APPLICATION FILED: May 22, 2008
BOARD OF ZONING APPEALS: August 5, 2008
TIME: 9:00 a.m.

County of Fairfax, Virginia

July 29, 2008

STAFF REPORT
SPECIAL PERMIT AMENDMENT APPLICATION NO. SPA 2005-MV-010
MOUNT VERNON DISTRICT

APPLICANT:	New Hope Church, Inc. and Silo Center, LLC
ZONING:	R-1
LOCATION:	8905 Ox Road
ZONING ORDINANCE PROVISIONS:	3-103
TAX MAP:	106-2 ((1)) 7
LOT SIZE:	8.79 acres
F.A.R.:	0.15
PLAN MAP:	Residential 0.5-1 du/acre
SPA PROPOSAL:	To amend SP 2005-MV-010 previously approved for a church with child care center add Silo Center, LLC as a permittee, to increase the total maximum number of children enrolled in the child care center to from 99 students to 250, and to make site design modifications to include addition of an outdoor gathering area with baptistry and covered picnic area.

STAFF RECOMMENDATION: Staff recommends approval of SPA 2005-MV-010 subject to the proposed development conditions contained in Appendix 1.

It should be noted that it is not the intent of 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.

N:\SPA\SPA 2005-MV-010 New Hope Church\New Hope Church Staff Report.doc

Department of Planning and Zoning
Zoning Evaluation Division
12055 Government Center Parkway, Suite 801
Fairfax, Virginia 22035-5509
Phone 703 324-1290
FAX 703 324-3924
www.fairfaxcounty.gov/dpz/

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 Zoning Appeals. A copy of the BZA's Resolution setting forth this decision will be mailed within five (5) days after the decision becomes final.

The approval of this application does not interfere with, abrogate or annul any easements, covenants, or other agreements between parties, as they may apply to the property subject to the application.

For additional information, call Zoning Evaluation Division, Department of Planning and Zoning at 324-1280, 12055 Government Center Parkway, Suite 801, Fairfax, Virginia 22035. **Board of Zoning Appeals' meetings are held in the Board Room, Ground Level, Government Center Building, 12000 Government Center Parkway, Fairfax, Virginia 22035-5505.**

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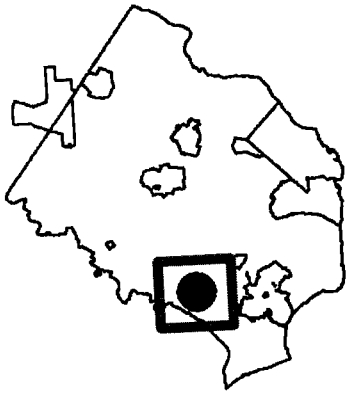
Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 7 days advance notice. For additional information on ADA call (703) 324-1334 or TTY 711 (Virginia Relay Center).

Special Permit Amendment

SPA 2005-MV-010



Applicant: NEW HOPE CHURCH, INC. AND SILO CENTER, LLC

Accepted: 05/22/2008

Proposed: AMEND SP 2005-MV-010 PREVIOUSLY APPROVED FOR CHURCH WITH CHILD CARE CENTER TO PERMIT CHANGE IN PERMITTEE, INCREASE ENROLLEMENT, BUILDING ADDITIONS, AND MODIFICATION OF DEVELOPMENT CONDITIONS

Area: 8.79 AC OF LAND; DISTRICT - MOUNT VERNON

Zoning Dist Sect: 03-0103

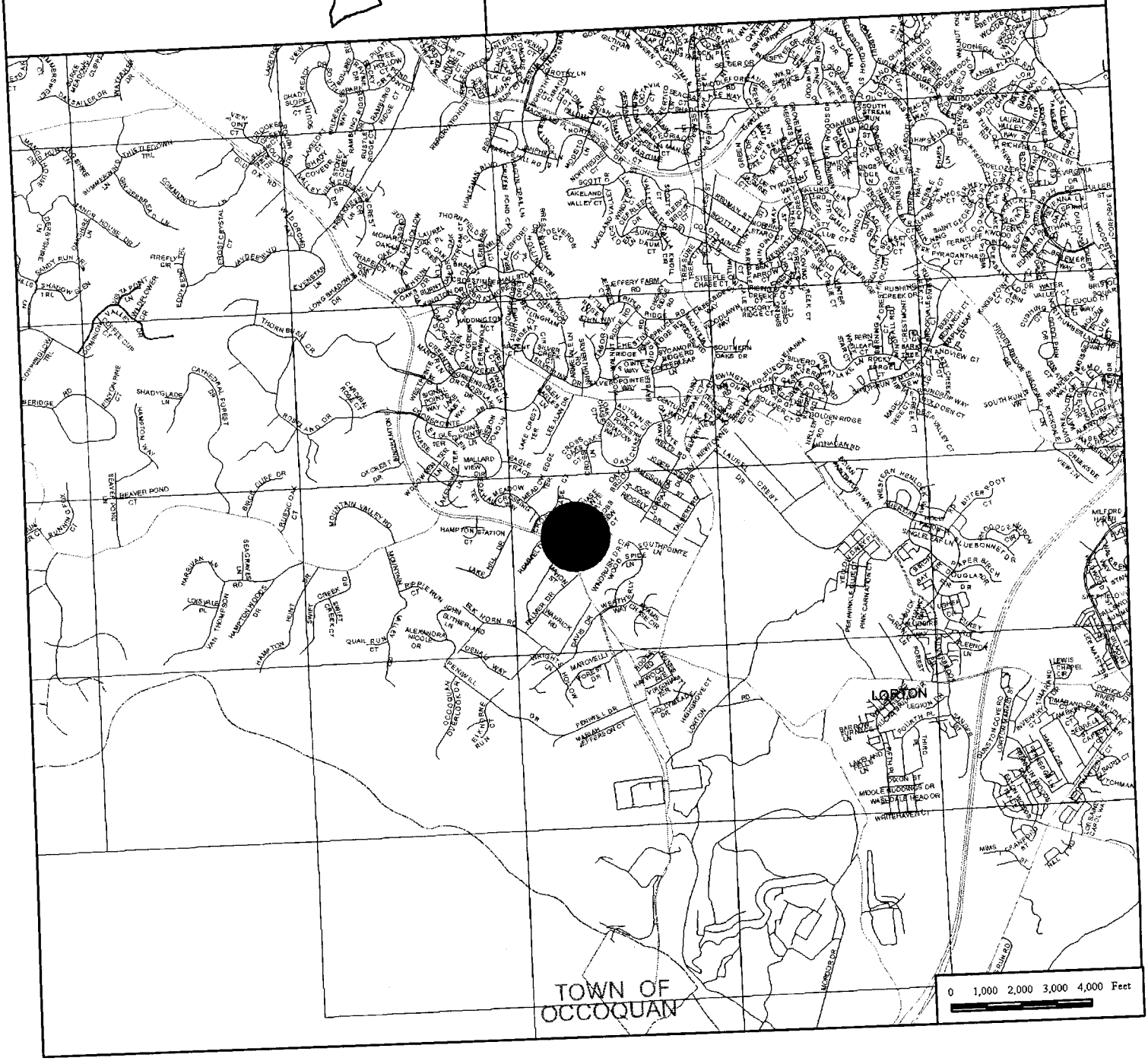
Art 8 Group and Use: 3-10

Located: 8905 OX ROAD

Zoning: R- 1

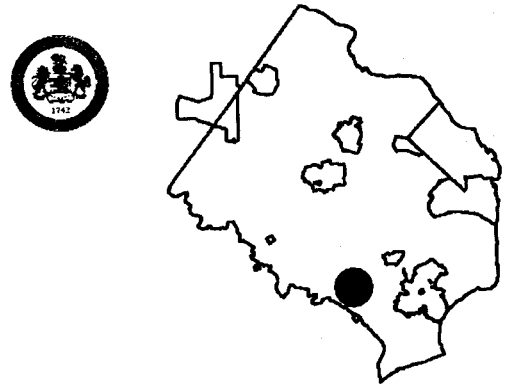
Overlay Dist:

Map Ref Num: 106-2- /01/ /0007



Special Permit Amendment

SPA 2005-MV-010



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Art 8 Group and Use:	3-10
Located:	8905 OX ROAD
Zoning:	R- 1
Overlay Dist:	
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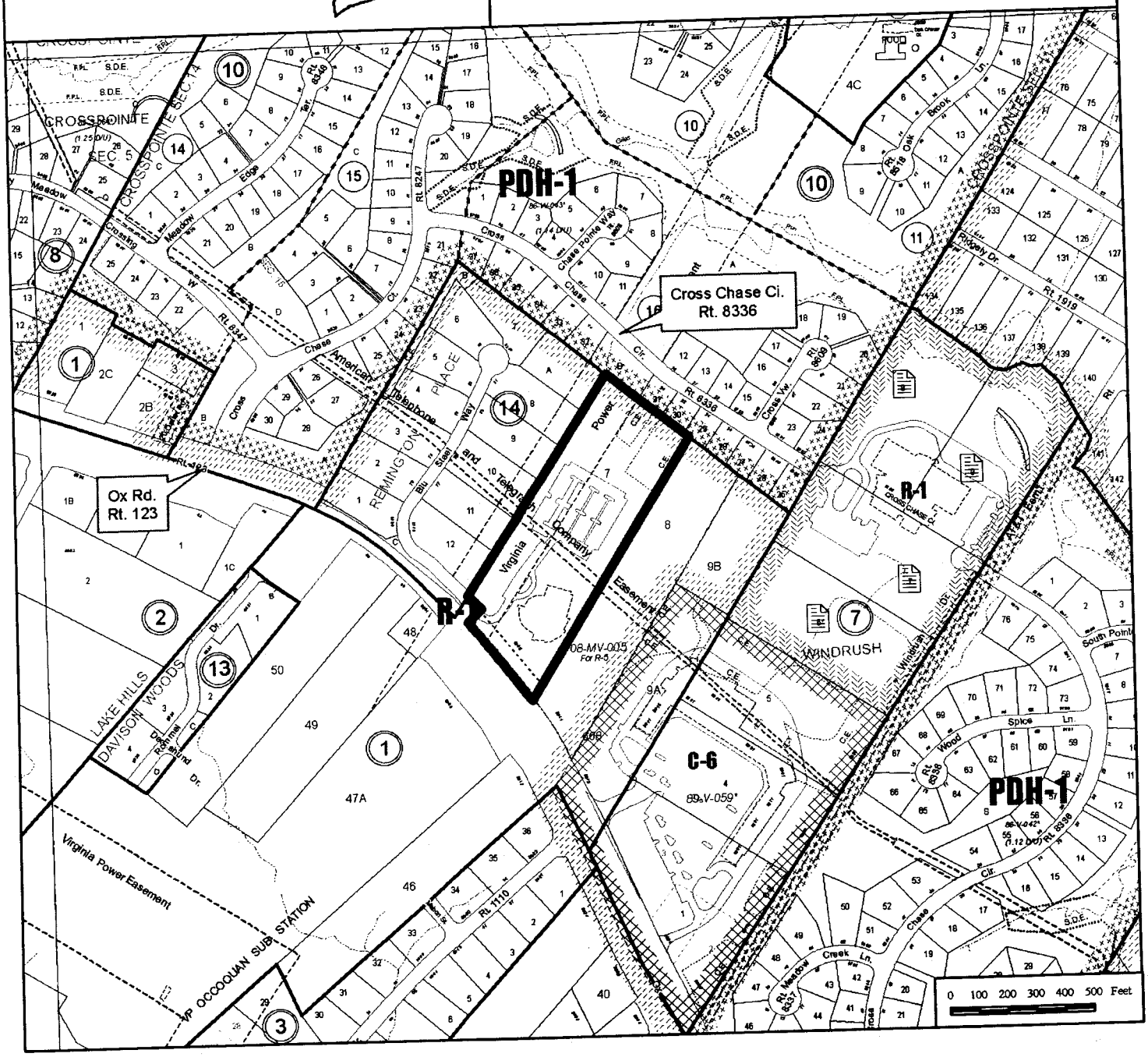


