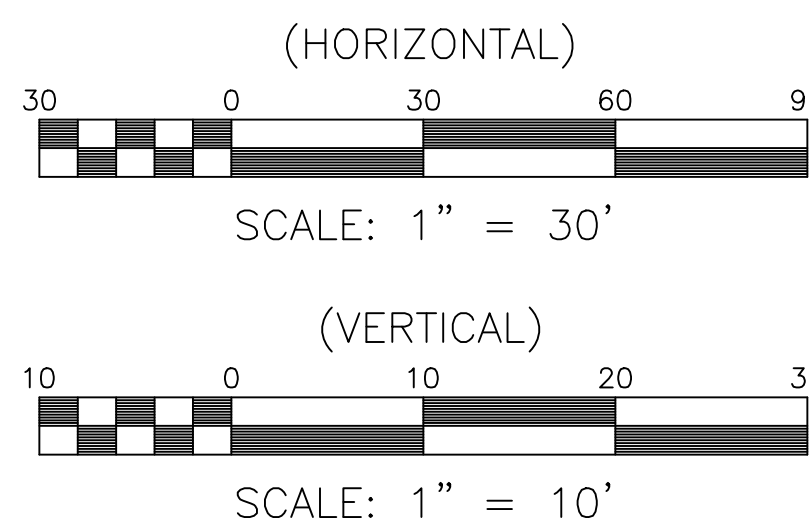
STORM SEWER STR. 17 - STR. 18 PROFILE



STORM SEWER STR. 9 - STR. 5 PROFILE



PROFILE SCALES:



APPROVAL BLOCK

FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT DATE

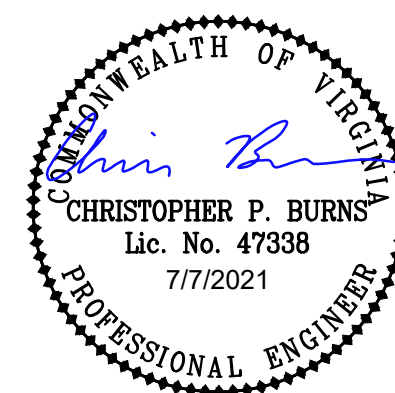


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Roanoke, VA 24018
540.772.9580



WESTLAKE VILLAGE APARTMENTS

PHASE 1

STORM PROFILES

GLIS CREEK DISTRICT
FRANKLIN COUNTY, VIRGINIA

DRAWN BY: CPB
DESIGNED BY: CPB
CHECKED BY: BTC
DATE: 4/30/2019
SCALE: AS NOTED

REVISIONS

7/11/2019	
8/30/2019	
10/30/2019	
12/31/2019	
3/24/2020	
9/28/2020	
7/7/2021	

C12

PROJECT NO. 04180116.00

LANDSCAPE SUMMARY:

PERIMETER LANDSCAPING

THE MINIMUM REQUIRED LANDSCAPING FOR ALL OUTER BOUNDARIES OF ANY USE REQUIRING A SITE PLAN SHALL BE PROVIDED AS PER PERIMETER LANDSCAPING A.

PERIMETER LANDSCAPING A

VILLAGE SPRINGS ROAD FRONTAGE: 700 LF

REQUIRED:

ONE SMALL DECIDUOUS TREE FOR EACH FIFTY (50) LINEAL FEET OR AT LEAST ONE EVERGREEN TREE FOR EACH FIFTY (50) LINEAL FEET SHALL BE PLANTED WITHIN THE REQUIRED LANDSCAPE YARD.

ONE MEDIUM SHRUB FOR EACH TWENTY-FIVE (25) LINEAL FEET SHALL BE PLANTED WITHIN THE REQUIRED YARDS AND SETBACK AREA.

LOW SHRUBS AND GROUND COVER SHALL BE DISPERSED WITHIN THE REQUIRED YARDS AND SETBACK AREA.

THE REQUIRED LANDSCAPE YARD SHALL BE SUFFICIENT TO ACCOMMODATE THE REQUIRED LANDSCAPE TREATMENT DEFINED HEREIN.

PROVIDED: 14 SMALL TREES, 28 SHRUBS

PERIMETER LANDSCAPING B

MOREWOOD ROAD RTE. 616 FRONTAGE: 620 LF

REQUIRED:

ONE LARGE DECIDUOUS TREE FOR EACH FIFTY (50) LINEAL FEET OR AT LEAST ONE (1) EVERGREEN TREE FOR EACH THIRTY (30) LINEAL FEET.

ONE SMALL DECIDUOUS TREE FOR EACH FIFTY (50) LINEAL FEET.

ONE MEDIUM SHRUB FOR EACH THIRTY (30) LINEAL FEET.

THE REQUIRED LANDSCAPE YARD SHALL BE A MINIMUM OF TWENTY (20) FEET IN WIDTH.

PROVIDED: 12 LARGE TREES, 12 SMALL TREES, 21 SHRUBS

ADJOINING ZONING DISTRICT LANDSCAPING REQUIREMENTS

BUILDING SITE: PCD, ADJOINING DISTRICTS: B2 & PCD

NO LANDSCAPE REQUIREMENTS.

PARKING LOT LANDSCAPING AND SCREENING

LANDSCAPED OPEN SPACE SHALL BE EQUAL TO 5% OF PARKING AREA AND WITHIN THE PERIMETER OF THE PARKING AREA.

PARKING AREA PAVEMENT: 56,594 SF

REQUIRED LANDSCAPED OPEN SPACE: ±2,830 SF

PROVIDED LANDSCAPED OPEN SPACE: ±6,700 SF

PARKING AREA CROWN COVERAGE SHALL BE A MINIMUM OF 20% OF PARKING AREA AT MATURITY.

REQUIRED CROWN COVERAGE: ±11,320 SF

PROVIDED CROWN COVERAGE: ±16,250 SF (13 TREES @ 1,250 SF EA)

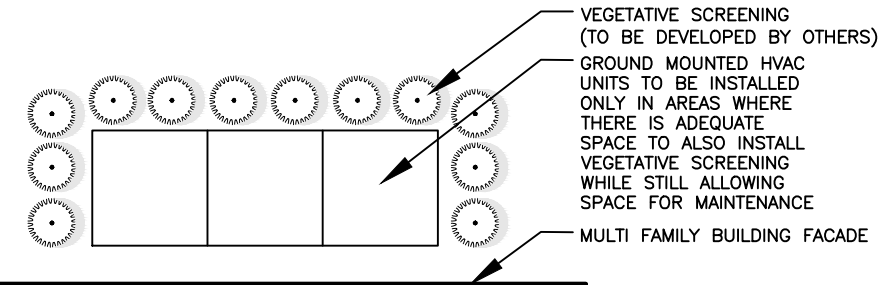
LANDSCAPED OPEN SPACE
WITHIN PARKING AREA

PARKING AREA

N/F
ARC C440Y4001 LLC
D.B. 1032, PG. 2910
ZONING: B2
T.M. #0300000103B

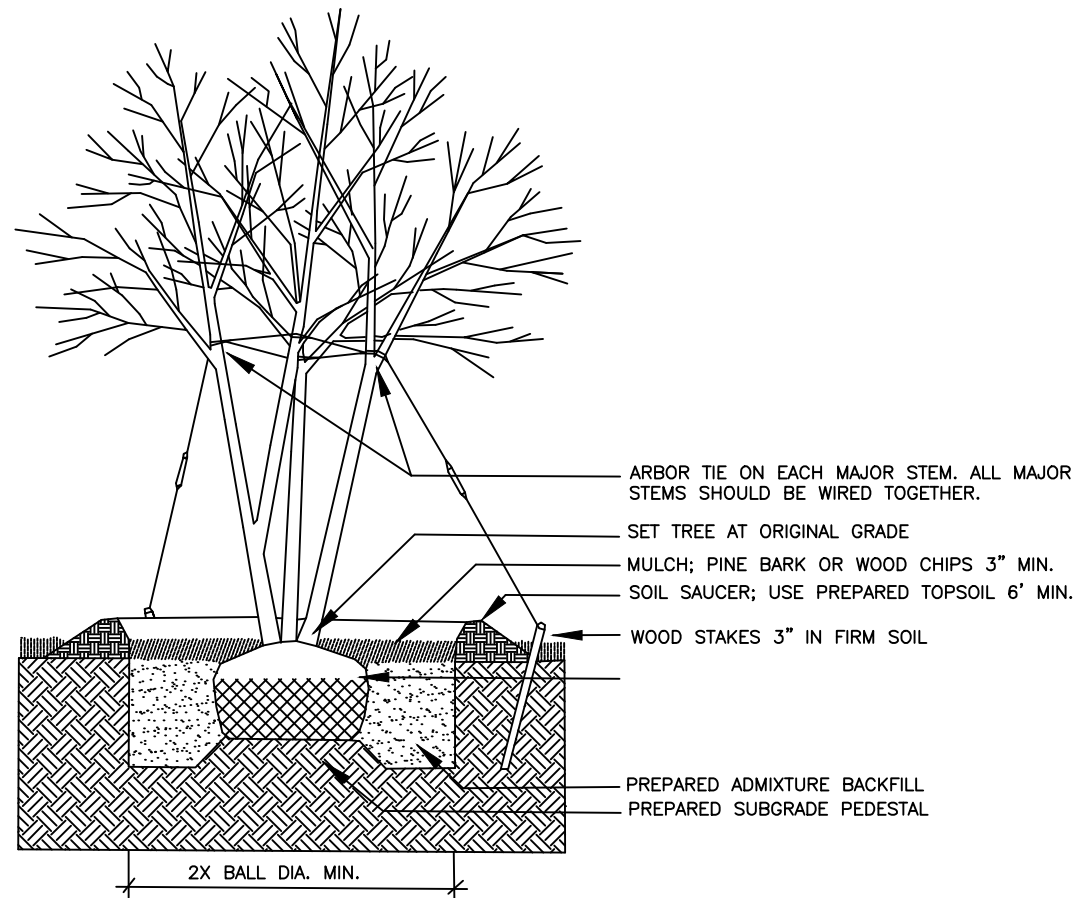
PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL	HT	
	13	Acer rubrum "Autumn Glory" / Autumn Glory Maple	B # B	2.00" CAL. MIN.	10'-12' MIN.	
	14	Cercis canadensis "Appalachian Red" / Eastern Redbud	B # B	1.50" CAL. MIN.	6' MIN.	
	12	Lagerstroemia x "Natchez" / White Crape Myrtle Multi-Trunk	B # B	1.25" CAL. MIN.	5' MIN.	
	11	Quercus phellos "Hightower" / Willow Oak	B # B	2.00" CAL. MIN.	10'-12' MIN.	
SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	CONT	HT	SPR	SPACING
	21	Prunus laurocerasus "Otto Luyken" / Luykens Laurel	3 gal	24" MIN.		48" o.c.
	28	Fothergilla gardenii "Blue Mist" / Blue Mist Fothergilla	3 gal	24" MIN.		48" o.c.



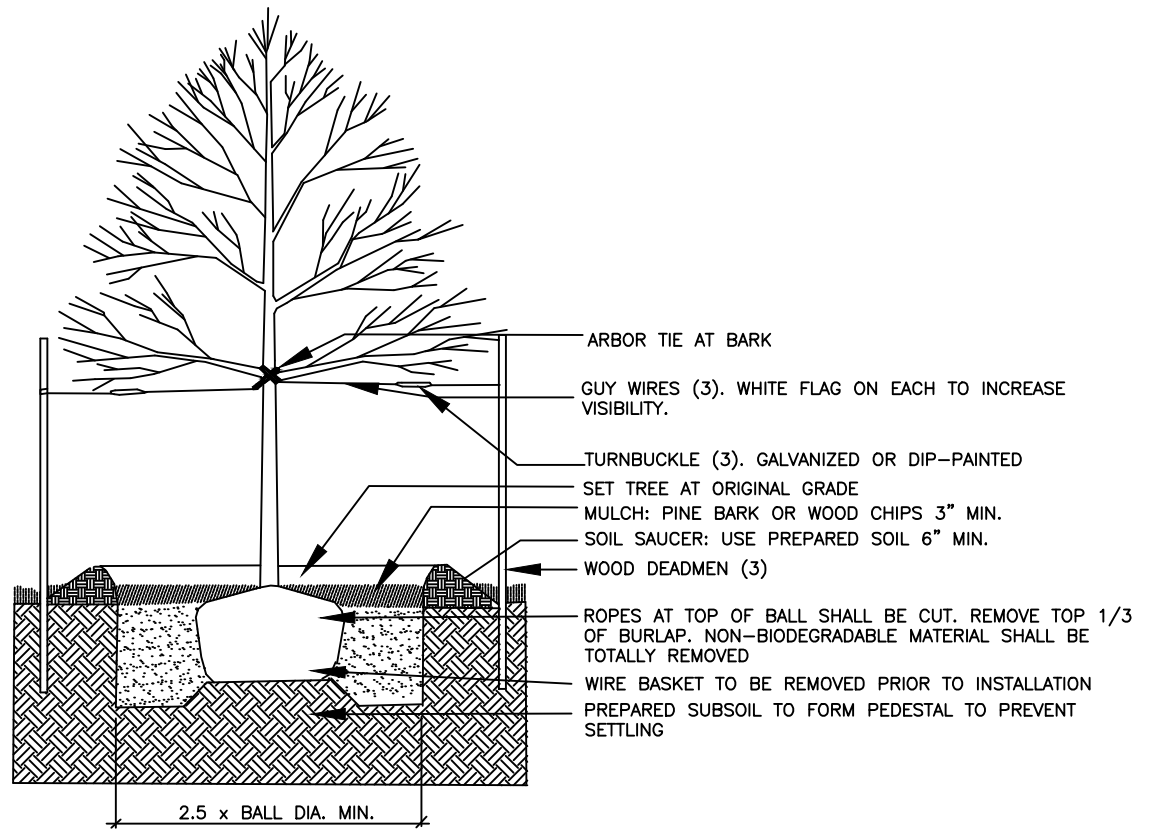
HVAC BUFFERING DETAIL

NO SCALE



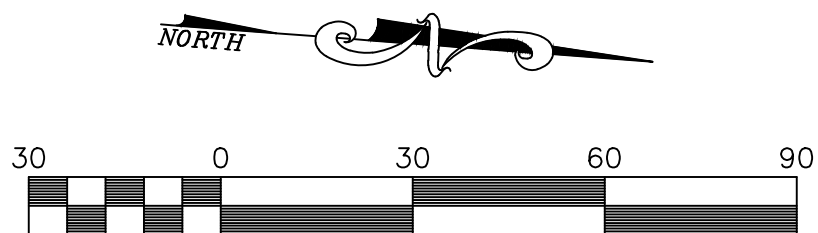
MULTI-STEM PLANTING DETAIL

NO SCALE



DEC. TREE PLANTING DETAIL

NO SCALE



SCALE: 1" = 30'

