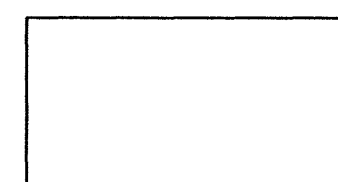


## USE OF NUTRIENT BANK CREDITS FOR BMP

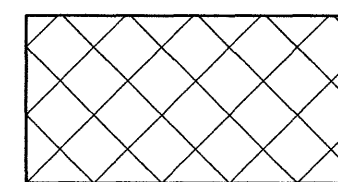
	BMP #1	BMP #2
NAME OF AUTHORIZED NUTRIENT BANK	NUTRIENT BANK CREDIT	NA
REQUIRED PHOSPHORUS TO BE REMOVED (LB/YR)	UNKNOWN	NA
AMOUNT OF PHOSPHORUS CREDIT PURCHASED (LB/YR)	4.55	NA
TECHNICAL REQUIREMENTS MET (PART IIB OR IIC)	PART IIB	PART IIB
TOTAL AREA TREATED (AC)	4.1	3.3
IMPERVIOUS AREA TREATED BY BMP (AC)	2.5	2.3
MANAGED TURF AREA TREATED BY BMP (AC)	1.6	1.0
OPEN SPACE / FOREST AREA TREATED BY BMP (AC)	0	0
SURFACE AREA OF BMP (AC)	NA	NA
STORAGE VOLUME OF BMP (AC-FT)	NA	NA
QUALITY, QUANTITY, OR BOTH?	QUALITY	QUANTITY
TMDL ADDRESSED? (PHOSPHORUS, BACTERIA, SEDIMENT, ETC)	PHOSPHORUS	NA
NAME OF RECEIVING WATER (PROJECT SITE)	CARVIN CREEK	CARVIN CREEK
HYDROLOGIC UNIT CODE FOR PROJECT SITE (ALPHANUMERIC CODE RU14, ETC)	RU12	RU12

## STORMWATER SITE STATISTICS

	EXISTING	PROPOSED
TOTAL DISTURBED AREA (AC)	0	3.9
TOTAL SITE AREA (AC)	4.1	4.1
IMPERVIOUS AREA (AC)	0	2.3
MANAGED TURF AREA (AC)	4.1	1.8
OPEN SPACE / FOREST AREA (AC)	0	0
RIGHT OF WAY DISTURBANCE (SF)	0	3,100
KARST PRESENT (Y/N)	N	N



DENOTES STANDARD DUTY PAVEMENT



DENOTES HEAVY DUTY PAVEMENT

NOTE: CONTRACTOR TO COORDINATE WITH OWNER FOR PROPER SIGNAGE DIRECTING HEAVY VEHICLE TRAFFIC.

