



APPLICATION ACCEPTED: April 29, 2009  
PLANNING COMMISSION: February 4, 2010  
BOARD OF SUPERVISORS: March 9, 2010  
@ 4:00 pm

# County of Fairfax, Virginia

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February 4, 2010

## STAFF REPORT ADDENDUM

APPLICATION SE 2009-DR-008

### DRANESVILLE DISTRICT

**APPLICANT:** Oakcrest School

**ZONING:** R-E

**PARCELS:** 18-4 ((1)) 26C, 18-4 ((8)) 4 & A

**ACREAGE:** 23 acres

**FAR:** 0.136

**PLAN MAP:** Residential use at 0.2-0.5 dwelling units per acre

**SE CATEGORY:** Category 3; Private School of General Education

**PROPOSAL:** Approval of a special exception for a Private School of General Education with a maximum daily enrollment of 450 students (grades 6-12)

**WAIVERS & MODIFICATIONS:** Modification of transitional screening on the east and south, in favor of existing vegetation and as shown on the SE Plat

Modification of the location of the required barrier along the eastern and southern property boundaries, in favor of that shown on the SE Plat

### STAFF RECOMMENDATIONS:

Staff recommends denial of SE 2009-DR-008. If it is the intent of the Board to approve the application, staff recommends that such approval be subject to the proposed development conditions in Attachment 1.

It should be noted that it is not the intent of the staff to recommend that the Board, in adopting any conditions, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards; and that, should this application be approved, such approval does not interfere with, abrogate or annul any easements, covenants, or other agreements between parties, as they may apply to the property subject to this application.

It should be further noted that the content of this report reflects the analysis and recommendation of staff; it does not reflect the position of the Board of Supervisors.

For information, contact the Zoning Evaluation Division, Department of Planning and Zoning, 12055 Government Center Parkway, Suite 801, Fairfax, Virginia 22035-5505, (703) 324-1290 TTY 711 (Virginia Relay Center).

*Tracy Strunk*

*N:\Oakcrest SE 2009-DR-008\SE 2009-DR-008 ADDENDUM.doc*



Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 7 days advance notice.  
For additional information on ADA call (703) 324-1334 or TTY 711 (Virginia Relay Center).

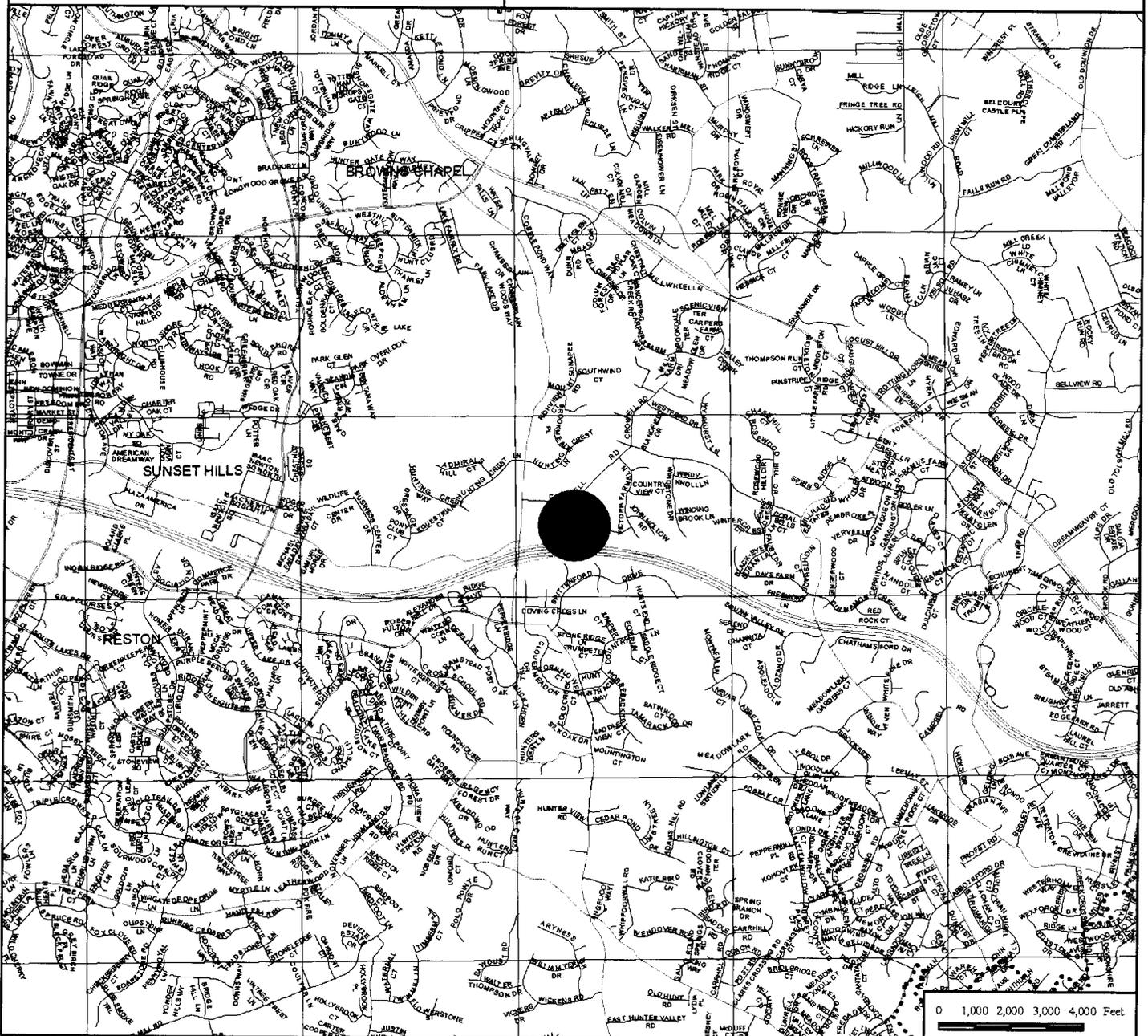
# Special Exception

SE 2009-DR-008



Applicant: OAKCREST SCHOOL  
Accepted: 04/29/2009  
Proposed: PRIVATE SCHOOL OF GENERAL EDUCATION  
Area: 23 AC OF LAND; DISTRICT - DRANESVILLE  
Zoning Dist Sect: 03-0E04  
Art 9 Group and Use: 3-11  
Located: SOUTH SIDE OF CROWELL ROAD  
APPROXIMATELY 1,200 FEET EAST OF ITS  
INTERSECTION WITH HUNTER MILL ROAD  
AND NORTH SIDE OF DULLES TOLL ROAD

Zoning: R- E  
Plan Area: 3,  
Overlay Dist:  
Map Ref Num: 018-4 /01/ /0026C /08/ / A  
/08/ /0004



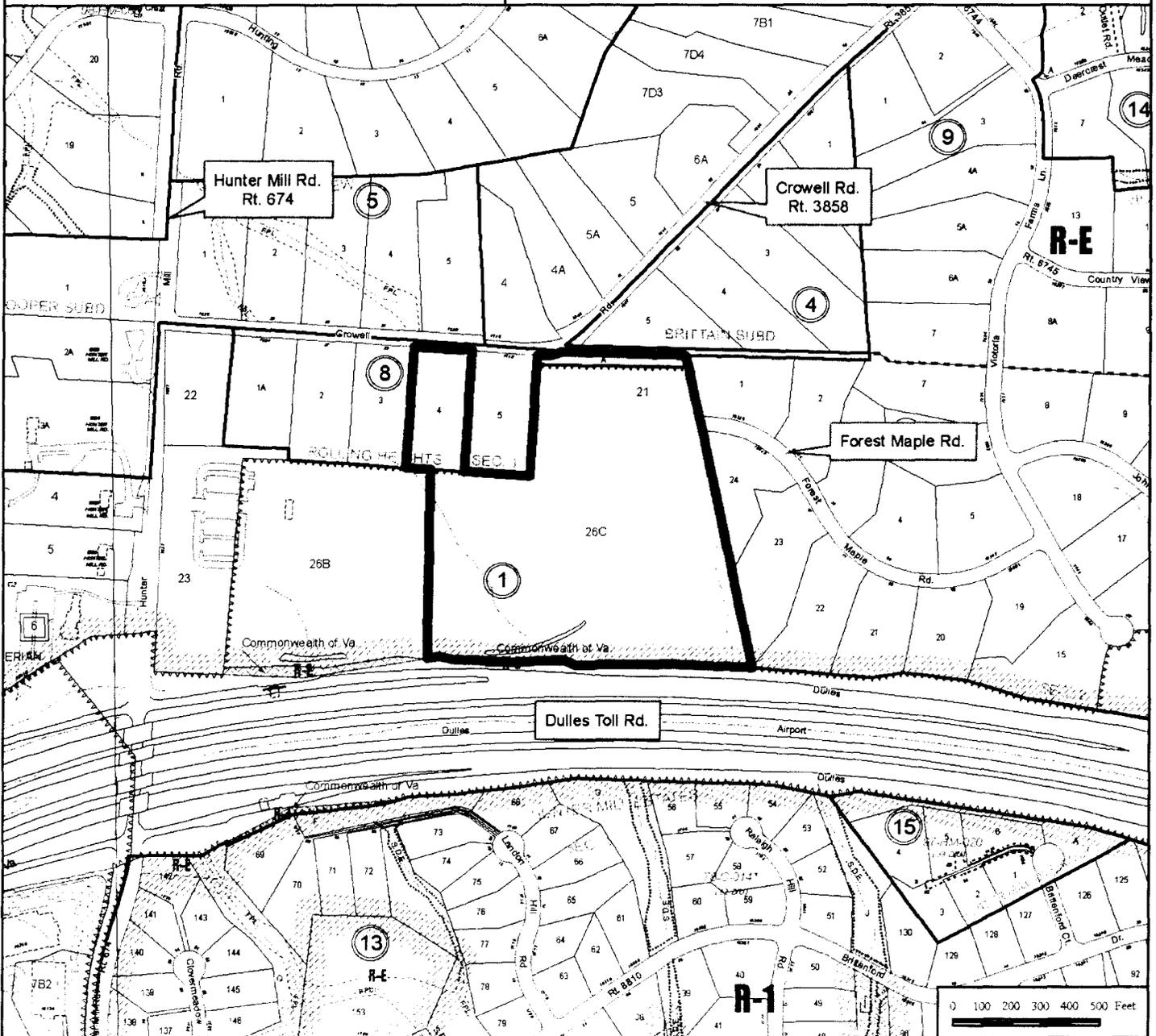
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**SPECIAL EXCEPTION PLAN NOTES:**

1. THIS SPECIAL EXCEPTION (SE) APPLICATION IS TO PERMIT CONSTRUCTION OF A PRIVATE SCHOOL ON THE SUBJECT SITE.
2. THE PROPERTIES, WHICH ARE THE SUBJECT OF THIS SE, ARE IDENTIFIED ON THE FAIRFAX COUNTY TAX MAP AS PARCELS 18-4-(1-1) PARCEL 29C, 18-4-(8B) PARCEL 4 AND 18-4-(8B) PARCEL A.
3. THE SUBJECT PROPERTY IS ZONED R-E RESIDENTIAL ESTATE.
4. THE BOUNDARY INFORMATION SHOWN HEREON IS BASED UPON A GROUND FIELD SURVEY PERFORMED BY VIKI, INC. IN DECEMBER 2003. THE PHYSICAL IMPROVEMENTS SHOWN HEREON ARE BASED UPON A GROUND FIELD SURVEY PERFORMED BY VIKI, INC. IN SEPTEMBER 2004 AND BY AN AERIAL SURVEY PROVIDED BY MCKENZIE/SCHNIDER ON DECEMBER 29, 2003. THE LAST FIELD DATE WAS JUNE 6, 2008.
5. THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS AT A CONTOUR INTERVAL OF TWO (2) FEET AND IS BASED ON GROUND SURVEY AND AERIAL SURVEY REFERENCED ABOVE.
6. THE LOCATION AND SIZE OF THE ON-SITE STORMWATER MANAGEMENT FACILITIES SHOWN HEREON ARE APPROXIMATE AND SUBJECT TO REVISION AT THE TIME OF FINAL ENGINEERING. STORM SEWER LAYOUT IS PRELIMINARY & SUBJECT TO FINAL ENGINEERING.
7. THE PROPERTY WILL BE SERVED BY BOTH PUBLIC WATER AND SEWER.
8. THE PROPOSED LIMITS OF CLEARING AND GRADING ARE APPROXIMATE AND SUBJECT TO ADJUSTMENT DUE TO FINAL ENGINEERING AND LOCATION OF UTILITIES, BUT WILL BE IN SUBSTANTIAL CONFORMANCE WITH THAT WHICH IS PRESENTED HEREON.
9. THE BUILDINGS SHOWN HEREON APPEAR TO FLOT IN FLOOD ZONE "C" AREA, DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN AS SHOWN ON F.E.I.M.A. MAP PANEL NO. 515525 D050 D, DATED MARCH 5, 1990.
10. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO RESOURCE PROTECTION AREAS (RPA), ENVIRONMENTAL QUALITY CORRIDORS (EQC) OR FLOODPLAINS BASED ON FAIRFAX COUNTY MAPS.
11. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO UTILITY EASEMENTS GREATER THAN TWENTY-FIVE (25) FEET IN WIDTH, OTHER THAN SHOWN ON THIS SE PLAN. ALL EXISTING MAJOR UNDERGROUND UTILITIES ARE SHOWN.
12. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO GRAVES ON THIS SITE.
13. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO HAZARDOUS OR TOXIC SUBSTANCES, HAZARDOUS WASTE OR PETROLEUM PRODUCTS STORED ON THE SUBJECT PROPERTY.
14. DEVELOPMENT WILL COMMENCE UPON APPROVAL OF ALL REQUIRED PERMITS AND FUNDING.
15. TO THE BEST OF OUR KNOWLEDGE, THE PROPOSED DEVELOPMENT CONFORMS TO ALL CURRENT APPLICABLE LAND DEVELOPMENT ORDINANCES, REGULATIONS AND ADOPTED STANDARDS.
16. MINOR MODIFICATIONS TO THE SIZES, DIMENSIONS, FOOTPRINTS AND LOCATIONS OF THE BUILDINGS, SIDEWALKS AND UTILITIES AS PRESENTED ON THE SE PLAN MAY OCCUR WITH FINAL ENGINEERING AND DESIGN.
17. IT IS TO BE UNDERSTOOD THAT ADDITIONAL SITE FEATURES SUCH AS TRASH/RECYCLING FACILITIES, PLANTERS, FENCES, RETAINING WALLS, AND DATES, IF SHOWN, ARE APPROXIMATE AND MAY BE ADJUSTED WITH FINAL ENGINEERING AND LANDSCAPE DESIGN AND, IF NOT REPRESENTED HEREON, MAYBE PROVIDED.
18. THE APPLICANT RESERVES THE RIGHT TO INSTALL ACCESSORY STRUCTURES AND USES DEFINED IN ARTICLE 10 OF THE ZONING ORDINANCE, INCLUDING, BUT NOT LIMITED TO FLAGPOLES, DECORATIVE FENCING, SCULPTURE, COMMUNION TABLES IN LOCATIONS THAT ARE NOT IN CONFLICT WITH THE LOCALITY'S REQUIREMENTS OF THE ZONING ORDINANCE OR THIS SPECIAL EXCEPTION.
19. BUILDING ELECTRIC, GAS, COMMUNICATION LINES TO BE SERVED VIA UNDERGROUND CONDUITS.
20. THE APPLICANT RESERVES THE RIGHT TO DEVELOP THE PROPERTY IN PHASES, PROVIDED THAT ALL APPLICABLE REQUIREMENTS OF THE SE FOR LANDSCAPING AND TRANSITIONAL SCREENING AND ALL COUNTY REQUIREMENTS FOR MINIMUM PARKING AND STORM WATER MANAGEMENT SHALL BE FULFILLED IN CONNECTION WITH EACH INDIVIDUAL PHASE.
21. PARKING LOT LIGHTING SHALL BE A MAXIMUM OF TWENTY (20) FEET IN HEIGHT FROM THE BOTTOM OF THE POLES TO THE BASE OF THE FIXTURE AND ALL PARKING LOT LIGHTING FIXTURES SHALL BE FULL CUT-OFF AND DIRECTED DOWNWARD.

**STORMWATER MANAGEMENT NARRATIVE**

THE OAKCREST SCHOOL PROPERTY IS LOCATED WITHIN THE DIFFICULT RUN WATERSHED. A MAJORITY OF THE SITE IS TRIBUTARY TO THE MIDDLE DIFFICULT RUN BRANCH WITH THE REMAINDER TRIBUTARY TO THE COLUMBIA RUN BRANCH. THE AREA TRIBUTARY TO THE MIDDLE DIFFICULT RUN BRANCH DISCHARGES TO A CONSTRUCTED REGIONAL DETENTION BASIN, BASIN NO. 0-52. THE REGIONAL BASIN WAS CONSTRUCTED BY THE DEVELOPER OF THE HUNTER MILL ESTATES SUBDIVISION IN OR AROUND 1994. THE REGIONAL POND WAS DESIGNED TO PROVIDE FLOOD CONTROL VOLUME UP TO THE 10-YEAR EVENT AND BMP VOLUME TO MEET THE 40% PHOSPHORUS REMOVAL REQUIREMENT PER THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM). THE DESIGN VOLUME WAS BASED ON ANTICIPATED FUTURE CONDITIONS USING THE FUTURE LAND USE PROJECTIONS. THE AMOUNT OF IMPERVIOUS SURFACE ASSOCIATED WITH THE OAKCREST SCHOOL PROJECT SLIGHTLY EXCEEDS THE AMOUNT PROJECTED FOR THE REGIONAL BASIN. HOWEVER, THE OVERALL "C" COEFFICIENT DOES NOT APPRECIABLY CHANGE AND PROVIDES THE REQUIRED BMP VOLUME FOR THIS PROJECT. THE REGIONAL POND DISCHARGES TO A STREAM THAT IS APPROXIMATELY 700 FEET UPSTREAM OF THE JUNCTION WITH MIDDLE BRANCH OF THE DIFFICULT RUN DRAIN WHERE THERE IS A FLOODPLAIN IN EXCESS OF THE 1 SQUARE MILE REQUIREMENT.

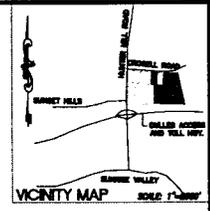
WITH RESPECT TO THE MIDDLE DIFFICULT RUN WATERSHED, THE OAKCREST SCHOOL SITE DRAINS TO TWO CULVERTS THAT CONVEY RAINFALL WATER ACROSS THE DUALS ACCESS ROAD AND THROUGH THE HUNTER MILL ESTATES SUBDIVISION TO THE REGIONAL BASIN. THE WESTERLY OUTLET POINT (TRIBUTARY A) IS 36 INCH CONCRETE CULVERT. THE EASTERLY OUTLET POINT (TRIBUTARY B) IS A 42 INCH CONCRETE CULVERT. THE CULVERTS DISCHARGE TO NATURAL CHANNELS. CHANNELS WITH SLOPE CHANGES BETWEEN THE DUALS ACCESS ROAD AND THE REGIONAL BASIN. FIELD EVALUATION OF THE ORANGE CHANNELS INDICATE THAT THEY ARE EXPERIENCING EROSION, INCISIONS AND UNDERCUTTING AND DO NOT MEET THE REQUIREMENTS OF AN ADEQUATE OUTLET FOR THE FAIRFAX COUNTY PFM DUE TO THE RELATIVE STEEPNESS OF THE CHANNELS AND THE ERODIBILITY OF THE UNLINED CHANNELS.