APPROVAL BLOCK

FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT

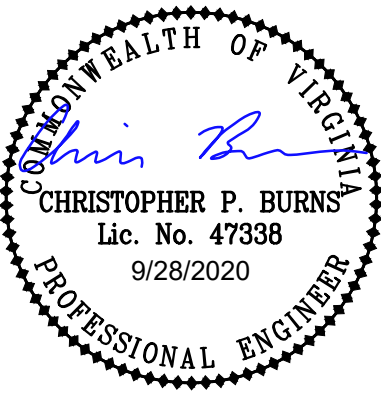
DATE



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Roanoke, VA 24018
540.772.9580



WESTLAKE VILLAGE APARTMENTS

PHASE 1
LANDSCAPE PLAN

DRAWN BY: CPB
DESIGNED BY: CPB
CHECKED BY: BTC
DATE: 4/30/2019
SCALE: 1"=30'
REVISIONS:
7/11/2019
8/30/2019
10/30/2019
12/31/2019
3/24/2020
9/28/2020

C13
PROJECT NO: 04180116.00



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WESTLAKE VILLAGE APARTMENTS

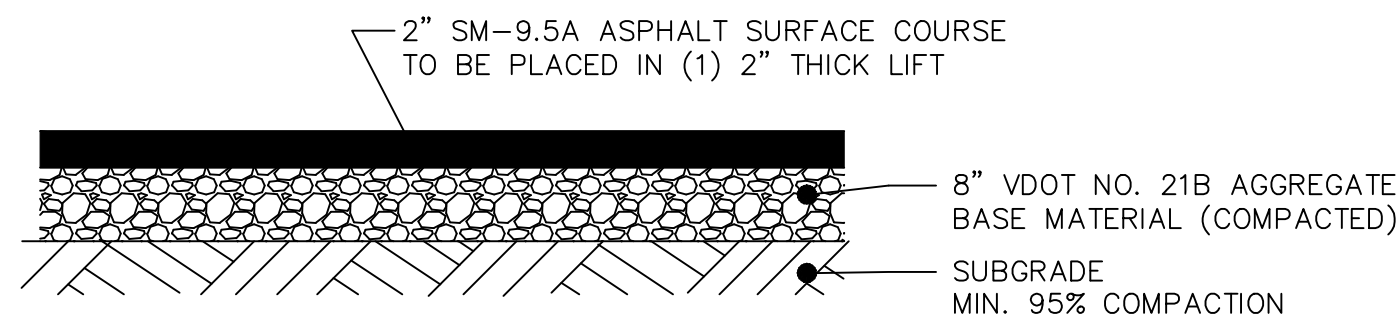
PHASE 1
SITE DETAILS 2

GLS CREEK DISTRICT
FRANKLIN COUNTY, VIRGINIA

DRAWN BY	CPB
DESIGNED BY	CPB
CHECKED BY	BTC
DATE	4/30/2019
SCALE	N/A
REVISIONS	
	7/11/2019
	8/30/2019
	10/30/2019
	12/31/2019
	3/24/2020
	9/28/2020

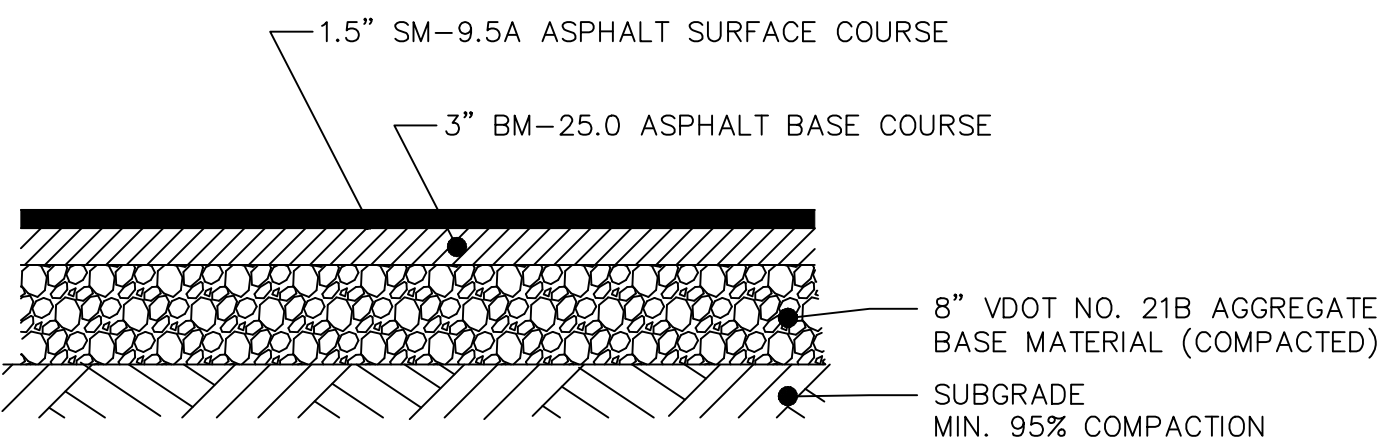
C15
PROJECT NO. 04180116.00

PARKING AREA PAVEMENT SECTIONS



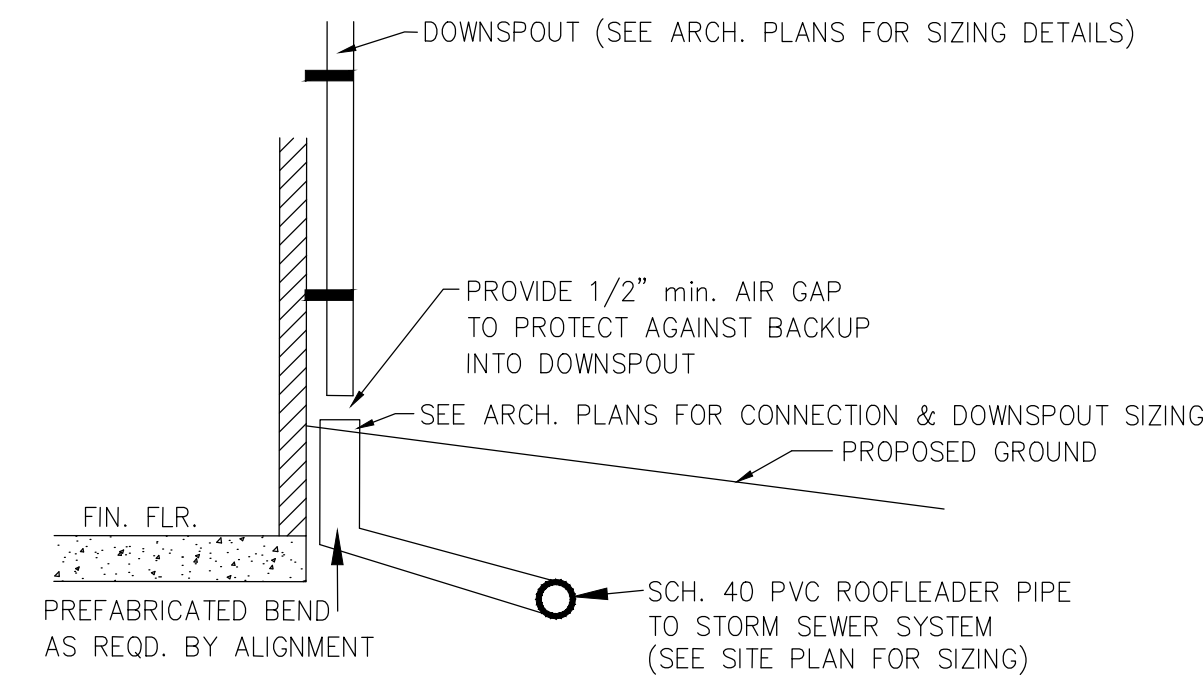
LIGHT-DUTY PAVEMENT SECTION
N.T.S.

NOTE:
1. G.C. SHALL BE RESPONSIBLE FOR OBTAINING ADEQUATE SUB-GRADE COMPACTION PRIOR TO PAVEMENT CONSTRUCTION.



HEAVY-DUTY PAVEMENT SECTION
N.T.S.

NOTE:
1. G.C. SHALL BE RESPONSIBLE FOR OBTAINING ADEQUATE SUB-GRADE COMPACTION PRIOR TO PAVEMENT CONSTRUCTION.

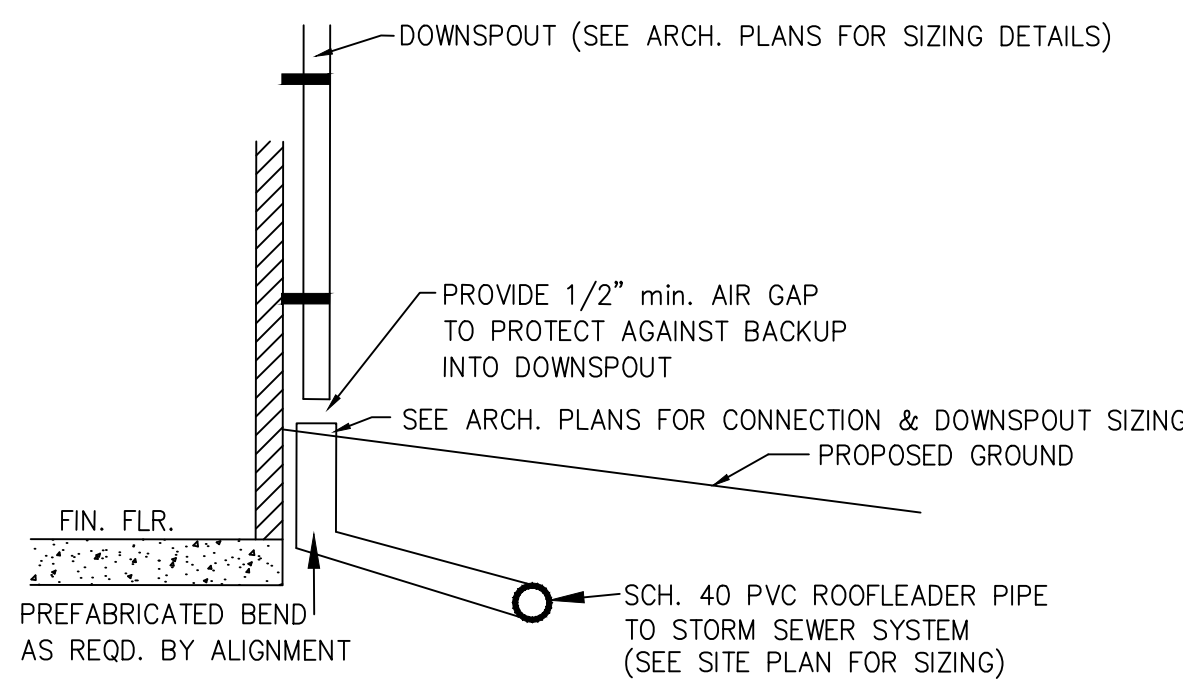


ROOF LEADERS NOTE:

ALL VERTICAL BUILDING DOWNSPOUTS FROM ALL BUILDINGS SHALL BE TRANSITIONED TO UNDERGROUND HORIZONTAL PIPING IN SCH. 40 PVC PER BLDG CODE. MINIMUM SLOPE OF 1% W.I. THE CONVEYANCE SYSTEM. ALL HORIZONTAL ROOFLEADER PIPE SHALL TIE DIRECTLY TO AN UNDERGROUND STORM SEWER SYSTEM/INLET FOR CONVEYANCE.

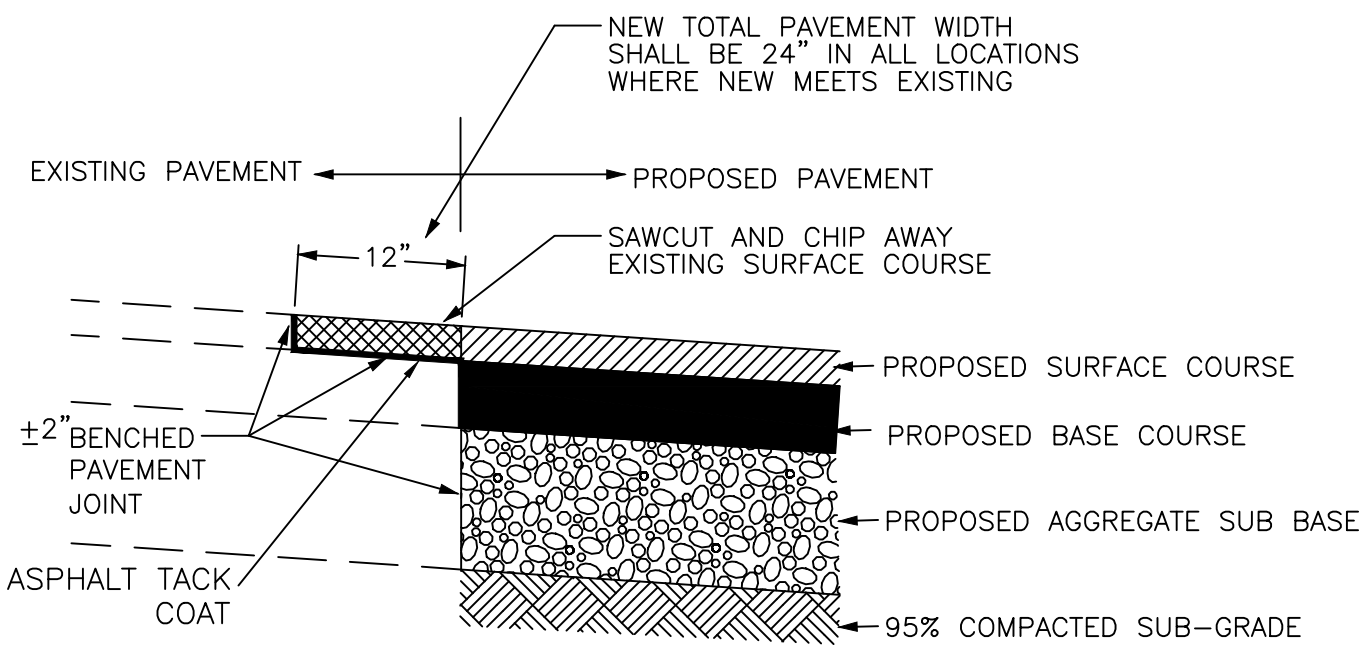
DOWNSPOUT CONNECTION DETAIL

NO SCALE



DOWNSPOUT CONNECTION DETAIL

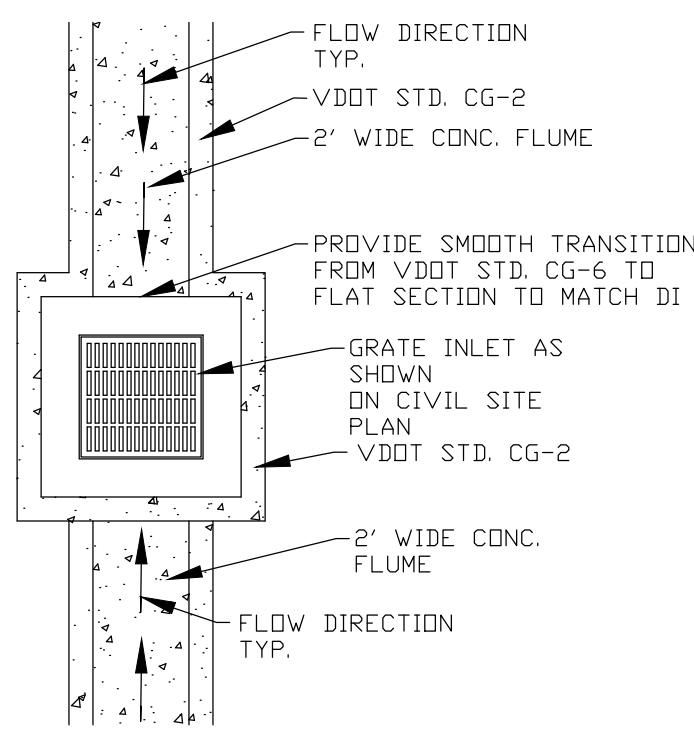
N.T.S.