NEW HOPE CHURCH

MOUNT VERNON DISTRICT FAIRFAX COUNTY, VIRGINIA

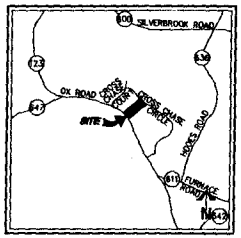
SPECIAL PERMIT AMENDMENT PLAT

NOTES

1. OWNER: NEW HOPE CHURCH, INC.
   8905 OX ROAD
   LORTON, VA 22079
2. THIS APPLICATION REQUESTS A SPECIAL PERMIT AMENDMENT TO INCREASE THE NUMBER OF CHILDREN IN THE CHILD CARE CENTER TO 250, AND ADD AN OUTDOOR GATHERING AREA AND BAPTISTRY, AND A COVERED PICNIC AREA.
3. THE PROPERTY IS DESIGNATED BY FAIRFAX COUNTY, VIRGINIA, AS TAX ASSESSMENT MAP NUMBER 106-2-01-0007, AND IS ZONED R-1.
4. THE PROPERTY IS NOW IN THE NAME OF NEW HOPE CHURCH, INC.
5. TOTAL AREA OF THE PROPERTY IS 383,090 SQUARE FEET OR 8.79 ACRES.
6. TO THE BEST OF OUR KNOWLEDGE, ALL UTILITY EASEMENTS HAVING A WIDTH OF 25 FEET OR MORE ON THIS PROPERTY ARE SHOWN.
7. THIS PLAT DOES NOT SHOW ALL COVENANTS, EASEMENTS, RESTRICTIONS OR DEDICATIONS WHICH MAY EXIST IN THE CHAIN OF TITLE.
8. THE PROPOSED DEVELOPMENT CONFORMS TO ALL APPLICABLE FAIRFAX COUNTY ORDINANCES, REGULATIONS AND ADOPTED STANDARDS, EXCEPT AS NOTED IN THE WAIVERS REQUESTED SECTION.
9. BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM A FIELD SURVEY PERFORMED BY THIS FIRM. CONTOUR INTERVAL IS 2 FOOT.
10. PROPERTY IS SERVED BY PUBLIC WATER AND SEWER.
11. ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP 5155250136D, DATED MARCH 1990, THIS PROPERTY IS SHOWN AS ZONE X, AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOOD PLAIN.
12. NO RESOURCE PROTECTION AREAS OR ENVIRONMENTAL QUALITY CORRIDORS, AS DEFINED, ARE DELINEATED ON THIS PROPERTY.
13. NO GRAVES OR OTHER EVIDENCE OF BURIAL PLACES HAVE BEEN FOUND ON THIS PROPERTY.
14. THIS PLAN IS CONCEPTUAL AND IS INTENDED TO BE USED IN CONJUNCTION WITH THE LAND USE APPROVAL PROCESS ONLY. IT IS NOT AN ENGINEERING CONSTRUCTION DRAWING; AND, MINOR DEVIATIONS AND ADJUSTMENTS MAY BE REQUIRED.
15. SITE SIGNAGE WILL BE PROVIDED IN ACCORDANCE WITH ARTICLE 12 OF THE FAIRFAX COUNTY ZONING ORDINANCE.
16. ALL EXISTING BUILDINGS ARE TO REMAIN.
17. THE MAJOR VEPCO EASEMENT ON THIS PROPERTY WAS GRANTED PRIOR TO THE EFFECTIVE DATE OF FAIRFAX COUNTY ZONING ORDINANCE.
18. PHASE I OF THE CHURCH IS CURRENTLY UNDER CONSTRUCTION AND INCLUDES A 685 SEAT SANCTUARY. PHASE II WILL INCLUDE THE ADDITION OF A MULTI-PURPOSE AREA. PHASE I OUTDOOR RECREATION AREA TO BE LOCATED IN THE AREA OF THE FUTURE PHASE II ADDITION. THE OUTDOOR RECREATION AREA WILL BE RELOCATED DURING PHASE II TO LOCATION AS SHOWN.
19. LIGHTING WILL BE IN ACCORDANCE WITH FAIRFAX COUNTY STANDARDS.

WAIVERS/MODIFICATIONS REQUESTED

1. MODIFY TRANSITIONAL SCREENING REQUIREMENT AND WAIVE BARRIER REQUIREMENT ON THE NORTHEASTERN SIDE ADJACENT TO LOTS 29, 30, 31, AND PARCEL B IN THE PORTION OF THE PROPOSED CONSERVATION EASEMENT AREA AND VEPCO EASEMENT. EXISTING TREES AND VEGETATION ARE TO REMAIN IN THE PROPOSED CONSERVATION EASEMENT AREA. **(PREVIOUSLY APPROVED PER SITE PLAN #8036-SP-002)**
2. MODIFY TRANSITIONAL SCREENING REQUIREMENT AND WAIVE BARRIER REQUIREMENT ON THE SOUTHEASTERN SIDE ADJACENT TO PARCEL 6 IN PORTION OF PROPOSED CONSERVATION EASEMENT. EXISTING TREES AND VEGETATION ARE TO REMAIN IN THIS AREA. **(PREVIOUSLY APPROVED PER SITE PLAN #8036-SP-002)**
3. WAIVE TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS ON THE NORTHWESTERN SIDE OF THE SITE (ADJACENT TO REMINGTON PLACE) DUE TO EXISTING VEPCO EASEMENT. **(PREVIOUSLY APPROVED PER SITE PLAN #8036-SP-002)**
4. WAIVE TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS ALONG THE SOUTHWESTERN PROPERTY LINE (ADJACENT TO ROUTE 123) DUE TO ACCESS EASEMENT AND VEPCO EASEMENT. **(PREVIOUSLY APPROVED PER SITE PLAN #8036-SP-002)**
5. **WAIVE BARRIER REQUIREMENT ON THE ENTIRE SOUTHEASTERN SIDE ADJACENT TO PARCEL 6.**



VICINITY MAP SCALE: 1"=2000'

ZONING TABULATION

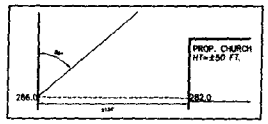
R-1, RESIDENTIAL DISTRICT: ONE DWELLING UNIT/ACRE

	REQUIRED	PROVIDED
SITE	N/A	383,090 SF/8.79 AC
MAX. BLDG. HT.	60 FT	±50 FT
MIN. YARD REQUIREMENTS		
FRONT	50' ABP, 40 FT	±134 FT
SIDE	45' ABP, 20 FT	±25 FT
REAR	45' ABP, 25 FT	±518 FT
MAX. FAR	0.15	±0.15
OPEN SPACE	N/A	±50%

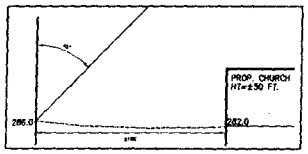
PARKING TABULATION

(PER APPROVED SITE PLAN #8036-SP-002)

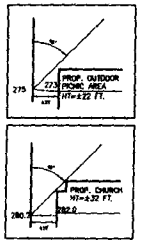
CHURCH: 685 SEATS @ 1 SP/4 SEATS
REQUIRED = 685/4 = 172 SPACES
DAYCARE: 250 CHILDREN @ 0.19 SP/CHILD
REQUIRED = 99 X 0.19 = 48 SPACES
TOTAL REQUIRED: 172 + 48 = 220 SPACES
PARKING PROVIDED: 246 PARKING SPACES (INCLUDING 7 ACCESSIBLE SPACES)



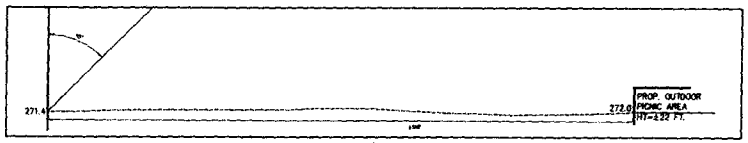
BULK PLANE DETAIL
OX ROAD
1" = 50'



BULK PLANE DETAIL
ADJACENT TO REMINGTON PLACE
1" = 50'



BULK PLANE DETAIL
ADJACENT TO PARCEL 6
1" = 50'



BULK PLANE DETAIL - REAR
1" = 50'

SHEET INDEX

1. COVER SHEET
2. EXISTING CONDITIONS PLAN/EXISTING VEGETATION MAP
3. SPECIAL PERMIT AMENDMENT PLAT
4. CONCEPTUAL LANDSCAPE PLAN
5. STORMWATER MANAGEMENT CALCULATIONS (FOR INFORMATION ONLY)
6. BEST MANAGEMENT COMPUTATIONS (FOR INFORMATION ONLY)
7. BEST MANAGEMENT COMPUTATIONS (FOR INFORMATION ONLY)
8. BEST MANAGEMENT COMPUTATIONS (FOR INFORMATION ONLY)
9. ADEQUATE OUTFALL ANALYSIS (FOR INFORMATION ONLY)
10. STORM SEWER COMPUTATIONS AND OUTFALL NARRATIVE (FOR INFORMATION ONLY)
11. AREA OF INFLUENCE STUDY (FOR INFORMATION ONLY)

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
307 PARK AVENUE, FALLS CHURCH, VIRGINIA 22046 WWW.WLPINC.COM
(703) 532-6163 FAX (703) 532-3521