IN ORDER TO ACHIEVE AN ADEQUATE OUTLET PER THE PFM, IT IS PROPOSED TO PROVIDE DETENTION VOLUME IN ORDER TO RESTRICT THE POST DEVELOPMENT FLOW RATES BELOW THAT OF A SITE IN GOOD FORESTED CONDITION IN ACCORDANCE WITH THE PROPORTIONAL IMPROVEMENT REQUIREMENT OF THE PFM. THE STORMWATER MANAGEMENT POND (SWM POND #1) IN THE SOUTHWEST CORNER OF THE SITE WILL PROVIDE APPROXIMATELY 75,436 CUBIC (1.73 AC-FT) FEET STORAGE. THE POND WILL HAVE AN OUTLET CONTROL STRUCTURE WILL BE A COMBINED CONTROL AND SPILLWAY STRUCTURE SIMILAR TO FAIRFAX COUNTY STANDARDS PFM PLATE #9-8 OR 9-4-8. THE OUTLET CONTROL STRUCTURE AND DAM/SPILLWAY WILL MEET THE REQUIREMENTS OF THE PFM DAM STANDARDS. THE AREA THAT DISCHARGES TO TRIBUTARY B WILL UTILIZE LOW IMPACT DEVELOPMENT (LID) TECHNIQUES SUCH AS VEGETATED SWALES, BIO-RETENTION BASINS AND A PERCOLATION TRENCH. THE ESTIMATED STORAGE TO BE PROVIDED BY THE VEGETATED SWALE IS 1,467 CUBIC FEET (0.3 AC-FT). THE BIO-RETENTION BASINS ARE 15,415 CUBIC FEET (0.35 AC-FT) OF STORAGE AND THE PERCOLATION TRENCH WILL PROVIDE 7,783 CUBIC FEET (0.18 AC-FT) OF FLOOD STORAGE. RESPECTIVELY, OTHER LID TECHNIQUES MAY BE UTILIZED DURING FINAL DESIGN TO MANAGE THE AMOUNT OF STORAGE IN THE FACILITIES.

ALSO, THE APPLICANT RESERVES THE RIGHT TO COMBINE OR UTILIZE JOINT STORMWATER FACILITIES WITH MINVA IF IT IS DETERMINED THAT IT IS BENEFICIAL TO MINVA AND OAKCREST SCHOOLS. PROVIDED THAT ALL APPLICABLE REQUIREMENTS OF THE PFM ARE MET. WITH THIS IN MIND, THE UNCONTROLLED AREA IN THE SOUTHWEST HAS NOT BEEN DESIGNED. DEPENDING ON THE FINAL COORDINATION WITH MINVA, ADDITIONAL LID MEASURES IN THIS AREA MAY BE NECESSARY TO MEET THE PFM REQUIREMENTS.

A SMALL PORTION OF THE SITE (0.19 ACRES) DRAINS NORTH AND WEST ALONG CROWELL ROAD AND IS TRIBUTARY TO COLUMBIA RUN BRANCH. IT IS NOT ANTICIPATED THAT RAINFALL FROM THESE AREAS WILL INCREASE RUNOFF INTO THE COLUMBIA RUN BRANCH.

# SPECIAL EXCEPTION PLAT OAKCREST SCHOOL DRANESVILLE DISTRICT FAIRFAX CO., VIRGINIA



**TABULATIONS**

EXISTING ZONING	R-E, RESIDENTIAL ESTATE	PARKING:
MINIMUM LOT REQUIREMENTS	75,000 FT <sup>2</sup>	REQUIRED PARKING: - 450 STUDENTS X .3 SPACES/STUDENT = 135 SPACES OR - SPECTATOR GYMNASIUM (300 SEATS) 300 X .3 SPACES/SEAT = 90 SPACES
MINIMUM LOT AREA	989,120 FT <sup>2</sup>	PROVIDED PARKING: - PAVED AUTOMOBILE PARKING AROUND BUILDING = 135 SPACES - REINFORCED TURF OVER FLOW PARKING = 97 SPACES
PROVIDED LOT AREA	200 FT	OUTDOOR RECREATION AREA: REQUIRED: 430 FT <sup>2</sup> PER STUDENT NO. OF STUDENTS = 450 REQUIRED RECREATION AREA = 193,500 FT <sup>2</sup>
MINIMUM LOT WIDTH	200 FT	PROVIDED: 193,500 FT <sup>2</sup> HAS BEEN PROVIDED AS SHOWN ON THE SE PLAN.
PROVIDED LOT WIDTH	200 FT	
TOTAL AREA OF SITE FOR SPECIAL EXCEPTION:		
PARCEL 1 (OUTLOT A)	0.57 AC. (24,838 S.F.)	
PARCEL 2 (PARCEL A)	20.48 AC. (892,042 S.F.)	
PARCEL 2 (OUTLOT A)	1.96 AC. (85,000 S.F.)	
AREA TO BE ACQUIRED BY MINVA	0.29 AC. (12,760 S.F.)	
*TOTAL SITE AREA FOR THIS SPECIAL PERMIT	22.71 AC. (989,120 S.F.)	
MAXIMUM PERMITTED GROSS FLOOR AREA: R-E FAR = 0.15	SITE AREA 989,120 S.F. X 0.15 = 148,368 MAX. GFA	
PROPOSED GROSS FLOOR AREA:	134,500 S.F.	
PROPOSED BUILDING	(DOES NOT INCLUDE NATATORIUM)	
MAXIMUM PERMITTED FLOOR AREA RATIO = 0.15	*PROPOSED FLOOR AREA RATIO = 0.136	
MAXIMUM PERMITTED BUILDING HEIGHT = 60 FT	PROPOSED BUILDING HEIGHT = 30 FT	
PROPOSED BUILDING HEIGHT = 30 FT		
REQUIRED MINIMUM YARDS (USING ZONING R-E CRITERIA):		
FRONT YARD: CONTROLLED BY 55° ANGLE OF BULK PLANE	BUT NOT LESS THAN 50 FT	
REAR YARD: CONTROLLED BY 45° ANGLE OF BULK PLANE	BUT NOT LESS THAN 20 FT	
SIDE YARD: CONTROLLED BY 45° ANGLE OF BULK PLANE	BUT NOT LESS THAN 25 FT	

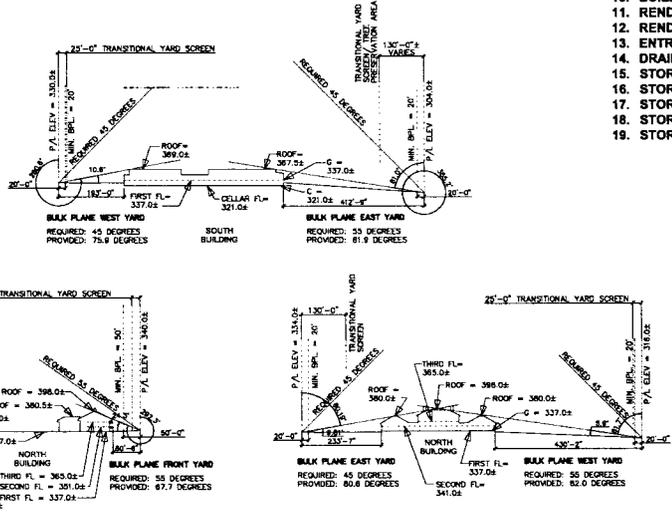
**REQUESTED MODIFICATIONS:**

1. A MODIFICATION TO THE REQUIRED TRANSITIONAL SCREENING REQUIREMENT IS REQUESTED ALONG THE EAST AND A PORTION OF THE SOUTH PROPERTY LINE. IN LIEU OF THE TRANSITIONAL SCREENING REQUIREMENT, THIS AREA WILL BE DESIGNATED A TREE PRESERVATION AREA WITH SUPPLEMENTAL PLANTINGS WHERE VEGETATION IS SPARSE AS DETERMINED BY FAIRFAX COUNTY URBAN FORESTRY AT TIME OF SITE PLAN.
2. A MODIFICATION TO THE LOCATION OF THE REQUIRED BARRIER, PER SECTION 13-308 OF THE ZONING ORDINANCE IS REQUESTED ALONG THE SOUTHERLY PROPERTY LINES. THE SOUTHERLY LOT LINE IS ADJACENT TO THE TOLL ROAD AND A FENCE ON THE RIGHT-OF-WAY LINE WILL PROVIDE A MORE EFFECTIVE BARRIER.

**INDEX OF SHEETS**

SHEET NO.	COVER SHEET
1.	BOUNDARY & TOPOGRAPHIC SURVEY
2.	SPECIAL EXCEPTION PLAN
3.	EXISTING VEGETATION MAP
4.	OVERALL LANDSCAPE PLAN
5.	LANDSCAPE PLAN
6.	LANDSCAPE PLAN
7.	LANDSCAPE PLAN
8.	BUILDING ELEVATIONS
9.	BUILDING ELEVATIONS
10.	BUILDING ELEVATIONS
11.	RENDERINGS
12.	RENDERINGS
13.	ENTRANCE DETAIL
14.	DRAINAGE AREA MAP
15.	STORM WATER CALCULATIONS
16.	STORM WATER CALCULATIONS
17.	STORM WATER CALCULATIONS
18.	STORM WATER CALCULATIONS
19.	STORM WATER CALCULATIONS

RELEASE DATES	
1-28-08	BE SUBMITTAL PACKAGE
3-20-08	COUNTY RE - SUBMISSION
7-17-08	REVISIONS PER STAFF REPORT
8-24-08	FINAL REVISIONS PER STAFF REPORTS
9-23-08	BE RE - SUBMISSION
10-16-08	BE RE - SUBMISSION
12-18-08	BE RE - SUBMISSION



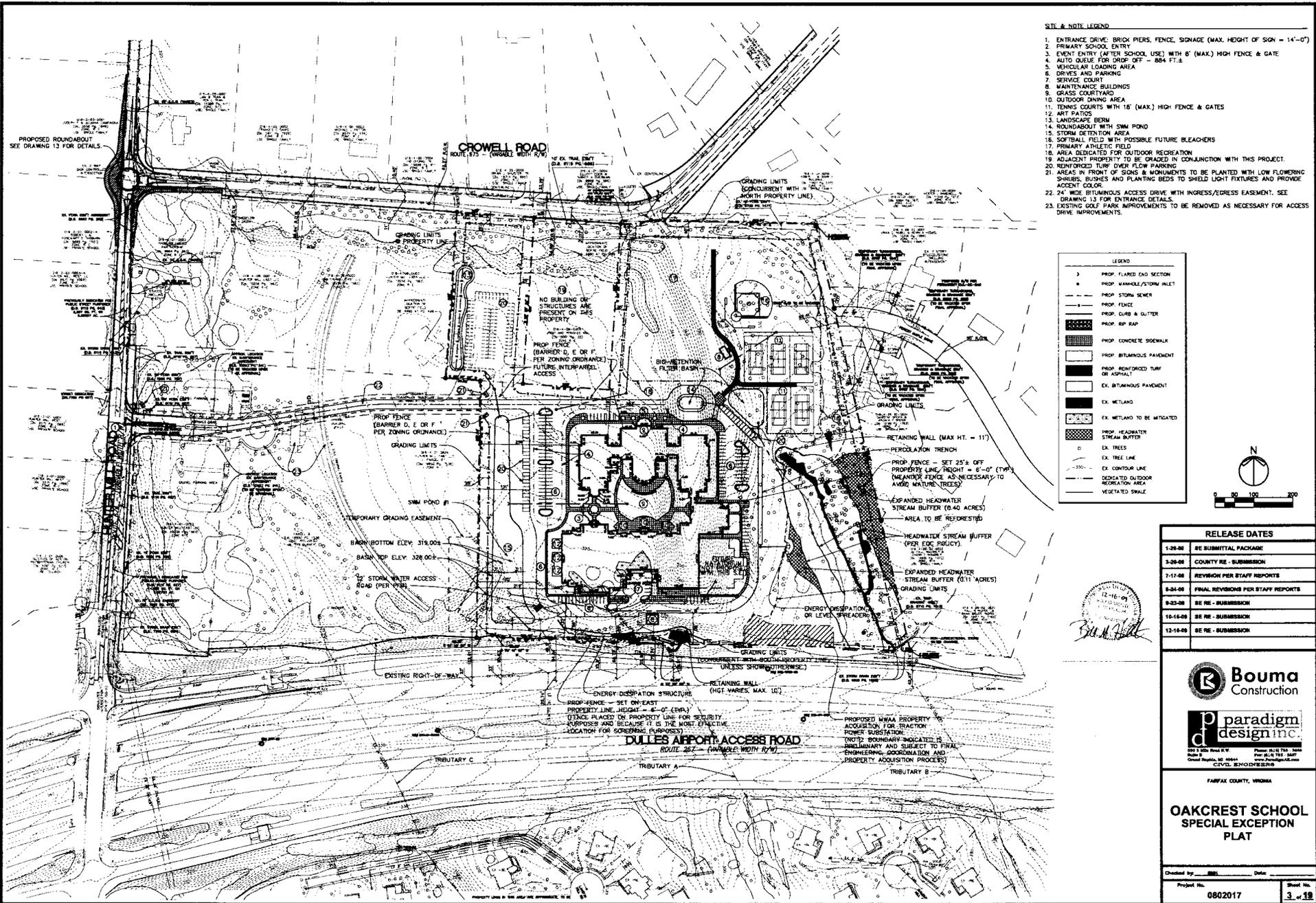
**BULK PLANE DIAGRAMS**

**Bouma Construction**  
**paradigm inc.**  
 200 S. 15th St. #10  
 Fairfax, VA 22031  
 Phone: 703.761.1000  
 Fax: 703.761.1001  
 Email: info@paradigm-inc.com  
 WWW.PARADIGM-INC.COM  
 CIVIL ENGINEERING

**OAKCREST SCHOOL  
SPECIAL EXCEPTION  
PLAT**

Checked by: <b>BM</b>	Date: <b>1-28-08</b>
Project No. <b>0802017</b>	Sheet No. <b>1 of 19</b>



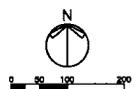


**SITE & NOTE LEGEND**

1. ENTRANCE DRIVE, BRICK PIERS, FENCE, SIGNAGE (MAX. HEIGHT OF SIGN = 14'-0")
2. PRIMARY SCHOOL ENTRY
3. EVENT ENTRY (AFTER SCHOOL USE) WITH 6' (MAX.) HIGH FENCE & GATE
4. AUTO QUEUE FOR DROP OFF - 85A FT.±
5. VEHICULAR LOADING AREA
6. DRIVES AND PARKING
7. SERVICE COURT
8. MAINTENANCE BUILDINGS
9. GRASS COURTYARD
10. OUTDOOR DINING AREA
11. TENNIS COURTS WITH 18' (MAX.) HIGH FENCE & GATES
12. ART PATIOS
13. LANDSCAPE BERM
14. ROUNDABOUT WITH SSM POND
15. STORM DETENTION AREA
16. SOFTBALL FIELD WITH POSSIBLE FUTURE BLEACHERS
17. PRIMARY ATHLETIC FIELD
18. AREA DEDICATED FOR OUTDOOR RECREATION
19. ADJACENT PROPERTY TO BE GRADED IN CONJUNCTION WITH THIS PROJECT
20. REINFORCED TURF OVER FLOW PARKING
21. AREAS IN FRONT OF SIGNS & MONUMENTS TO BE PLANTED WITH LOW FLOWERING SHRUBS, BUSHES AND PLANTING BEDS TO SHIELD LIGHT FIXTURES AND PROVIDE ACCENT COLOR
22. 24' WIDE BITUMINOUS ACCESS DRIVE WITH INGRESS/EGRESS EASEMENT; SEE DRAWING 13 FOR ENTRANCE DETAILS
23. EXISTING GOLF FARM IMPROVEMENTS TO BE REMOVED AS NECESSARY FOR ACCESS DRIVE IMPROVEMENTS

**LEGEND**

- ▬ PROP. PLANNED END SECTION
- PROP. MANHOLE/STORM INLET
- ▬▬▬ PROP. STORM SEWER
- ▬▬▬ PROP. FENCE
- ▬▬▬ PROP. CURB & GUTTER
- ▬▬▬ PROP. BIP RAP
- ▬▬▬ PROP. CONCRETE SIDEWALK
- ▬▬▬ PROP. BITUMINOUS PAVEMENT
- ▬▬▬ PROP. REINFORCED TURF OR ASPHALT
- ▬▬▬ EX. BITUMINOUS PAVEMENT
- ▬▬▬ EX. WETLAND
- ▬▬▬ EX. WETLAND TO BE MITIGATED
- ▬▬▬ PROP. HEADWATER STREAM BUFFER
- EX. TREES
- EX. TREE LINE
- EX. CONTOUR LINE
- ▬▬▬ DEDICATED OUTDOOR RECREATION AREA
- ▬▬▬ VEGETATED SWALE

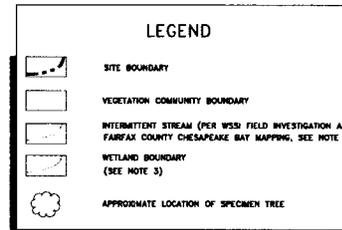
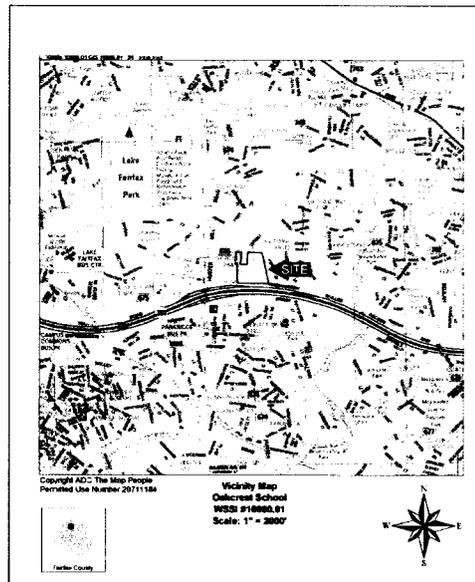


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**OAKCREST SCHOOL  
SPECIAL EXCEPTION  
PLAT**

Checked by: <b>SM</b>	Date:	Sheet No.:
Project No.:	0802017	3 of 19



NOTES:

1. This Existing Vegetation Map is based upon examination of background materials, such as existing topography, the 1994 USGS Vienna, VA-MD topographic quadrangle map, the Fairfax County Salls Map, the 1998 Vienna, VA-MD National Wetlands Inventory Map, and aerial photography, as well as a field verification performed by Jennifer D. Fesse, WPIT and Sean D. Stipple, PWS, CT of Wetland Studies and Solutions, Inc. (WSSI) on June 3, 2008.
2. Topography and boundary information from VVKA Inc. and Fairfax County Digital Data, and an Aerials Express October 2007 Natural Color Imagery orthophotograph, were used as the base for this exhibit.
3. Waters of the U.S. delineation information shown hereon, was performed by WSSI as described in a report dated January 22, 2004 and approved by the U.S. Army Corps of Engineers (COE) in a jurisdictional determination dated February 25, 2004 (COE #04-R0440). This report was revised on June 17, 2006. Confirmation from the COE is pending.

	COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION	ACREAGE	COMMENTS
A	Bottomland Hardwood	Red Maple	Sub-Climax	Good	2.75	See condition description. Area contains one specimen tree.
B	Upland Forest	White Pine and Red Maple	Sub-Climax	Fair	2.75	See condition description.
C	Old Field	Sweet Gum	Pioneer	Fair	9.05	See condition description.
D	Open Field	Fescue	N/A	Good	2.05	See condition description.
E	Maintained	Fescue	N/A	N/A	6.40	See condition description.
<b>TOTAL ACREAGE</b>					<b>23.00</b>	

\*CONDITION DESCRIPTION:

- Area A is a sub-climax bottomland hardwood forest in good overall condition and comprises a part of the southeastern portion of the site. The canopy is dominated by red maple (*Acer rubrum*). Sub-dominants include black locust (*Robinia pseudoacacia*), black walnut (*Juglans nigra*), persimmon (*Diospyros virginiana*) and tulip poplar (*Liriodendron tulipifera*). The Diameter Breast Height (DBH) of these overstory species ranges from 3 to 34 inches. The understorey includes black-haw (*Viburnum prunifolium*) and greenbriar (*Smilax rotundifolia*). A tulip poplar with a DBH of 34 inches is present in the southern portion of Area A. Exotic species are present in small numbers in the groundcover, including garlic mustard (*Alliaria petiolata*) and Nepal microstegium (*Eulalia viminea*).
- Area B consists of a sub-climax upland forest in fair overall condition along the southern, northeastern and northwestern portions of the site. The canopy is dominated by red maple and white pine (*Pinus strobus*). Sub-dominants include black locust and black walnut. The DBH of these overstory species ranges from 5 to 25 inches. The understorey is overgrown and includes eastern red cedar (*Juniperus virginiana*) and the exotic species autumn olive (*Elaeagnus umbellata*) and multiflora rose (*Rosa multiflora*). Exotic species are present in the groundcover, including garlic mustard, Nepal microstegium, and Japanese honeysuckle (*Lonicera japonica*).
- Area C consists of an old field in the eastern and southwestern portions of the site. Dominant sapling species include sweet gum (*Liquidambar styraciflua*), eastern red cedar and the exotic species autumn olive, all greater than 12 inches in height. Herbaceous dominants include meadow fescue (*Festuca pratensis*), sweet vernal grass (*Anthoxanthum odoratum*) and crown vetch (*Securigera varia*). Exotic species are present in the groundcover, including garlic mustard, Nepal microstegium, and Japanese honeysuckle.
- Area D consists of an open field in the central portion of the site. Herbaceous dominants include meadow fescue, sweet vernal grass, crown vetch, and broomsedge (*Andropogon virginicus*).
- Area E consists of a maintained field associated with a golf course driving range on the western portion of the site. Meadow fescue is the dominant herbaceous plant species in this area.

Wetland

EXISTING VEGETATION MAP

Project: Oakcrest School  
Fairfax County, Virginia

No.	Date	Description	Prep. By	App. By
1	10-24-08	FINAL REVISIONS PER STAFF COMMENTS	JDF	BH
2	11-23-08	SE Resubmittal	JDF	BH
3	12-15-08	SE Resubmittal	JDF	BH

Horizontal Datum: NAD 83  
Vertical Datum: NAVD 83  
Boundary and Topo Source: ESRI, Inc. (Copyright 2008)

Design	Draft	Approved
SDS	SDS	BH/JDF

Sheet #  
4 of 19

Computer File Name: ...

FAIRFAX COUNTY TREE COVER CALCULATIONS

Table 13.12.16 Tree Canopy Calculations Worksheet	Area	Notes
1. Total Project Area	178,100	
2. Detached Dwelling (D)	1,200	
3. Commercial/Industrial (C)	1,200	
4. Public Use (P)	1,200	
5. Other (O)	1,200	
6. Total Excluded Area	4,800	
7. Net Project Area	173,300	
8. Tree Canopy Coverage	173,300	

TRANSITIONAL SCREENING AND BARRIERS

NARRATIVE (PER Z.O. MATRIX)  
 FOR THE TRANSITIONAL SCREENING AND BARRIER BARRIERS IN THE ZONING ORDINANCE, THE SUBJECT APPLICATION IS CLASSIFIED AS A PRIVATE SCHOOL.

TO THE NORTH: DETACHED DWELLING (D)  
 SCREENING REQUIREMENT: 1  
 BARRIER REQUIREMENT: D, E, OR F

TO THE WEST: COMMERCIAL/INDUSTRIAL USE (DRIVING RANGE) (P)  
 SCREENING REQUIREMENT: 1  
 BARRIER REQUIREMENT: D, E, OR F

TO THE SOUTH: DETACHED DWELLING (D)  
 SCREENING REQUIREMENT: 1  
 BARRIER REQUIREMENT: D, E, OR F

TO THE EAST: DETACHED DWELLING (D)  
 SCREENING REQUIREMENT: 1  
 BARRIER REQUIREMENT: D, E, OR F

\*NOTE: THE SUBJECT APPLICATION MEETS THE TRANSITION AND SCREENING BARRIER REQUIREMENTS FOR ALL PROPERTY LINES AS REQUIRED BY THE ZONING ORDINANCE UPON APPROVAL OF REQUESTED MODIFICATIONS.

FAIRFAX COUNTY TRANSITIONAL SCREENING REQUIREMENTS

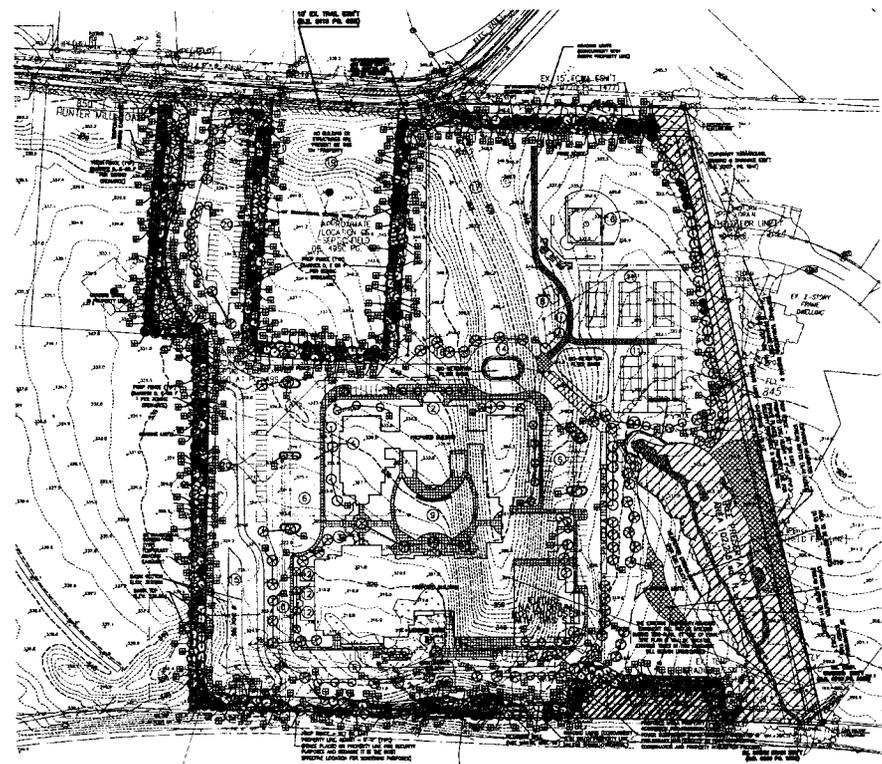
TRANSITIONAL SCREENING REQUIREMENTS	Requirement	Notes
1. New Residential (R)	8' High	Screen Yard
2. Commercial/Industrial (C)	8' High	Screen Yard
3. Public Use (P)	8' High	Screen Yard
4. Other (O)	8' High	Screen Yard

INTERIOR PARKING LOT LANDSCAPING CALCULATIONS

Table 13.13 Interior Parking Lot Landscaping Calculations	Area	Notes
1. Total Area	1,200	
2. Landscaping Area	1,200	

SITE & MOVE LEGEND

- ENTRANCE DRIVE: BRICK PIERS, FENCE, SIGNAGE (MAX. HEIGHT OF SIGN = 14'-0")
- PRIMARY SCHOOL ENTRY
- ENTRY (AFTER SCHOOL USE) WITH 8' (MAX.) HIGH FENCE & GATE
- ALTO QUEUE FOR DROP OFF - 884 FT±
- VEGETABLE LOADING AREA
- DRIVES AND PARKING
- SCIENCE COURT
- MAINTENANCE BUILDINGS
- CRASS COURTYARD
- OUTDOOR DINING AREA
- TENNIS COURTS WITH 18' (MAX.) HIGH FENCE & GATES
- ART PATIOS
- LANDSCAPE BERM
- ROUNDABOUT WITH SWM POND
- STORM DETENTION AREA
- SOFTBALL FIELD WITH POSSIBLE FUTURE BLEACHERS
- PRIMARY ATHLETIC FIELD
- AREA DEDICATED FOR OUTDOOR RECREATION
- ADJACENT PROPERTY TO BE GRADED IN CONJUNCTION WITH THIS PROJECT.
- REINFORCED TURN-OVER FLOW PARKING
- AREAS IN FRONT OF SIGNS & MONUMENTS TO BE PLANTED WITH LOW FLOWERING SHRUBS, BUSHES AND PLANTING BEDS TO SHIELD LIGHT FIXTURES AND PROVIDE ACCENT COLOR.



PLANT LIST

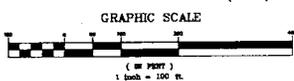
KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	NORMAL COVER PER TREE AREA (SF)	TREE COVER WITH CREDIT AREA (SF)
Ar	Acer rubrum	Red Maple	2" CAL	Well branched - BAB	300	300
Nr	Nyssa sylvatica	Black Gum	2" CAL	Well branched - BAB	150	225
Qb	Quercus bicolor	Pin Oak	2" CAL	Well branched - BAB	200	300
Cc	Cornus occidentalis	Hawberry	2" CAL	Well branched - BAB	150	225
Tc	Tilia cordata	Littleleaf Linden	2" CAL	Well branched - BAB	150	N/A
Cv	Coryla avellana	Shagbark Hickory	2" CAL	Well branched - BAB	200	300
Jr	Juniperus virginiana	Eastern Red Cedar	8"-8" HT	Well branched - BAB	100	150
As	Aspidodermis	American Holly	6"-8" HT	Well branched - BAB	100	150
Pp	Pinus palustris	Carolina Blue Spruce	6"-8" HT	Well branched - BAB	100	N/A
Ns	Nyssa sylvatica	Norway Spruce	2" CAL	Well branched - BAB	150	N/A
Pi	Pinus rigida	Pitch Pine	2" CAL	Well branched - BAB	200	300
Mg	Magnolia grandiflora	Southern Magnolia	2" CAL	Well branched - BAB	200	N/A

MEDIUM EVERGREEN SHRUBS

BOTANICAL NAME	COMMON NAME	SIZE
Isis glabra	Hiberty	#3 CONT.
Isis grandiflora	Southern Bayberry	#3 CONT.
Kalmia latifolia	Mountain Laurel	#3 CONT.
Buxa x 'Green Mountain'	'Green Mountain' Boxwood	#3 CONT.
Chamaecyparis Lawsoniana	Lawson Foliage Cypress	#3 CONT.
Juniperus horizontalis	Japanese Holly	#3 CONT.

LEGEND:

- ⊗ ⊗ ⊗ CAT. IV DECIDUOUS TREES
- ⊙ ⊙ ⊙ CAT. III DECIDUOUS TREES
- ● ● CAT. II EVERGREEN TREES
- CAT. III EVERGREEN TREES
- ⊙ CAT. IV EVERGREEN TREES
- ..... MEDIUM EVERGREEN SHRUBS
- ⊗ ⊗ ⊗ INTERIOR PARKING LOT TREES
- ▨ TREE PRESERVATION AREA



\* NOTE: PER PFM SECTION 12-0509.4B(5) IN ORDER TO RECEIVE NATIVE TREE CREDIT "A" LETTER CERTIFYING THAT ALL PLANT MATERIAL USED TO GAIN THE ADDITIONAL CREDITS HAS BEEN PROPAGATED FROM SEED OR NON-GENETICALLY MODIFIED GERMOPASM COLLECTED WITHIN THE MID-ATLANTIC REGION IS REQUIRED.

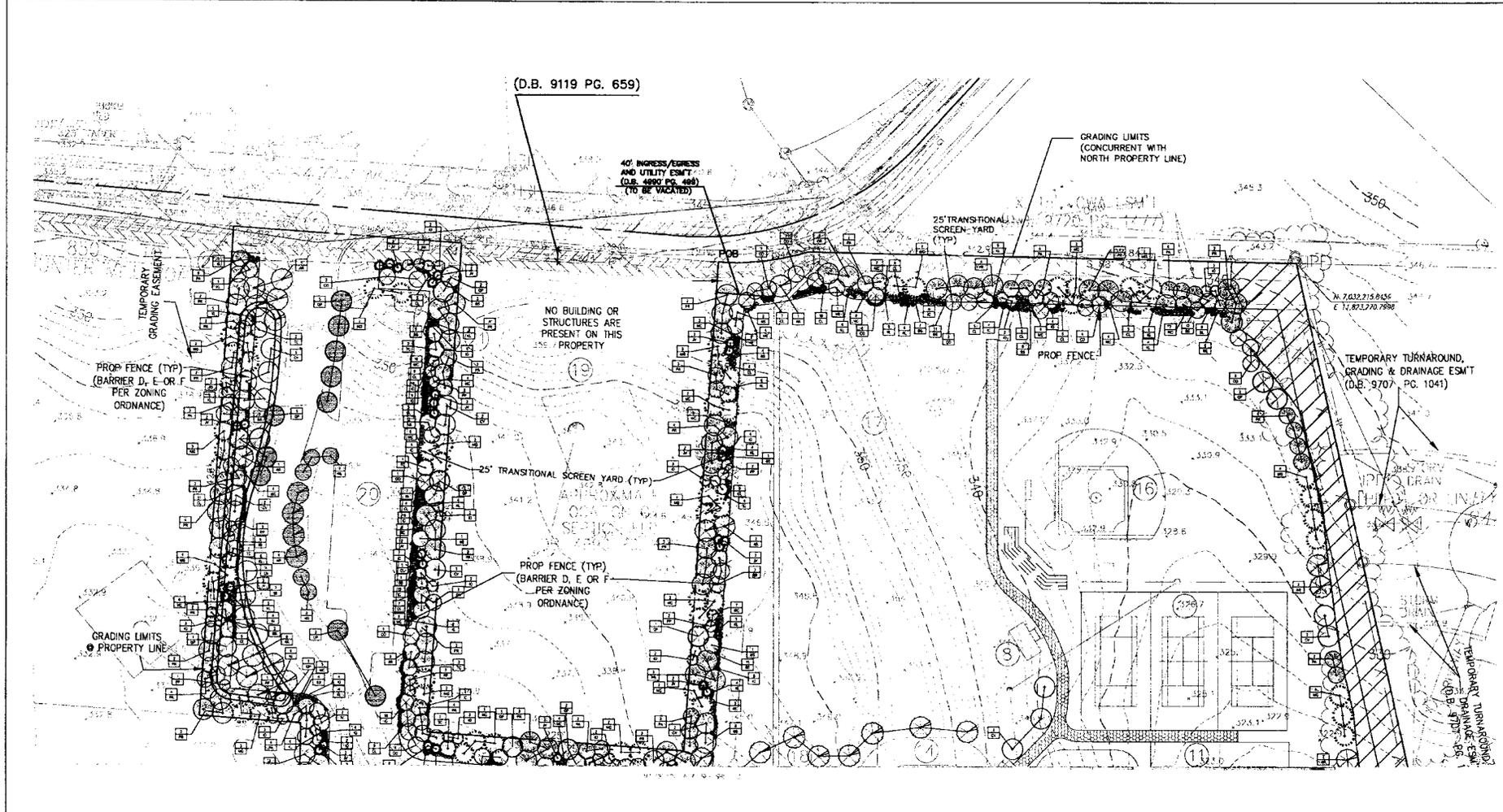
NOTES:  
 1. ALL PLANTS LISTED ON THIS PLAN ARE RECOMMENDATIONS/SUGGESTIONS OF PLANTINGS, THESE OR AN APPROVED EQUAL BY THE FAIRFAX COUNTY URBAN FORESTRY DIVISION SHOULD BE USED IN ORDER TO OBTAIN THE NECESSARY COVERAGES.  
 2. TRANSITIONAL SCREEN YARD PLANTINGS WILL BE ADJUSTED AS NEEDED IN THE FIELD TO AVOID THE PROPOSED FENCE/BARRIER REQUIREMENT OF THE TRANSITIONAL SCREEN YARD.

VIVA  
 ARCHITECTURE & LANDSCAPE ARCHITECTURE  
 1100 GREENSBORO ROAD, SUITE 100  
 GREENSBORO, NC 27409  
 TEL: 336.733.7777  
 FAX: 336.733.7777

THE PROPERTY OF  
 OAKCREST SCHOOL  
 DEED BOOK 19650 PAGE 1542  
 FAIRFAX COUNTY, VIRGINIA

OVERALL LANDSCAPE PLAN

VIVA REVISIONS  
 DATE: JAN. 2008  
 PROJECT/FILE NO. V6752H  
 SHEET NO. 5 OF 19

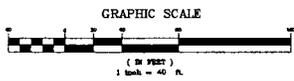


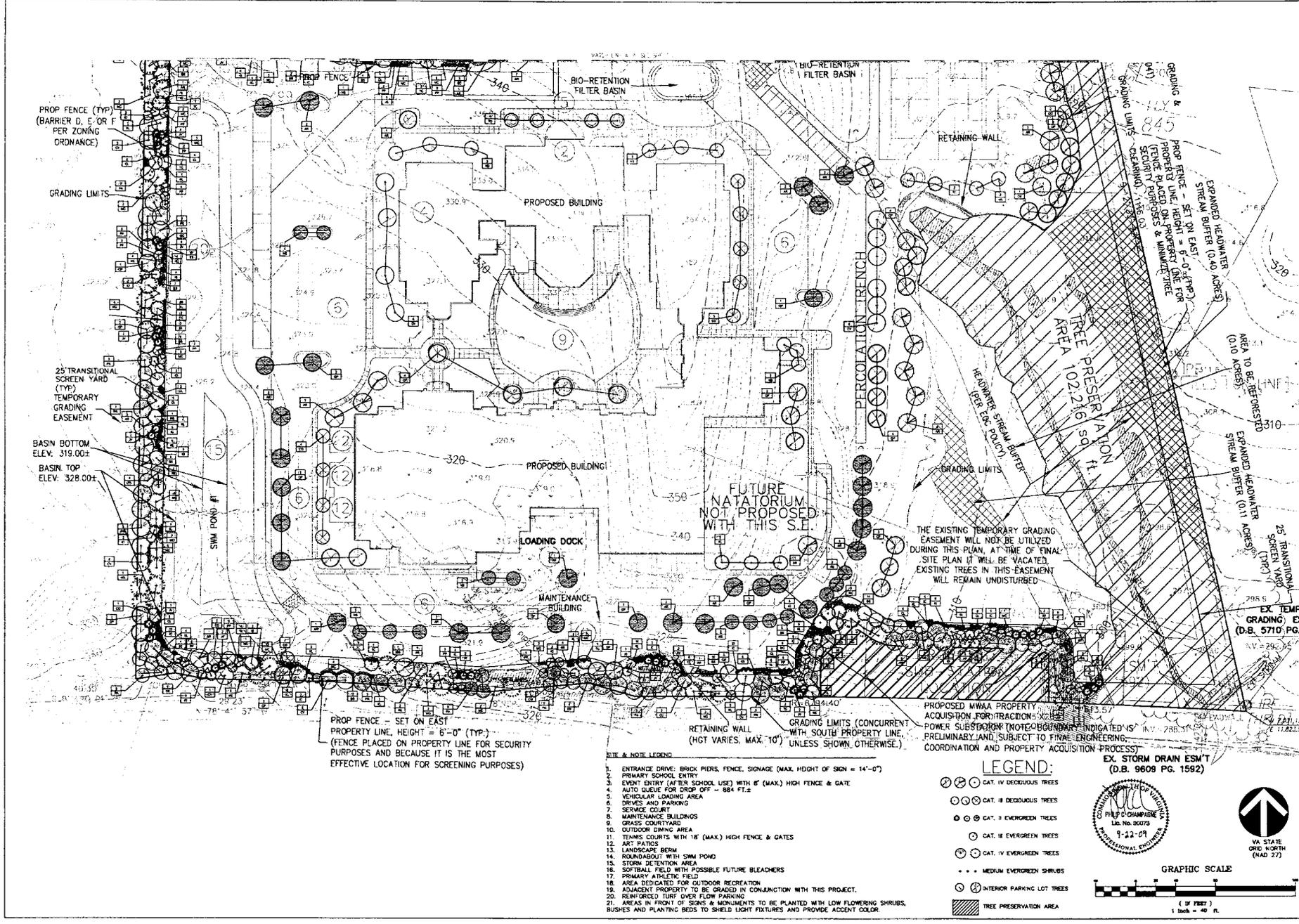
**SITE & NOTE LEGEND**

1. ENTRANCE DRIVE, BRICK PIERS, FENCE, SIGNAGE (MAX. HEIGHT OF SIGN = 14'-0")
2. PRIMARY SCHOOL ENTRY
3. EVENT ENTRY (AFTER SCHOOL USE) WITH 8' (MAX.) HIGH FENCE & GATE
4. AUTO QUEUE FOR DROP OFF - 884 FT.±
5. VEHICULAR LOADING AREA
6. DRIVES AND PARKING
7. SERVICE COURTYARD
8. MAINTENANCE BUILDINGS
9. GRASS COURTYARD
10. OUTDOOR DINING AREA
11. TENNIS COURTS WITH 18" (MAX.) HIGH FENCE & GATES
12. ART PATIOS
13. LANDSCAPE BERM
14. ROUNDABOUT WITH SWIM POND
15. STORM DETENTION AREA
16. SOFTBALL FIELD WITH POSSIBLE FUTURE BLEACHERS
17. PRIMARY ATHLETIC FIELD
18. AREA DEDICATED FOR OUTDOOR RECREATION
19. ADJACENT PROPERTY TO BE GRADED IN CONJUNCTION WITH THIS PROJECT.
20. REINFORCED TURF OVER FLOW PARKING
21. AREAS IN FRONT OF SIGNS & MONUMENTS TO BE PLANTED WITH LOW FLOWERING SHRUBS, BUSHES AND PLANTING BEDS TO SHIELD LIGHT FIXTURES AND PROVIDE ACCENT COLOR.