PAVEMENT JOINT DETAIL

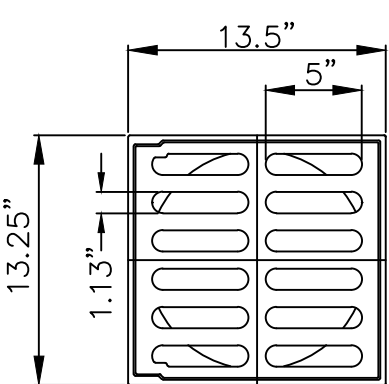
N.T.S.

1. 8" STONE BASE MUST BE PLACED IN TWO LIFTS OF NO MORE THAN 4" EACH.
2. A TACK COAT SHALL BE APPLIED BETWEEN ASPHALT PAVEMENT LAYERS.
3. G.C. TO ENSURE A MINIMUM OF 95% COMPACTION OF THE SUBGRADE PRIOR TO STONE/ASPHALT PLACEMENT.
4. G.C. SHALL HAVE A GEOTECHNICAL ENGINEER VERIFY THE CBR AND SUB-BASE MATERIAL TO CONFIRM THAT THE PROPOSED PAVEMENT SECTION IS ADEQUATE FOR THE PROPOSED USE.
5. G.C. SHALL PROVIDE MINIMUM 1" SAW CUT AND SHALL TACK COAT ALL VERTICAL SURFACES WHERE THE PROPOSED PAVEMENT ABUTS THE EXISTING MAINLINE PAVEMENT. THE SAW CUT SHALL BE ALONG THE FULL DEPTH PAVEMENT, NOT THE SHOULDER PORTION OF THE ROADWAY. NO CONVEYANCE OF RUNOFF WILL BE PERMITTED ALONG A SEAM IN THE PAVEMENT.
6. THIS DETAIL PERTAINS TO PRIVATE CONSTRUCTION ONLY. SEE SHEETS C13, C14, AND C15 FOR STANDARD CITY OF LYNCHBURG DETAILS.



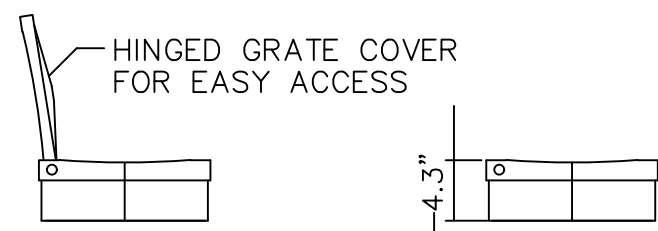
GRATE INLET CURB FLUME DETAIL

NO SCALE

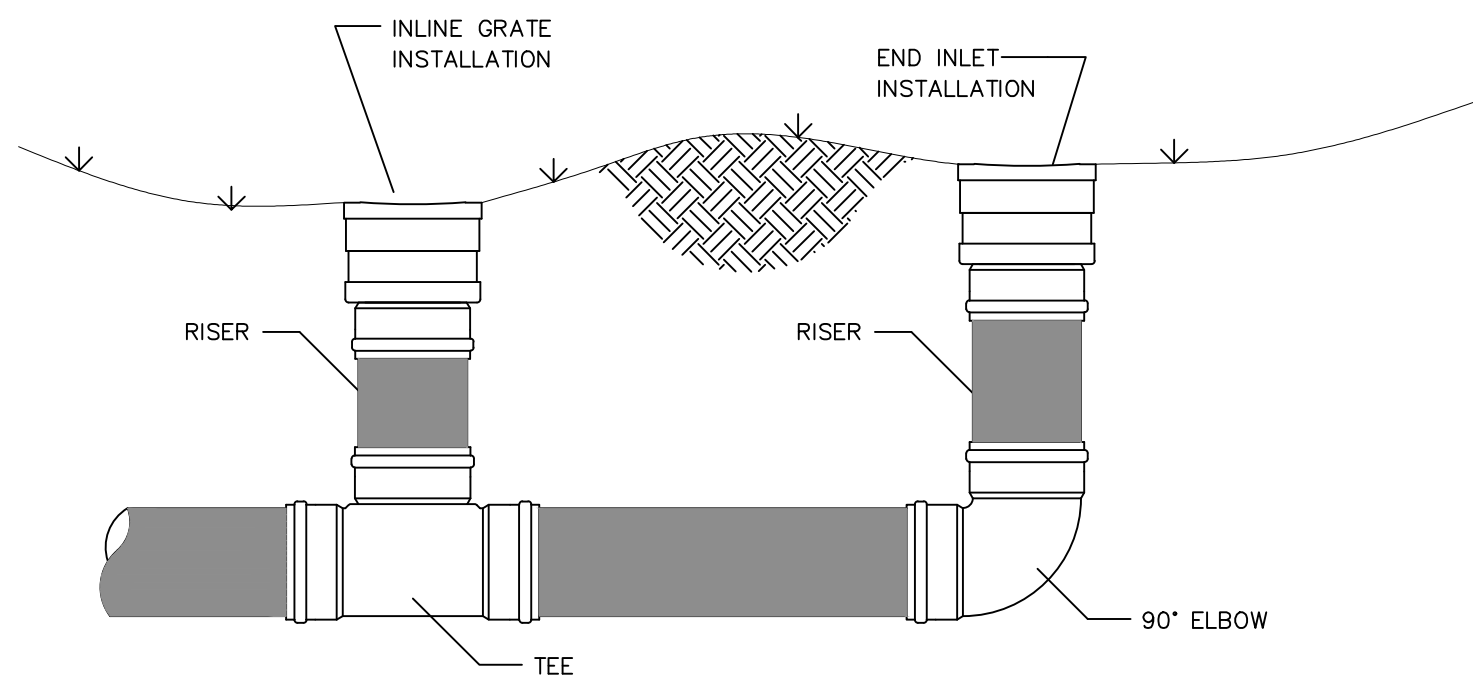


DRAIN AREA = 62.7 SQ. INCH

MATERIAL: CAST IRON
QUALITY: MATERIAL SHALL CONFORM TO ASTM A48 - CLASS 30B
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT

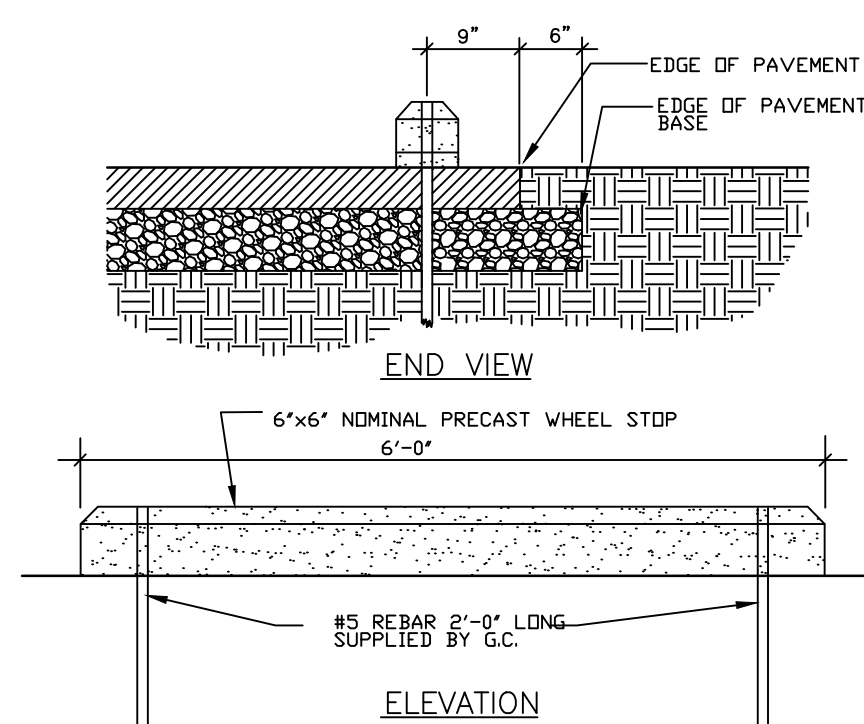


12" CAST IRON GRATE



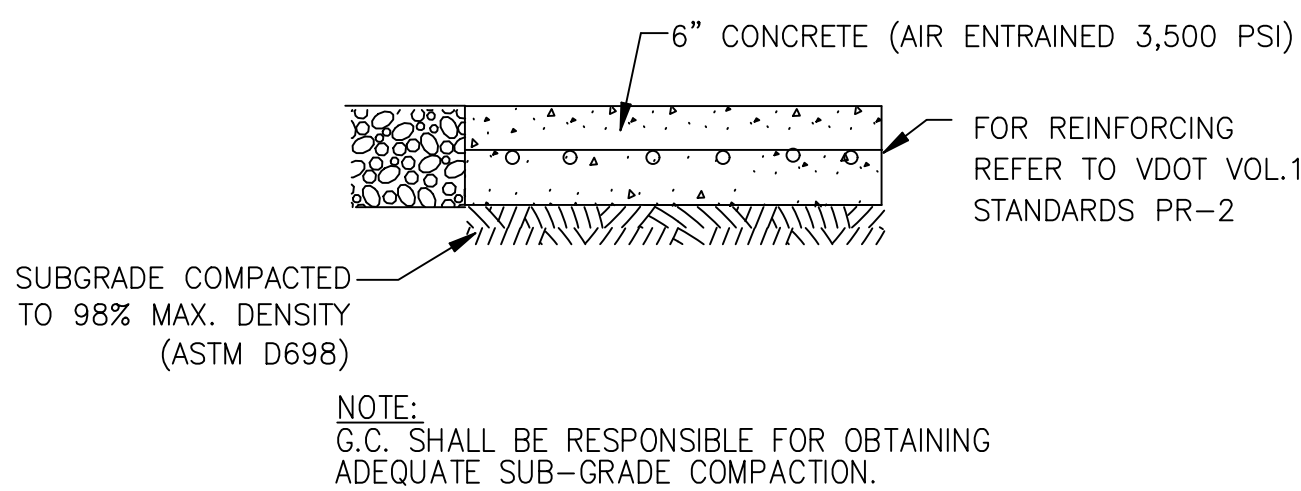
NYLOPLAST INLET

RECOMMENDED MANUFACTURER, APPROVED EQUAL MAY BE SUBSTITUTED WITH WRITTEN PERMISSION FROM THE ENGINEER.



CONCRETE BUMPER BLOCK DETAIL

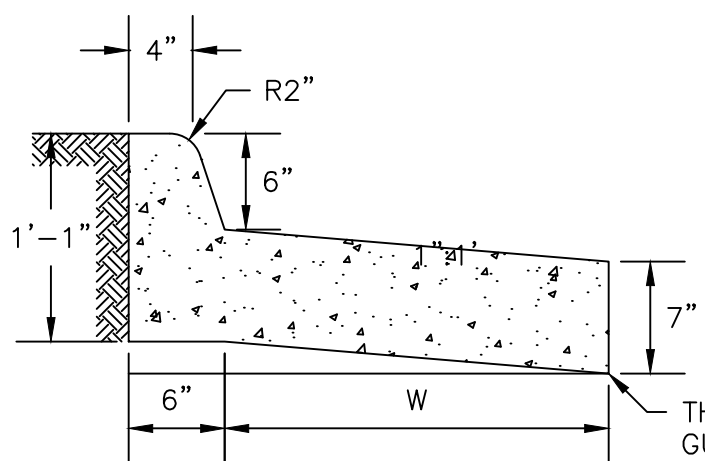
NO SCALE



SECTION THROUGH DUMPSTER PAD

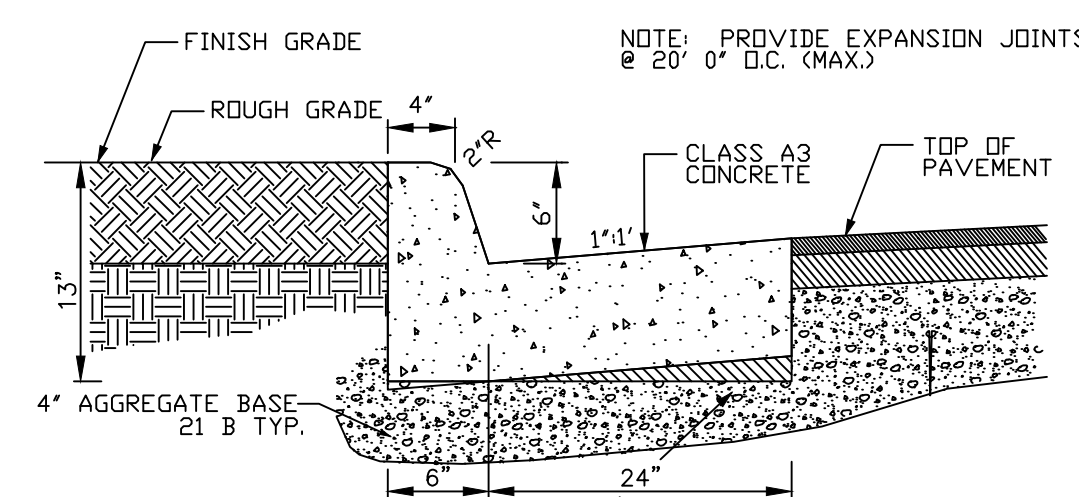
NO SCALE

- NOTES:
1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
 2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
 3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL BE PAID FOR AS RADIAL COMBINATION CURB & GUTTER.
 4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB & GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF THE SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT.
 5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.