SCALE: 1" = 50' DATE: 3/13/06, 7/10/06 - DPZ COMMENTS DRAWN: MPR

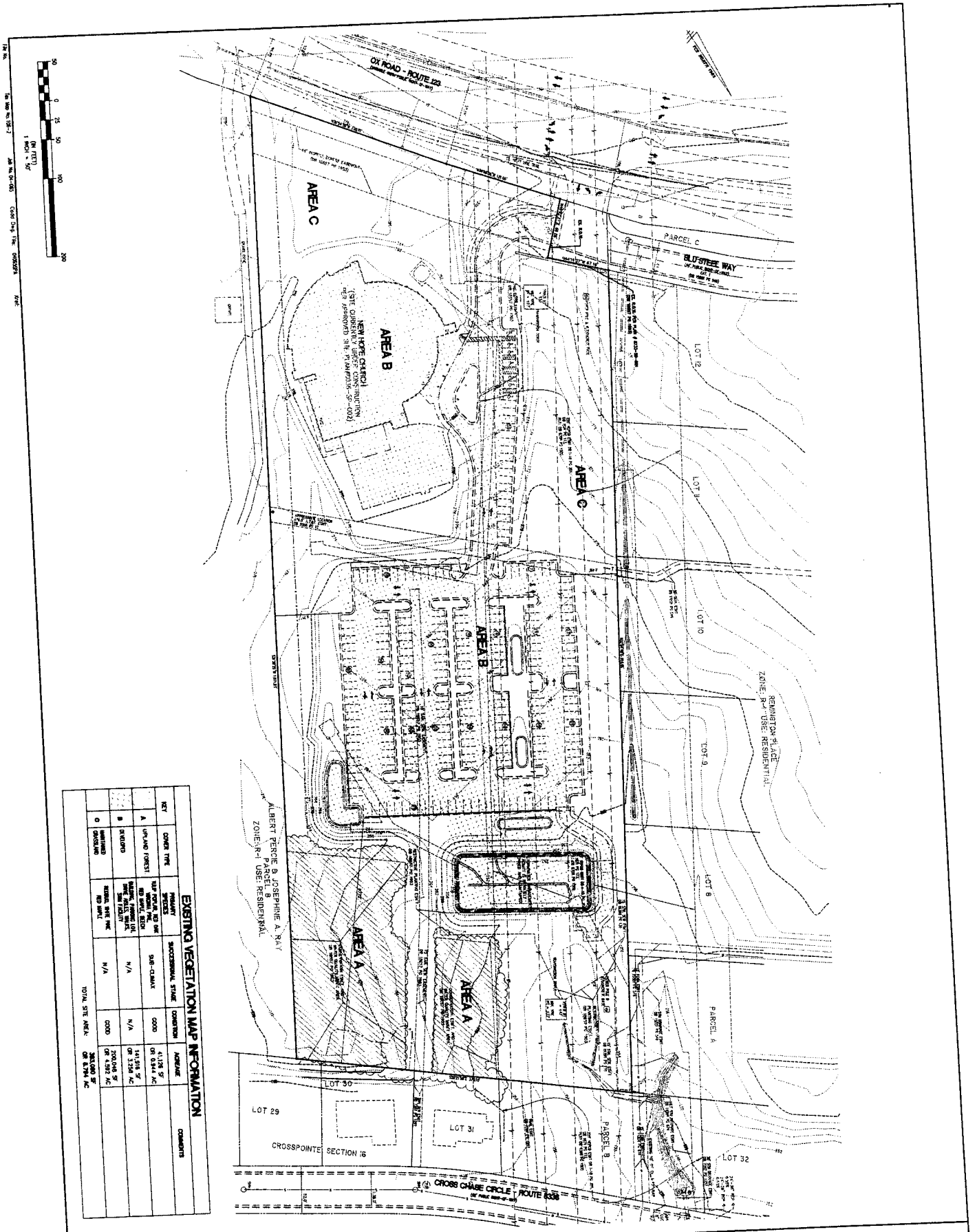
REVISION APPROVED BY

NO.	DESCRIPTION	DATE	BY	APPROVED	DATE

COVER SHEET

NEW HOPE CHURCH
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

File No. Tax Map No. 106-2 Job No. 04-065 Cadd Dwg. File: 040659PA Xref:



EXISTING VEGETATION MAP INFORMATION

KEY	COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION	ACREAGE	COMMENTS
A	UPLAND FOREST	TULIP POPLAR, RED OAK, VIRGINIA PINE, RED MAPLE, BEECH	SUB-CLIMAX	GOOD	41,126 SF OR 0.944 AC	
B	DEVELOPED	BUILDING, PARKING LOT, DRIVE AISLES, WALKS, SWM FACILITY	N/A	N/A	141,916 SF OR 3.258 AC	
C	MAINTAINED GRASSLAND	RIDGED, WHITE PINE, RED MAPLE	N/A	GOOD	200,048 SF OR 4.592 AC	
				TOTAL SITE AREA:	383,090 SF OR 8.794 AC	

EXISTING CONDITIONS EXHIBIT/EXISTING VEGETATION MAP

NEW HOPE CHURCH

MT. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

COMMONWEALTH OF VIRGINIA
CHARLES F. DUNCAN
No. 13098
3/13/08
LAND SURVEYOR

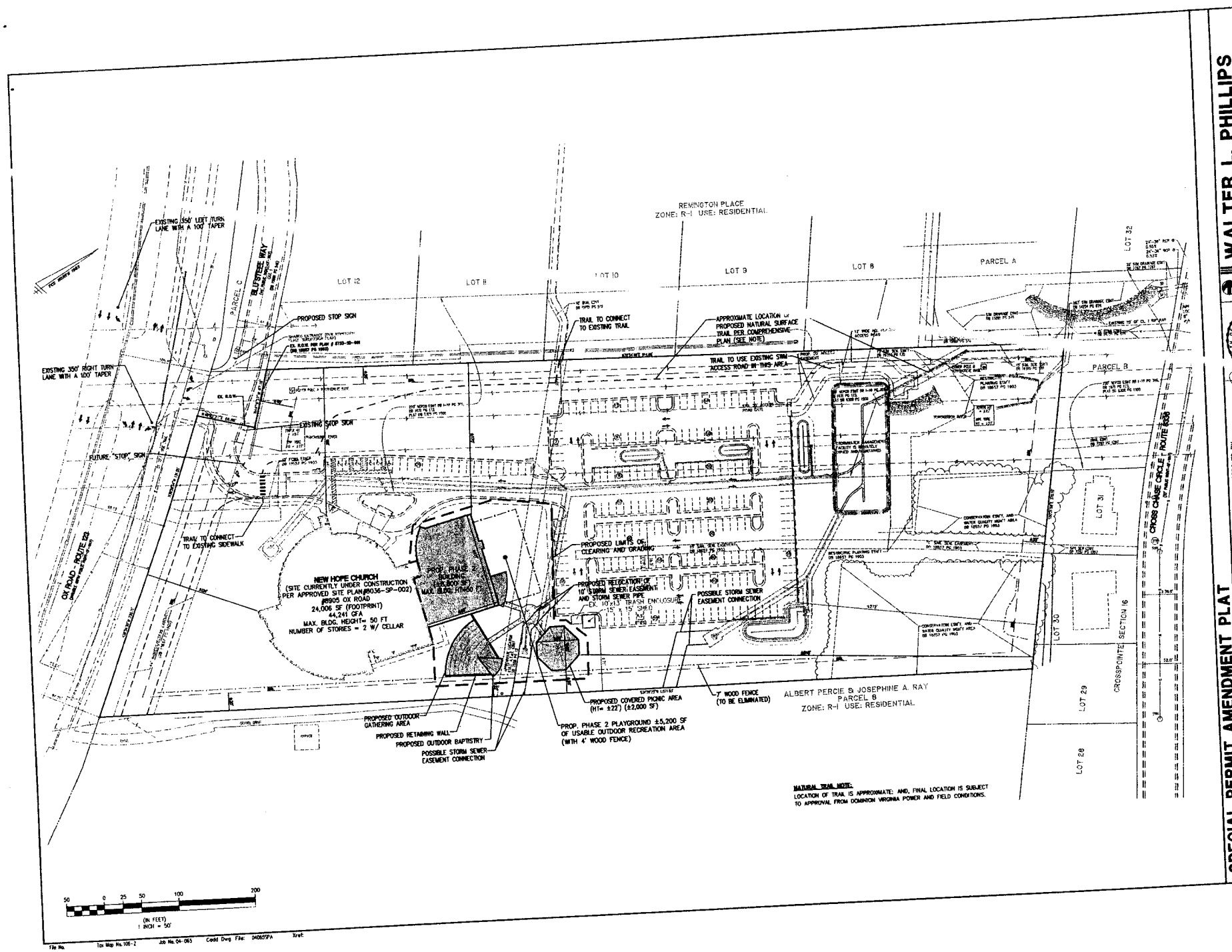
WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1301
WWW.WLPINC.COM

SCALE: 1" = 50'

DATE: 3/13/08; 7/10/08 - DPZ COMMENTS

DRAWN: MRW

SHEET: 2 OF 11



SPECIAL PERMIT AMENDMENT PLAT

NEW HOPE CHURCH

MT. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

WALTER L. PHILLIPS
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CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1501
WWW.WLPINC.COM

SCALE: 1" = 50'

DATE: 3/13/08; 7/10/08 - OPZ COMMENTS

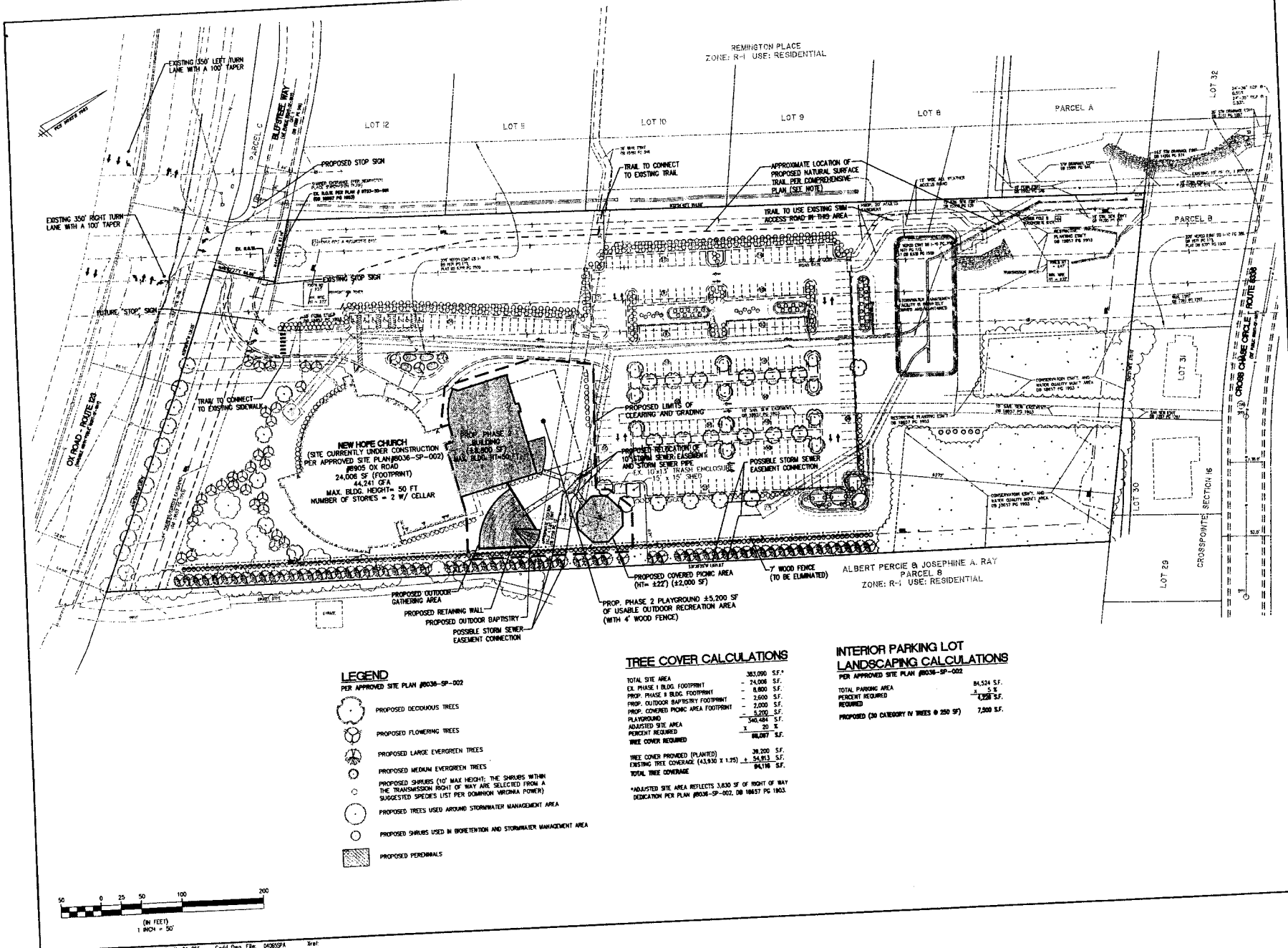
DRAWN: MRW

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

SHEET: 3 OF 11

File No. Tax Map No. 106-2 Job No. 04-065 Cadd Dwg File: 040655PA Xref:



LEGEND

PER APPROVED SITE PLAN #8036-SP-002

- PROPOSED DECIDUOUS TREES
- PROPOSED FLOWERING TREES
- PROPOSED LARGE EVERGREEN TREES
- PROPOSED MEDIUM EVERGREEN TREES
- PROPOSED SHRUBS (10' MAX HEIGHT; THE SHRUBS WITHIN THE TRANSMISSION RIGHT OF WAY ARE SELECTED FROM A SUGGESTED SPECIES LIST PER DOMINION VIRGINIA POWER)
- PROPOSED TREES USED AROUND STORMWATER MANAGEMENT AREA
- PROPOSED SHRUBS USED IN BIORETENTION AND STORMWATER MANAGEMENT AREA
- PROPOSED PERENNIALS

TREE COVER CALCULATIONS

TOTAL SITE AREA	383,090	S.F.*
EX. PHASE 1 BLDG. FOOTPRINT	- 24,008	S.F.
PROP. PHASE 2 BLDG. FOOTPRINT	- 8,800	S.F.
PROP. OUTDOOR BAPTISTRY FOOTPRINT	- 2,600	S.F.
PROP. COVERED PICNIC AREA FOOTPRINT	- 2,000	S.F.
PLAYGROUND	- 5,200	S.F.
ADJUSTED SITE AREA	340,484	S.F.
PERCENT REQUIRED	X 20	%
TREE COVER REQUIRED	68,097	S.F.
TREE COVER PROVIDED (PLANTED)	39,200	S.F.
EXISTING TREE COVERAGE (43,930 X 1.25)	+ 54,913	S.F.
TOTAL TREE COVERAGE	94,116	S.F.