**LEGEND:**

- ⊗ ⊗ ⊗ CAT. IV DECIDUOUS TREES
- ⊙ ⊙ ⊙ CAT. III DECIDUOUS TREES
- ⊕ ⊕ ⊕ CAT. II EVERGREEN TREES
- ⊖ ⊖ ⊖ CAT. I EVERGREEN TREES
- ⊙ ⊙ ⊙ CAT. IV EVERGREEN TREES
- • • MEDIUM EVERGREEN SHRUBS
- ⊙ ⊙ INTERIOR PARKING LOT TREES
- ▨ TREE PRESERVATION AREA





PROP FENCE (TYP)  
 (BARRIER D, E OR F  
 PER ZONING  
 ORDINANCE)

GRADING LIMITS

25' TRANSITIONAL  
 SCREEN YARD  
 (TYP)  
 TEMPORARY  
 GRADING  
 EASEMENT

Basin Bottom  
 ELEV. 319.00±  
 Basin Top  
 ELEV. 328.00±

SIM POND #1

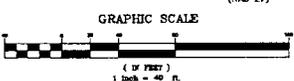
PROP FENCE - SET ON EAST  
 PROPERTY LINE, HEIGHT = 6'-0" (TYP)  
 (FENCE PLACED ON PROPERTY LINE FOR SECURITY  
 PURPOSES AND BECAUSE IT IS THE MOST  
 EFFECTIVE LOCATION FOR SCREENING PURPOSES)

**SITE & NOTE LEGEND**

1. ENTRANCE DRIVE: BRICK PIERS, FENCE, SIGNAGE (MAX. HEIGHT OF SIGN = 14'-0")
2. PRIMARY SCHOOL ENTRY
3. EVENT ENTRY (AFTER SCHOOL USE) WITH 6" (MAX.) HIGH FENCE & GATE
4. AUTO QUEUE FOR DROP OFF - 884 FT.±
5. VEHICULAR LOADING AREA
6. DRIVES AND PARKING
7. SERVICE COURT
8. MAINTENANCE BUILDINGS
9. GRASS COURTYARD
10. OUTDOOR DINING AREA
11. TENNIS COURTS WITH 18" (MAX.) HIGH FENCE & GATES
12. ART PATIOS
13. LANDSCAPE BERM
14. ROUNDABOUT WITH SIM POND
15. STORM DETENTION AREA
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**LEGEND:**

- ⊗ CAT. IV DECIDUOUS TREES
- ⊙ CAT. II DECIDUOUS TREES
- ⊙ CAT. III EVERGREEN TREES
- ⊙ CAT. II EVERGREEN TREES
- ⊙ CAT. IV EVERGREEN TREES
- ⊙ CAT. I EVERGREEN TREES
- MEDIUM EVERGREEN SHRUBS
- ⊙ INTERIOR PARKING LOT TREES
- ▨ TREE PRESERVATION AREA



THE EXISTING TEMPORARY GRADING  
 EASEMENT WILL NOT BE UTILIZED  
 DURING THIS PLAN. AT TIME OF FINAL  
 SITE PLAN IT WILL BE VACATED.  
 EXISTING TREES IN THIS EASEMENT  
 WILL REMAIN UNDISTURBED

PROPOSED MWAA PROPERTY  
 ACQUISITION FOR TRACIONS  
 POWER SUBSTATION (NOTED BOUNDARY INDICATED IN 1" SCALE PLAN)  
 PRELIMINARY AND SUBJECT TO FINAL ENGINEERING,  
 COORDINATION AND PROPERTY ACQUISITION PROCESS

EX. STORM DRAIN ESM'T  
 (D.B. 9809 PG. 1592)

EX. TEMP.  
 GRADING (D.B. 5710 PG. 12)

25' TRANSITIONAL  
 SCREEN YARD  
 (TYP)

AREA TO BE CREATED

EXPANDED HEADWATER  
 STREAM BUFFER (0.10 ACRES)

EXPANDED HEADWATER  
 STREAM BUFFER (0.40 ACRES)

TREE PRESERVATION  
 AREA 102,216 sq. ft.

RETAINING WALL

BIO-RETENTION  
 FILTER BASIN

PROPOSED BUILDING

PROPOSED BUILDING

LOADING DOCK

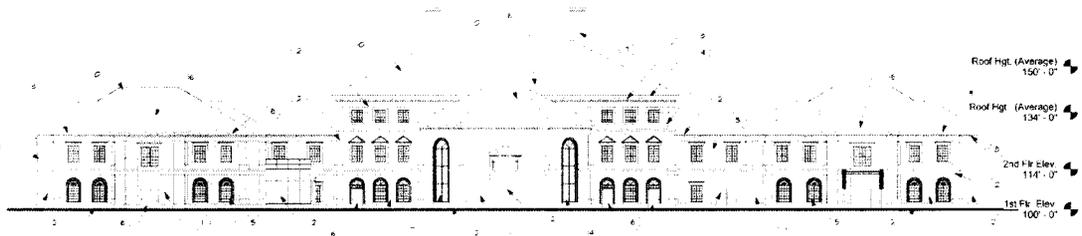
MAINTENANCE BUILDING

FUTURE  
 NATATORIUM  
 NOT PROPOSED  
 WITH THIS S.E.

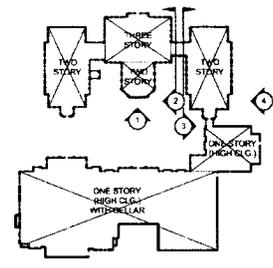
RETAINING WALL  
 (HGT VARIES, MAX. 10')

GRADING LIMITS (CONCURRENT  
 WITH SOUTH PROPERTY LINE,  
 UNLESS SHOWN OTHERWISE.)





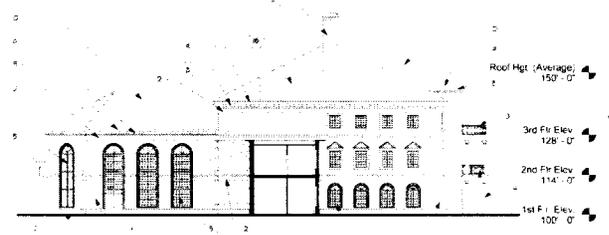
1 South Chapel Elevation  
SCALE: 1" = 20'-0"



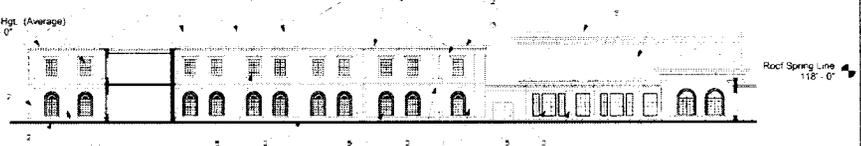
5 Floor Plan Key  
NO SCALE

**KEYNOTE LEGEND**

- 1 EXTERIOR INSULATION FASH SYSTEM (FIELD COLOR 4)
- 2 EXTERIOR INSULATION FASH SYSTEM (RAISED PROFILE) (FIELD COLOR 5)
- 3 DECORATIVE BALCONY RAILS (PAINT)
- 4 GLASS FIBER REINFORCED CONCRETE (GLASS FIBER) PAINT
- 5 ALUMINUM GLAZED WOOD WINDOWS WITH RAISED PROFILE TRIM
- 6 EXTERIOR DECORATIVE DOOR
- 7 EXTERIOR INSULATION FASH SYSTEM (OVER MASONRY) CURRY
- 8 POLYURETHANE MOULD EXTERIOR TRIM
- 9 PREFINISHED ALUMINUM SLITTER ON PREFINISHED ALUMINUM FACE TRIM
- 10 DIMENSIONAL ASPHALT SHAKES
- 11 CAST STONE VENER
- 12 SCENE BODY SHEETROUSE
- 13 PREFINISHED METAL CORNICE
- 14 DIPS PANELS WITH RAISED PROFILE TRIM (WOOD FINISH)
- 15 ROOF TOP MECHANICAL SECTION (METAL PANELS)
- 16 ROOF TOP MECHANICAL (WOOD FINISH)
- 17 METAL OVER GLAZED DOORS



2 East Chapel Elevation  
SCALE: 1" = 20'-0"



3 West Courtyard Elevation  
SCALE: 1" = 20'-0"

**MATERIAL KEY**

- 1 DIPS COLOR 4 (FIELD)
- 2 DIPS COLOR 5 (TRIM)
- 3 CAST STONE VENER
- 4 ROOF TOP MECHANICAL SCREEN
- 5 ROOF TOP SHAKES

**S-E-M ARCHITECTS**  
167 South State Street • Suite 200  
Westerville, Ohio 43081  
614.794.3100 • 614.794.3686 fax  
www.sem-architects.com

**Bouma Construction**

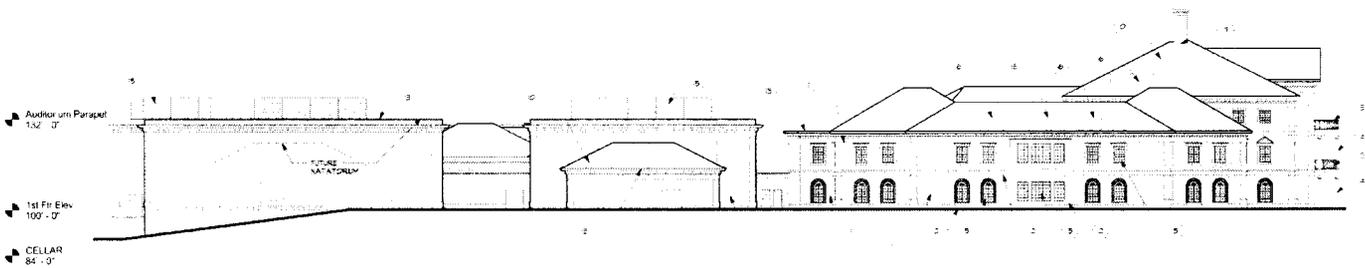
**OAKCREST SCHOOL**  
WHERE GIRLS MAKE A DIFFERENCE

New Campus Development  
Exterior Elevations

DATE: January 25, 2009  
PROJECT: 2008-54

SCALE: 1" = 20'-0"

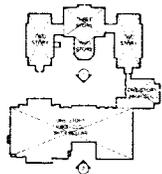
9 OF 19  
SHEET TWO



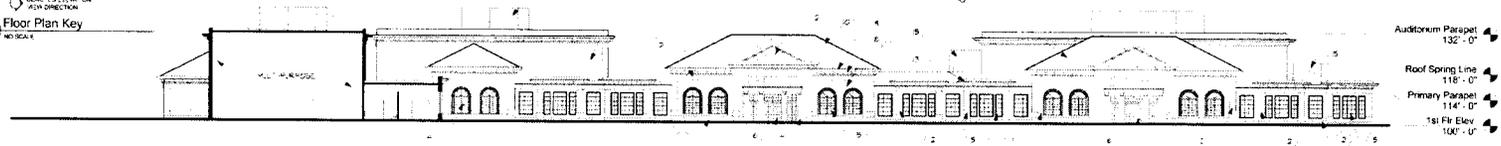
4 East Building Elevation  
SCALE: 1" = 20'-0"

THESE DRAWINGS ARE FOR ILLUSTRATIVE PURPOSES ONLY

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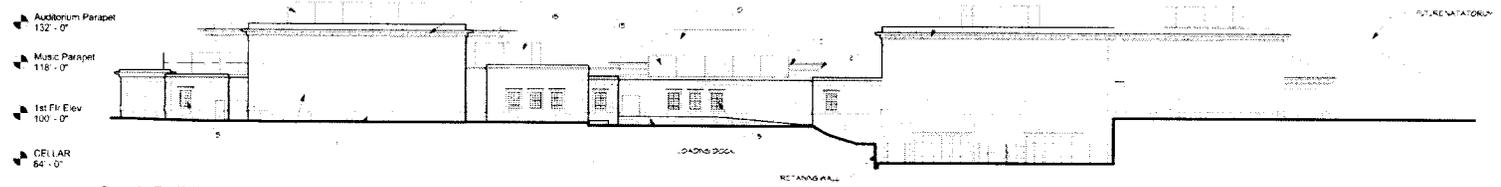


11  
Floor Plan Key  
NOT SCALE



- Auditorium Parapet 132' - 0"
- Roof Spring Line 118' - 0"
- Primary Parapet 114' - 0"
- 1st Fl Elev 100' - 0"

1 North Courtyard Elevation  
SCALE: 1" = 20'-0"



- Auditorium Parapet 132' - 0"
- Music Parapet 118' - 0"
- 1st Fl Elev 100' - 0"
- CELLAR 84' - 0"

2 South Building Elevation  
SCALE: 1" = 20'-0"



3 Maintenance Building One - North Elevation  
SCALE: 1" = 20'-0"



4 Maintenance Building One - East Elevation  
SCALE: 1" = 20'-0"



5 Maintenance Building One - South Elevation  
SCALE: 1" = 20'-0"



6 Maintenance Building One - West Elevation  
SCALE: 1" = 20'-0"



7 Maintenance Building Two - North Elevation  
SCALE: 1" = 20'-0"



8 Maintenance Building Two - East Elevation  
SCALE: 1" = 20'-0"



9 Maintenance Building Two - South Elevation  
SCALE: 1" = 20'-0"



10 Maintenance Building Two - West Elevation  
SCALE: 1" = 20'-0"

KEYNOTE LEGEND

- 1 EXTERIOR INSULATION SYSTEM (FIELD COLOR: A)
- 2 EXTERIOR INSULATION FINISH SYSTEM (FIELD COLOR: B)
- 3 DESIGNATED BALCONY RAILING FINISH
- 4 SLAB EDGE POLYURETHANE CONCRETE COLLECTOR COVERS PAINT
- 5 ALUMINUM GLAZED WINDOW WITH RAISED SILL TRIM
- 6 EXTERIOR OPERATING WINDOW
- 7 EXTERIOR INSULATION FINISH SYSTEM OVER MAINTENANCE GRADY
- 8 POLYURETHANE CONCRETE COLLECTOR TRIM
- 9 S. FINISH TO ALUMINUM SLITTER OVER FINISHED ALUMINUM FASCIA TRIM
- 10 DIMENSIONAL ASPHALT SHINGLES
- 11 CAST STONE VENER
- 12 SCIENCE ROOM BRICKHOUSE
- 13 FINISHED METAL CORNS
- 14 EPS PANELS WITH RAISED EPS TRIM (NOT A WINDOW)
- 15 ROOF TOP MECHANICAL SCREEN METAL HANDLE
- 16 ROOF TOP MECHANICAL INT. BEYOND
- 17 HOLD METAL OVERHEAD DOORS

MATERIAL KEY

- FIELD COLOR A/FIELD
- FIELD COLOR B/FIELD
- CAST STONE VENER
- ROOF TOP MECHANICAL SCREEN
- ROOF TOP HANDLE

**S-E-M** ARCHITECTS  
167 South State Street • Suite 200  
Westerville, Ohio 43081  
614.784.3100 • 614.784.3088 fax  
www.sem-architects.com

**Bouma** Construction

**OAKCREST SCHOOL**  
WHERE GIRLS MAKE A DIFFERENCE

New Campus Development  
Exterior Elevations

DATE: January 20, 2009  
PROJECT: 2009-04

ARCHITECT: GREGORY DAVID ELLER  
1214 W. BE. ROAD, WESTERVILLE, OHIO 43081

10 OF 19  
STEP TWO

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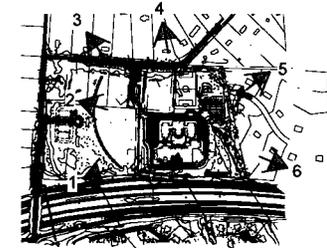
CAMERA 1 (EL. 345'-0")



CAMERA 2 (EL. 363'-0")



CAMERA 3 (EL. 344'-0")

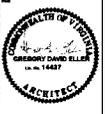


**KEY PLAN**

CAMERA ANGLE LOCATIONS

**GENERAL NOTES:**

1. NUMBER LISTED @ HEIGHT ELEVATION OF CAMERA TAKEN FROM NEAREST HOME, RESIDENCE OR OPEN PROPERTY. HEIGHT LISTED HAS SELECTED BY ABOVE AREA AT LOCATION SHOWN.
2. COLORS SHOWN IS A REPRESENTATION ONLY. FINAL ACTUAL COLORS TO BE DETERMINED.
3. REFER TO LANDSCAPE PLAN FOR PLANT TYPES.