CG-6 (DRY) DETAIL

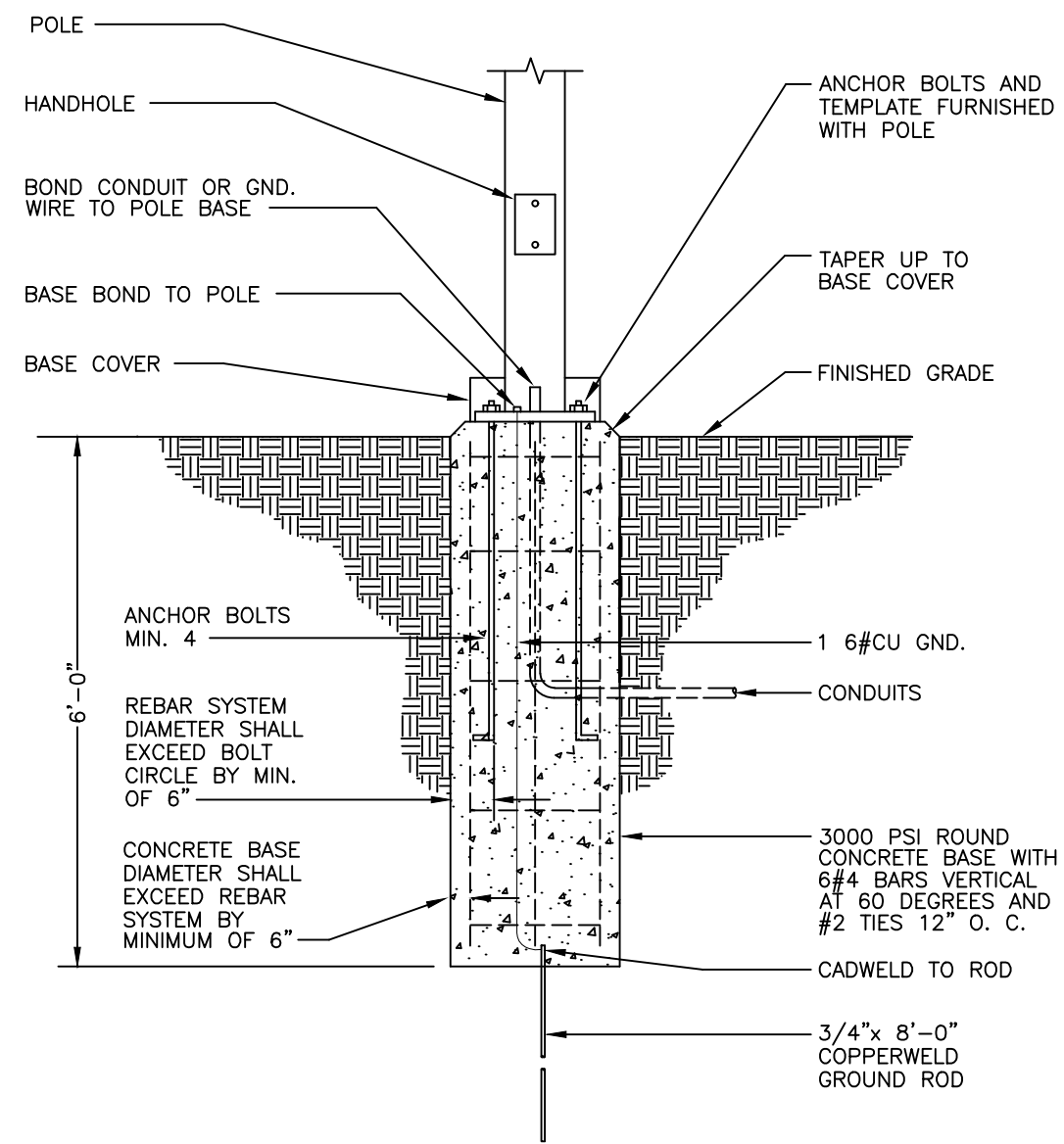
N.T.S.



CG-6 (WET) DETAIL

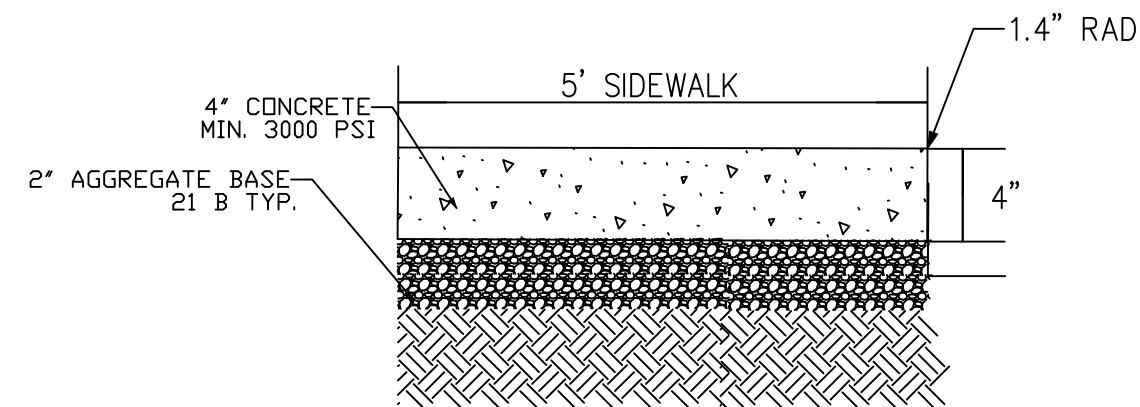
N.T.S.

- NOTE:
1. G.C. SHALL BE RESPONSIBLE FOR OBTAINING ADEQUATE SUB-GRADE COMPACTION PRIOR TO SIDEWALK CONSTRUCTION.
 2. THIS DETAIL PERTAINS TO PRIVATE CONSTRUCTION ONLY. SEE SHEETS C13, C14, AND C15 FOR STANDARD CITY OF LYNCHBURG DETAILS.



FLUSH LIGHT POLE BASE DETAIL

SCALE: NONE

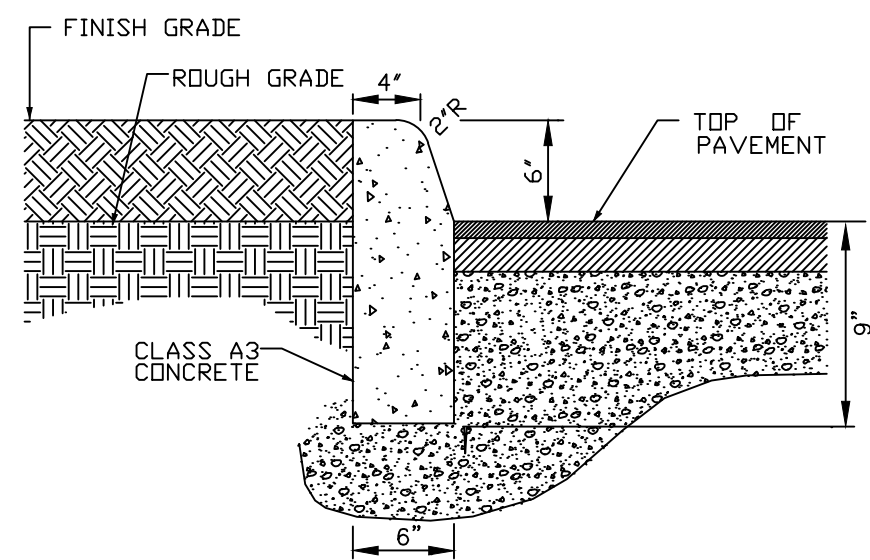


NOTE:
FINISH - TROWELED EDGES, BROOM FINISH
SCORING EVERY 6" EXPANSION JOINTS EVERY 30' MIN.

G.C. SHALL BE RESPONSIBLE FOR OBTAINING ADEQUATE SUB-GRADE COMPACTION.

SIDEWALK DETAIL

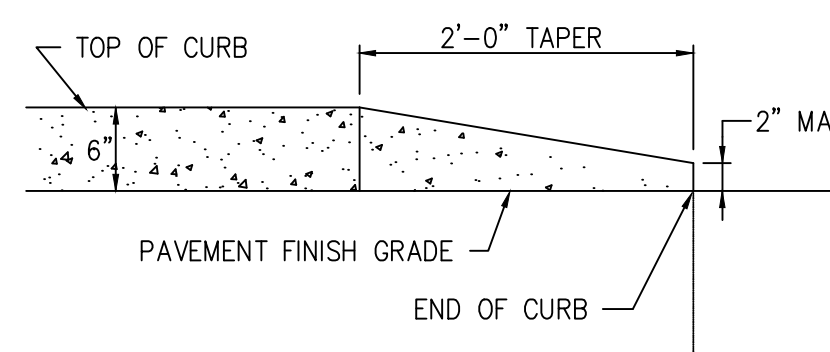
N.T.S.



CG-2 DETAIL TYP.

N.T.S.

(SUBGRADE - MIN 98% COMPACTION)



CURB TAPER DETAIL

NO SCALE

APPROVAL BLOCK

FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT DATE



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1208 Corporate Circle
 Roanoke, VA 24018
 540.772.9580



WESTLAKE VILLAGE APARTMENTS

PHASE 1

WATER & SEWER DETAILS

GILL'S CREEK DISTRICT
 FRANKLIN COUNTY, VIRGINIA

DRAWN BY

DESIGNED BY

CHECKED BY

DATE

SCALE

REVISIONS

CPB

CPB

BTC

4/30/2019

N/A

7/11/2019

8/30/2019

10/30/2019

12/31/2019

3/24/2020

9/29/2020

6/18/2021

7/7/2021

C16

PROJECT NO 04180116.00

SPECIFICATIONS

DUPLEX UltraGRIND™ JOBSITE WIRED BASIN PACKAGE WITH 3 HP SGV PUMP AND INDIVIDUAL FLOATS

1.0 GENERAL

1.01 DESCRIPTION

The manufacturer shall furnish complete factory-built and tested Grinder Pump Station(s), each consisting of a basin package, control panel, alarm device, unitized level control system, grinder pump and all necessary appurtenances to form a complete U.L. listed package system. Grinder pump shall be listed to U.L. 778 and CSA 108, basin package shall be listed to U.L. 1951, and control panel shall be listed to U.L. 508A. All equipment in the wet well shall be capable of constant submergence in sewage to a minimum depth of ten feet without electrical power being energized. Pump station equivalent to a Barnes 3 hp SGV Grinder Pump.

1.02 SHOP DRAWINGS AND MANUALS

After receipt of notice to proceed, the manufacturer shall furnish the engineer a minimum of eight (8) sets of shop drawings detailing the equipment to be furnished including dimensional data and materials of construction. The engineer shall promptly review this data, and return two (2) copies to the manufacturer as approved, or approved as noted. Upon receipt of accepted shop drawings, the manufacturer shall proceed with order entry and fabrication of the equipment. Prior to completion of equipment delivery, the manufacturer shall supply four (4) copies of Operation and Maintenance Manuals to the owner, and one (1) copy of the same to the engineer.

1.03 PRE-APPROVAL OF MANUFACTURER

The system design is detailed in the drawings. Any pump manufacturer not specified, but wishing to be pre-approved as an acceptable supplier shall submit a complete hydraulic analysis based on the design detailed in the drawings at least fifteen days prior to bid date. All manufacturers must have been in the business of manufacturing complete grinder pump systems for a minimum of ten years. Manufacturer Representatives, Distributors, or Packageers will not be considered to be manufacturers. Manufacturer must demonstrate to the satisfaction of engineer that the proposed pump equipment will meet system flows and heads required. In addition, pre-submittal must also demonstrate to the satisfaction of the engineer that the equipment being proposed meets or exceeds all performance and safety requirements, materials of construction, and user benefits of the specified equipment. Only pre-approved grinder pump station manufacturers will be considered. All bids utilizing manufacturers not pre-approved will be considered non-responsive.

1.04 WARRANTY

The manufacturer shall provide a warranty on materials and workmanship for a period of twenty-four (24) months after notice of owner's acceptance, but no greater than twenty-seven (27) months after receipt of shipment. The owner will return any equipment found to be defective to the manufacturer for inspection and validation of the defect. Defective equipment will be repaired or replaced and shipped back to customer at no charge. Consult factory for extended warranty information.

1.05 ACCEPTABLE MANUFACTURER(S)

Acceptable grinder pump station manufacturer(s) are Barnes or pre-approved equal.

1.06 CORROSION PROTECTION

All materials exposed to wastewater shall have inherent corrosion protection: i.e., painted cast iron, fiberglass, stainless steel, PVC, CPVC.

1.07 SAFETY

The Grinder Pump Station shall be free from electrical and fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled, factory wired and tested grinder pump station assembly shall be U.L. listed. Grinder pump stations not U.L. listed will not be acceptable.

2.0 BASIN PACKAGES

2.01 STATION CONFIGURATION

Basins shall be supplied in a wet well configuration. As shown on drawings.

2.02 FACTORY WIRING

Not Applicable

2.03 CHECK VALVE

The stainless steel pump discharge piping shall be equipped with factory installed gravity operated flap-type check valve. Gravity operated ball type check valve shall not be permitted. This valve will provide a full ported passageway when open, and shall introduce a friction loss of less than six inches of water at maximum rated flow. Working parts will be made of 300 series stainless steel and non-wicking fabric reinforced neoprene flap to ensure corrosion resistance, repeatability, and dimensional stability. The valve body shall be powder-coated cast iron for corrosion resistance.

2.04 REDUNDANT CHECK VALVE

None

2.05 LEVEL DETECTION

Level detection for controlling pump and alarm operation shall be accomplished by use of a detection mechanism specifically designed for use in a sewage grinder pump basin and shall be removable without the need to remove the pump. A quantity of five (5) liquid level controls with SGVW cable, shall be provided to control operation of the pumps and high-water alarm as well as low water alarm. The level sensors shall be mercury type pilot duty devices mounted in a corrosion resistant polypropylene housing.