## UTILITY NOTES:

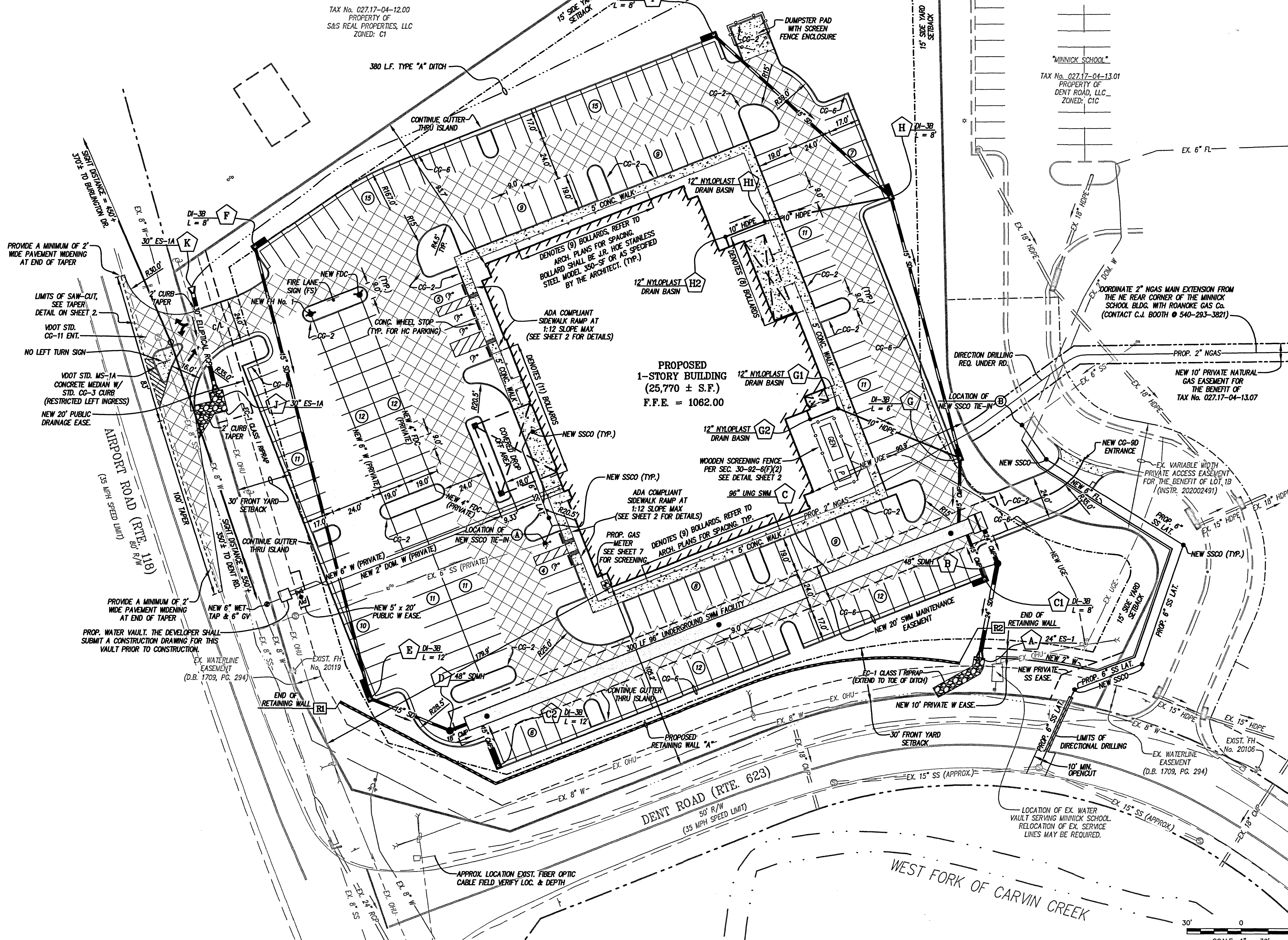
- ALL WATER AND SANITARY SEWER FACILITIES ARE TO BE INSTALLED ACCORDING TO THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS.
- ALL SANITARY SEWER CLEANOUTS WITHIN PAVEMENT SHALL BE H-20 TRAFFIC RATED.
- ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH VDOT'S ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS.
- ALL WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM OF 3.0 FEET OF COVER.
- MAINTAIN A MINIMUM OF 18" CLEARANCE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE AT ALL WATER, SANITARY SEWER, AND STORM DRAIN CROSSINGS. WHERE THIS CLEARANCE CAN NOT BE ACHIEVED, CONCRETE PIERS SHALL BE UTILIZED IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY'S WATER AND SANITARY SEWER STANDARDS.
- SANITARY SEWER LATERAL PIPE MATERIAL SHALL BE PVC SDR-26.
- NEW WATERLINE MAIN PIPE MATERIAL SHALL BE C900 PVC DR14 WATERLINES, UNLESS OTHERWISE INDICATED, OR APPROVED EQUAL.
- ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH VDOT STANDARDS.
- ALL STORM DRAIN PIPES SHALL BE HDPE OR RCP UNLESS OTHERWISE INDICATED AS CMP.
- ALL HDPE PIPE SHALL BE ADS WT N-12, OR HP STORM.
- ALL RCP PIPE SHALL BE CLASS III.
- ALL CMP PIPE SHALL BE ALUMINIZED STEEL, TYPE 2. 96" & 120" PIPE SHALL BE PER MANUFACTURER RECOMMENDATIONS.
- ALL NEW DROP INLETS AND STORM DRAIN MANHOLES SHALL HAVE VDOT STD. IS-1, INLET SHAPING.
- ALL DRAINAGE STRUCTURES DEEPER THAN 4.0 FEET SHALL HAVE STEPS (VDOT STD. ST-1) INSTALLED.
- SAFETY SLABS (VDOT STD. SL-1) ARE REQUIRED IN ALL NEW DRAINAGE STRUCTURES WITH A DEPTH OF 12.0 FEET OR GREATER. THE SPACING OF THE SLABS SHOULD BE 8 TO 12 FEET WITH NO SAFETY SLAB LOCATED WITHIN 6 FEET FROM THE TOP OR BOTTOM OF THE STRUCTURE.
- THE CONTRACTOR OR DEVELOPER IS REQUIRED TO NOTIFY THE WESTERN VIRGINIA WATER AUTHORITY IN WRITING AT LEAST THREE (3) DAYS PRIOR TO ANY CONSTRUCTION. PLEASE CONTACT NICK ROBERTSON AT (540) 283-2932.
- ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE WESTERN VIRGINIA WATER AUTHORITY.
- ALL WATER CONNECTIONS TO EXISTING LINES SHALL BE COORDINATED WITH AND PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY.
- ALL WATER & SANITARY SEWER CONNECTIONS TO EXISTING LINES SHALL BE COORDINATED WITH AND PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY.
- A GEOTECHNICAL ENGINEER SHALL OBSERVE SUBGRADE CONDITIONS PRIOR TO INSTALLATION OF PIPE BEDDING MATERIAL.
- THE CONTRACTOR SHALL COMPLY WITH ALL WVWA AND ROANOKE COUNTY AS-BUILT REQUIREMENTS.