 <p><b>SEM ARCHITECTS</b> "Exceeding your Expectations"</p>		<p>SEM PARTNERS, Inc. 167 South State Street + Suite 200 Westerville, Ohio 43081 614.798.3100 • 614.798.2089 fax www.sem-architects.com</p>	
 <p><b>Bouma Construction</b></p>			
 <p><b>OAKCREST SCHOOL</b> WHERE GIRLS MAKE A DIFFERENCE</p>			
<p><b>New Campus Development</b></p>			
<p><b>SITE VIEWS 1</b></p>			
	<p>Scale: _____</p>	<p>Date: January 26, 2008</p>	<p>Sheet: 000004</p>
	<p>Project: _____</p>	<p>Client: _____</p>	
<p>11 CF 13</p>		<p>STEP TWO</p>	

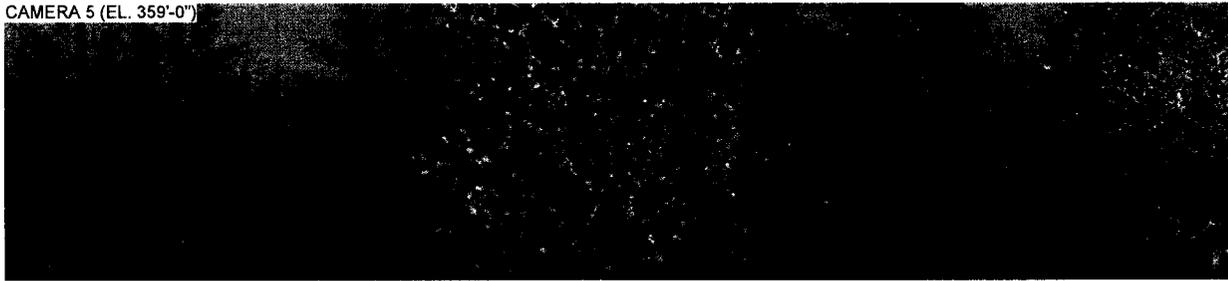
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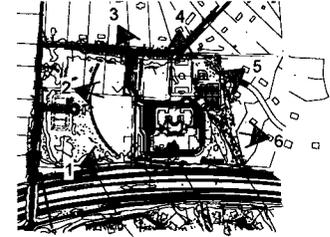
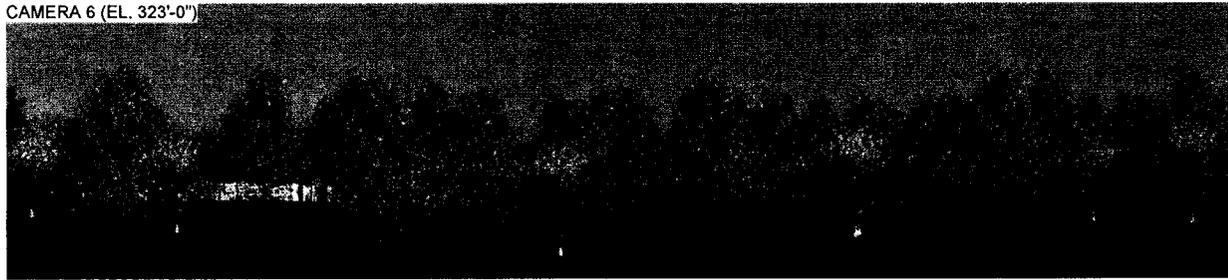
CAMERA 4 (EL. 355'-0")



CAMERA 5 (EL. 359'-0")



CAMERA 6 (EL. 323'-0")



**KEY PLAN**

CAMERA ANGLE LOCATIONS

**GENERAL NOTES:**

1. NUMBER LISTED IN HEADLINE ELEVATION OF CAMERA TAKEN FROM NEIGHBORING RESIDENCES OR OPEN PROPERTY. HEADLINE LISTED ARE SELECTED TO ABOVE GRADE AT LOCATION SHOWN.
2. COLORS SHOWN IS A REPRESENTATION ONLY. FINAL ACTUAL COLORS TO BE DETERMINED.
3. REFER TO LANDSCAPE PLAN FOR PLANT TYPES.

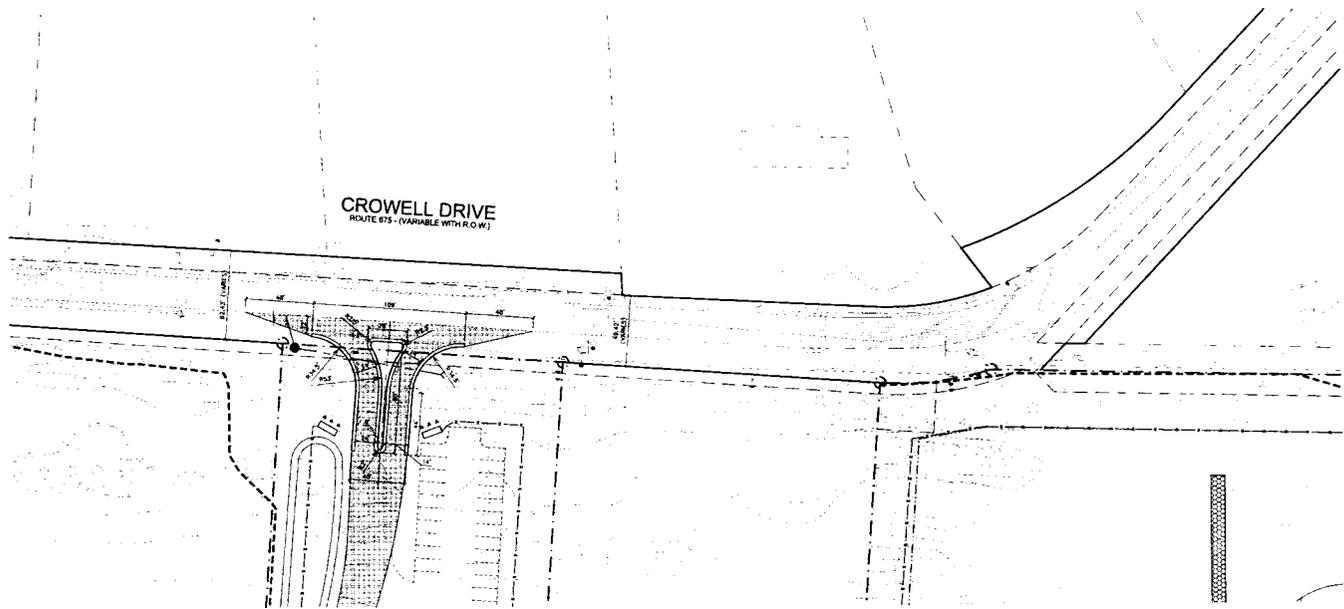
	SEM PRATTIERS, Inc. 167 South State Street • Suite 200 Westerville, Ohio 43081 614.794.3100 • 614.794.3086 fax www.sem-architects.com														
	"Exceeding your Expectations"														
															
 <b>OAKCREST SCHOOL</b> WHERE GIRLS MAKE A DIFFERENCE															
Project Name: <b>New Campus Development</b>															
Drawing Title: <b>SITE VIEWS 2</b>															
	<table border="1"> <tr> <td>Date:</td> <td>January 26, 2008</td> </tr> <tr> <td>Drawn by:</td> <td>000804</td> </tr> <tr> <td>Checked by:</td> <td></td> </tr> <tr> <td>Scale:</td> <td></td> </tr> <tr> <td>Sheet No.:</td> <td><b>12</b></td> </tr> <tr> <td>Total Sheets:</td> <td><b>19</b></td> </tr> <tr> <td>Project:</td> <td>STEP TWO</td> </tr> </table>	Date:	January 26, 2008	Drawn by:	000804	Checked by:		Scale:		Sheet No.:	<b>12</b>	Total Sheets:	<b>19</b>	Project:	STEP TWO
Date:	January 26, 2008														
Drawn by:	000804														
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Total Sheets:	<b>19</b>														
Project:	STEP TWO														

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CROWELL DRIVE  
ROUTE 673 - (VARIABLE WITH ROW)

**CROWELL ROAD ENTRANCE DETAIL**

NOTE: EXISTING UTILITIES, SIGNAGE AND IMPROVEMENTS SUCH AS FENCING, MAILBOXES, ETC TO BE RELOCATED AS NECESSARY TO ACCOMPLISH THE WORK.

LEGEND

[Symbol]	PROP. PLANNED DIST. SECTION
[Symbol]	PROP. MANHOLE/STORM HOLE
[Symbol]	PROP. UTILITY SERVICE
[Symbol]	PROP. FENCE
[Symbol]	PROP. CURB & GUTTER
[Symbol]	PROP. EASEMENT/PAVEMENT
[Symbol]	EX. EASEMENT/PAVEMENT
[Symbol]	EX. HYDRANT
[Symbol]	EX. MAILMAN
[Symbol]	EX. MAILBOX
[Symbol]	EX. LIGHT
[Symbol]	EX. UTILITY HOLE
[Symbol]	EX. DRIVE WALK
[Symbol]	EX. DRIVE
[Symbol]	EX. TREES
[Symbol]	EX. SITE LOT



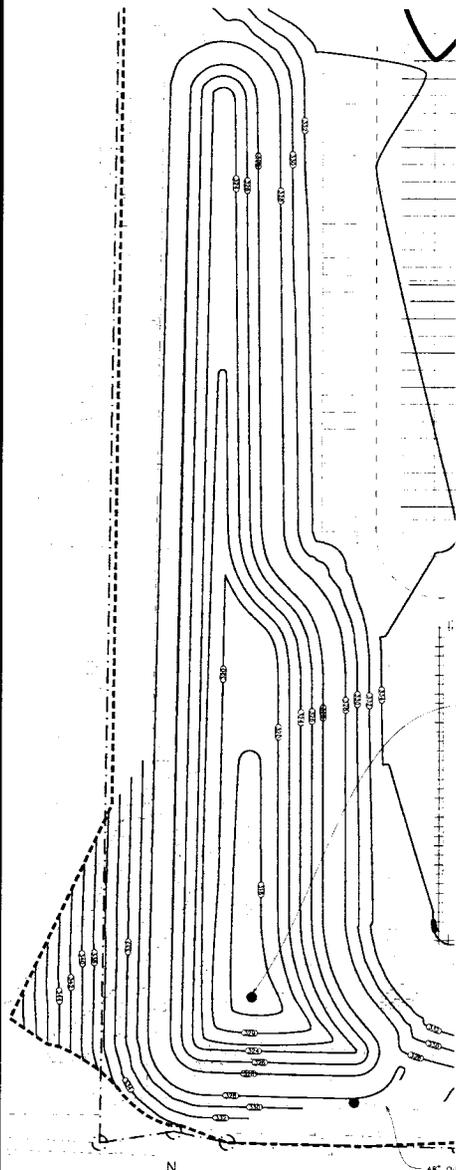
RELEASE DATES	
8-24-08	FINAL REVISIONS PER STAFF REPORTS
8-23-08	BE RE-SUBMISSION
16-16-08	BE RE-SUBMISSION
11-4-08	RIGHT-OF-WAY & EASEMENT INFO ADDED
12-16-08	OWNER REVIEW



FARFAX COUNTY, VIRGINIA

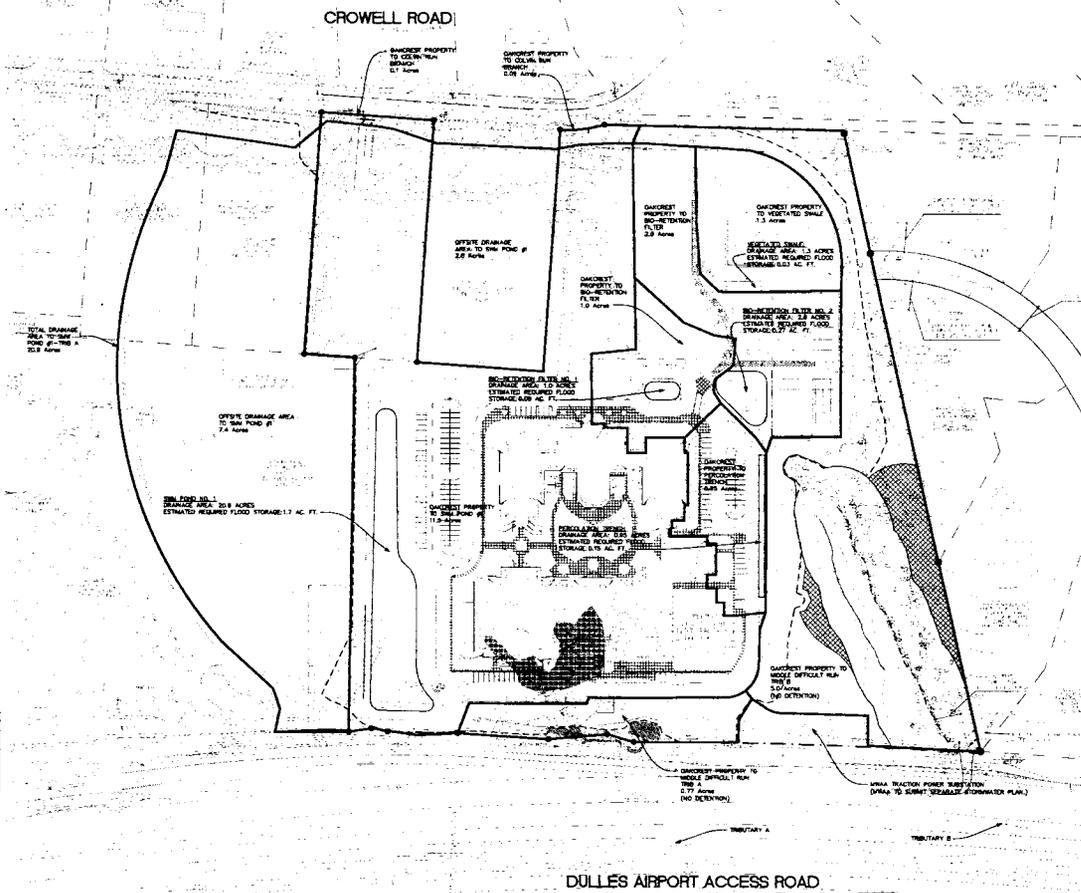
**OAKCREST SCHOOL  
SPECIAL EXCEPTION  
PLAT**

Checked by: [Signature] Date: \_\_\_\_\_  
Project No: 0802017 Sheet No: 2 of 2



CSM POND DATA  
 BOTTOM OF BASIN = 317.0  
 1-YR STORM EL. = 323.80  
 2-YR STORM EL. = 325.75  
 10-YR STORM EL. = 324.56  
 SDF EL. = 328.00  
 FRH = 326.4  
 TOP OF BERM = 328.00

DETENTION POND DETAIL  
 SCALE 1" = 30'



RELEASE DATES	
1-26-08	SE SUBMITTAL PACKAGE
3-20-08	COUNTY RE - SUBMISSION
7-17-08	REVISION PER STAFF REPORTS
8-24-08	FINAL REVISIONS PER STAFF REPORTS
9-23-08	SE RE - SUBMITTAL
12-14-08	SE RE SUBMITTAL



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 CIVIL ENGINEERING

OAKCREST SCHOOL  
 SPECIAL EXCEPTION  
 PLAT

Checked by:            Date:             
 Project No. 0802017 Sheet No. 14 of 19



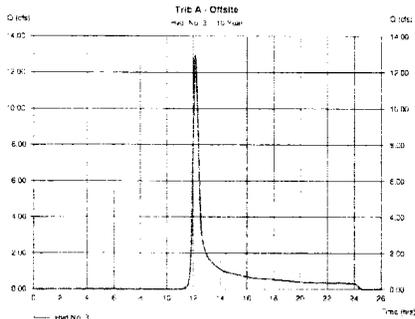
### Hydrograph Report

Hyd. No. 3  
Trib A - Offsite

Hydrograph type = SCS Runoff  
Storm frequency = 10 yrs  
Time interval = 2 min  
Drainage area = 9,200 ac  
Slope = 0.2 %  
Tc method = TR55  
Total precip = 5.20 in  
Storm duration = 24 hrs

Peak discharge = 12.95 cfs  
Time to peak = 730 min  
Hyd. volume = 51,389 cuft  
Curve number = 82  
Hydraulic length = 0 ft  
Time of conc. (TC) = 25.70 min  
Distribution = Type II  
Shape factor = 484

*This line to be bypassed in R.S.P.*



### TR55 Tc Worksheet

Hyd. No. 2  
Proposed Trib. A

Description	A	B	C	Total
Sheet Flow				
Manning's n-value	0.016	0.011	0.011	
Flow length (ft)	300.0	0.0	0.0	
Two-year 24-hr precip. (in)	3.20	0.00	0.00	
Land slope (%)	2.00	0.00	0.00	

Travel Time (min) = 3.94 + 0.00 + 0.00 = 3.94

Shallow Concentrated Flow  
Flow length (ft) = 0.00  
Watercourse slope (%) = 0.00  
Surface description = Paved  
Average velocity (ft/s) = 0.00

Travel Time (min) = 0.00 + 0.00 + 0.00 = 0.00

Channel Flow  
X-sectional flow area (sq ft) = 2.40  
Wetted perimeter (ft) = 5.00  
Channel slope (%) = 0.01  
Manning's n-value = 0.015  
Velocity (ft/s) = 0.69  
Flow length (ft) = 300.0

Travel Time (min) = 8.82 + 0.00 + 0.00 = 8.82

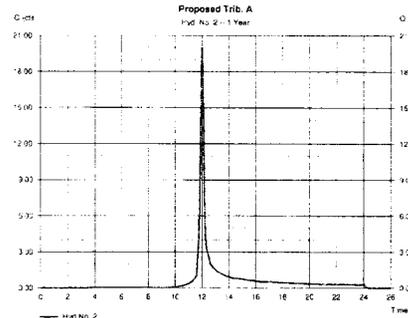
Total Travel Time, Tc = 12.76 min

### Hydrograph Report

Hyd. No. 2  
Proposed Trib. A

Hydrograph type = SCS Runoff  
Storm frequency = 1 yrs  
Time interval = 2 min  
Drainage area = 11,500 ac  
Slope = 0.0 %  
Tc method = TR55  
Total precip = 2.70 in  
Storm duration = 24 hrs

Peak discharge = 19.95 cfs  
Time to peak = 720 min  
Hyd. volume = 52,051 cuft  
Curve number = 83  
Hydraulic length = 0 ft  
Time of conc. (TC) = 12.83 min  
Distribution = Type II  
Shape factor = 484

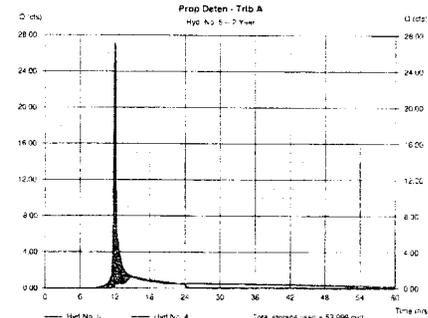


### Hydrograph Report

Hyd. No. 5  
Prop Deten - Trib A

Hydrograph type = Reservoir  
Storm frequency = 2 yrs  
Time interval = 2 min  
Inflow Hyd. No. = 4 - Trib A - Comb Offsite/Onsite  
Reservoir name = Proposed SWM POND 1

Peak discharge = 12.19 cfs  
Time to peak = 9.14 min  
Hyd. volume = 52,347 cuft  
Max. Elevation = 523.75 ft  
Max. Storage = 53,999 cuft

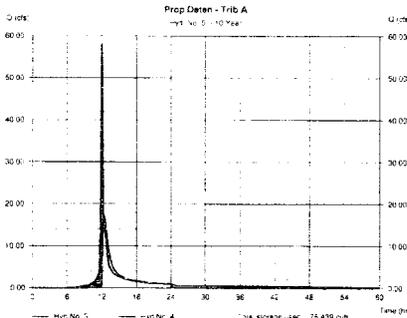


### Hydrograph Report

Hyd. No. 5  
Prop Deten - Trib A

Hydrograph type = Reservoir  
Storm frequency = 10 yrs  
Time interval = 2 min  
Inflow Hyd. No. = 4 - Trib A - Comb Offsite/Onsite  
Reservoir name = Proposed SWM POND 1

Peak discharge = 17.39 cfs  
Time to peak = 730 min  
Hyd. volume = 183,678 cuft  
Max. Elevation = 524.88 ft  
Max. Storage = 75,429 cuft