2.06 SHUT-OFF VALVE

The station discharge shall be equipped with a factory installed, true union, manual ball valve. Ball valves shall be full ported, constructed of PVC, with a minimum rated pressure of 150 PSI. All valves shall be operable from ground level. Shut off valve must be replaceable without excavating basin exterior. Duplex station shall utilize two shut off valves, each equal to the size of the pump discharge.

2.07 ANTI-SIPHON FUNCTION

The pump shall be constructed with a positively primed hooded suction configuration. As added assurance that the pump cannot lose prime even under negative pressure conditions in the discharge piping system, the discharge piping system must include an anti-siphon capability. The design shall

provide for a maximum bypass, under normal operating conditions, of no more than 1 GPM.

2.08 BASIN CONSTRUCTION AND ASSEMBLY

2.08.1 The basin shall be fiberglass reinforced polyester resin with a 3" ballast support flange. The basin shall be furnished with one flexible inlet flange (shipped loose to facilitate field location) to accept an 8" SDR 35 sanitary sewer pipe. Inlet location can vary to accommodate ease of installation. (See installation instructions or consult factory for details.) Basin capacities and dimensions shall be as shown on the contract drawings or as specified herein. The basin FRP wall laminate thickness shall vary with the wet well depth to provide the aggregate strength to meet the tensile and flexural physical property requirements. The basin FRP wall laminate must be designed to withstand wall collapse or buckling based on a hydrostatic pressure of 62.4 pounds per square foot, a saturated soil weight of 120 pounds per cubic foot, a soil modulus of 700 pounds per square foot. Basin must comply with the pipe stiffness values as specified in ASTM D 3753. The basin laminate must be constructed to withstand or exceed 150% of the assumed loading on any depth. The finished FRP laminate will have a Barcol hardness of at least 90% of the resin. Manufacturers specified hardness for the fully cured resin. The Barcol Hardness shall be the same for both interior and exterior surfaces. Manufacturer must submit documentation including calculation and production certification that basin (s) on the project are in compliance with the above requirements.

2.08.2 All piping inside the basin silhouette shall be at a level in the station that is lower than the frost depth. The basin package shall be furnished with junction box. In case of groundwater flooding around grinder station location, the junction box shall be protected from such ground water.

2.08.3 Cover shall be an aluminum cover with a hinged access opening to accommodate removal of pumps. Junction box shall be NEMA 6 rated and mounted on the upper rail system cross-member beneath the access opening. Basin cover shall be equipped with a 2 inch bug free vent.

2.08.4 Basin shall be UL Listed to Standard 1951.

2.08.5 All discharge pipe shall be constructed of 300 Series Stainless Steel and terminate outside the bulkhead with a stainless steel, female NPT fitting. The manufacturer shall guarantee all bulkhead penetrations watertight.

2.09 PUMP & LEVEL CONTROL REMOVAL SYSTEM

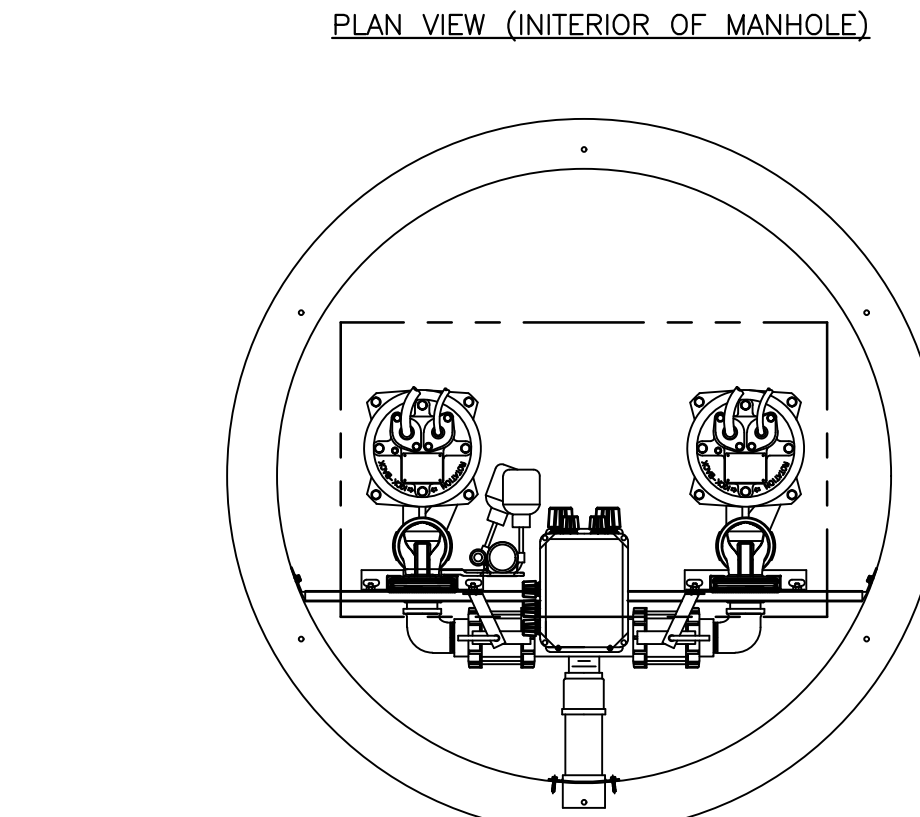
Each basin shall be equipped with a 300 series stainless steel "C" channel rail assembly to facilitate removal of the pump(s) and level control(s) from ground level. A 3/16" diameter 300 series stainless steel lifting chain with a breaking strength of 3750 lbs. shall be supplied for pump removal and 1/4" diameter knotted polypropylene rope with a breaking strength of 1200 lbs. shall be supplied for level control removal. Removal system must not require the loosening of fasteners to facilitate removal of pump or level control and shall provide for automatic alignment and re-connection of discharge piping for the replacement pump and correct height location for level control. Pump and level control replacement shall be accomplished while the basin is full of sewage without the need to de-water the basin.

3.0 PUMPS

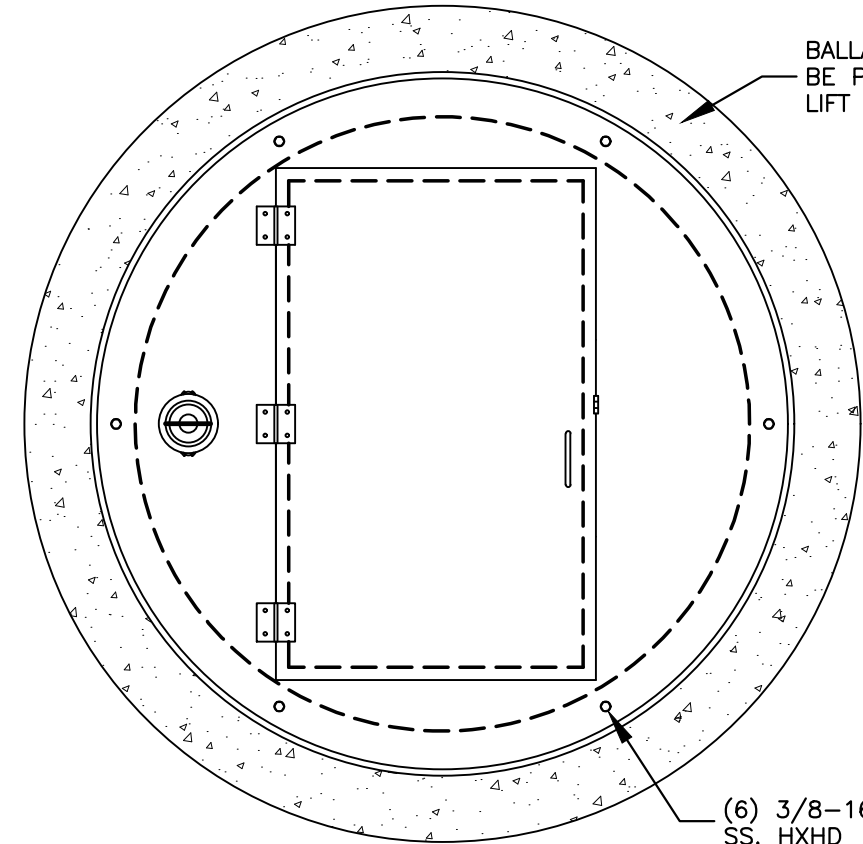
3.01 DESIGN

A centrifugal submersible grinder pump designed to reduce all material found in normal domestic sewage, including plastic, rubber, sanitary napkins, and disposable diapers into a finely ground slurry. The resultant slurry is then pumped through small diameter piping, gravity interceptor, or treatment facility. The temperature limitation of the liquid being pumped is 160 °F (71 °C) intermittent and shall be capable of running dry for extended periods of time.

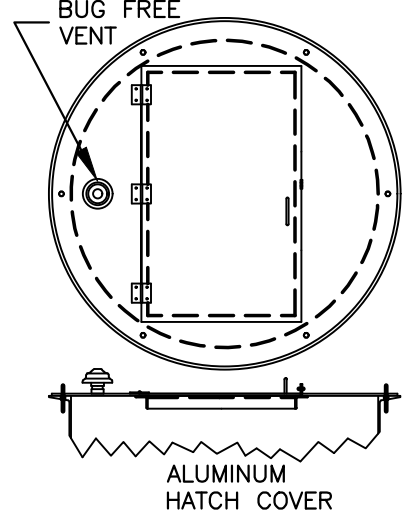
Pump(s) shall be suitable for long term submergence in sewage. Grinder pump(s) shall be U.L. Listed to Standard 778 and CSA Listed to Standard 108.



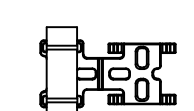
PLAN VIEW (TOP OF MANHOLE)