*ADJUSTED SITE AREA REFLECTS 3,830 SF OF RIGHT OF WAY DEDICATION PER PLAN #8036-SP-002, DB 18657 PG 1903.

INTERIOR PARKING LOT LANDSCAPING CALCULATIONS

PER APPROVED SITE PLAN #8036-SP-002

TOTAL PARKING AREA	84,524	S.F.
PERCENT REQUIRED	X 5	%
REQUIRED	4,226	S.F.
PROPOSED (30 CATEGORY IV TREES @ 250 SF)	7,500	S.F.

(IN FEET)
1 INCH = 50'

File No. Tax Map No. 106-2 Job No. 04-055 Cadd Dwg. File: 04055SPA Xref:

CONCEPTUAL LANDSCAPE PLAN

NEW HOPE CHURCH

MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

WALTER L. PHILLIPS
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CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE, FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 538-1501
WWW.WLPINC.COM

DRAWN: MW
DATE: 3/10/06 7/10/06 09/ COMMENTS
SCALE: 1" = 50'

COMMONWEALTH OF VIRGINIA
No. 13298
3/13/08
LAND SURVEYOR

STORMWATER MANAGEMENT SUMMARY (ENTIRE SITE)

I. PRE-DEVELOPMENT (EXISTING CONDITIONS)

A. CONTRIBUTING AREAS:

8.71 AC. @ 0.30 (GREEN AREA ON-SITE)
0.17 AC. @ 0.90 (ROOFS, DRIVEWAYS, SIDEWALKS, ETC.)

B. WEIGHTED 'C':

$\frac{(8.71)(0.20)+(0.17)(0.90)}{8.88} = 0.21$ (2 YR STORM)

$\frac{(8.71)(0.30)+(0.17)(0.90)}{8.88} = 0.31$

C. TIME OF CONCENTRATION = 10 MIN.

D. RUNOFF: Q2 = (0.21)(4.60)(8.88) = 8.58 CFS
Q10 = (0.31)(5.92)(8.88) = 16.30 CFS

II. POST-DEVELOPMENT UNDETAINED (2-YEAR, 10-YEAR):

A. CONTRIBUTING AREAS:

2.17 AC. @ 0.30 (UNDETAINED GREEN, ON-SITE)
0.04 AC. @ 0.90 (UNDETAINED PAVED, ON-SITE)
2.21 AC.

B. WEIGHTED 'C':

$\frac{(2.17)(0.30)+(0.04)(0.90)}{2.21} = 0.31$

C. TIME OF CONCENTRATION = 5 MIN.

D. RUNOFF: Q2 = (0.31)(5.45)(2.21) = 3.73 CFS
Q10 = (0.31)(7.27)(2.21) = 4.98 CFS

III. POST-DEVELOPMENT DETAINED (TO POND):

A. CONTRIBUTING AREAS:

3.98 AC. @ 0.30 (GREEN AREA DETAINED, ON-SITE)
2.79 AC. @ 0.90 (PAVED AREA DETAINED, ON-SITE)
6.67 AC.

B. WEIGHTED 'C':

$\frac{(3.88)(0.30)+(2.79)(0.90)}{6.67} = 0.55$

C. RUNOFF: Q2 = (0.55)(5.45)(6.67) = 19.99 CFS
Q10 = (0.55)(7.27)(6.67) = 26.67 CFS

IV. OFFSITE ATEA (TO POND):

A. AREA = 1.74 AC.
B. C FACTOR = 0.33
C. Q2 = (0.33)(5.45)(1.74) = 3.13 CFS
Q10 = (0.33)(7.27)(1.74) = 4.17 CFS

V. MAX RELEASE:

QMAX REL. = QPRE - Q(POST UNDETAINED) + Q(OFFSITE)

Q2 = 8.58- 3.73 + 3.13 = 7.98 CFS
Q10 = 16.30 - 4.98 + 4.17 = 15.48 CFS

VI. ACTUAL RELEASE:
Q2 = 6.39 CFS < 7.98 CFS
Q10 = 8.88 CFS < 15.48CFS

STORMWATER MANAGEMENT NARRATIVE

STORMWATER MANAGEMENT MEASURES ARE INCORPORATED AS A DRY POND THAT WILL REDUCE THE PEAK DRAINAGE FLOWS FROM 2 YEAR AND 10 YEAR STORMS FROM THE PROPERTY TO LEVELS AT OR BELOW THE PRE-DEVELOPEMENT RATES. THERE WILL ALSO BE UNDETAINED RUNOFF FROM THE PROPERTY THAT WILL NOT BE REGULATED; HOWEVER THIS WILL NOT RAISE THE 2 YEAR AND 10 YEAR RELEASE RATE ABOVE PRE-DEVELOPEMENT RATES. THE POND WILL OUTFALL THROUGH PROPOSED PIPES ON THE NORTH EASTERN SIDE OF THE SITE. THE OUTFALL WILL BE IN AN EXISTING STORMWATER EASEMENT ON THE ADJACENT PROPERTY.THERE IS ALSO AN EMERGENCY SPILLWAY THAT IN THE EVENT THE PRINCIPAL SPILLWAY IS BLOCKED WILL BE ABLE TO PASS THE 100 YEAR EVENT SAFELY THROUGH THE POND AND DISCHARGE THE RUNOFF INTO THE EXISTING EASEMENT ON THE ADJACENT SITE. THE UNDETAINED AREAS ARE THE SOUTH WESTERN CORNER OF THE SITE AND ALSO THE EASTERN SIDE OF THE SITE. PARTS OF THE EASTERN SIDE OF THE PROPERTY WILL REMAIN UNTOUCHED THROUGH OUT CONSTRUCTION AND A CONSERVATION EASEMENT WILL BE DESIGNATED IN THESE AREAS. THE TOTAL RELEASE FROM THE SITE FOR THE 2 YEAR STORM WILL BE 6.35 CFS WHICH IS BELOW THE PREDEVOLEMENT RATE OF 7.98 CFS AND THE 10 YEAR FLOW RATE IS 8.39 CFS WHICH IS BELOW THE 15.48 CFS.

2 YEAR ROUTING

GIVEN POND DATA

ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (cu-ft)
251.50	0.0	01
251.75	0.0	1251
252.00	0.1	9971
252.25	0.1	2,5251
252.50	0.1	4,1201
252.75	0.1	5,7831
253.00	0.9	7,5151
253.25	2.8	9,3151
253.50	5.0	11,1871
253.75	6.2	13,1301
254.00	7.2	15,1451
254.25	8.1	17,2331
254.50	18.6	19,3961
254.75	37.8	21,6321
255.00	62.4	23,9451
255.25	91.2	26,3341
255.50	123.7	28,8011
255.75	159.2	31,3451

INTERMEDIATE ROUTING COMPUTATIONS

2S/t (cfs)	2S/t + O (cfs)
0.0	0.0
0.8	0.8
6.5	6.7
16.8	16.9
27.5	27.6
38.6	38.7
50.1	51.0
62.1	64.9
74.6	79.6
87.5	93.7
101.0	108.2
114.9	123.0
129.3	147.9
144.2	182.0
159.6	222.0
175.6	266.8
192.0	315.7
209.0	368.2

Time Increment (t) = 5.0 min.

INFLOW HYDROGRAPH

TIME (min)	INFLOW (cfs)
0.0	0.001
5.0	23.111
10.0	14.881
15.0	11.081
20.0	8.821
25.0	7.221
30.0	6.131
35.0	5.431
40.0	4.661
45.0	4.241
50.0	3.771
55.0	3.481
60.0	3.141
65.0	2.881
70.0	2.631
75.0	2.371
80.0	2.081
85.0	1.821
90.0	1.571
95.0	1.311
100.0	1.061
105.0	0.811
110.0	0.511
115.0	0.251
120.0	0.001

ROUTING COMPUTATIONS

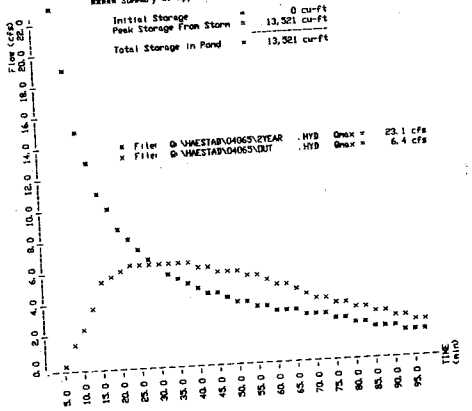
I1+I2 (cfs)	2S/t - O (cfs)	2S/t + O (cfs)	OUTFLOW (cfs)	ELEVATION (ft)
	0.0	0.01	0.00	251.50
23.1	22.9	23.11	0.10	252.40
38.0	56.4	60.91	5.23	253.18
25.9	71.8	91.71	6.03	253.71
19.8	83.1	93.71	6.24	253.80
16.1	82.7	98.51	5.92	253.78
13.5	80.7	96.41	6.31	253.73
11.6	80.6	92.81	6.12	253.67
10.1	77.8	89.51	5.84	253.61
8.9	74.8	85.81	5.53	253.54
8.0	71.6	82.01	5.21	253.48
7.3	68.6	78.21	4.90	253.42
6.6	66.1	74.61	4.26	253.36
6.0	64.0	71.61	3.81	253.32
5.5	62.2	69.01	3.42	253.28
5.0	60.5	66.41	3.06	253.24
4.5	58.9	64.41	2.73	253.20
3.9	57.4	62.31	2.45	253.17
3.4	56.0	60.31	2.17	253.13
2.9	54.5	58.31	1.90	253.10
2.4	53.1	56.41	1.64	253.06
1.9	51.7	54.41	1.37	253.03
1.3	50.3	52.51	1.10	252.99
0.8	48.8	50.51	0.87	
0.3				

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 23.11 cfs
Peak Outflow = 6.39 cfs
Peak Elevation = 253.80 Ft

***** Summary of Approximate Peak Storage *****

Initial Storage = 0 cu-ft
Peak Storage From Storm = 13,521 cu-ft
Total Storage in Pond = 13,521 cu-ft



10 YEAR ROUTING

GIVEN POND DATA

ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (cu-ft)
251.50	0.0	01
251.75	0.0	1251
252.00	0.1	9971
252.25	0.1	2,5251
252.50	0.1	4,1201
252.75	0.1	5,7831
253.00	0.9	7,5151
253.25	2.8	9,3151
253.50	5.0	11,1871
253.75	6.2	13,1301
254.00	7.2	15,1451
254.25	8.1	17,2331
254.50	18.6	19,3961
254.75	37.8	21,6321
255.00	62.4	23,9451
255.25	91.2	26,3341
255.50	123.7	28,8011
255.75	159.2	31,3451

INTERMEDIATE ROUTING COMPUTATIONS

2S/t (cfs)	2S/t + O (cfs)
0.0	0.0
0.8	0.8
6.5	6.7
16.8	16.9
27.5	27.6
38.6	38.7
50.1	51.0
62.1	64.9
74.6	79.6
87.5	93.7
101.0	108.2
114.9	123.0
129.3	147.9
144.2	182.0
159.6	222.0
175.6	266.8
192.0	315.7
209.0	368.2

Time Increment (t) = 5.0 min.