### Pond Report

Pond No. 1 - Proposed SWM POND 1

Stage (ft)	Storage (cuft)	Outflow area (sq ft)	Area (sq ft)	Total storage (cuft)
2.25	31,150	308	6	3
4.50	119,19	2,374	1,267	1,264
6.75	248,29	5,174	2,517	4,891
9.00	397,39	9,114	10,875	10,875
11.25	566,49	13,838	19,885	19,885
13.50	755,59	19,152	29,895	29,895
15.75	964,69	24,866	41,794	41,794
18.00	1,193,79	30,980	55,592	55,592
20.25	1,442,89	37,494	71,391	71,391
22.50	1,711,99	44,408	89,190	89,190
24.75	2,001,09	51,722	109,089	109,089
27.00	2,310,19	59,436	131,888	131,888
29.25	2,639,29	67,550	157,687	157,687
31.50	3,088,39	76,064	185,486	185,486
33.75	3,657,49	85,078	215,285	215,285
36.00	4,346,59	94,592	248,084	248,084
38.25	5,165,69	104,606	283,883	283,883
40.50	6,124,79	115,220	322,682	322,682
42.75	7,233,89	126,434	364,481	364,481
45.00	8,502,99	138,248	409,280	409,280
47.25	9,942,09	150,662	457,079	457,079
49.50	11,561,19	163,676	507,878	507,878
51.75	13,370,29	177,290	561,677	561,677
54.00	15,369,39	191,504	618,476	618,476
56.25	17,568,49	206,318	678,275	678,275
58.50	19,967,59	221,732	741,074	741,074
60.75	22,566,69	237,746	806,873	806,873
63.00	25,365,79	254,360	875,672	875,672
65.25	28,364,89	271,574	947,471	947,471
67.50	31,563,99	289,388	1,022,270	1,022,270
69.75	34,963,09	307,802	1,100,069	1,100,069
72.00	38,562,19	326,816	1,180,868	1,180,868
74.25	42,361,29	346,430	1,264,667	1,264,667
76.50	46,360,39	366,644	1,351,466	1,351,466
78.75	50,559,49	387,458	1,441,265	1,441,265
81.00	54,958,59	408,872	1,534,064	1,534,064
83.25	59,557,69	430,886	1,629,863	1,629,863
85.50	64,356,79	453,500	1,728,662	1,728,662
87.75	69,355,89	476,714	1,830,461	1,830,461
90.00	74,554,99	500,528	1,935,260	1,935,260
92.25	79,954,09	524,942	2,043,059	2,043,059
94.50	85,553,19	549,956	2,153,858	2,153,858
96.75	91,352,29	575,570	2,267,657	2,267,657
99.00	97,351,39	601,784	2,384,456	2,384,456
101.25	103,550,49	628,598	2,504,255	2,504,255
103.50	109,949,59	655,912	2,627,054	2,627,054
105.75	116,548,69	683,726	2,752,853	2,752,853
108.00	123,347,79	712,140	2,881,652	2,881,652
110.25	130,346,89	741,154	3,013,451	3,013,451
112.50	137,545,99	770,768	3,148,250	3,148,250
114.75	144,945,09	800,982	3,286,049	3,286,049
117.00	152,544,19	831,796	3,426,848	3,426,848
119.25	160,343,29	863,210	3,570,647	3,570,647
121.50	168,342,39	895,224	3,717,446	3,717,446
123.75	176,541,49	927,838	3,867,245	3,867,245
126.00	184,940,59	961,052	4,019,044	4,019,044
128.25	193,539,69	994,866	4,172,843	4,172,843
130.50	202,338,79	1,029,280	4,328,642	4,328,642
132.75	211,337,89	1,064,294	4,486,441	4,486,441
135.00	220,536,99	1,100,008	4,646,240	4,646,240
137.25	230,036,09	1,136,322	4,808,039	4,808,039
139.50	239,835,19	1,173,236	4,971,838	4,971,838
141.75	249,934,29	1,210,750	5,137,637	5,137,637
144.00	260,333,39	1,248,864	5,305,436	5,305,436
146.25	271,032,49	1,287,578	5,475,235	5,475,235
148.50	282,031,59	1,326,892	5,647,034	5,647,034
150.75	293,330,69	1,366,806	5,820,833	5,820,833
153.00	304,929,79	1,407,320	5,997,632	5,997,632
155.25	316,828,89	1,448,434	6,177,431	6,177,431
157.50	329,027,99	1,490,148	6,359,230	6,359,230
159.75	341,527,09	1,532,462	6,543,029	6,543,029
162.00	354,326,19	1,575,376	6,728,828	6,728,828
164.25	367,425,29	1,618,890	6,916,627	6,916,627
166.50	380,824,39	1,663,004	7,106,426	7,106,426
168.75	394,523,49	1,707,718	7,298,225	7,298,225
171.00	408,522,59	1,753,032	7,492,024	7,492,024
173.25	422,821,69	1,798,946	7,687,823	7,687,823
175.50	437,420,79	1,845,460	7,885,622	7,885,622
177.75	452,319,89	1,892,574	8,085,421	8,085,421
180.00	467,518,99	1,940,288	8,287,220	8,287,220
182.25	483,018,09	1,988,602	8,490,019	8,490,019
184.50	498,817,19	2,037,516	8,694,818	8,694,818
186.75	514,916,29	2,087,030	8,901,617	8,901,617
189.00	531,315,39	2,137,144	9,109,416	9,109,416
191.25	548,014,49	2,187,858	9,318,215	9,318,215
193.50	565,013,59	2,239,172	9,528,014	9,528,014
195.75	582,312,69	2,291,086	9,738,813	9,738,813
198.00	599,911,79	2,343,600	9,950,612	9,950,612
200.25	617,810,89	2,396,714	10,163,411	10,163,411
202.50	636,009,99	2,450,428	10,377,210	10,377,210
204.75	654,509,09	2,504,742	10,592,009	10,592,009
207.00	673,308,19	2,559,656	10,807,808	10,807,808
209.25	692,407,29	2,615,170	11,024,607	11,024,607
211.50	711,806,39	2,671,284	11,242,406	11,242,406
213.75	731,505,49	2,727,998	11,461,205	11,461,205
216.00	751,504,59	2,785,312	11,681,004	11,681,004
218.25	771,803,69	2,843,226	11,901,803	11,901,803
220.50	792,402,79	2,901,740	12,123,602	12,123,602
222.75	813,301,89	2,960,854	12,346,401	12,346,401
225.00	834,500,99	3,020,568	12,570,200	12,570,200
227.25	856,000,09	3,080,882	12,795,099	12,795,099
229.50	877,809,19	3,141,796	13,020,998	13,020,998
231.75	899,908,29	3,203,310	13,247,897	13,247,897
234.00	922,307,39	3,265,424	13,475,696	13,475,696
236.25	945,006,49	3,328,138	13,704,495	13,704,495
238.50	968,005,59	3,391,452	13,934,294	13,934,294
240.75	991,304,69	3,455,366	14,165,093	14,165,093
243.00	1,014,903,79	3,519,880	14,396,892	14,396,892
245.25	1,038,802,89	3,585,094	14,629,691	14,629,691
247.50	1,063,001,99	3,650,908	14,863,490	14,863,490
249.75	1,087,501,09	3,717,322	15,098,289	15,098,289
252.00	1,112,300,19	3,784,336	15,334,088	15,334,088
254.25	1,137,409,29	3,851,950	15,570,887	15,570,887
256.50	1,162,808,39	3,920,164	15,808,686	15,808,686
258.75	1,188,507,49	3,988,978	16,047,485	16,047,485
261.00	1,214,506,59	4,058,392	16,287,284	16,287,284
263.25	1,240,805,69	4,128,406	16,528,083	16,528,083
265.50	1,267,404,79	4,199,020	16,769,882	16,769,882
267.75	1,294,303,89	4,270,234	17,012,681	17,012,681
270.00	1,321,502,99	4,342,048	17,256,480	17,256,480
272.25	1,349,002,09	4,414,462	17,501,279	17,501,279
274.50	1,376,801,19	4,487,476	17,747,078	17,747,078
276.75	1,404,900,29	4,561,090	17,993,877	17,993,877
279.00	1,433,309,39	4,635,304	18,241,676	18,241,676
281.25	1,462,008,49	4,710,118	18,490,475	18,490,475
283.50	1,491,007,59	4,785,532	18,740,274	18,740,274
285.75	1,520,306,69	4,861,546	18,991,073	18,991,073
288.00	1,550,005,79	4,938,160	19,242,872	19,242,872
290.25	1,580,004,89	5,015,374	19,495,671	19,495,671
292.50	1,610,303,99	5,093,188	19,749,470	19,749,470
294.75	1,640,903,09	5,171,602	20,004,269	20,004,269
297.00	1,671,802,19	5,250,616	20,260,068	20,260,068
299.25	1,703,001,29	5,330,230	20,516,867	20,516,867
301.50	1,734,500,39	5,410,444	20,774,666	20,774,666
303.75	1,766,309,49	5,491,258	21,033,465	21,033,465
306.00	1,798,408,59	5,572,672	21,293,264	21,293,264
308.25	1,830,807,69	5,654,686	21,554,063	21,554,063
310.50	1,863,506,79	5,737,300	21,815,862	21,815,862
312.75	1,896,505,89	5,820,514	22,078,661	22,078,661
315.00	1,929,804,99	5,904,328	22,342,460	22,342,460
317.25</				



### Hydrograph Report

Hydrograph Report for Autodesk Civil 3D 2009 by Autodesk, Inc. 06/26 Thursday, Aug 19, 2010

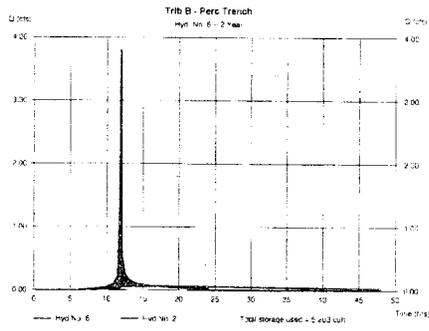
#### Hyd. No. 6

Trib B - Perc Trench

Hydrograph type = Reservoir  
 Storm frequency = 2 yrs  
 Time interval = 1 min  
 Inflow Hyd. No. = 2 - Percolation Trench  
 Reservoir name = Trib B - Perc Trench

Peak discharge = 0.061 cfs  
 Time to peak = 992 min  
 Hyd. volume = 6.435 cuft  
 Max. Elevation = 325.42 ft  
 Max. Storage = 5.203 cuft

Storage released = 0.000 cuft



### Hydrograph Report

Hydrograph Report for Autodesk Civil 3D 2009 by Autodesk, Inc. 06/26 Thursday, Aug 19, 2010

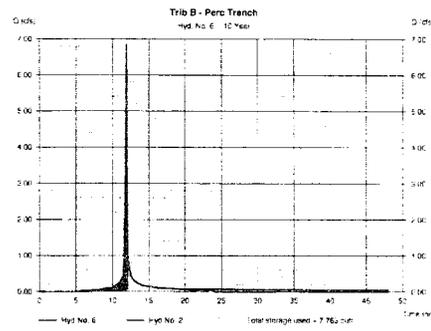
#### Hyd. No. 6

Trib B - Perc Trench

Hydrograph type = Reservoir  
 Storm frequency = 10 yrs  
 Time interval = 1 min  
 Inflow Hyd. No. = 2 - Percolation Trench  
 Reservoir name = Trib B - Perc Trench

Peak discharge = 1.217 cfs  
 Time to peak = 724 min  
 Hyd. volume = 11.548 cuft  
 Max. Elevation = 326.09 ft  
 Max. Storage = 7.763 cuft

Storage released = 0.000 cuft



### Hydrograph Report

Hydrograph Report for Autodesk Civil 3D 2009 by Autodesk, Inc. 06/26 Thursday, Aug 19, 2010

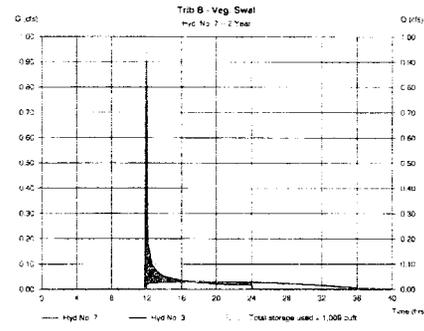
#### Hyd. No. 7

Trib B - Veg Swale

Hydrograph type = Reservoir  
 Storm frequency = 2 yrs  
 Time interval = 1 min  
 Inflow Hyd. No. = 3 - Trib B - Vegetated Swale  
 Reservoir name = Trib B - Veg Swale

Peak discharge = 0.030 cfs  
 Time to peak = 1054 min  
 Hyd. volume = 2.062 cuft  
 Max. Elevation = 339.21 ft  
 Max. Storage = 1.006 cuft

Storage released = 0.000 cuft



### Hydrograph Report

Hydrograph Report for Autodesk Civil 3D 2009 by Autodesk, Inc. 06/26 Thursday, Aug 19, 2010

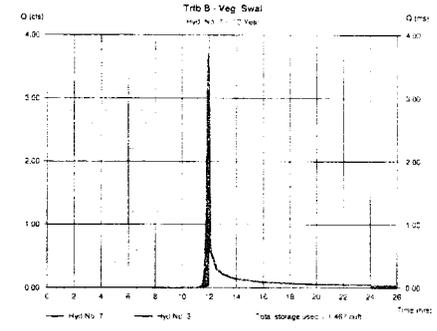
#### Hyd. No. 7

Trib B - Veg Swale

Hydrograph type = Reservoir  
 Storm frequency = 10 yrs  
 Time interval = 1 min  
 Inflow Hyd. No. = 3 - Trib B - Vegetated Swale  
 Reservoir name = Trib B - Veg Swale

Peak discharge = 3.405 cfs  
 Time to peak = 718 min  
 Hyd. volume = 7.031 cuft  
 Max. Elevation = 339.99 ft  
 Max. Storage = 1.467 cuft

Storage released = 0.000 cuft



### TR55 Tc Worksheet

#### Hyd. No. 4

Trib B - Bio Filter 1

Description	A	B	C	Totals	
<b>Sheet Flow</b>					
Manning's n value	= 0.016	0.011	0.011		
Flow length (ft)	= 50.0	0.0	0.0		
Two-year 24-hr precip. (in)	= 3.20	0.00	0.00		
Land slope (%)	= 2.00	0.00	0.00		
Travel Time (min)	= 0.94	+ 0.00	+ 0.00	= 0.94	
<b>Shallow Concentrated Flow</b>					
Flow length (ft)	= 30.00	0.00	0.00		
Watercourse slope (%)	= 2.00	0.00	0.00		
Surface description	= Paved	Paved	Paved		
Average velocity (ft/s)	= 2.87	0.00	0.00		
Travel Time (min)	= 0.17	+ 0.00	+ 0.00	= 0.17	
<b>Channel Flow</b>					
X horizontal flow area (sqft)	= 0.00	0.00	0.00		
Wetted perimeter (ft)	= 0.00	0.00	0.00		
Channel slope (%)	= 0.00	0.00	0.00		
Manning's n value	= 0.315	0.015	0.015		
Velocity (ft/s)	= 0.33	0.00	0.00		
Flow length (ft)	= 0.3	0.3	0.3		
Travel Time (min)	= 0.00	+ 0.00	+ 0.00	= 0.00	
Total Travel Time, Tc					1.11 min

### Hydrograph Report

Hydrograph Report for Autodesk Civil 3D 2009 by Autodesk, Inc. 06/26 Thursday, Aug 19, 2010

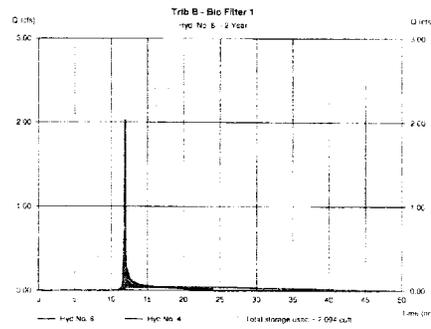
#### Hyd. No. 8

Trib B - Bio Filter 1

Hydrograph type = Reservoir  
 Storm frequency = 2 yrs  
 Time interval = 1 min  
 Inflow Hyd. No. = 4 - Trib B - Bio Filter 1  
 Reservoir name = Trib B - Bio Filter 1

Peak discharge = 0.041 cfs  
 Time to peak = 982 min  
 Hyd. volume = 3.502 cuft  
 Max. Elevation = 331.59 ft  
 Max. Storage = 2.094 cuft

Storage released = 0.000 cuft



### Hydrograph Report

Hydrograph Report for Autodesk Civil 3D 2009 by Autodesk, Inc. 06/26 Thursday, Aug 19, 2010

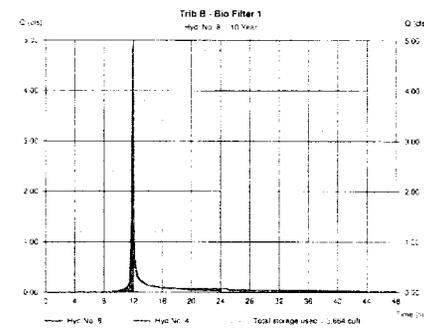
#### Hyd. No. 8

Trib B - Bio Filter 1

Hydrograph type = Reservoir  
 Storm frequency = 10 yrs  
 Time interval = 1 min  
 Inflow Hyd. No. = 4 - Trib B - Bio Filter 1  
 Reservoir name = Trib B - Bio Filter 1

Peak discharge = 1.792 cfs  
 Time to peak = 721 min  
 Hyd. volume = 9.386 cuft  
 Max. Elevation = 336.12 ft  
 Max. Storage = 3.664 cuft

Storage released = 0.000 cuft



RELEASE DATES	
8-24-08	FINAL REVISIONS PER STAFF REPORTS
8-23-08	SE RE - SUBMISSION
12-18-08	SE RE - SUBMISSION



FARFAX COUNTY, VIRGINIA

**OAKCREST SCHOOL  
SPECIAL EXCEPTION  
PLAT**

Checked by: BM Date: \_\_\_\_\_  
 Project No. 0802017 Sheet No. 18 of 19

TR55 Tc Worksheet

Hyd. No. 5

Trib B - Bio Retention No.2

Description	A	B	C	Totals
Sheet Flow				
Manning's n value	0.016	0.011	0.011	
Flow length (ft)	300.0	0.0	0.0	
Two-year 24-hr precip (in)	3.20	0.00	0.00	
Land slope (%)	2.00	0.00	0.00	
Travel Time (min)	3.94	0.00	0.00	3.94

Shallow Concentrated Flow

Flow length (ft)	50.00	0.00	0.00	
Watercourse slope (%)	5.00	0.00	0.00	
Surface description	Unpaved	Paved	Paved	
Average velocity (ft/s)	3.61	0.00	0.00	
Travel Time (min)	0.23	0.00	0.00	0.23

Channel Flow

X-sectional flow area (sqft)	0.00	0.00	0.00	
Wetted perimeter (ft)	0.00	0.00	0.00	
Channel slope (%)	0.00	0.00	0.00	
Manning's n value	0.015	0.015	0.015	
Velocity (ft/s)	0.00	0.00	0.00	
Flow length (ft)	0.0	0.0	0.0	
Travel Time (min)	0.00	0.00	0.00	0.00

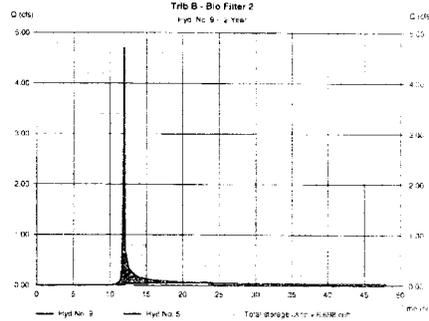
Total Travel Time, Tc = 4.17 min

Hydrograph Report

Hyd. No. 9

Trib B - Bio Filter 2

Hydrograph type	Reservoir	Peak discharge	0.059 cfs
Storm frequency	2 yrs	Time to peak	120.4 min
Time interval	1 min	Hyd. volume	5.287 cuft
Inflow hyd. No.	5 - Trib B - Bio Retention No.2	Max. Elevation	334.01 ft
Reservoir name	Trib B - Bio Filter 2	Max. Storage	6.699 cuft

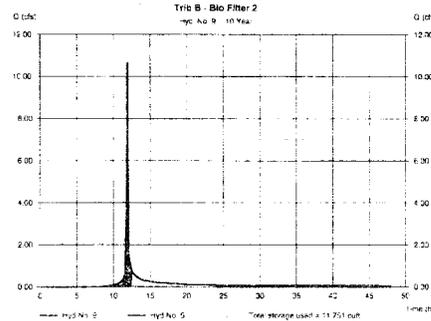


Hydrograph Report

Hyd. No. 9

Trib B - Bio Filter 2

Hydrograph type	Reservoir	Peak discharge	0.674 cfs
Storm frequency	10 yrs	Time to peak	75.7 min
Time interval	1 min	Hyd. volume	13.989 cuft
Inflow hyd. No.	5 - Trib B - Bio Retention No.2	Max. Elevation	335.00 ft
Reservoir name	Trib B - Bio Filter 2	Max. Storage	11.751 cuft

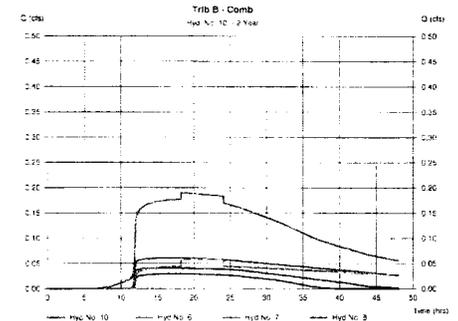


Hydrograph Report

Hyd. No. 10

Trib B - Comb

Hydrograph type	Combine	Peak discharge	0.190 cfs
Storm frequency	2 yrs	Time to peak	1095 min
Time interval	1 min	Hyd. volume	17.260 cuft
Inflow hyd.	6, 7, 8, 9	Contrib. drain. area	0.000 ac



RELEASE DATES	
8-24-08	FINAL REVISIONS PER STAFF REPORTS
9-23-08	SE RE - SUBMISSION
12-18-08	SE RE - SUBMISSION



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 CIVIL ENGINEERS

FAIRFAX COUNTY, VIRGINIA

**OAKCREST SCHOOL  
 SPECIAL EXCEPTION  
 PLAT**

Checked by: <u>BM</u>	Date:
Project No. <u>0802017</u>	Sheet No. <u>19</u> of <u>19</u>

## BACKGROUND

The applicant requests approval of a Special Exception to permit a Private School of General Education, with a maximum daily enrollment of 450 students (grades 6-12). The site is proposed to have a floor area ratio of 0.136 (land to be sold to the Dulles Rail Project for a traction power substation site is not included in the density calculation; approximate acreage to remain is 22.71 acres).