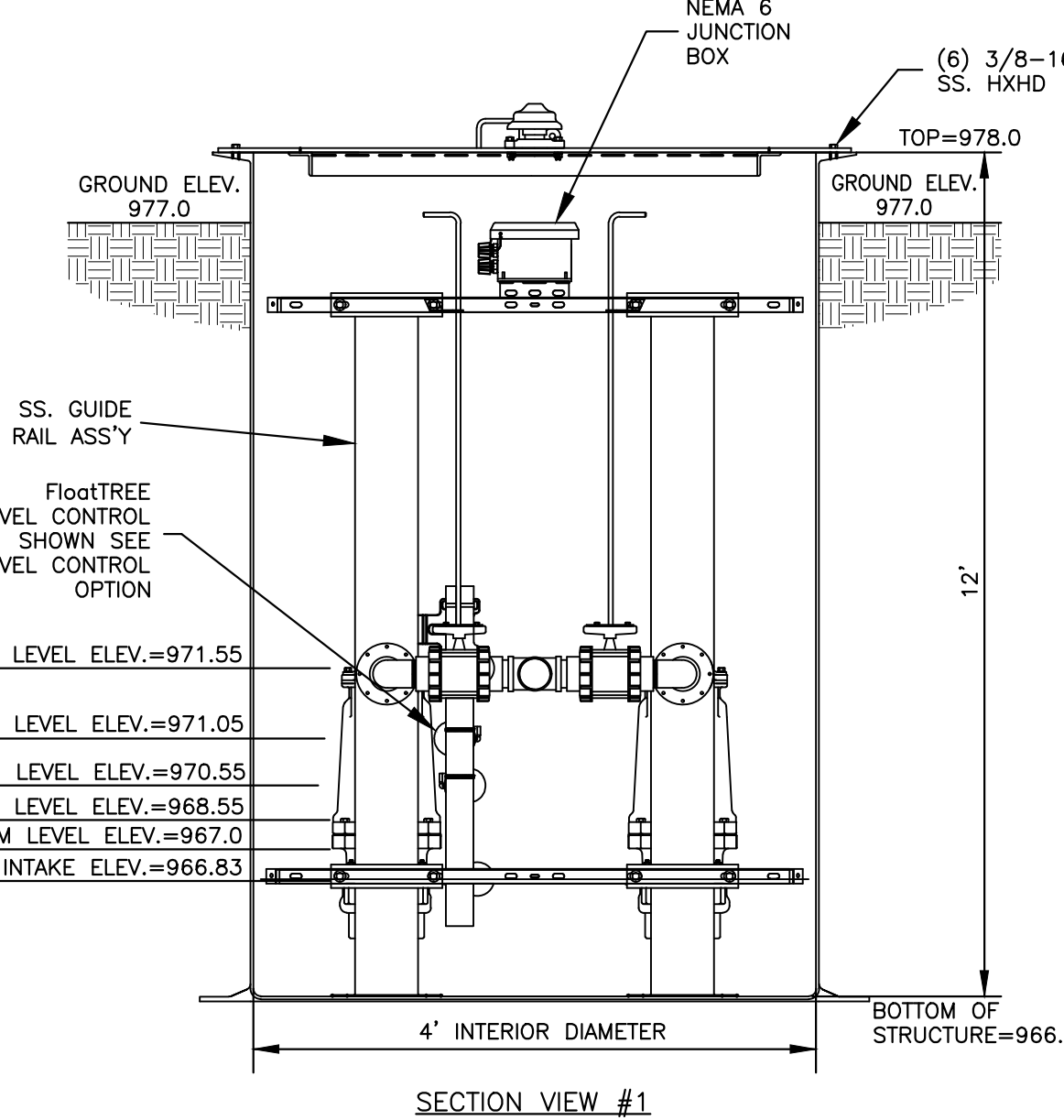
BASIN COVER



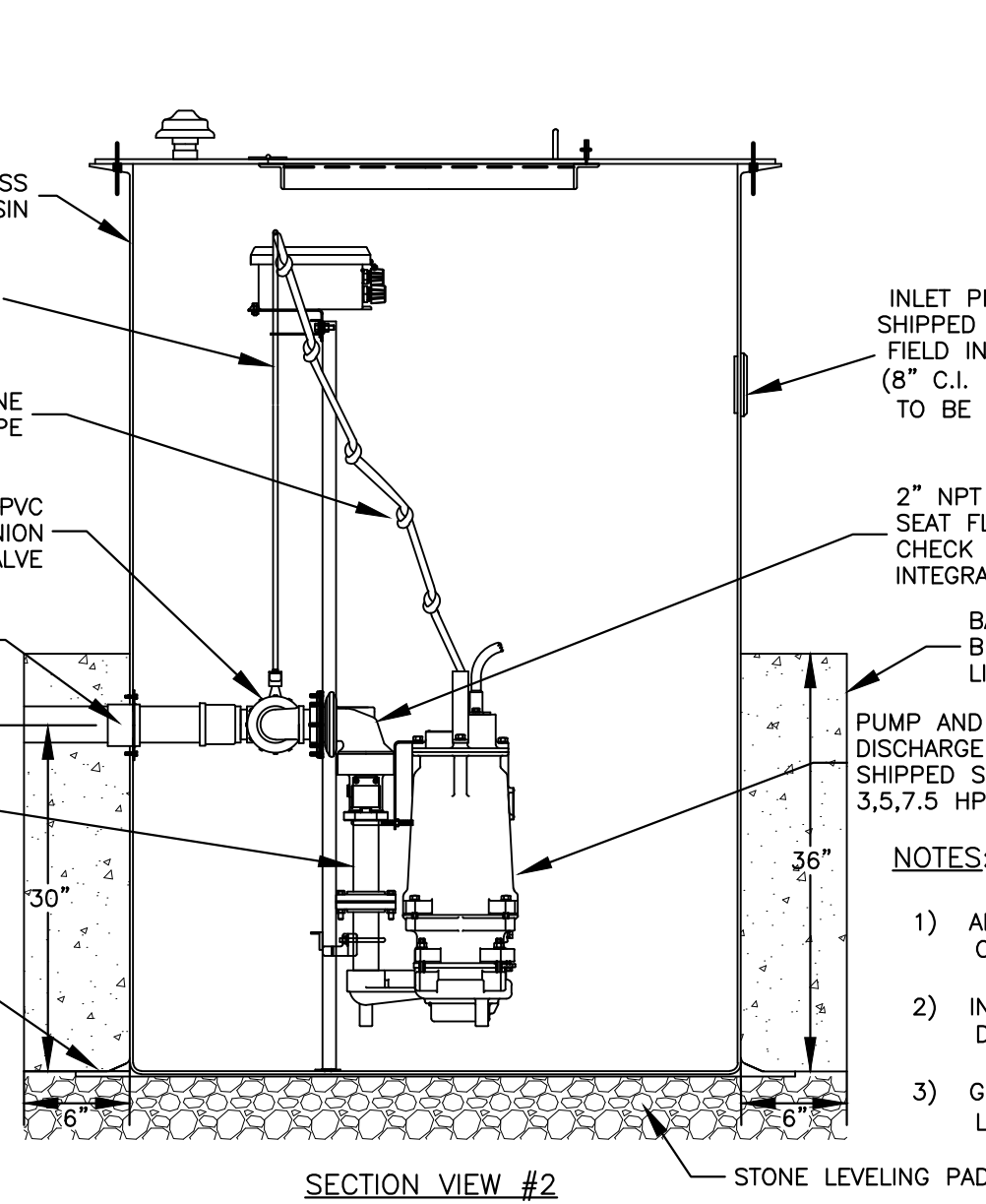
INDIVIDUAL FLOATS DIAGRAM



SEE ADDITIONAL DETAILS FOR FLOAT ELEVATIONS



SECTION VIEW #2



NOTES:

- 1) ALL DIMENSIONS TO BE $\pm 1/4"$ UNLESS OTHERWISE SPECIFIED.
- 2) INTERMEDIATE SUPPORT SUPPLIED FOR DEPTHS 12 FT. AND DEEPER.
- 3) G.C. SHALL COORDINATE POWER FOR THE PROPOSED LIFT STATION W/ LOCAL POWER COMPANY.

throughout the entire pump curve. The motor shall be constructed with the open windings operating in a sealed housing, which contains clean dielectric oil for heat dissipation from the windings and for lubrication of the bearings, making it capable of operating in a totally, partially, or non-submerged condition for extended periods of time without damage due to heat being generated. Oil used must be able to be disposed of as non-hazardous waste. Air-filled motors shall be acceptable. The rotor and stator assembly shall be of the standard frame design and secured to the pump seal plate by four threaded fasteners allowing for easy serviceability. Motor design incorporating shrink or press fit assemblies between the stator and motor housing shall not be considered acceptable. The motor shaft shall be of 416 stainless steel.

Protection against excessive temperature shall be provided by heat sensor thermostat attached to the stator windings and connected in series with the motor coil to the control panel.

The pumps shall be equipped with type SGVW power cable. The power cable is connected to the motor via quick disconnect pin terminals. Threaded cord grip type cord entries are not acceptable. Pin receptacles shall be crimped and molded to the power cord in a PVC plug. The plug shall be secured with a stainless steel compression plate to prevent water from entering the motor housing and to provide strain relief at the point of cable entry. A stainless steel clamp shall compress the PVC molding against the cable jacket to prevent water from entering the jacket. A polybutylene terephthalate terminal block with brass pin inserts shall connect the power cord leads with motor leads. The ground pin shall be longer than the other pins such that the ground connection is the first connection made and the last connection broken when the plug is inserted and removed, respectively. A Buna-N o-ring shall provide isolation sealing between terminal block and the motor housing. The plug assembly shall be guaranteed by the manufacturer to meet UL approval for submersion.

3.06 MECHANICAL SEAL

The pump shall utilize a tandem mechanical shaft seal arrangement and shall operate in an oil atmosphere. Each seal shall be double floating, self-aligning rotary shaft seals to prevent leakage between the motor and pump. The materials of construction shall be carbon for the rotating face and ceramic for the stationary face, lapped and polished to a tolerance of one light band, with 300 stainless steel hardware, with all elastomer parts of Buna-N. The seal shall be commercially available and not a proprietary design of the manufacturer.

3.07 MOISTURE DETECTION

Not Applicable

3.08 CLOSED VALVE PROTECTION

Not Applicable

3.09 TESTING

Each grinder pump shall be submerged, operated and tested for performance compliance to its respective curve. Testing process and periodic inspection of testing process shall be conducted and approved by U.L.

4.0 CONTROL PANEL

4.01 General

A wall mounted control panel shall be supplied with each station. All control panels shall be UL Listed to meet Standard 508A. Each panel shall be constructed with a polycarbonate NEMA 4X fiberglass enclosure and utilize stainless steel hardware. Panel shall be mounted to three 2 inch galvanized channels attached to 2 inch galvanized posts 10 ft long sunk 2 feet in the ground supported by concrete.

APPROVAL BLOCK

FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT	DATE
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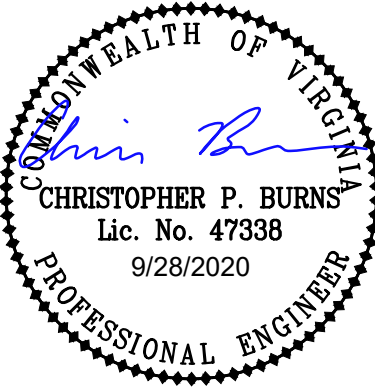


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Harrisonburg / Lynchburg

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1208 Corporate Circle
Roanoke, VA 24018
540.772.9580



WESTLAKE VILLAGE APARTMENTS

PHASE 1

LIFT STATION SPECIFICATIONS

GLS CREEK DISTRICT
FRANKLIN COUNTY, VIRGINIA

DRAWN BY	CPB
DESIGNED BY	CPB
CHECKED BY	BTC
DATE	4/30/2019
SCALE	N/A
REVISIONS	
	7/11/2019
	8/30/2019
	10/30/2019
	12/31/2019
	3/24/2020
	9/28/2020

LIFT STATION DETAILS

NO SCALE

C17

PROJECT NO 04180116.00

GRADING NOTES

1. G.C. SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS.
2. REFER TO BUILDING PLANS FOR SUBGRADE AND UTILITY TRENCHES WITHIN 5' OF THE BUILDING ENVELOPE.
3. REMOVE TREES, SHRUBS, GRASS, AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS AS REQUIRED TO PERMIT INSTALLATION OF NEW CONSTRUCTION. REMOVE TREES AND OTHER VEGETATION, INCLUDING STUMPS AND ROOTS, COMPLETELY IN AREAS REQUIRED FOR SUBSEQUENT SEEDING. CUT OFF TREES AND STUMPS IN AREAS TO RECEIVE FILL MORE THAN THREE FEET IN DEPTH TO WITHIN EIGHT INCHES OF THE ORIGINAL GROUND SURFACE.
4. BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND OPERATE WARNING LIGHTS AS RECOMMENDED BY AUTHORITIES HAVING JURISDICTION.
5. EXCAVATION FOR STRUCTURES:
- a. CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF 0.1'
 - b. PROVIDE TRUE AND STRAIGHT FOOTING EXCAVATIONS WITH UNIFORM AND LEVEL BOTTOMS OF THE WIDTH INDICATED TO ENSURE PROPER PLACEMENT AND COVER OF ALL REINFORCEMENT.
 - c. REMOVE LOOSE MATERIALS FROM THE EXCAVATION PRIOR TO PLACEMENT OF CONCRETE.
 - d. FOOTINGS WHICH SUPPORT CONCRETE MASONRY UNITS MAY BE STEPPED PROVIDED THE VERTICAL STEP DOES NOT EXCEED ONE HALF OF THE HORIZONTAL DISTANCE BETWEEN STEPS AND HORIZONTAL DISTANCE BETWEEN STEPS IS NOT LESS THAN TWO FEET.
 - e. IF ROCK IS ENCOUNTERED IN A FOOTING EXCAVATION, UNDERCUT IT A MINIMUM EXCAVATION WITH CONTROLLED FILL.
6. CUT SURFACE UNDER PAVEMENTS TO COMPLY WITH CROSS SECTIONS, ELEVATIONS, AND GRADES AS INDICATED.
7. EXCAVATE TRENCHES TO UNIFORM WIDTH CONFORMING TO VDOT STANDARD PB-1 FOR STORM DRAINAGE PIPING.
8. PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS.
9. PROTECT EXCAVATED BOTTOMS OF ALL FOOTINGS AND TRENCHES AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THEN 35°F (1°).
10. BACKFILLING SHALL BE A SUITABLE MATERIAL THAT IS CAPABLE ACHIEVING THE REQUIRED COMPACTIONS INDICATED ON THE DETAILS PAGE.
11. 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.
12. GRADE SURFACE UNDER BUILDING SLABS SMOOTH AND EVEN, FREE OF VOIDS. PROVIDE FINAL GRADES WITHIN 1/2" OF THOSE INDICATED WHEN TESTED WITH A 10' STRAIGHT EDGE.
13. PROTECT GRADED AREAS FROM TRAFFIC AND EROSION. REPAIR AREAS WHICH HAVE SETTLED, ERODED, OR BECOME DAMAGED DUE TO CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO OWNER.
14. PLACE ALL FILL AND BACKFILL AS CONTROLLED FILL AS FOLLOWS:
- a. ESTABLISH SUITABLE SUBGRADE CONDITIONS PRIOR TO PLACING FILL BY PROOFRROLLING, UNDERCUTTING AND COMPACTING AS NECESSARY.
 - b. PLACE FILL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" FOR HAND TAMPERS.
 - c. PRIOR TO COMPACTION, PROVIDE MOISTURE CONTENT TO WITHIN 3% OF OPTIMUM BY MOISTENING OR AERATING EACH LAYER. DO NOT PLACE FILL MATERIAL ON SURFACES WHICH ARE MUDDY, FROZEN OR CONTAIN FROST OR ICE.
 - d. COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698 (STANDARD PROCTOR):
 - i. 95% UNDER PAVEMENT
 - ii. 85% UNDER LAWN OR UNPAVED AREAS
15. PREPARE AREA FOR PERMANENT STABILIZATION BY SPREADING TOPSOIL TO A DEPTH OF 4" OVER ALL DISTURBED AREAS NOT RECEIVING WALKS, PAVEMENT, WALLS OR BUILDING, INCLUDING TRENCHES. 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. PREPARE FOR SOD IMMEDIATELY.
16. OWNER (CONTRACTOR) SHALL EMPLOY QUALIFIED SOILS TESTING LABORATORY TO INSPECT EARTHWORK OPERATIONS. NOTIFY LABORATORY PRIOR TO PERFORMING EARTHWORK OPERATIONS.

GENERAL NOTES

PROVIDE NEW MATERIALS AND WORKMANSHIP IN CONFORMANCE WITH ALL APPLICABLE CODES, STATE AND FEDERAL LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND OTHER CRITERIA WHICH WOULD NORMALLY APPLY TO WORK OF THIS NATURE. NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERING A CONFLICT IN CODES, ORDINANCES, STANDARDS, OR OTHER CRITERIA. APPLICABLE CODES AND STANDARDS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, THE FOLLOWING:

- a. BOCA – BASIC CODES
- b. FRANKLIN COUNTY
- c. VDOT – VIRGINIA DEPARTMENT OF TRANSPORTATION, ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS
- d. VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND HANDBOOK
- e. OSHA – OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- f. ASTM – AMERICAN SOCIETY FOR TESTING AND MATERIALS
- g. WESTERN VIRGINIA WATER AUTHORITY

Obtain each required permit prior to commencing that part of the work. Pay required fees.

Notify the engineer immediately upon discovery of conditions which differ from those shown on the plans.

Comply with local ordinances for burning of waste. Transport waste materials and unsuitable materials from owner's property.

Verify the location and elevation of each existing underground utility in areas of construction prior to commencement of work. Contact engineer immediately if there appears to be a conflict upon discovery of a utility which is not shown, and upon discovery of a location or elevation which differs from that shown. To locate utilities, call "Miss Utility", 1-800-552-7001. Utility locations shown are the result of a combination of field location and existing information. Locations are approximate.

Repair all damage to any utility, public or private, caused as a result of construction activities, at no additional cost to owner.

Notify owners of utilities in areas of construction prior to commencement of excavation.

Any site development outside the scope of this plan will require additional plan review and approval.

Additional drainage structures and easements may be required by the Virginia Department of Transportation due to any deviations between the approved proposed contours and the as-built conditions or any other topographic changes.

Any signage proposed for this development shall comply with the applicable regulations of the Franklin County Zoning Ordinance. A separate sign permit and approval will be required.

Any new alignments, changes in grades, alternative pipe sizes or manholes will require a new set of plans stamped by the consulting engineer. County engineer will review plans within three days of submittal. Plan sheets can be 8.5 x 11 if the information is legible.

No construction/field changes without approval of the consulting engineer and Franklin County and Town of Rocky Mount.