INFLOW HYDROGRAPH

TIME (min)	INFLOW (cfs)
0.0	0.001
5.0	30.821
10.0	19.841
15.0	14.671
20.0	11.741
25.0	9.731
30.0	8.231
35.0	7.121
40.0	6.231
45.0	5.551
50.0	5.001
55.0	4.581
60.0	4.201
65.0	3.861
70.0	3.521
75.0	3.141
80.0	2.801
85.0	2.461
90.0	2.121
95.0	1.741
100.0	1.401
105.0	1.061
110.0	0.721
115.0	0.341
120.0	0.001

ROUTING COMPUTATIONS

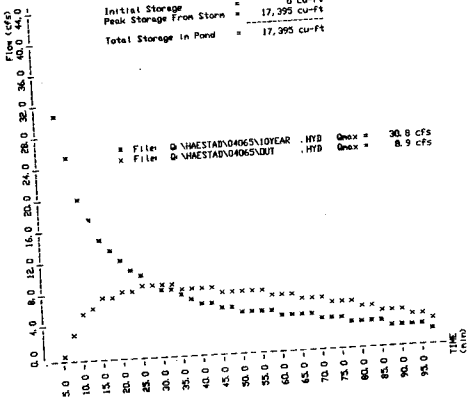
I1+I2 (cfs)	2S/t - O (cfs)	2S/t + O (cfs)	OUTFLOW (cfs)	ELEVATION (ft)
	0.0	0.01	0.00	251.50
30.8	30.6	30.81	0.10	252.32
50.7	71.0	81.31	5.14	253.95
34.5	91.5	105.51	7.08	254.16
26.4	117.9	117.91	7.79	254.26
21.5	123.8	123.81	8.05	254.27
17.9	107.1	125.01	8.09	254.24
15.4	106.3	122.41	8.07	254.19
13.4	103.9	119.61	7.90	254.13
11.8	100.3	115.61	7.65	254.05
10.6	96.1	110.91	7.36	253.96
9.6	91.7	105.71	7.03	253.87
8.8	87.1	100.41	6.67	253.77
8.1	82.6	95.21	6.30	253.68
7.4	78.2	90.01	5.88	253.59
6.7	74.0	84.91	5.45	253.51
5.9	69.8	79.91	5.03	253.42
5.3	66.4	75.11	4.33	253.35
4.6	63.6	71.01	3.78	253.29
3.9	61.1	67.51	3.18	253.24
3.1	58.8	64.21	2.71	253.18
2.5	56.7	61.31	2.30	253.13
1.8	54.6	58.41	1.92	253.08
1.1	52.6	55.71	1.54	253.03
0.3	50.6	52.91	1.16	

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 30.82 cfs
Peak Outflow = 8.88 cfs
Peak Elevation = 254.27 Ft

***** Summary of Approximate Peak Storage *****

Initial Storage = 0 cu-ft
Peak Storage From Storm = 17,395 cu-ft
Total Storage in Pond = 17,395 cu-ft



FOR INFORMATION ONLY

SHEET 5 OF 11

WALTER L. PHILLIPS
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(703) 532-6163 FAX (703) 533-1201

DRAWN: MPC CHKD: WLP DATE: 8-5-05 SCALE: NOT TO SCALE

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	APPROVED	REV. BY	DATE

STORMWATER MANAGEMENT CALCULATIONS

PROPOSED NEW HOPE CHURCH
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

File No. FL-6 Tax Map No. 108-2 Job No. 04-065 Cadd Dwg. File: 04065801 Xref:

ONSITE TO BIO-RETENTION PONDS (CONTROLLED)
OFFSITE TO BIO-RETENTION PONDS (CONTROLLED)
ONSITE TO SWM POND (CONTROLLED)
ONSITE TO SWM POND (UNCONTROLLED)
ONSITE TO CONSERVATION EASEMENT (CONTROLLED)
ONSITE TO OFFSITE AREAS (UNCONTROLLED)

BMP NARRATIVE

THE BMP REQUIREMENTS ARE MEET BY THREE DIFFERENT BMP SYSTEMS. THERE IS A TOTAL OF 4 BIO-RETENTION FACILITIES ONSITE, A BMP/SWM POND THAT WILL TREAT A PART OF THE RUNOFF THAT FLOWS TO IT, AND ALSO A CONSERVATION EASEMENT ON THE SITE. THE 4 BIO-RETENTION FACILITIES WILL COMBINE TO COLLECT 19.07% OF THE 40.00% REQUIREMENT. THIS WILL BE ACHIEVED THROUGH COLLECTING ONSITE RUNOFF AND ALSO TREATING OFFSITE RUNOFF. THE BMP/SWM POND WILL TREAT 13.14% OF THE 40.00% REQUIREMENT. THIS WILL BE ACHIEVED BY CTREATING ONLY A PORTION OF THE RUNOFF THAT FLOWS TO THE POND. FINALLY A CONSERVATION EASEMENT HAS BEEN CREATED TO TREAT 9.00% OF 40.00% REQUIREMENT. A CONSERVATION EASEMENT TREATES 100.00% OF THE AREA THAT IT ENCOMPASSES. THROUGH THESE MEASEURES A TOTAL OF 41.21% PHOSPHOROUS REMOVAL WILL SATISFY THE 40.00% REQUIREMENT.

BIO-RETENTION #	① BMP ELEV.	② MULCH ELEV.	③ WIDTH	④ SIDE WIDTH	⑤ SIDE WIDTH	⑥ THROAT ELEV.	⑦ TOP ELEV.	⑧ 6" INV.	⑨ 18" INV. OUT	⑩ LENGTH	⑪ 6" INV	⑫ 6" INV.
BIO-RETENTION 1	265.20	264.70	10'	5'	5'	265.20	266.03	260.29	259.51	42'	260.95	260.79
BIO-RETENTION 2	263.00	262.50	10'	5'	5'	263.00	263.83	258.14	257.88	32'	258.75	258.64
BIO-RETENTION 3	260.90	260.40	10'	5'	5'	260.90	261.73	256.43	256.33	57'	256.65	256.53
BIO-RETENTION 4	262.60	262.10	VARIES	5'	5'	262.60	263.43	257.82	257.72	82'	258.35	257.94

(@ SH. #14)

PLEASE NOTE THAT THE CIRCLED NUMBERS CORRESPOND TO THE CIRCLED NUMBERS ON THE DETAIL SHOWN BELOW.

GENERAL MONITORING WELL DETAIL
N.T.S.

SECTION A-A
N.T.S.

SECTION B-B
N.T.S.

NOTE: BMP FACILITY TO BE PRIVATELY OWNED AND MAINTAINED (A PRIVATE MAINTENANCE AGREEMENT SHALL BE REQUIRED)

BIO-RETENTION TYPICAL SECTIONS

BMP FACILITY DESIGN CALCULATIONS

2. WATERSHED INFORMATION

# SUBAREA DESIGNATION AND DESCRIPTION	"C"	ACRES
1. ONSITE TO BIO-RETENTION #1	0.62	0.34
2. ONSITE TO BIO-RETENTION #2	0.72	0.17
3. ONSITE TO BIO-RETENTION #3	0.74	0.35
4. ONSITE TO BIO-RETENTION #4	0.67	0.96
5. ONSITE TO POND (NOT COVERED BY BIO-RENETION)	0.52	2.77
6. ONSITE UNCONTROLLED (TO POND-AREA 1)	0.53	1.66
7. ONSITE UNCONTROLLED (TO POND-AREA 2)	0.58	0.12
8. ONSITE UNCONTROLLED (TO POND-AREA 3)	0.30	0.30
9. ONSITE CONTROLLED (CONSERVATON EASEMENT)	0.30	0.88
10. ONSITE UNCONTROLLED (OFFSITE)	0.32	1.33

3. WEIGHTED AVERAGE "C" FACTOR FOR THE SITE

(A) AREA OF THE SITE (SEE MAP BELOW) (a) 8.88 ACRES

(B) SUBAREA DESIGNATION

	"C"		ACRES		PRODUCT
1. ONSITE TO BIO-RETENTION #1	0.62	•	0.34	=	0.21
2. ONSITE TO BIO-RETENTION #2	0.72	•	0.17	=	0.12
3. ONSITE TO BIO-RETENTION #3	0.74	•	0.35	=	0.26
4. ONSITE TO BIO-RETENTION #4	0.67	•	0.96	=	0.64
5. ONSITE TO POND (NOT COVERED BY BIO-RETENTION)	0.52	•	2.77	=	1.44
6. ONSITE UNCONTROLLED (TO POND AREA-1)	0.53	•	1.66	=	0.88
7. ONSITE UNCONTROLLED (TO POND AREA-2)	0.58	•	0.12	=	0.07
8. ONSITE UNCONTROLLED (TO POND AREA-3)	0.30	•	0.30	=	0.09
9. ONSITE UNCONTROLLED (CONSERVATION EASEMENT)	0.30	•	0.88	=	0.26
10. ONSITE UNCONTROLLED (OFFSITE)	0.32	•	1.33	=	0.43
			(b) TOTAL	=	4.39

(C) WEIGHTED AVERAGE "C" FACTOR (c)=(b)/(a) = 0.49

4. PHOSPHORUS REMOVAL FOR THE SITE

SUBAREA DESIGNATION (1)	BMP TYPE (2)	REMOVAL EFF. (%) (3)		AREA RATIO (4)	"C" FACTOR RATIO (5)	PRODUCT BMP SYSTEM (6)
1. BIO-RETENTION #1 (ONSITE)		65	x 0.34/8.88	= 0.04	x 0.62/0.49	= 3.30%
2. BIO-RETENTION #2 (ONSITE)		65	x 0.17/8.88	= 0.02	x 0.72/0.49	= 1.91%
3. BIO-RETENTION #3 (ONSITE)		65	x 0.35/8.88	= 0.04	x 0.74/0.49	= 3.93%
5. BIO-RETENTION #4 (ONSITE)		65	x 0.96/8.88	= 0.11	x 0.67/0.49	= 9.77%
6. BIO-RETENTION #4 (OFFSITE)		65	x 0.07/8.88	= 0.002	x 0.30/0.49	= 0.08%
7. BIO-RETENTION #4 (OFFSITE)		65	x 0.07/8.88(0.20)	= 0.002	x 0.30/0.49	= 0.08%
14. POND		40	x 2.79/8.88	= 0.31	x 0.52/0.49	= 13.14%
15. CONSERVATION EASEMENT		100	x 0.84/8.88	= 0.09	x 0.30/0.30	= 9.00%
					(e) TOTAL	= 41.21%

5. DETERMINE COMPLIANCE WITH PHOSPHORUS REMOVAL REQUIREMENT

(A) SELECT REQUIREMENT (A) 40%

WATER SUPPLY OVERLAY DISTRICT (OCCOQUAN WATERSHED) = 50% (FAIRFAX COUNTY AND PRINCE WILLIAM COUNTY)

CHESAPEAKE BAY PRESERVATION AREA (NEW DEVELOPMENT) = 40% (FAIRFAX COUNTY) 50% (PRINCE WILLIAM COUNTY)

CHESAPEAKE BAY PRESERVATION AREA (REDEVELOPMENT) = [1-0.9X("I"pre/"I"post)] x 100 = ____

(B) IF LINE 4(A) 41.21% > LINE 5(A) 40.00% THEN PHOSPHOROUS REMOVAL REQUIREMENT IS SATISFIED.