A staff report published on November 5, 2009, recommended denial based on the lack of consolidation and the possible negative impacts on the unconsolidated parcels, and because of a concern that breaking the land area of the existing, single special permit use (the golf driving range) into separate sites (the school and surrounding, undeveloped parcels) will encourage the development of additional non-residential uses on those remaining parcels.

As described in the staff report, the applicant proposed to mitigate their traffic impacts by installing a temporary traffic signal at the intersection of Crowell Road and Hunter Mill Road. Access to the site was proposed to be at a full entrance onto Crowell Road.

Subsequent to publication of the staff report, the applicant has provided a revised development plan showing access to Hunter Mill Road, and proposing a traffic circle at Crowell Road and Hunter Mill Road (in lieu of the signal). The SE Plat includes an option for a secondary entrance (right-in/right-out only) to Crowell Road, and the applicant has committed to develop a car pool program to be established by development condition. The revised plat and car pool proposal were delivered to the Planning Commission under cover memo on January 21, 2010, although staff analysis was not available at that time.

## DISCUSSION

### **Special Exception Plat** (Copy at front of addendum)

The revised SE plat now has 21 sheets and is revised through December 16, 2009. The only changes shown on the plat are to the surrounding transportation network and the site's access. In the previous version, the SE Plat showed a traffic signal to be installed at the intersection of Hunter Mill Road and Crowell Road; the revised version shows a one-lane roundabout (or traffic circle), as discussed further below. The site access was previously shown as a single point of access to Crowell Road. A right turn taper and a left turn lane were provided on Crowell Road. The revised plan shows two options for access. The main plan sheet shows no access to Crowell Road, the preservation of the existing berm across the site frontage in that area, and an access drive bisecting the property to the west (the remainder of the driving range), giving access to Hunter Mill Road. This access (at the existing golf park entrance) would be right-in/left-in/right-out. No left turns would be permitted to exit the site at the entrance. All traffic would leave the site by turning right (north) on Hunter Mill. Traffic wishing to go south (or return to the Toll Road) would proceed north and U-turn through the traffic circle.

No changes are proposed to the basic use, building design or orientation, landscaping, operational conditions (aside from phasing enrollment to demonstration of trip generation maximums), stormwater management, or recreational facilities. It should be noted, however, that the landscape sheets (and drainage map divides) in the SE Plat still show the original access plan, with full access to Crowell Road and no access to Hunter Mill. These sheets should be updated to reflect the current plan.

It should also be noted that the SE Plat appears to show an off-site sign located along Hunter Mill Road, in addition to wall features and signs located on-site at the edge of the property along the access to Hunter Mill and at the Option B Crowell Road entrance. Off-site signs are not permitted, and as a special exception use, the application would be governed by Sect. 12-208 Par. N, which permits only one building mounted sign and one freestanding sign, each with a maximum sign area of 12 square feet and with a combined total sign area of no more than 20 square feet. Staff has proposed a new condition stating that, irrespective of that shown on the SE Plat, signage shall conform to Sect. 12-208 of the ordinance.

### **Proposed Traffic Circle**

The applicant has agreed to install the traffic circle, as shown on the SE Plat. The analysis provided by the applicant demonstrates that the traffic circle shown would adequately mitigate the site's traffic, and based on a review of the preliminary design, it appears that the circle is feasible. However, it should be noted that final design of the circle will require the provision of additional information as detailed in the memo from VDOT (See Attachment 3), and additional engineering details which may require modifications to the design that is shown. Additionally, the applicant has not shown or agreed to construct the trail facilities recommended by the Comprehensive Plan for Hunter Mill Road. These consist of an on-road bike lane and parallel paved and natural surface trails. The applicant's analysis indicates that an additional 20 to 24 feet of right-of-way would be required along the length of the Hunter Mill Road frontage of the improvement, and an additional 13 feet of ROW along Crowell Road. Staff does not object to the provision of a traffic circle, as opposed to a traffic signal as previously shown. However, staff does recommend that provision be made for the required trail facilities.

### **Site Access (Entrances)**

#### *Land Use Considerations*

As currently proposed, the main access to the site would not be located within the special exception area. In order to be the main access, a long term commitment from the applicant that the access will be in place is necessary. Staff has therefore proposed a development condition that requires a public access easement to be

recorded across the driveway, and further requires that the driveway be constructed to standards as stated in the condition.

As noted in the initial staff report, staff is concerned that the lack of consolidation with surrounding parcels will encourage a proliferation of non-residential uses in an area where Comprehensive Plan language recommends an evaluation of the cumulative impact of such uses. Staff feels that these issues are exacerbated by the revised layout showing an entrance bisecting the adjacent property to access Hunter Mill. As it operates today, the entire golf driving range is a single special permit use. As originally proposed by the Oakcrest School, the site had been broken into three separate sites (the school, the eastern half of the driving range, and the unconsolidated Parcel 5). As now proposed, the site would be broken into four sites (the school, Parcel 5, and the northern and southern halves of the remainder of the driving range, split by the new entrance road to the school). As such, staff feels that the new proposal creates even more pressure on the surrounding properties to develop with multiple non-residential uses.

#### *Traffic Function Considerations*

The applicant's analysis indicates that either of the proposed entrance configurations will function, so long as the traffic circle is installed. Because of the high percentage of traffic coming to the site from the Toll Road (and returning to the Toll Road), the traffic circle is essential. Without the circle, that traffic would have no place to U-turn to return to the Toll Road. Staff therefore recommended that, if for some reason at final design the traffic circle could not be installed, the applicant should be required to return for a special exception amendment to amend their plan and reevaluate the entrances and the traffic network. In response, the applicant has proposed that the original entrance configuration for Crowell Road (full access) be included as an option. Staff has therefore proposed a development condition that states that, if the traffic circle is not approved, a signal will be installed and full access will be provided to Crowell Road, as shown in the attachments.

Staff also recommends that, with the traffic circle, Option B (with a right-in/right-out on Crowell Road) be implemented. Although the site would function with "Option A" (a single entrance to Hunter Mill Road), staff believes that the second entrance provides a significant benefit to the surrounding network, specifically by reducing delay for properties on the west side of Hunter Mill Road and by offering an option for southbound traffic on Hunter Mill Road to turn onto Crowell and access the school.

#### **Carpool Commitments**

To address citizen concerns about the traffic generated by the school, the applicant has proposed a development condition that would require a study to identify traffic generation once the school is open and in operation at this site. This study would identify a "base rate" of traffic generation for the school during peak hours (AM and PM). The applicant has agreed to phase enrollment to a demonstration that they have

reduced traffic generation rates for the AM and PM peaks from this base rate. As proposed, prior to increasing enrollment above 250, the applicant would be required to document to FCDOT that they have reduced their traffic generation rate in the AM and PM peaks by at least 5%. Prior to increasing enrollment above 350, the applicant would have to document to FCDOT that they have reduced their traffic generation rate by at least 10%. Thereafter, the applicant would have to maintain their traffic generation rate at (or below) the 10% reduction level.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Staff Conclusions**

While the current proposal does constitute a major revision from the proposal laid out in the initial staff report, the modifications do not positively affect the issues noted as denial issues in the initial staff report (lack of consolidation and impact on unconsolidated parcels). In fact, it is staff's opinion that the revised plan exacerbates the issues.

Initial review of the proposed traffic circle design indicates that the circle does meet the minimum standards for a traffic circle, however it should be noted that additional issues may be noted when engineered plans are provided for review.

Therefore, staff continues to find that the proposed use is of a design and intensity that is not in conformance with the Comprehensive Plan, or the applicable Zoning Ordinance provisions.

### **Recommendations**

Staff recommends denial of SE 2009-DR-008. If it is the intent of the Board to approve the application, staff recommends that such approval be subject to the proposed development conditions in Attachment 1.

It should be noted that it is not the intent of staff to recommend that the Board, in adopting any conditions proffered by the owner, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

It should be further noted that the content of this report reflects the analysis and recommendations of staff; it does not reflect the position of the Board of Supervisors.

## **ATTACHMENTS**

1. Proposed Development Conditions
2. Land Use Analysis Addendum
3. Transportation Analysis Addendum, Fairfax County DOT
4. VDOT Analysis

## PROPOSED DEVELOPMENT CONDITIONS

SE 2009-DR-008

~~November 5, 2009~~ February 4, 2010

If it is the intent of the Board of Supervisors to approve SE 2009-DR-008, located on the south side of Crowell Road, Tax Map 18-4 ((1)) 26C and 18-4 ((8)) 4 and A, for a private school of general education, pursuant to Sect. 3-E04 of the Fairfax County Zoning Ordinance, the staff recommends that the Board condition the approval by requiring conformance with the following development conditions:

1. This Special Exception is granted for and runs with the land indicated in this application and is not transferable to other land.
2. This Special Exception is granted only for the purpose(s), structure(s) and/or use(s) indicated on the special exception plat approved with the application, as qualified by these development conditions.
3. This Special Exception is subject to the provisions of Article 17, Site Plans, as may be determined by the Director, Department of Public Works and Environmental Services (DPWES). Any plan submitted pursuant to this special exception shall be in substantial conformance with the approved Special Exception Plat entitled "Oakcrest School," consisting of 21 sheets (sheets as detailed in the following chart), and these conditions. Minor modifications to the approved special exception may be permitted pursuant to Par. 4 of Sect. 9-004 of the Zoning Ordinance.

<i>Sheet</i>	<i>Prepared by</i>	<i>Dated</i>
1	paradigm design, inc.	1-26-2009 as rev. to <del>12-16-2009</del>
2	Vika, Inc.	11-2007 as rev. to <del>12-16-2009</del>
3	paradigm design, inc.	1-26-2009 as rev. to <del>12-16-2009</del>
4	Wetland Studies & Solutions, Inc.	6-2008 as rev. to <del>9-2312-16-2009</del>
5 - 7	Vika, Inc.	1-2009 as rev. to <del>9-2312-16-2009</del>
8 - 12	SEM partners, Inc.	1-26-2009 as rev. to <del>9-2312-16-2009</del>
13	paradigm design, inc.	8-24-2009 as rev. to <del>12-16-2009</del>
<u>Option B Sht 1</u>	<u>paradigm design, inc.</u>	<u>1-26-2009 as rev. to 12-16-2009</u>
<u>Option B Sht 2</u>	<u>paradigm design, inc.</u>	<u>8-24-2009 as rev. to 12-16-2009</u>
14	paradigm design, inc.	1-26-2009 as rev. to <del>9-2312-16-2009</del>
15 - 19	paradigm design, inc.	8-24-2009 as rev. to <del>9-2312-16-2009</del>

4. Prior to the issuance of any permits for any clearing or ground-disturbing activities on the site, SPA 91-C-070-4 shall be vacated or amended so that it does not apply to the application property, and any activities associated with that approval shall cease on this property (Tax Map 18-4 ((1)) 26C and 18-4 ((8)) 4 and A).

5. A copy of these special exception conditions shall be posted in a conspicuous place on the property, and made available to the public and all departments of the County of Fairfax during hours of operation.
6. Architecture shall be in general conformance with that shown on Sheets 8-10 of the SE Plat.
7. Any retaining walls provided which are not shown on the SE Plat shall not exceed three feet in height.
8. The architectural treatment of the portions of any retaining walls over two feet in height that face the eastern, northern, or western lot lines shall consist of a split face, landscape block, masonry, concrete, concrete tie or stone finish, and shall be of a color compatible with the other structures on the property.
9. The maximum daily enrollment shall be limited to 450 students, grades 6-12, as further limited by condition #19.
10. The maximum number of staff on-site at any one time shall be 90.
11.
  - (a) The primary hours of operation, to include regular extracurricular activities, shall be limited to 7:00 am to 6:00 pm, Monday - Friday.
  - (b) Evening hours of operation for parent/teacher conferences and similar meetings shall be permitted Monday - Friday, but shall end by 11:00 pm.
  - (c) Other evening activities shall be permitted Monday - Friday, but shall end by 10:00 pm, and shall be limited to a maximum of eight occurrences per month
  - (d) Weekend activities with an anticipated attendance of 30 or more shall be limited to 9:00 am to 11:00 pm on Saturday and 9:00 am to 5:00 pm on Sunday, and shall be limited to four events per month. No more than twice a year an indoor event on a Saturday may extend until 12:00 midnight.
  - (e) Weekend outdoor activities shall not extend beyond 7:30 pm.
  - (f) The school buildings and outdoor playing fields shall not be leased, rented, or otherwise made available to groups not affiliated with or sponsored by the school.
12. Any on-site summer camp or summer school activities shall be subject to the following restrictions:
  - (a) The total maximum daily enrollment shall be limited to 450 children (as further limited by condition #19), limited to children entering 1<sup>st</sup> grade through those who have just graduated from 12<sup>th</sup> grade.
  - (b) The hours of operation of the summer camp / summer school shall be limited to 8 am to 5 pm, Monday - Friday.
13. Prior to the first day of school each year, a neighborhood liaison committee shall be established to coordinate and meet with interested neighbors to discuss and address neighborhood concerns regarding the school. The neighborhood liaison committee shall designate a contact person, and the

name and phone number of the contact person shall be provided to the presidents of surrounding civic associations and the office of the Dranesville District Supervisor, prior to the first day of school.

14. No lighting shall be provided for the outdoor playing fields, and the use of outdoor public address speaker systems or bull horns shall be prohibited. However, this shall not preclude the use of a temporary public address speaker system to be used for outdoor graduation/baccalaureate ceremonies.
15. All lighting, including security lighting, shall be in conformance with Part 9 of Article 14 of the Zoning Ordinance. Any light fixtures provided on the site shall be limited to a maximum height of 12 feet, from ground level to the top of the fixture.
16. Indoor recreation space shall be provided for each student enrolled in accordance with the provisions of Chapter 30 of the Code.
17. All vehicular parking shall be provided on-site. If additional parking is required during any special event, off-site parking and shuttle service shall be provided.
18. Procedures and policies, to include incentives and a car pool coordinator, shall be established to promote the maximum use of car pools to the school. The car pool coordinator (whose duties may be part of other duties assigned to that individual) shall be responsible for contacting families that do not participate in the car pool program to encourage participation and additional car pool efforts.
19. (a) In order to establish a baseline trip generation rate (trips per student) for the school, within one year of opening, the school shall coordinate with an independent contractor to perform traffic counts of vehicles entering and exiting the School from 6:30 AM to 9:30 AM and from 2:30 PM to 6:30 PM on a typical school day during a typical school week (i.e. no holidays, parent/teacher conferences, teacher in-service days, etc.). Counts shall be averaged over three consecutive school days (excluding Monday and Friday). The AM and PM peak hour trip generation for each day shall be determined as the four highest consecutive 15-minute intervals during the AM period and the PM period, respectively. The baseline rate for the AM and PM peak hours for the school shall be determined by dividing the observed hourly AM and PM peak hour traffic count by the actual enrollment of the school at the time of the study. The scope and results of this study shall be subject to review and approval by FCDOT.  
  
(b) Prior to an increase in enrollment above 250 students, the School shall demonstrate to FCDOT, using study methodology as established in subparagraph (a), that for the two consecutive semesters in the regular school session immediately preceding the request, the trip generation rate is at least 5% lower than the baseline rate.

- (c) Prior to an increase in enrollment above 350 students, the School shall demonstrate to FCDOT, using study methodology as established in subparagraph (a), that for the two consecutive semesters in the regular school session immediately preceding the request, the trip generation rate is at least 10% lower than the baseline rate.
  - (d) At enrollment levels between 250 and 350, the school shall be responsible for maintaining a trip generation rate that is at least 5% lower than the baseline rate. At enrollment levels above 350, the school shall be responsible for maintaining a trip generation rate that is at least 10% lower than the baseline rate. A record of the AM and PM peak hour trip generation by semester shall be maintained, which records shall be made available upon request by FCDOT, the Department of Planning and Zoning (DPZ), or the Dranesville Supervisor's office.
  - (e) A new Non-RUP shall be instituted for each enrollment increase. Such Non-RUPs shall not be issued until FCDOT determines that the terms of this condition have been met.
  - (f) This condition shall apply to both regular school year and summer activities. While this condition references car pools specifically, buses or shuttles may be utilized to meet the terms of this condition (with each bus or shuttle counted as one vehicle).
20. Access shall be provided to the site from Hunter Mill Road and Crowell Road, as shown on the sheets of the SE Plat titled "Exhibit Access – Option B," except as otherwise required below.
21. Prior to the issuance of a Non-Residential Use Permit, all transportation improvements shown on the SE Plat (including frontage improvements, turn lanes and relocation of utility poles) shall be completed, subject to as approval approved by the Virginia Department of Transportation (VDOT).
22. The temporary cul-de-sac of Forest Hills Drive shall be converted from a temporary cul-de-sac to a permanent cul-de-sac in dedicated right-of-way, subject to VDOT approval, and the excess right-of-way shall be vacated.
23. Prior to the issuance of a Non-Residential Use Permit, a traffic signal circle shall be installed at the intersection of Crowell Road and Hunter Mill Road, with a design approved by VDOT, including turn lanes if deemed necessary and Fairfax County. Should such a traffic circle not be approved, the applicant shall, in lieu of the traffic circle, install a traffic signal with a design approved by VDOT, including turn lanes if deemed necessary, and the Crowell Road entrance shall be designed as a full access entrance, as shown in Exhibit 1 of these Conditions (with improvements to Crowell Road as required by VDOT).
24. If additional right-of-way or easements are needed to accommodate the signal and required intersection improvements improvements to the intersection of Crowell Road and Hunter Mill Road, the Applicant shall make all reasonable efforts to acquire such right-of-way and easements. In the event the Applicant

is not able to acquire the right-of-way or easements necessary, the Applicant shall submit a written request to Fairfax County to acquire the right-of-way or easements by means of its condemnation powers. In conjunction with such request, the Applicant shall forward to the appropriate County agency: (1) plat, plans and profiles showing the necessary right-of-way and easements to be acquired; (2) an appraisal, prepared by an independent appraiser approved by the County, of the value of the right-of-way and easements to be acquired and of all damages, if any, to the residue of the affected parcel(s); (3) a sixty (60) year title search certificate of the affected parcel(s) on which the easement is to be acquired; and (4) cash in an amount equal to appraised value of the right-of-way and easements and of all damages to the residue of the affected parcel(s). In the event the owner of the affected parcel(s) is awarded more than the appraised value of the parcel(s) and of the damages to the residue in a condemnation suit, the Applicant shall pay the amount of the award in excess of cash amount to the County within fifteen (15) calendar days of said award. It is understood that the Applicant upon demand shall pay all other costs incurred by the County in acquiring the right-of-way and easements to the County. Prior to and during the contemplated condemnation proceedings described above, the Applicant, its successors and assigns, shall be permitted to submit, process, and receive approval of site plan(s) and development permits for other portions of the Application Property as described herein.