WATER AND SEWER NOTES

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST WESTERN VIRGINIA REGIONAL DESIGN AND CONSTRUCTION STANDARDS, LATEST EDITION.
2. OBTAIN ALL REQUIRED PERMITS AND NOTIFY APPROPRIATE OFFICIALS AT LEAST THREE (3) DAYS PRIOR TO COMMENCEMENT OF WORK. OBTAIN INFORMATION FROM WESTERN VIRGINIA WATER AUTHORITY AND/OR BOTETOURT COUNTY CONCERNING PERMITS AND CONNECTIONS TO EXISTING LINES. WVWA SHALL BE NOTIFIED IN WRITING AND MARK SINK SHALL BE CONTACTED AT (540) 537-3460.
3. ALL WORK SHALL BE SUBJECT TO INSPECTION BY WESTERN VIRGINIA WATER AUTHORITY AND/OR BOTETOURT COUNTY. NOTIFY APPROPRIATE OFFICIALS PRIOR TO COMMENCEMENT OF WORK.
4. SITE SHALL BE TO SUBGRADE PRIOR TO INSTALLATION OF UTILITIES. ALL UTILITIES SHALL BE IN PLACE PRIOR TO PLACEMENT OF PAVEMENT BASE MATERIAL.
5. USE SELECT MATERIAL FREE FROM FROST, LARGE CLODS, STONES, AND DEBRIS FOR BACKFILL FROM THE BOTTOM OF THE TRENCH TO TWELVE (12) INCHES ABOVE THE PIPE.
6. MINIMIZE ANY DISTURBANCE TO EXISTING WATER SERVICE, SEWER LINES OR ANY OTHER UTILITY DURING CONSTRUCTION AND PROVIDE QUALITY WORKMANSHIP.
7. MAKE ALL PIPE JOINTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND/OR WESTERN VIRGINIA WATER AUTHORITY SPECIFICATIONS. MAKE JOINTS BETWEEN DIFFERENT PIPE MATERIALS WITH STANDARD FITTINGS MANUFACTURED FOR THE PURPOSE.
8. MAINTAIN ALL WATER LINES AT TEN (10) FEET HORIZONTAL SEPARATION FROM SEWER LINES AND MANHOLES; MEASURE THE DISTANCE EDGE-TO-EDGE. WHEN LOCAL CONDITIONS PREVENT THE DESIRED HORIZONTAL SEPARATION, THE WATERLINE MAY BE LAID CLOSER TO THE SEWER OR MANHOLE PROVIDED THAT THE BOTTOM OF THE WATERLINE SHALL BE AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF THE SEWER. WHERE THIS VERTICAL SEPARATION CANNOT BE OBTAINED, ADDITIONAL MEASURES WILL BE REQUIRED IN ACCORDANCE WITH WVWA STANDARDS.
9. LOCATE AND UNCOVER VALVE VAULTS AND MANHOLES AFTER PAVING AND ADJUST TO FINAL GRADE, IF NECESSARY.
10. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS WHERE UTILITIES ENTER THE BUILDING.
11. PRIOR TO COMMENCING WITH ANY UNDERGROUND PIPE CONSTRUCTION OR GRADING (EXCAVATION), THE GENERAL CONTRACTOR SHALL CALL MISS UTILITY OF VIRGINIA (TOLL FREE 1-800-552-7001) AT LEAST 48 HOURS PRIOR TO COMMENCING. THE G.C. IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO ANY UTILITY, PUBLIC OR PRIVATE, AS A RESULT OF NOT CONTACTING MISS UTILITY AND SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER/DEVELOPER.
12. EXISTING UTILITY LOCATIONS SHOWN ARE A RESULT OF FIELD SURVEYS, AVAILABLE RECORDS, AND PREVIOUSLY APPROVED PLANS. LOCATIONS ARE APPROXIMATE. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON THE PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT THE ENGINEER IMMEDIATELY IF: 1) ANY LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLANS. 2) IF THERE APPEARS TO BE ANY CONFLICT. UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLANS. G.C. SHALL CALL "MISS UTILITY" OF VIRGINIA AND/OR BOTETOURT COUNTY AND/OR WESTERN VIRGINIA WATER AUTHORITY.
13. PROVIDE A CONTINUOUS AND UNIFORM BEDDING IN THE TRENCH FOR ALL PIPE. REMOVE STONES AND ROCKS FOUND IN THE TRENCH FOR A DEPTH OF AT LEAST SIX (6) INCHES BELOW THE BOTTOM OF THE PIPE AND TAMP SELECT FILL BEDDING PROVIDED. AFTER THE PIPE HAS BEEN PLACED IN THE TRENCH, BACKFILL THE TRENCH WITH SELECT MATERIAL, THOROUGHLY COMPACT TO 90% (95% UNDER PAVEMENT OR CONCRETE SLAB) OF THE STANDARD PROCTOR (ASTM D-698) USING CARE NOT TO DAMAGE THE PIPE. USE VDOT STANDARD PB-1 TRENCH FOR STORM SEWER AND UB-1 FOR SANITARY SEWER AND WATER.
14. PLACE BACKFILL FOR ALL WATER AND SEWER UTILITIES IN ACCORDANCE WITH WESTERN VIRGINIA WATER AUTHORITY SPECIFICATIONS, AND THE FOLLOWING CRITERIA: 1) BACKFILL NO TRENCH UNTIL INSPECTED BY WESTERN VIRGINIA WATER AUTHORITY. MATERIALS USED FOR BACKFILL FROM THE BOTTOM OF THE TRENCH TO TOP OF THE PIPE SHALL BE CRUSHER RUN, OR APPROVED EQUAL MATERIAL. THOROUGHLY AND CAREFULLY COMPACT THE BACKFILL MATERIAL. 2) COMPACT BACKFILL BY MECHANICAL TAMPING THROUGHOUT THE DEPTH OF THE TRENCH TO ENSURE A SUITABLE SUBBASE ACCEPTABLE TO THE ROAD ENGINEER. IF THE MATERIAL TAKEN FROM THE DITCH IS NOT SUITABLE FOR BACKFILLING, REMOVE IT AND USE AN ACCEPTABLE MATERIAL FOR BACKFILLING THE TRENCH.
15. IN AREAS OF WATER LINE CONSTRUCTION, GRADES SHALL BE WITHIN SIX (6) INCHES OF FINAL GRADE PRIOR TO BEGINNING CONSTRUCTION.
16. MINIMUM COVER OVER ALL WATER AND SANITARY SEWER LINES SHALL BE THREE (3) FEET.
17. THE CONTRACTOR SHALL INSTALL ALL WATER SERVICE CONNECTIONS AND METER BOXES.
18. CONNECT PIPE TO MANHOLES THROUGH PRE CAST OPENINGS AND JOIN WITH EITHER A FLEXIBLE BOOT ADAPTER OR A PIPE SEAL GASKET.
19. FIELD CORRECTIONS SHALL BE APPROVED BY THE WESTERN VIRGINIA WATER AUTHORITY PRIOR TO SUCH CONSTRUCTION.

SITE CONSTRUCTION PLAN GENERAL NOTES

- ALL WORK DONE IN THE PROPOSED OR EXISTING RIGHT-OF-WAY, INCLUDING BUT NOT LIMITED TO STREET GRADING, STREET PAVING, AND ALL CONSTRUCTION OF ALL STRUCTURAL COMPONENTS, SHALL BE DONE IN ACCORDANCE WITH CURRENT VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS.
- ALL GRADING OPERATIONS AND PROCEDURES WITHIN THE RIGHT-OF-WAY MUST CONFORM TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS IN THE CURRENT VDOT ROAD AND BRIDGE SPECIFICATIONS. ALL REQUIRED COMPACTION TESTS SHALL BE SUBMITTED TO THE BEDFORD VDOT RESIDENCY OFFICE PRIOR TO STREET ACCEPTANCE.
- LAND USE PERMITS (CE-7P) MUST BE OBTAINED FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION PRIOR TO BEGINNING ANY CONSTRUCTION WITHIN THE EXISTING STATE MAINTAINED RIGHT-OF-WAY (INCLUDING ACCESS). VDOT IS TO RECEIVE WRITTEN NOTIFICATION 48 HOURS PRIOR TO COMMENCING WITH INITIAL CONSTRUCTION ACTIVITIES WITHIN SAID RIGHT-OF-WAYS.
- THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF ALL POINTS OF CONNECTION OR PROPOSED WORK TO EXISTING CURBS, SANITARY LINES, WATER LINES, ETC., PRIOR TO CONSTRUCTION.
- UPON THE DISCOVERY OF SOILS THAT ARE UNSUITABLE FOR FOUNDATIONS, SUBGRADES, OR OTHER ROADWAY CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL IMMEDIATELY CONTACT A GEOTECHNICAL ENGINEER AND VDOT. THESE AREAS SHALL BE EXCAVATED BELOW PLAN GRADE AS DIRECTED BY THE GEOTECHNICAL ENGINEER, BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED IN ACCORDANCE WITH CURRENT VDOT SPECIFICATIONS.
- ALL STORM SEWER DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.
- ALL ENTRANCES ARE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH CURRENT VDOT STANDARDS.
- CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON PLAN. IF THERE APPEARS TO BE A CONFLICT, AND/OR UPON DISCOVERY OF ANY UTILITY SHOWN ON THIS PLAN, CALL MISS UTILITY OF CENTRAL VIRGINIA AT 1-800-552-7001. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE RELOCATION OF ANY UTILITY WITHIN EXISTING AND/OR PROPOSED RIGHT-OF-WAY REQUIRED BY THE DEVELOPMENT.
- CASING SLEEVES SHALL BE PLACED AT ALL PAVEMENT CROSSINGS FOR PUBLIC WATER, PUBLIC SEWER, GAS, POWER, TELEPHONE AND CABLE TV SERVICES TRUNK LINES.
- THE INSTALLATION OF SEWER, WATER, AND GAS MAINS (INCLUDING SERVICE LATERALS AND SLEEVES) SHALL BE COMPLETED PRIOR TO PLACEMENT OF AGGREGATE BASE COURSE.
- A PRIME COAT SEAL BETWEEN THE AGGREGATE BASE AND BITUMINOUS CONCRETE WILL BE REQUIRED AT A RATE OF 0.30 GALLONS PER SQUARE YARD (REC-250 PRIME COAT) PER VDOT STANDARDS AND SPECIFICATIONS.
- THE SCHEDULING OF AGGREGATE BASE INSTALLATION AND SUBSEQUENT PAVING ACTIVITIES SHALL ACCOMMODATE FORECAST WEATHER CONDITIONS PER SECTION 315 OF THE ROAD AND BRIDGE SPECIFICATIONS.
- ALL VEGETATION AND ORGANIC MATERIAL IS TO BE REMOVED FROM THE RIGHT-OF-WAY LIMITS PRIOR TO CONDITIONING OF THE SUBGRADE.

18. PLANTING PROCEDURES FOR TREES AND SHRUBS
A. PLANTING SHALL OCCUR IN ACCORDANCE WITH ALL DETAILS.
B. TREES AND SHRUBS SHALL BE PLACED IN THE PLANTING PIT, BY LIFTING FROM THE BALL (NEVER FROM THE BRANCHES OR TRUNK). ALL PLANT MATERIAL SHALL BE PLACED IN A STRAIGHT POSITION WITHIN THE PLANTING PIT WITH THE MOST DESIRABLE SIDE PLACED TOWARDS THE PROMINENT VIEW (SIDEWALK, STREET, ETC.).
C. THE TREE PIT SHALL BE BACKFILLED WITH A SOIL MIXTURE AS PER SPECIFICATIONS. THE PIT SHALL BE FILLED HALFWAY INITIALLY AND TAMPED FIRMLY. ALL ROPES, WIRES, ETC. ON THE ROOTBALL SHALL BE CUT AND THE BURLAP OR BALL WRAP PULLED BACK TO THE EDGE OF THE ROOTBALL. COMPLETE BACKFILLING PLANT PIT AND TAMP FIRMLY. BACKFILL SOIL SHALL NOT COVER TOP OF ROOTBALL. MULCH ROOTBALL AND SAUCER WITH MINIMUM OF 3 INCHES SHREDDED OR CHIPPED HARDWOOD OR PINE MULCH. WATER THOROUGHLY OR UNTIL PLANT PIT IS FILLED.

CONSTRUCTION SITE PLAN GENERAL NOTES
CONSTRUCTION METHODS

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS, AND LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS, WHERE APPLICABLE.
2. THE LOCATION OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION WORK AND NOTIFY ENGINEER IMMEDIATELY IF LOCATIONS DIFFER FROM PLANS.
3. THE CONTRACTOR SHALL NOTIFY 'MISS UTILITY' AT 1-800-552-7001 OR 811 PRIOR TO ANY CONSTRUCTION WORK IN THIS AREA.
- CURB AND GUTTER**
1. THE CONTRACTOR SHALL USE A MINIMUM OF THREE (3) RUNNING CONSTRUCTION STAKES TO AVOID HARD BREAK LINES IN THE CURB – UNLESS SPECIFICALLY CALLED FOR ON THE PLANS.
2. THE MINIMUM LONGITUDINAL SLOPE FOR GUTTER PAN IS 0.5%, UNLESS OTHERWISE NOTED ON PLANS.
3. A MINIMUM 20'-FOOT TRANSITION FROM CG-6 TO CG-7 IS REQUIRED, UNLESS OTHERWISE NOTED ON THE PLANS.
4. ALL CURB AND GUTTER SHOWN ON THE PLANS SHALL BE VDOT CG-6, CG-2, OR CG-7, UNLESS SPECIFICALLY NOTED OTHERWISE.

- UNDERGROUND UTILITIES**
1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING LINE AND GRADE FOR ALL DRY UTILITIES PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING DRY UTILITY LINES AND GRADES AGAINST ALL PROPOSED UTILITIES SHOWN ON THE PLANS. POTENTIAL CONFLICTS SHALL BE REPORTED TO THE ENGINEER AS SOON AS POSSIBLE.
3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING TELEPHONE, CABLE, FIBER OPTIC, AND ELECTRICAL SERVICES TO THE PROJECT. CONTACT UTILITY PROVIDERS AS SOON AS POSSIBLE TO BEGIN COORDINATION.
4. THE CONTRACTOR SHALL REVIEW SITE AND BUILDING DRAWINGS TO VERIFY COORDINATION OF UTILITY INVERTS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.

- SIDEWALKS AND SITE STAIRS**
1. ALL SITE STAIRS SHALL BE FURNISHED WITH VDOT HR-1 ON BOTH SIDES OF THE STAIRS.
2. ALL SITE STAIRS SHALL BE CONSTRUCTED IN ACCORDANCE WITH VDOT/ADA/ANSI STANDARDS AND SPECIFICATIONS, UNLESS SPECIFICALLY NOTED OTHERWISE.
3. SIDEWALKS SHALL BE INSTALLED WITH A MAXIMUM 2% CROSS-SLOPE
4. SIDEWALKS SHALL BE BROOM FINISHED, UNLESS NOTED OTHERWISE ON THE PLANS.
5. SIDEWALKS SHALL BE 5- FEET IN WIDTH, UNLESS NOTED OTHERWISE ON THE PLANS.
6. REFER TO ARCH. PLANS FOR ADDITIONAL SPECIFICATIONS.