6. WEIGHTED AVERAGE "C" FACTOR FOR THE BMP FACILITY

NOTE:
REFER TO THIS SHEET & 21 OF 40 FOR BIO-RETENTION DETAILS
REFER TO SHEET 19 OF 40 FOR STORM WATER/BMP POND DETAILS

PART &: DETERMINE THE STORAGE REQUIRED FOR EACH POND #1

(A) EXTENDED DETENTION DRY POND
CHART A6-40 VALUE (APPENDIX 4-3) FOR BMP STORAGE PER ACRE (a) 919 CF/AC
[4375 x "C") - 875] OR [31.25 x % IMP.] =
= DESIGN 1 (48 HOUR DRAWDOWN) 6.67 x 919 = 6,129 CF

VI. OUTLET COMPUTATION
PART &: DETERMINE THE REQUIRED ORIFICE SIZE FOR THE POND

(A) BMP STORAGE REQUIREMENT (S) FROM PART 8 (a) 6,129
(B) MAXIMUM HEAD (h) AT THE REQUIRED BMP STORAGE FROM THE ELEVATION-STORAGE CURVE FOR THE FACILITY (b) 1.80
(C) PEAK OUTFLOW RATE (Qp) AT THE MAXIMUM HEAD FOR A DRAWDOWN TIME OF 48 HRS [Qp = S/(0.5 x 3600 x 48)] 0.0000116 x LINE 9(a) 6,129 = (c) 0.07
(D) REQUIRED ORIFICE AREA (A) [A = Qp/(0.6 x (64.4 x h)^0.5)] LINE 9(c) 0.07 / [0.6 x (64.4 x LINE 9(b) 1.80)^0.5] (d) 0.011
(E) DIAMETER OF A CIRCULAR ORIFICE 2.0 x (LINE 9(d) 0.011/3.1415927) (e) 0.04 = 1" DIA.

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

REVISION APPROVED BY

CHARLES F. DUNLAP No. 13086 8/5/05 LAND SURVEYOR — COMMONWEALTH OF VIRGINIA

WALTER L. PHILLIPS
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207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1301
WWW.WLPINC.COM

SCALE: AS SHOWN | DATE: 8-5-05, CO. REVS. 2-15-06 CO. REVISION 12-12-05 | DRAWN: MRW, MJLAKE

BEST MANAGEMENT COMPUTATIONS

PROPOSED NEW HOPE CHURCH

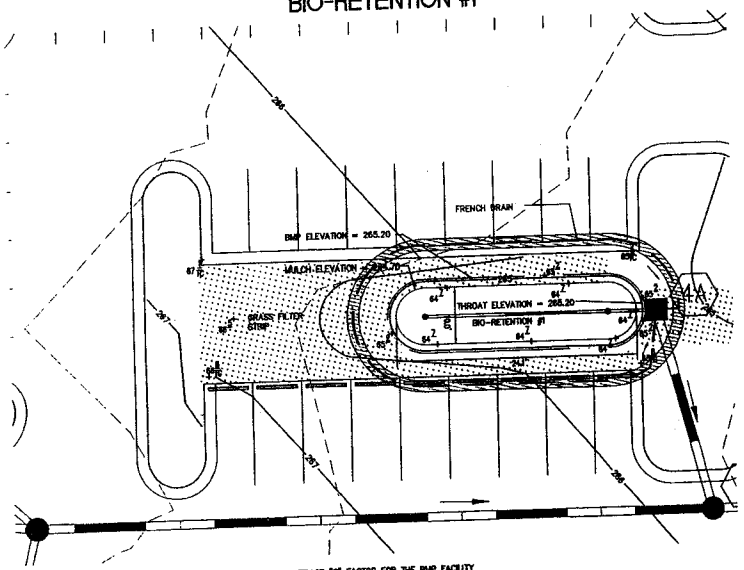
MT. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

FOR INFORMATION ONLY

File No. FL-6 Tax Map No. 106-2 Job No. 04-065 Cadd Dwg. File: 04065BMP Xref:

BIO-RETENTION #1



6. WEIGHTED AVERAGE "C" FACTOR FOR THE BMP FACILITY

(A) AREA DRAINING TO THE BMP FACILITY (SEE MAP SHEET 16) (a) 0.34 ACRES

(B) SUBAREA DESIGNATION	"C"	ACRES	PRODUCT
1. ONSITE TO BIO-RETENTION	0.62	X 0.34	= 0.21

(b) TOTAL = 0.21

(C) WEIGHTED AVERAGE "C" FACTOR (c)=(b)/(a) = 0.62

7. DETERMINE THE STORAGE REQUIREMENT FOR BMP FACILITY

1.0" STORAGE/IMP. AC.

(A) BIORETENTION AREA WITH 65% PHOSPHORUS REMOVAL (5% OF IMPERVIOS AREA)

BIO-RETENTION 0.05 * 7,841 SF =392.0 SF (400 SF)

B) SURFACE VOLUME ABOVE FILTER:

SURFACE AREA OF BIORETENTION FILTER = 400 SF

BIO-RETENTION	ELEVATION	VOLUME
	261.45	0
	264.70	1,300 CF
	265.20	1,538 CF

8. OUTFLOW COMPUTATIONS:

RAIN GARDEN 0.08 FT x 0.34 AC x 0.62 x 43,560 SF/AC = 735 CF

BMP STORAGE OUTFLOW IS THROUGH THE BIORETENTION AREA FACILITY. OUTFLOW FROM THE FACILITY IS THROUGH A 6" PVC PERFORATED DRAIN IN THE BOTTOM OF THE FILTER, WHICH DISCHARGES INTO STORM STRUCTURE 4A, AND IS DESIGNED TO DRAIN COMPLETELY WITHIN 48 HOURS OR LESS. THE 6" PVC PIPE HAS 1/2" HOLES ON EACH SIDE OF THE PIPE

FOR 1/2" DIA HOLE, $Q = CA\sqrt{(2gh)}$

$(0.60)(0.00136)\sqrt{(64.4)(3.75-.25)}$

$(0.60)(0.00136)(15.53) = 0.013$

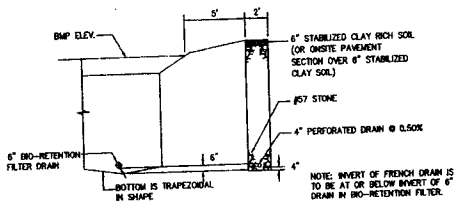
=0.013 CFS / HOLE

4 SETS OF 2 HOLES ON CENTER EVERY 8'

735 CF / 0.013 CFS/hole x 8 HOLES = DRAW DOWN TIME

2.0 HOURS = DRAW DOWN TIME

h=THE HEIGHT (IN FEET) FROM THE BMP ELEVATION TO THE CENTERLINE OF THE 6" BMP PIPE. THE 1/2" DIAMETER HOLE WILL BE LOCATED ON THE CENTERLINE OF THE 6" PVC PIPE



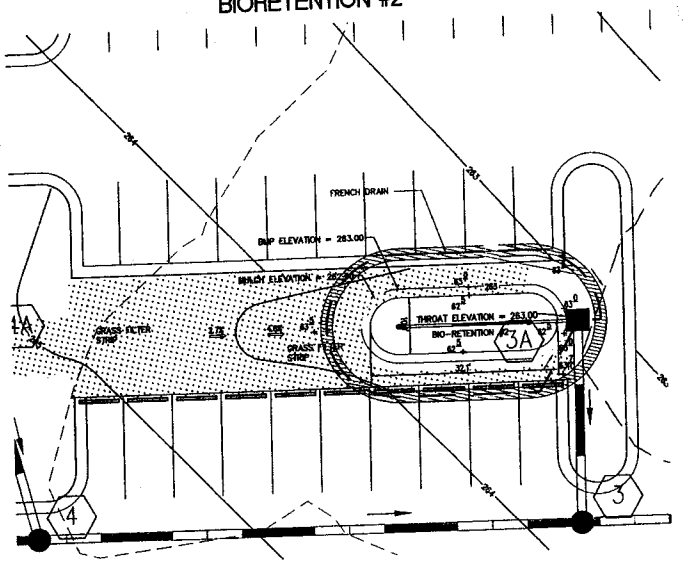
NOTE: INVERT OF FRENCH DRAIN IS TO BE AT OR BELOW INVERT OF 6" DRAIN IN BIO-RETENTION FILTER.

FRENCH DRAIN DETAIL*

N.T.S.

* SEE GEOSPECS, SHEET 22

BIORETENTION #2



6. WEIGHTED AVERAGE "C" FACTOR FOR THE BMP FACILITY

(A) AREA DRAINING TO THE BMP FACILITY (SEE MAP SHEET 16) (a) 0.17 ACRES

(B) SUBAREA DESIGNATION	"C"	ACRES	PRODUCT
1. ONSITE TO BIO-RETENTION	0.72	X 0.17	= 0.12

(b) TOTAL = 0.12

(C) WEIGHTED AVERAGE "C" FACTOR (c)=(b)/(a) = 0.72

7. DETERMINE THE STORAGE REQUIREMENT FOR BMP FACILITY

1.0" STORAGE/IMP. AC.

(A) BIORETENTION AREA WITH 85% PHOSPHORUS REMOVAL (5% OF IMPERVIOS AREA)

BIO-RETENTION 0.05 * 5,213 SF =261 SF (300 SF)

B) SURFACE VOLUME ABOVE FILTER:

SURFACE AREA OF BIORETENTION FILTER = 300 SF

BIO-RETENTION	ELEVATION	VOLUME
	259.25	0
	262.50	975 CF
	263.00	1,115 CF

8. OUTFLOW COMPUTATIONS:

RAIN GARDEN 0.08 FT x 0.17 AC x 0.72 x 43,560 SF/AC = 427 CF

BMP STORAGE OUTFLOW IS THROUGH THE BIORETENTION AREA FACILITY. OUTFLOW FROM THE FACILITY IS THROUGH A 6" PVC PERFORATED DRAIN IN THE BOTTOM OF THE FILTER, WHICH DISCHARGES INTO STORM STRUCTURE 3A, AND IS DESIGNED TO DRAIN COMPLETELY WITHIN 48 HOURS OR LESS. THE 6" PVC PIPE HAS 1/2" HOLES ON EACH SIDE OF THE PIPE

FOR 1/2" DIA HOLE, $Q = CA\sqrt{(2gh)}$

$(0.60)(0.00136)\sqrt{(64.4)(3.75-.25)}$

$(0.60)(0.00136)(15.53) = 0.013$

=0.013 CFS / HOLE

2 SETS OF 2 HOLES ON CENTER EVERY 11'

427 CF / 0.013 CFS/hole x 4 HOLES = DRAW DOWN TIME

2.3 HOURS = DRAW DOWN TIME

h=THE HEIGHT (IN FEET) FROM THE BMP ELEVATION TO THE CENTERLINE OF THE 6" BMP PIPE. THE 1/2" DIAMETER HOLE WILL BE LOCATED ON THE CENTERLINE OF THE 6" PVC PIPE