## FIRE PROTECTION NOTES:

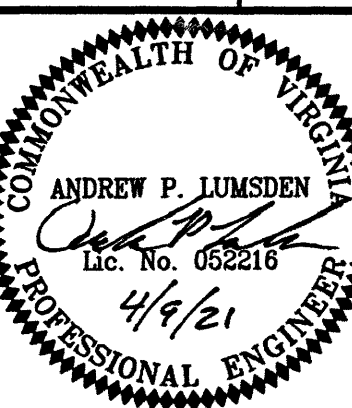
- CONTRACTOR SHALL PROVIDE A KNOX BOX KEY BOX, MODEL 3200 SERIES OR ABOVE, TO BE INSTALLED AT THE MAIN ENTRANCE TO EACH BUILDING. THE CONTRACTOR SHALL VERIFY MOUNTING LOCATION (EYE LEVEL) WITH THE ROANOKE COUNTY FIRE MARSHAL.
- FIRE DEPARTMENT CONNECTION (FDC) SHALL BE LOCATED AS INDICATED ON THESE PLANS. THE CONTRACTOR SHALL VERIFY LOCATION ON THE ARCHITECTURAL PLANS AND CONFIRM ACCEPTABILITY OF THE LOCATION WITH THE FIRE MARSHAL.
- FDC SHALL BE SINGLE 2.5 INCH SIAMENSE CONNECTION WITH 30" ELBOW AND SHALL HAVE A KNOX BOX LOCKING CAP.
- FIRE DEPARTMENT CONNECTIONS (FDC) AND POST INDICATOR VALVES (PIV) SHALL BE INSTALLED IN ACCORDANCE WITH NATIONAL FIRE PROTECTION STANDARDS.
- FIRE HYDRANT FLOW INFORMATION PROVIDED BY THE WVWA. THE MINIMUM PROPOSED FIRE HYDRANT FLOWS ARE 2,079 GPM AT 20 PSI RESIDUAL PRESSURE.
- NEW FIRE HYDRANT No. 1 SHALL BE PAINTED WHITE. THE BONNET (TOP) SHALL BE PAINTED BLUE.

## LEGEND

ITEM	EXISTING	PROPOSED
Pavement	---	---
Curb and Gutter	---	---
Storm Drain Line	---	---
Sanitary Sewer Manhole	---	---
Sanitary Sewer Line	---	---
Waterline	---	---
Hydrant	---	---
Underground Electric Line	---	---
Overhead Electric Line	---	---
Underground Telephone Line	---	---
Contours	---	---
TOP OF WALL = TW, BOTTOM OF WALL = BW		



**Lumsden Associates, P.C.**  
ENGINEERS | SURVEYORS | PLANNERS



DIMENSIONAL LAYOUT

**SITE DEVELOPMENT PLAN**  
PREPARED FOR  
**VISTAR EYE CENTER**  
PREPARED FOR  
**RETINA LAND I, LLC**  
LOCATED AT THE INTERSECTION OF  
AIRPORT ROAD & DENT ROAD  
ROANOKE COUNTY, VIRGINIA

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

DATE: April 9, 2021  
SCALE: 1" = 30'

COMMISSION NO: 2020-297

SHEET 4 OF 14

APPROVED. 6/15/2021