- ROOF DRAINS AND DOWN SPOUTS**
1. ALL DOWNSPOUTS NOT CONNECTED TO STORM SEWER SHALL BE FURNISHED WITH SPLASH BLOCKS.
2. ALL DOWN SPOUTS SHALL BE FURNISHED WITH A DOWNSPOUT/ROOFDRAIN TRANSITION BOOT. STUBBING OF DOWNSPOUT INTO ROOF DRAIN LATERAL WITHOUT A SUITABLE BOOT TRANSITION IS NOT PERMITTED.
3. ALL ROOF DRAIN LATERALS SHALL BE INSTALLED IN ACCORDANCE WITH THE PREVAILING LOCAL JURISDICTIONAL PLUMBING CODE OR THE INTERNATIONAL PLUMBING CODE, WHICHEVER IS MORE STRINGENT.
4. MINIMUM ALLOWABLE SLOPE FOR 4-INCH ROOF DRAIN LATERAL IS 2.08%.
5. MINIMUM ALLOWABLE SLOPE FOR 6-INCH ROOF DRAIN LATERAL IS 1.04%.
6. ROOF DRAIN LATERALS SHALL BE 6-INCH DIAMETER (SMOOTH-WALLED), UNLESS NOTED OTHERWISE ON THE PLANS.

- BUILDING DOORS AND GRADES**
1. A MINIMUM 5'X5' PAD SHALL BE INSTALLED AT ALL BUILDING DOOR LOCATIONS (MAXIMUM 2% SLOPE IN ANY DIRECTION). COMPLY WITH ADA DOOR CLEARANCE REQUIREMENTS FOR PAD POSITIONING OUTSIDE OF THE DOOR.
2. FINISHED GRADE SHALL BE 6-INCHES BELOW FINISHED FLOOR ELEVATION ALONG ALL BUILDING WALLS, IN AREAS WHERE PERVIOUS SURFACES ARE PROVIDED, UNLESS OTHERWISE NOTED. FINISHED GRADE FOR AREAS TO BE MULCHED SHALL BE AT TOP OF MULCH. FINISHED GRADE FOR AREAS TO RECEIVE SOD SHALL BE TO TOP OF SOD.
3. ALL PERVIOUS SURFACES SHALL BE INSTALLED WITH A MINIMUM OF 2% SLOPE AWAY FROM THE BUILDING (FOR A MINIMUM OF 10'-FEET), TO PROVIDE FOR POSITIVE DRAINAGE.
4. CONTRACTOR SHALL COORDINATE LOCATION OF WEEP HOLES ALONG ALL BUILDING WALLS AND VERIFY REQUIRED SEPARATION BETWEEN WEEP HOLES AND FINISHED GRADES.
5. CONTRACTOR SHALL REVIEW GRADING ALONG BUILDINGS WITH STOREFRONTS TO VERIFY REQUIRED SEPARATION IS PROVIDED.



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

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WESTLAKE VILLAGE APARTMENTS

PHASE 1

GENERAL NOTES

GLIS CREEK DISTRICT
FRANKLIN COUNTY, VIRGINIA

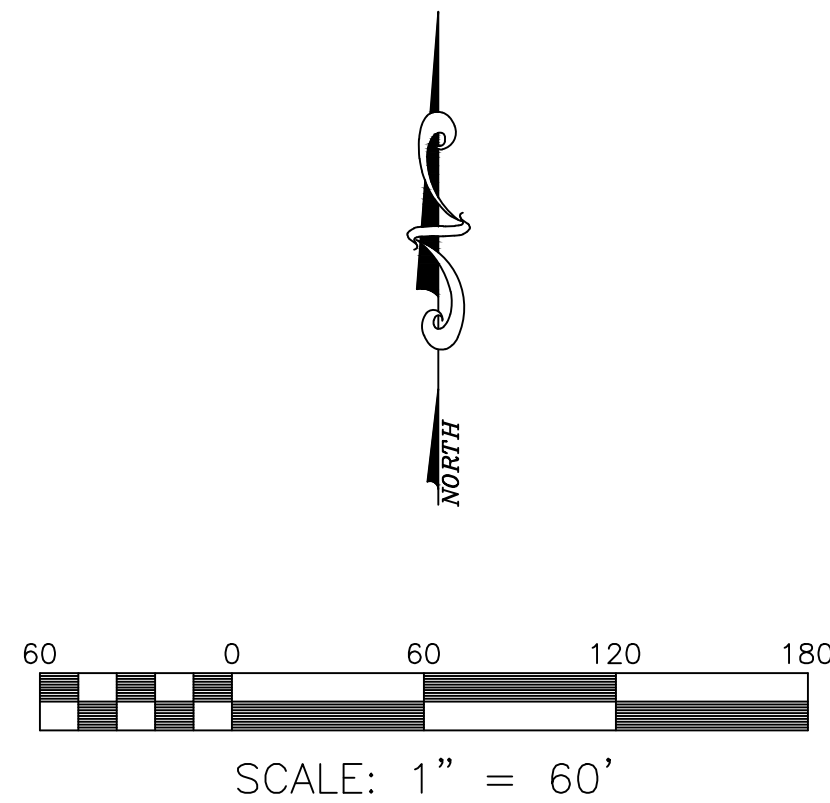
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DESIGNED BY	CPB
CHECKED BY	BTC
DATE	4/30/2019
SCALE	N/A
REVISIONS	
	7/11/2019
	8/30/2019
	10/30/2019
	12/31/2019
	3/24/2020
	9/28/2020

APPROVAL BLOCK

FRANKLIN COUNTY DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT

DATE

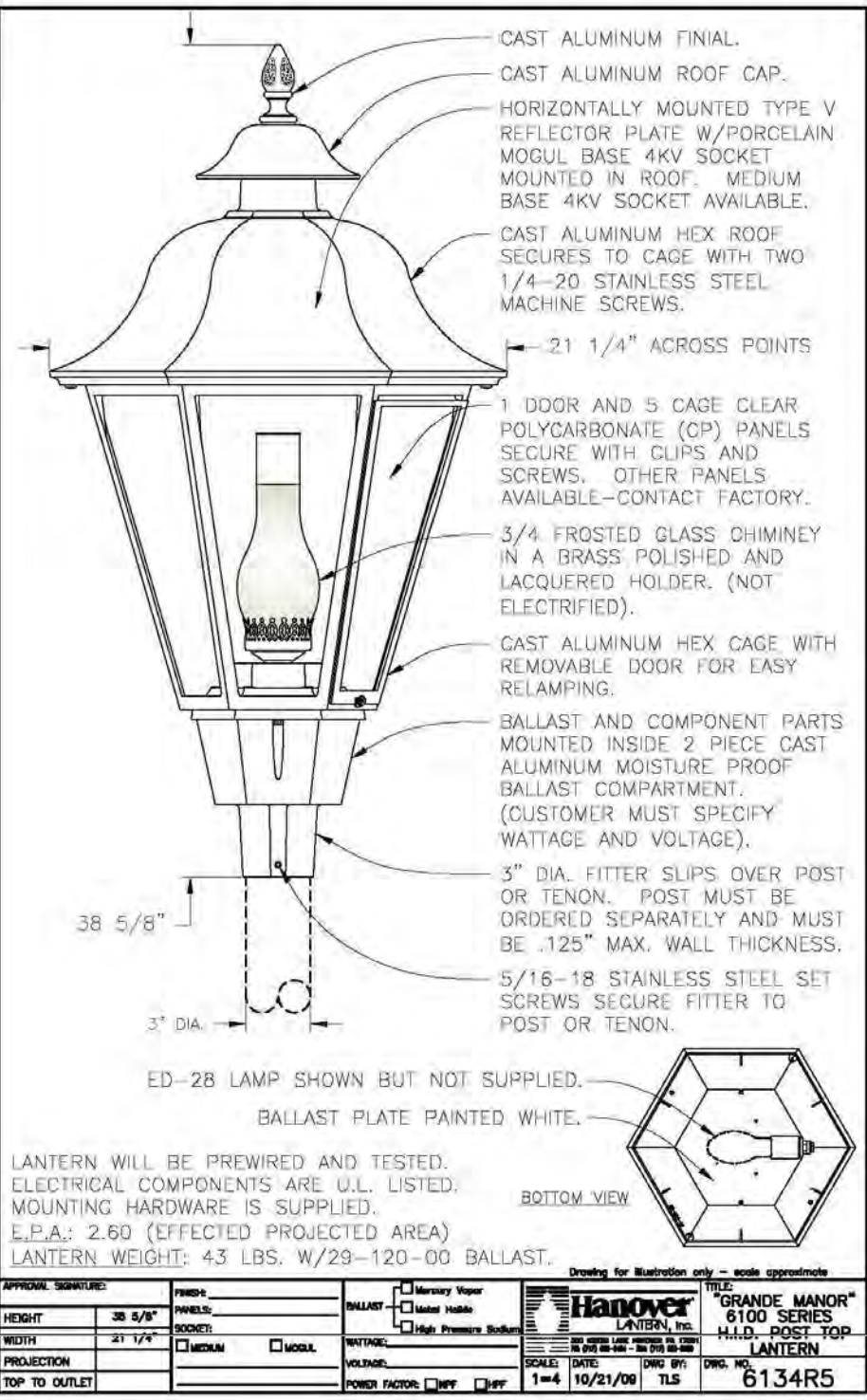
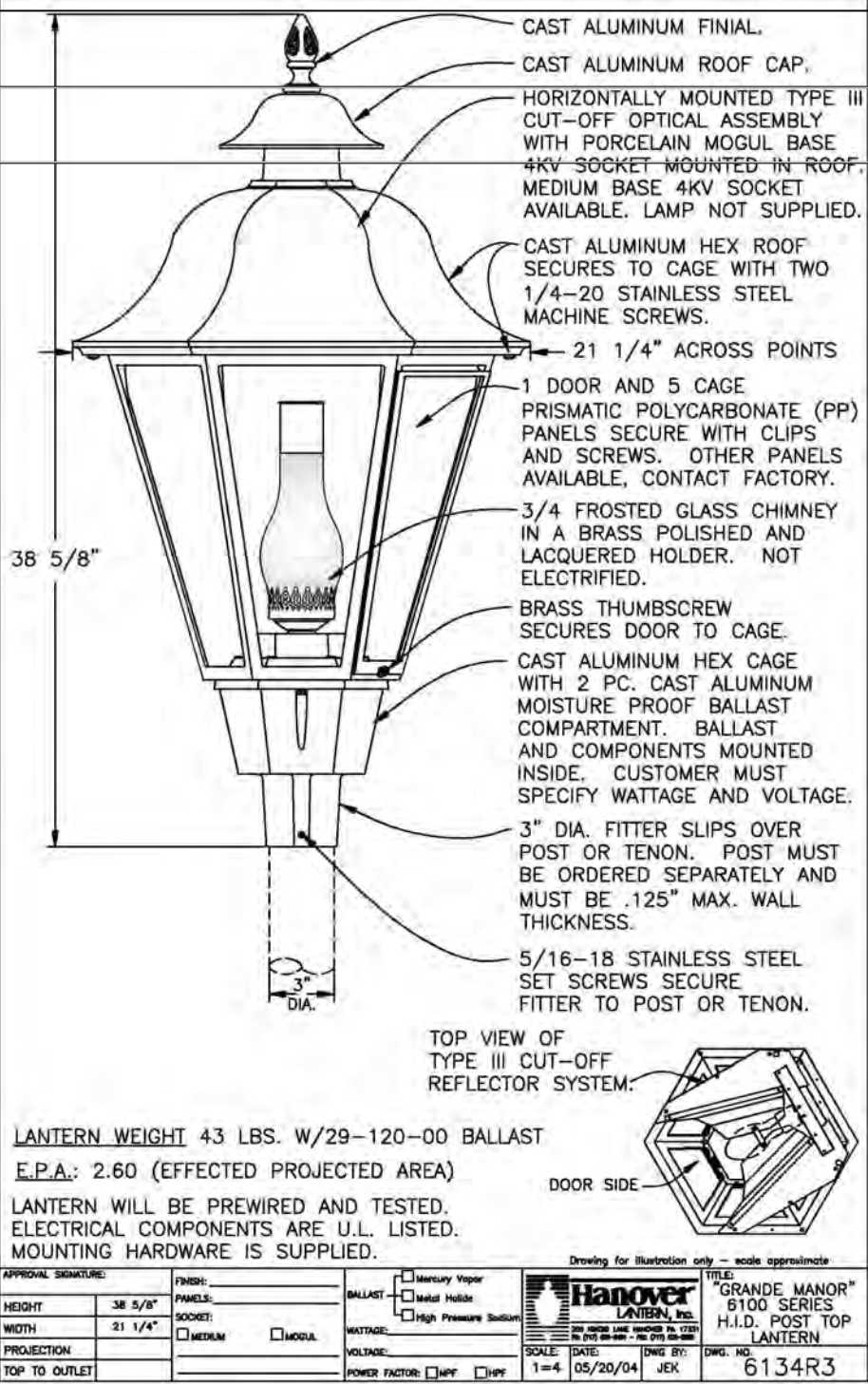
C18
PROJECT NO 04180116.00



Scale: 1 inch= 60 Ft.

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Lum. Lumens	Lum. Watts	LLF	Description
	3	PT5	SINGLE	15997	295	0.720	6135BPR5, 250W MH, Pole Mounted 15ft AFG
	9	PT3	SINGLE	11573	295	0.720	6135BPR3, 250W MH, Pole Mounted 15ft AFG

Calculation Summary									
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Description	
Parking Lot	Illuminance	Fc	0.75	3.5	0.2	3.75	17.50	10ft Grid	



Lighting Designs
by Dugan

24" x 36"
Page 1 of 1

Disclaimer Laying Designs by Dugan (LDD) assumes no responsibility for any errors in the EES files, background images, or other information provided. The user assumes all responsibility for the accuracy of the measured results may vary due to manufacturer tolerances, component malfunctions, obstructions, varying surface reflectance & color, and/or other factors. The user agrees to hold Laying Designs by Dugan (LDD) harmless for any claims, damages, or liabilities arising from the use of the LDD software, including but not limited to compliance with federal, state and/or local codes and regulations.	Revisions		
	Rev	Date	Comments
	A	04/23/19	Initial Layout
	B	07/10/19	New site layout

Disclaimer
Lighting Designs by Dugan (LDD) assumes no responsibility for any errors in the E.S. files, background images, or other information provided to LDD to be used in these calculations. Actual or component malfunctions, obstructions, varying surface reflectance's and field conditions. The owner assumes all responsibility for compliance with local, state and/or federal codes and regulations.