In the event, the County elects not to use its condemnation powers to acquire the necessary right-of-way from the affected parcel(s), the Applicant shall be relieved of its obligation to ~~install the signal and construct the intersection improvements~~, and shall instead contribute the estimated cost of constructing the ~~signal and approved~~ intersection improvements, as determined by DPWES, including estimated right-of-way acquisition costs, to Fairfax County for future construction by others or for other roadway improvements in the area.

Upon demonstration by the Applicant that despite diligent efforts installation of the ~~traffic signal circle (or signal)~~ has been delayed, either due to the time necessary for potential condemnation or other engineering/construction related issues, the Zoning Administrator may agree to a later date for the completion of the improvement.

~~22. Should a signal not be warranted or approved by VDOT, or should a traffic circle be designed and approved (as determined by the Fairfax County Department of Transportation) for the intersection of Crowell Road and Hunter Mill Road, the applicant shall, in lieu of the traffic signal, contribute the cost of design and installation of the traffic signal and associated improvements, as determined by DPWES, to Fairfax County for use for improvements to the intersection or other transportation improvements in the vicinity.~~

25. (a) Prior to site plan approval, a public access easement (at least 30 feet in width) providing access to the application property from Hunter Mill Road in the

location shown on the SE Plat shall be recorded in the land records of Fairfax County in a form acceptable to DPWES and the County Attorney.

(b) The entrance drive shall be designed generally as shown on the SE Plat, and shall be constructed to PFM standards and with a minimum width of 24 feet. No additional entrances shall be provided onto the entrance drive within 200 feet of its intersection with Hunter Mill Road, and a concrete island shall be provided at its intersection with Hunter Mill Road that provides a positive directional movement to the right, such that left turns are prohibited.

23-26. Vehicular access to the Traction Power Substation Site (TPSS) shown on the SE Plat shall be provided from the internal road system. Such access shall be designed and constructed in accordance with the specifications provided by the Metropolitan Washington Airports Authority (MWAA).

24-27. In conjunction with the dedication/sale of the land for the TPSS, an access easement shall be provided to MWAA (or, as appropriate, the Washington Metropolitan Area Transit Authority) to permit periodic access to the TPSS from the interior road system.

25-28. If sewer service is not available to the site, a special exception amendment shall be required to provide a septic system, or other alternative system, on the property.

26-29. The applicant shall conform strictly to the limits of clearing and grading as shown on the SE Plat, subject to the installation of utilities and/or trails as determined necessary by the Director of DPWES. If it is determined necessary to install utilities and/or trails within of the limits of clearing and grading as shown on the SE Plat, they shall be located in the least disruptive manner necessary as determined by UFM. A replanting plan shall be developed and implemented, subject to approval by UFM, for any areas within the limits of clearing and grading that must be disturbed

27-30. Dead, dying, or invasive vegetation may be removed from the areas protected by the limits of clearing and grading, if approved by UFM.

28-31. If removal of the existing berm, which extends across Tax Map Parcel 18-4 ((8)) 5, is necessary to achieve the grading and development shown on the SE Plat, the applicant shall request approval from the property owner to remove the berm and stabilize the area. If no approval is granted, the applicant shall demonstrate that the grading and landscaping on the application property is in substantial conformance with that shown on the SE Plat, or shall apply for a special exception amendment to modify those elements.

29-32. To provide an effective, year round screen along the northernmost 550 feet of the eastern property boundary, the vegetation shown on the SE Plat shall be further supplemented by understory plantings to provide ground level screening, as recommended and approved by UFM.

- ~~30-33.~~ If it is determined by the Urban Forest Management Division of DPWES (UFM) that the landscaping shown on the SE Plat outside of the preservation area along the eastern boundary of the site, along with the additional plantings required by these conditions, does not meet the intent of Transitional Screening I, such landscaping shall be supplemented with additional plantings to meet the intent of Transitional Screening I, as determined by UFM.
- ~~31-34.~~ A landscape plan shall be submitted concurrent with site plan review and shall provide for the number, sizes and locations of trees and plantings consistent with that shown on the SE plat and the additional requirements of these conditions. The landscape plan shall be subject to the review and approval of Urban Forest Management (UFM). Minor modifications may be permitted by UFM to the extent that these do not result in significant physical impacts to the areas designated to be left undisturbed.
- ~~32-35.~~ At the time of site plan submission, a tree survey shall be submitted that identifies the trunk location, species, size, crown spread and condition analysis rating for all individual and groups of trees shown on the Special Exception Plat to be preserved, as well as all on and off-site trees, living or dead with trunks 6 inches in diameter and greater (measured at 4 ½ feet from the base of the trunk or as otherwise allowed in the 9th or latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture) located within 25 feet of the approved limits of clearing and grading for review by the Urban Forest Management Division. This tree survey shall be prepared by a Certified Arborist or Landscape Architect with experience in the preparation of tree preservation plans.
- ~~33-36.~~ The applicant shall take necessary steps and actions to ensure the long-term survival, and continuing structural integrity and health of trees designated on the SE Plat to be preserved. If any of these trees is found to be dead, dying, diseased, or hazardous (as determined by UFM) at or prior to, the final release of the project bond, and that such was not the result of unapproved construction practices, the applicant shall provide for restoration and remuneration by:
- a) providing for the removal of the above ground portions of trees
  - b) restoring understory plants and/or soil conditions damaged during tree removal activities (as determined by UFM)
  - c) provide for the restoration of the associated loss in canopy coverage in accordance with the tree cover guidance found in the Public Facilities Manual
- ~~34-37.~~ The applicant shall: a) root prune the roots of trees to be preserved that may be damaged during clearing, demolition, grade changes, utility installation and/or the installation of retaining walls; b) mulch to a minimum depth of 3 inches within the areas to be left undisturbed where soil conditions are poor, lacking leaf litter or prone to soil erosion; and c) then provide tree protection

fencing approved by the Urban Forest Management Division (UFM), Fairfax County Department of Public Works and Environmental Services ("DPWES"), where deemed necessary by UFM. The areas that will be root pruned and mulched shall be clearly identified on the Tree Designation Plan. All treatments for such trees and vegetation shall be clearly specified, labeled, and detailed on the erosion and sediment control sheets and demolition plan (if provided) sheets of the site plan submission. The details for these treatments shall be included in the Tree Designation Plan and shall be subject to the review and approved of UFM.

All root pruning and mulching work shall be performed in a manner that protects adjacent trees and vegetation that are required to be preserved and may include, but not be limited to, the following:

- Root pruning shall be done with a trencher or vibratory plow to a depth of 18 inches.
- Root pruning shall take place prior to any clearing and grading and/or demolition of structures.
- Root pruning shall not sever or significantly damage structural or compression roots in a manner that may compromise the structural integrity of trees or the ability of the root system to provide anchorage for the above ground portions of the trees.
- Root pruning shall be conducted with the on-site supervision of a certified arborist.
- 14 gauge welded wire tree protection fencing shall be installed immediately after root pruning, and shall be positioned directly in the root pruning trench and backfilled for stability, or just outside the trench within the disturbed area.
- Immediately after the Phase II E&S activities are complete, mulch shall be applied at a depth of 3 inches within designated areas without the use of motorized equipment
- Mulch shall consist of wood chips, shredded hardwood and/or pine bark mulch. Hay or straw mulch shall not be used within tree preservation areas.
- UFM, DPWES shall be informed in writing when all root pruning and tree protection fence installation is complete.

38. Irrespective of that shown on the SE Plat, all signage shall conform to Sect. 12-208 of the Zoning Ordinance.

The above proposed conditions are staff recommendations and do not reflect the position of the Board of Supervisors unless and until adopted by that Board.

This approval, contingent on the above noted conditions, shall not relieve the applicant from compliance with the provisions of any applicable ordinances,

regulations, or adopted standards. The applicant shall be himself responsible for obtaining the required Non-Residential Use Permit through established procedures, and this Special Exception shall not be valid until this has been accomplished.

Pursuant to Section 9-015 of the Zoning Ordinance, this special exception shall automatically expire, without notice, thirty (30) months after the date of approval unless, at a minimum, the use has been established or construction has commenced and been diligently prosecuted. If the project is phased, development of the initial phase shall be considered to establish the use for the entire development as shown herein. The Board of Supervisors may grant additional time to establish the use or to commence construction if a written request for additional time is filed with the Zoning Administrator prior to the date of expiration of the special exception. The request must specify the amount of additional time requested, the basis for the amount of time requested and an explanation of why additional time is required.





# County of Fairfax, Virginia

## MEMORANDUM

**DATE:** February 1, 2010

**TO:** Regina Coyle, Director  
Zoning Evaluation Division, DPZ

**FROM:** Pamela G. Nee, Chief *PGN*  
Environment and Development Review Branch, DPZ

**SUBJECT: Land Use Analysis Addendum: SE 2009-DR-008 Oakcrest School**

The memorandum, prepared by John Bell, includes citations from the Comprehensive Plan that provide guidance for the evaluation of the special exception (SE) plat dated January 26, 2009 revised through December 16, 2009. The extent to which the application conforms to the applicable guidance contained in the Comprehensive Plan is noted. Possible solutions to remedy identified issues are suggested. Other solutions may be acceptable, provided that they achieve the desired degree of mitigation and are also compatible with Plan policies.

The intensity of the proposed use and the ability to develop the surrounding parcels continues to raise concerns for staff. Access to the proposed use and how these access points might be integrated into the redevelopment of some of the surrounding parcels is also of concern to staff. Although either of the proposed entrances would functionally serve the site, staff feels that the land use issues raised by the lack of consolidation in the initial proposal are exacerbated by the current layout showing an entrance bisecting the adjacent property to access Hunter Mill Road. As it operates today, the entire golf driving range is a single special permit use. As originally proposed by the Oakcrest School, the site had been broken into three separate sites (the school, the eastern half of the driving range and the unconsolidated Parcel 5). As now proposed, the site would be broken into four sites (the school, Parcel 5, and the northern and southern halves of the remainder of the driving range, split by the new entrance road to the school). As such, staff feels that the new proposal creates even more pressure on the surrounding properties to develop with multiple non-residential uses.

PGN:JRB

Department of Planning and Zoning  
Planning Division  
12055 Government Center Parkway, Suite 730  
Fairfax, Virginia 22035-5509  
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# County of Fairfax, Virginia

## MEMORANDUM

DATE: January 21, 2010

TO: Regina Coyle, Director  
Zoning Evaluation Division, DPZ

FROM: Angela Kadar Rodeheaver, Chief  
Site Analysis Section, DOT 

FILE: 3-5 (SE 2009-DR-008)

SUBJECT: ADDENDUM: SE 2009-DR-008; Oakcrest School  
Land Identification Map: 18-4-((1))-26C, 18-4-((8))-4, A

This department has reviewed the special exception plat revised through December 16, 2009. We have the following comments.

The applicant has agreed to install a roundabout at the intersection of Hunter Mill Road and Crowell Road. While staff has had limited time to review the roundabout, there is no indication at this time that a roundabout is infeasible at this location. However, the design of the roundabout may need to be revised with further review and analysis. It should be noted that the Comprehensive Plan recommends an on-road bike lane and major trail along Hunter Mill Road. These elements are not currently included in the applicant's roundabout design, but may need to be accommodated at the time of construction.

The current plat depicts an entrance on Hunter Mill Road with an option for a right-in/right-out on Crowell Road. This entrance configuration discourages left turning vehicles from exiting the site onto southbound Hunter Mill Road directing traffic leaving the site to U-turn at the proposed roundabout to continue southward. As such U-turn movements are facilitated exclusively by the roundabout, if the roundabout cannot be completed then there are no opportunities for vehicles to U-turn elsewhere along Hunter Mill Road. The applicant's traffic analysis indicates that a significant amount of site traffic will be entering and exiting the Dulles Toll Road. Thus, subsequent to approval, if the proposed roundabout is not feasible then the entrance on Hunter Mill Road is no longer functional to allow site traffic to access the Dulles Toll Road. It is staff's recommendation that in this event the applicant should be required to file a special exception amendment to allow for the review of site access including a possible alternate entry.

The following issue was also identified in our review:

- Further reinforcement is needed to discourage lefts out of the Hunter Mill Road entrance. The applicant should construct a channelized lane in addition to the porkchop island so as to lead exiting vehicles directly onto northbound Hunter Mill Road.

AKR/MEC



## COMMONWEALTH of VIRGINIA

## DEPARTMENT OF TRANSPORTATION

GREGORY A. WHIRLEY  
ACTING COMMISSIONER

14685 Avion Parkway  
Chantilly, VA 20151  
(703) 383-VDOT (8368)

January 22, 2010

Ms. Regina Coyle  
Director of Zoning Evaluation  
Department of Planning and Zoning  
12055 Government Center Parkway, Suite 801  
Fairfax, Virginia 22035-5503

Re: Oakcrest School

Fairfax County No.: SE 2009-DR-008

Dear Ms. Coyle:

We have reviewed the referenced Special Exception application and supplemental traffic study submissions as requested and we offer the following comments.

1. The following issue has been not addressed since the first submission: The SE plat should reflect provision of a permanent cul-de-sac at the terminus of Forest Maple Dr.
2. The Applicant should address the Fairfax County Comprehensive Plan and Hunter Mill Rd Traffic Calming Study with respect to the pedestrian and bicycle requirements in a manner that is satisfactory to the County.

The Fairfax Countywide Trails Plan shows a major trail (shared use path, 8' or more) on the south side of Crowell Road. On Hunter Mill Road it lists a minor trail (sidewalk less than 8' wide) on the east side with bike lanes on the roadway. The Northern Virginia Regional Bikeway and Trails Map indicates that only the Hunter Mill Road bicycle corridor has sufficient demand to be considered of regional significance. There are trail easements shown on the plans for both Hunter Mill and Crowell Road, however the submitted SE plans do not show the construction of any bike or pedestrian facilities.

**Advisory note for future addition of bicycle lane:** Currently the bicycle traffic can merge with either the pedestrian or vehicular traffic to navigate the roundabout. However, the current roundabout guide has not been re-issued yet, but it is currently undergoing revisions. The latest design guidance is for bicyclists to merge with traffic before going through a one-lane roundabout. Bike ramps should not be provided. Instead, the bike lane should end prior to the roundabout with dashed lines (50' to 200') indicating to the bicyclist that he should merge with traffic. The bike lane can then be picked up on the outgoing leg of the roundabout. Future design needs to adhere to the design guide in place at the time of plan preparation. The pedestrian facilities should cross the roadways at the splitter islands in accordance with the current FHWA roundabout guide.

3. Our recommendation is that a single lane roundabout shall be constructed at the intersection of Hunter Mill Road and Crowell Road. The roundabout would have acceptable LOS as shown in the study conducted by “Alternative Street Design, P.A.” referenced in their memo of November 19, 2009 to Mr. Bruce Bennett. Our own analysis has shown that the LOS F (north approach) predicted by Wells + Associates (using SIDRA) is not realistic as it is based on computed values the “Critical Gap” and “Headway” for the approach movements. The recommended practice used by other consultants in the area for similar roundabout analysis is to apply default values recommended by SIDRA for these parameters. The consultants “Alternative Street Design, P.A.” used the similar approach to predict LOS D for the north approach of the intersection.
4. The consultants have analyzed several alternatives for accessing the site with different driveway locations and movements in and out of the site. All of the alternatives seem to be functional approaches for solving the additional traffic generated by the school. Following are our recommendations ranked in order of our preference to accept the alternatives access to the site for driveways:
  - A full access to Crowell Road with no direct connection to Hunter Mill Road as shown in the original traffic impact study if the design issues associated with driveway such as turn lanes tapers and transition length, shoulder and travel lane width and sight distance, horizontal curve radius and superelevation transition are resolved. This alternative provides the best opportunity for best access management practice of using the lower volume road for driveways as well as preventing the circuitous movement of traffic accessing the site.
  - If all the movements cannot be established due to other design implications in the above alternative, then restricting the left-in at the Crowell Rd driveway may be considered provided adequate sight distance for this movement is verified on the final plan. This modified access will eliminate the considerable U-Turns at the roundabout occurring due to restricted left turn from the driveway at Hunter Mill Road also.
  - Right-in/right-out/left-in access at Hunter Mill Road with right-in/right-out access at Crowell Road.
  - Right-in/right-out/left-in access at Hunter Mill Road with no access at Crowell Road. This alternate creates substantial circuitous movement of traffic accessing the site.
  - The Department does not support future traffic signal installation at the intersection of Hunter Mill Road and the proposed site access (Fairfax Christian School Driveway) at any time in the future because of substandard spacing from the existing signalized intersection.
5. No proffer or design condition language was available for review.

**The following comments will need to be addressed at the time of submission of final engineering plans:**

6. Online aerial imagery indicates there is an existing driveway that appears to be serving a single family home on the NW quadrant of this intersection, approximately 40’ from yield bar on SB approach (Campagna property Tax Map 018-3-03-0001). This existing driveway needs to be shown in the plans with proposal how it will be treated with the proposed roundabout. Recommend relocating the driveway further north beyond the proposed splitter island.
7. Please refer to VDOT Road Design Manual, Appendix F (pg. F-42), for approval and submission requirements for a roundabout on the secondary system. Based on the design traffic volume of 10,000 VPD or higher, roundabout design plan must be submitted to the

Central Office Roundabout Review Committee for review. The committee will make recommendations to the State Location and Design Engineer for approval or disapproval. Note that this process applies to roundabouts proposed by Counties, Localities, Consultants and Developers. Please ensure 2 sets of final engineering plans are submitted to VDOT for review.

The submittal package should include the following as required per VDOT Road Design Manual, Appendix F:

Approach Grades and sight distances; Inscribed diameter of circulatory roadway; Design vehicle; Apron width, circulatory lane width and approach lane widths; Approach lane deflection and length of splitter islands; Pedestrian crossing locations; Pavement markings; Signing; Roadway Lighting (desirable); Nearest entrance locations and nature of property use; Initial or present and projected design year traffic count on all approaches; Turning movements for all directions; SIDRA Analysis on all approaches showing peak hour LOS in design year; Autoturn results showing off tracking of Design Vehicle; address the bicycle traffic questions: Is this facility designed as a bicycle Route?; Are their accommodations made to bicyclists?

8. Include AutoTurn plots showing path of design vehicle, as well as school bus and SU truck on all movements through roundabout. Verify diameter of roundabout and width of truck apron with AutoTurn plots. Truck apron should only be traversed by largest trucks (school buses and SU truck should not encroach upon truck apron). Additionally, truck path should not mount splitter islands.
9. Adequate lighting should be provided for safety reasons. Each approach should be illuminated, so that the roundabout may be visible. Additionally, lighting should be utilized during construction of the roundabout. Reference FHWA Roundabout Guide (Publication # FHWA-RD-00-067).
10. Include landscaping plans for VDOT review. The central island should be landscaped; however, landscaping should be selected such that adequate sight distance is maintained.
11. Include typical section for proposed roundabout, including composition of truck apron and details for Modified CG-3 edge from circulatory roadway to truck apron.
12. Show design year traffic volumes, truck traffic percentages, and design speed in plans.
13. Include horizontal and vertical sight distance verification.
14. Show profiles and grades of each road including roundabout feature on plans.
15. Drainage design has to be addressed in plans.
16. Include typical sections, profiles, cross sections, pavement marking & signage plans, erosion & sediment control plans, drainage descriptions, and intersection grading plan.
17. The submission of turn lane design waiver may be needed to document adequacy of the existing left and right turn lanes at Hunter Mill Rd entrance.

Sincerely,

Aleksandra M. Tuliszka, P.E.  
Senior Transportation Engineer

Cc: Ms. D.A. Purvis