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DATE: 8-5-05, CO. REVS. 2-15-06
01 REVISION 12-14-05 DRAWN BY: WLPINC

SCALE 1"=40'

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

BEST MANAGEMENT COMPUTATIONS

PROPOSED NEW HOPE CHURCH

MT. VERNON DISTRICT

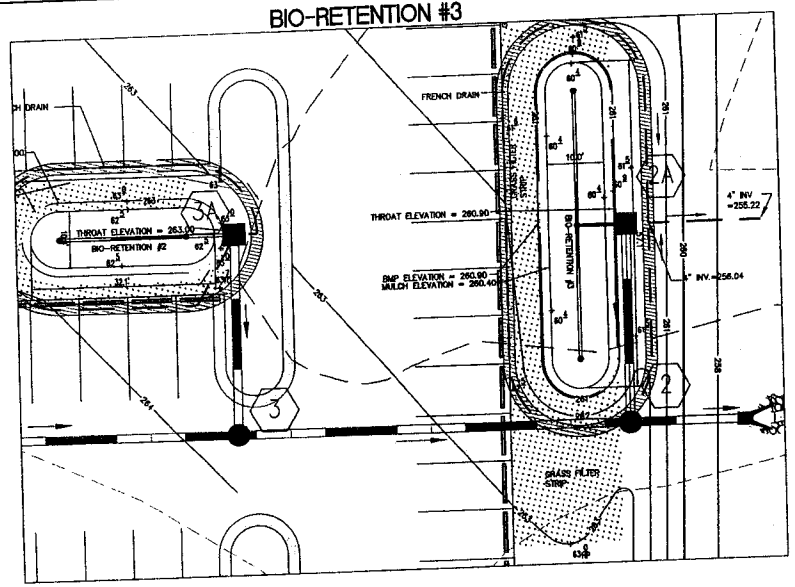
FAIRFAX COUNTY, VIRGINIA

FOR INFORMATION ONLY

SHEET 7 OF 11

File No. FL-6 Tax Map No. 105-2 Job No. 04-065 Cadd Dwg. File: 04065801 Xref:

BIO-RETENTION #3



6. WEIGHTED AVERAGE "C" FACTOR FOR THE BMP FACILITY

(A) AREA DRAINING TO THE BMP FACILITY (SEE MAP SHEET 16) (a) 0.35 ACRES

(B) SUBAREA DESIGNATION

	"C"	ACRES	PRODUCT
1. ONSITE TO BIO-RETENTION	0.74	X 0.35	= 0.26

(b) TOTAL = 0.26

(C) WEIGHTED AVERAGE "C" FACTOR (c)=(b)/(a) = 0.74

7. DETERMINE THE STORAGE REQUIREMENT FOR BMP FACILITY

1.0" STORAGE/IMP. AC.

(A) BIORETENTION AREA WITH 65% PHOSPHORUS REMOVAL (5% OF IMPERVIOS AREA)

BIO-RETENTION 0.05 * 10,672 SF =533 SF (550 SF)

B) SURFACE VOLUME ABOVE FILTER:

SURFACE AREA OF BIORETENTION FILTER = 550 SF

BIO-RETENTION	ELEVATION	VOLUME
	257.15	0
	260.40	1,788 CF
	260.90	2,112 CF

8. OUTFLOW COMPUTATIONS:

RAIN GARDEN 0.08 FT x 0.35 AC x 0.74 x 43,560 SF/AC = 903 CF

BMP STORAGE OUTFLOW IS THROUGH THE BIORETENTION AREA FACILITY. OUTFLOW FROM THE FACILITY IS THROUGH A 6" PVC PERFORATED DRAIN IN THE BOTTOM OF THE FILTER, WHICH DISCHARGES INTO STORM STRUCTURE 2A, AND IS DESIGNED TO DRAIN COMPLETELY WITHIN 48 HOURS OR LESS. THE 6" PVC PIPE HAS 1/2" HOLES ON EACH SIDE OF THE PIPE

FOR 1/2" DIA HOLE, $Q = CA\sqrt{(2gh)}$

$(0.60)(0.00136)/(64.4)(4.75-.25)$

$(0.60)(0.00136)(15.53) = 0.013$

$=0.013$ CFS / HOLE

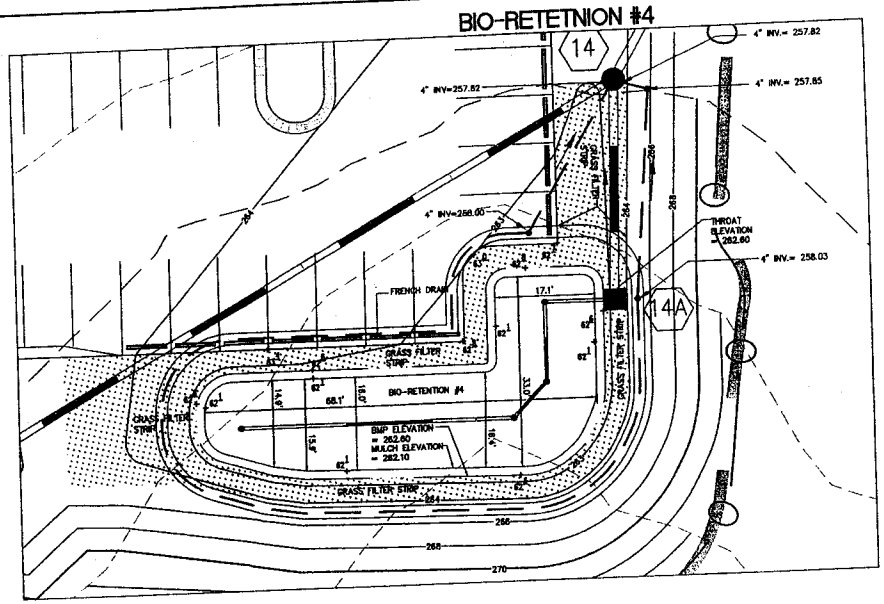
5 SETS OF 2 HOLES ON CENTER EVERY 12'

903 CF / 0.013 CFS/hole x 10 HOLES = DRAW DOWN TIME

1.9 HOURS = DRAW DOWN TIME

h=THE HEIGHT (IN FEET) FROM THE BMP ELEVATION TO THE CENTERLINE OF THE 6" BMP PIPE. THE 1/2" DIAMETER HOLE WILL BE LOCATED ON THE CENTERLINE OF THE 6" PVC PIPE

BIO-RETETNION #4



6. WEIGHTED AVERAGE "C" FACTOR FOR THE BMP FACILITY

(A) AREA DRAINING TO THE BMP FACILITY (SEE MAP SHEET 16) (a) 1.09 ACRES

(B) SUBAREA DESIGNATION

	"C"	ACRES	PRODUCT
1. ONSITE TO BIO-RETENTION	0.67	X 0.96	= 0.64
2. ONSITE TO BIO-RETENTION	0.30	X 0.13	= 0.04

(b) TOTAL = 0.68

(C) WEIGHTED AVERAGE "C" FACTOR (c)=(b)/(a) = 0.62

7. DETERMINE THE STORAGE REQUIREMENT FOR BMP FACILITY

1.0" STORAGE/IMP. AC.

(A) BIORETENTION AREA (RAIN GARDEN) WITH 65% PHOSPHORUS REMOVAL (5% OF IMPERVIOS AREA)

BIO-RETENTION 0.05 * 25,700 SF =1,285 SF (1,300 SF)

B) SURFACE VOLUME ABOVE FILTER:

SURFACE AREA OF BIORETENTION FILTER = 1,300 SF

BIO-RETENTION	ELEVATION	VOLUME
	259.35	0
	262.60	1,560 CF *
	263.10	2,398 CF

* 40% VOIDS ASSUMED FOR SOILS MEDIA AND NO STORAGE ASSUME FOR MULCH LAYER

8. OUTFLOW COMPUTATIONS:

RAIN GARDEN 0.08 FT x 1.09 AC x 0.62 x 43,560 SF/AC = 2,355 CF < 2,394 CF*

* STORAGE CAPACITY OK

BMP STORAGE OUTFLOW IS THROUGH THE BIORETENTION AREA FACILITY. OUTFLOW FROM THE FACILITY IS THROUGH A 6" PVC PERFORATED DRAIN IN THE BOTTOM OF THE FILTER, WHICH DISCHARGES INTO STORM STRUCTURE 14A, AND IS DESIGNED TO DRAIN COMPLETELY WITHIN 48 HOURS OR LESS. THE 6" PVC PIPE HAS 1/2" HOLES ON EACH SIDE OF THE PIPE

FOR 1/2" DIA HOLE, $Q = CA\sqrt{(2gh)}$

$(0.60)(0.00136)/(64.4)(3.75-.25)$

$(0.60)(0.00136)(16.01) = 0.013$

$=0.013$ CFS / HOLE

9 SETS OF 2 HOLES ON CENTER EVERY 8'

2355 CF / 0.013 CFS/hole x 18 HOLES = DRAW DOWN TIME

2.8 HOURS = DRAW DOWN TIME

h=THE HEIGHT (IN FEET) FROM THE BMP ELEVATION TO THE CENTERLINE OF THE 6" BMP PIPE. THE 1/2" DIAMETER HOLE WILL BE LOCATED ON THE CENTERLINE OF THE 6" PVC PIPE

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(703) 532-6163 FAX (703) 533-1501

DATE: 8-5-05, CO. REVS. 2-15-06
(1) REVISION 12-12-05

SCALE: 1"=10'

DRAWN: MPC, NLWE

CHARLES T. STAM, JR. No. 13581 LAND SURVEYOR 12/5/05

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

REVISION APPROVED BY

BEST MANAGEMENT COMPUTATIONS

PROPOSED NEW HOPE CHURCH

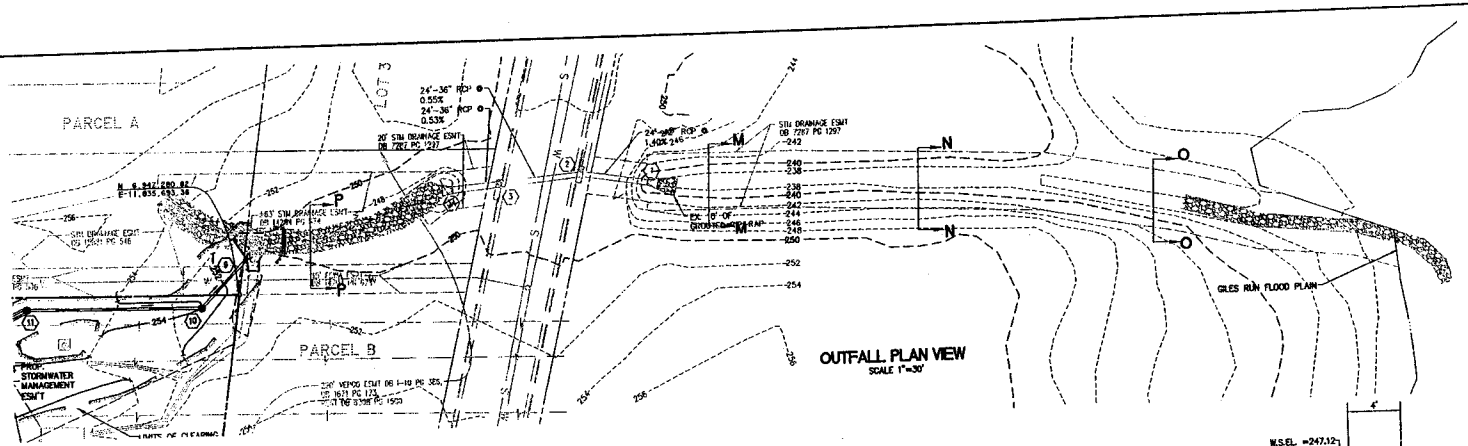
MT. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

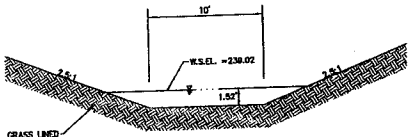
FOR INFORMATION ONLY

SHEET 8 OF 11

File No. FL-6 Tax Map No. 108-2 Job No. 04-085 Cadd Dwg. File: 04085R01 Xref:

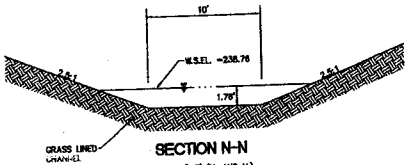


OUTFALL PLAN VIEW
SCALE 1"=30'

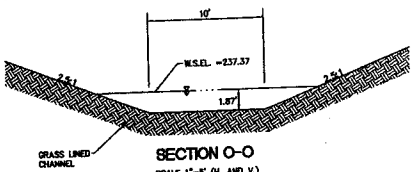


SECTION M-M
SCALE 1"=5' (H. AND V.)

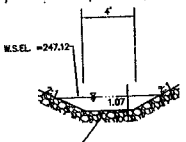
Q_{10} = 72.11 CFS
Q_{CAP} = 800 CFS
S = 0.010 FT/FT
N = 0.050 *
D = 1.52 FT
V_2 = 3.12 FT/S < 4.00 FT/S**
V_{10}= 3.32 FT/S
A = 21.73 SF
TOP WIDTH = 17.81 FT
CRITICAL DEPTH = 1.07 FT



SECTION N-N
SCALE 1"=5' (H. AND V.)
Q_2 = 69.92 CFS
Q_{10} = 90.00 CFS
Q_{CAP} = 800 CFS
S = 0.010 FT/FT
N = 0.050*
D = 1.76 FT
V_2 = 3.29 FT/S < 4.00 FT/S**
V_{10} = 3.54 FT/S
A = 25.19 SF
TOP WIDTH = 18.81 FT
CRITICAL DEPTH = 1.22 FT



SECTION O-O
SCALE 1"=5' (H. AND V.)
Q_2 = 77.89 CFS
Q_{10} = 100.00 CFS
Q_{CAP} = 800 CFS
S = 0.010 FT/FT
N = 0.050*
D = 1.87 FT
V_2 = 3.38 FT/S <4.00 FT/S**
V_{10} = 3.66 FT/S
A = 27.35 SF
TOP WIDTH = 19.33 FT
CRITICAL DEPTH = 1.30 FT

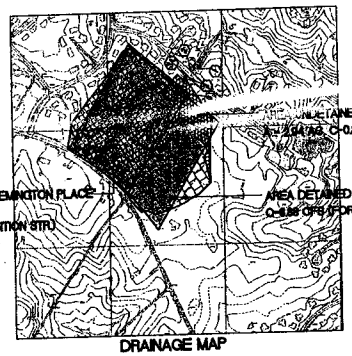


SECTION P-P
SCALE 1"=5' (H. AND V.)
Q_2 = 24.47 CFS
Q_{10} = 32.67 CFS
S = 0.020 FT/FT
N = 0.035
D = 1.07 FT
V_2 = 4.56 FT/S
V_{10} = 4.85 FT/S
A = 8.59 SF
TOP WIDTH = 8.29 FT
CRITICAL DEPTH = 1.08 FT

NOTE:
* "n" VALUE FROM APPROVED PLAN # 8733-SD-01-2 REMINGTON PLACE OUTFALL CHANNEL IS A GRASSED LINED CHANNEL
** BASED ON PFM 8-1004.1A

NOTE:
THE MAXIMUM [illegible] VELOCITY OF DISCHARGES SHALL [illegible] THAN 4 FT/S. SWALES, DITCHES AND CHANNELS WITH [illegible] WILL REQUIRE SPECIAL LININGS.

OUTFALL PROFILE VIEW
SCALE
1"=5' (H)
1"=5' (V)



DRAINAGE MAP

ADEQUATE OUTFALL NARRATIVE

DISCHARGES FORM THIS DEVELOPMENT ARE EITHER NON-CONCENTRATED SHEET FLOW OR INTO AN EXISTING RIP RAP CHANNEL WITHIN A RECORDED DRAINAGE EASEMENT IN PARCEL B, SECTION 6, CROSSPOINTE. THE NON-CONCENTRATED FLOWS ARE ALSO TO CROSSPOINTE. THE POST-DEVELOPMENT FLOWS FROM THE PROPERTY ARE LESS THAN THE PRE-DEVELOPMENT RATES DUE TO THE ONSITE DETENTION PROGRAM. ONCE ENTERING CROSSPOINTE, THESE FLOWS ARE COLLECTED IN AN EXISTING STORM DRAINAGE PIPE SYSTEM IN CROSS CHASE CIRCLE. FLOWS FROM THIS PIPE SYSTEM ARE THEN DISCHARGE INTO A WELL DEFINED RIP RAP AND GRASS CHANNEL LOCATED WITHIN AN EXISTING RECORDED DRAINAGE EASEMENT ESTABLISHED AS PART OF THE CROSSPOINTE DEVELOPMENT. THIS CHANNEL CONVEYS THE FLOWS TO THE GILES RUN FLOOD PLAIN. PHOTOGRAPHS OF THESE CHANNELS ARE INCORPORATED INTO THESE PLANS ON SHEET 24.

CROSS-SECTION F-P RELATES TO THE EXISTING RIP RAP CHANNEL BETWEEN PROPOSED STRUCTURE 9 AND CROSS CHASE CIRCLE. THE 2 YEAR STORM VELOCITY IS 4.8 FPS, WHICH IS AN ALLOWABLE VELOCITY FOR A RIP RAP CHANNEL; AND, THE 10 YEAR STORM FLOW IS CONTAINED WITHIN THE LIMITS OF THE CHANNEL. THIS CHANNEL MEETS THE DEFINITION OF A BED AND BANK CHANNEL.

CALCULATIONS FOR THE EXISTING STORM PIPE SYSTEM UNDER CROSS CHASE CIRCLE ARE INCLUDED IN THE PLAN ON THIS SHEET; AND, THESE CALCULATION DEMONSTRATE THAT THE PIPE SYSTEM IS ADEQUATE TO CONVEY THE 10-YEAR STORM FLOWS.

CROSS - SECTIONS M-M, N-N AND O-O PERTAIN TO THE GRASS LINED DITCH BETWEEN CROSS CHASE CIRCLE AND THE GILES RUN FLOOD PLAIN, CONSTRUCTED WITH THE CROSSPOINTE PROJECT (CROSS-SECTION M-M CORRESPONDS TO CROSS - SECTION B-B IN THE RECENTLY APPROVED PLANS FOR REMINGTON PLACE, PLAN #8733-SD-001.) THESE CROSS - SECTIONS DEMONSTRATE THAT THE 2 YEAR STORM VELOCITIES ARE ALL 3.5 fps OR LESS, WHICH IS LESS THAN THE ALLOWABLE VELOCITY OF 4.0 fps SPECIFIED IN PFM 8-1004.1A FOR A DESIGNED GRASS-LINED DITCH; AND THE 10 YEAR STORM FLOWS ARE CONTAINED ENTIRELY WITHIN THE LIMITS OF THE CHANNEL. THIS CHANNEL MEETS THE DEFINITION OF A BED AND BANKS CHANNEL.

BASED ON THE CALCULATIONS CONTAINED IN THE PLAN, SUPPLEMENTED BY A REVIEW OF THE FIELD CONDITIONS, IT IS THE SUBMITTING ENGINEER'S OPINION THAT THE RECEIVING CHANNELS ARE ADEQUATE; AND, THESE WILL BE NO ADVERSE IMPACT RESULTING FROM THE REDUCED DRAINAGE FLOWS GENERATED BY THIS DEVELOPMENT.

OVERLAND RELIEF NARRATIVE

IN THE EVENT OF A TOTAL STORM SEWER FAILURE THE RUNOFF WILL RUN FROM THE WESTERN SIDE OF THE SITE THROUGH THE PARKING LOT AREA DOWN TO THE POND. THE FLOW WILL CONTINUE TOWARDS THE EASTERN SIDE OF THE SITE WHERE IT WILL ENTER AN EXISTING STORM EASEMENT ON THE NORTH EASTERN SIDE OF THE SITE.

ALL DRAINAGE FLOWS ARE DIRECTED AWAY FROM THE PROPOSED BUILDING AND TOWARDS THE PARKING LOT AND PROPOSED INLETS.

IT IS THE SUBMITTING ENGINEER'S OPINION THAT THE BUILDING WILL NOT FLOOD IN THE EVENT OF A TOTAL STORM SEWER FAILURE, AND THE 100 YEAR OUTFALL IS ADEQUATE.

STORM SEWER CALCULATIONS

FROM POINT	TO POINT	AREA DRAIN ACRES	RUN-OFF "A" C	CA INCRE-MENT	CA ACCUM-ULATED	INLET TIME MIN-UTES	RAIN F'ALL IN/HR	RUNOFF Q C.F.S.	INVERT ELEV'S UPPER END	INVERT ELEV'S LOWER END	LENGTH FT.	SLOPE FT./FT.	MANNING'S "n"	DIA. IN.	CAPA-CITY C.F.S.	VEL. F.P.S.	FLOW TIME SEC.
3A	3	26.57	0.35	9.30	9.30	5.00	7.27	32.67*	242.86	241.38	24	0.053	0.013	36	153.55	17.26	1.38
3	2	11.000	0.45	4.95	14.25	5.00	7.27	58.68	241.23	239.14	38	0.055	0.013	36	156.42	21.41	1.77
2	1	1.180	0.45	0.53	14.78	5.00	7.27	72.91	238.86	238.23	30	0.014	0.013	42	119.04	12.98	2.31

* AREA DETAINED TO EX. STR.3A FORM POND 10 YEAR ROUTING = 8.88 CFS
AREA DETAINED FORM REMINGTON PLACE TO EX. STR. 3A=16.31 CFS
AREA UNDETAINED TO EX. STR.3A =2.94 AC, C=0.35, Q10=7.48 CFS

TOTAL RUNOFF TO EXISTING STRUCTURE 3A AFTER DEVELOPMENT IS 8.88 CFS + 16.31 CFS +7.48 CFS =32.67 CFS (REDUCE 17.75%
COMPARE WITH REMINGTON PLACE (PLAN # 8733-SD-001) (SEE SHEET 25A)

EX. TWIN 36" CULVER COMPUTATIONS-25 YEAR STORM FOR STR. 3A

Project: PROPOSED NEW HOPE CHURCH — Plan Sheet No. — Designer — Sheet — of —
Rev. Date — Date: 8-15-06

HYDROLOGICAL DATA:
D.A.=5.47ac.AC.
Q = FROM STORM SEWER COMPUTATION 10 YEAR RUNOFF = 32.67 CFS
Q = 33.67, FOR 10 YR. I = 7.27, AC=32.67 / 7.27= 4.49
(SEE STORM SEWER COMPUTATION THIS SHEET)

AHW Controls — STATION
100YR FLOOD PLAIN ELEV.
DESIGN AHW DEPTH. ELEV.
STRUCTURES ELEV.
FREQ. TW ELEV.

TOP OF CURB ELEV. 248.90 — ℄ ELEV 249.00
SKEW — COVER —
INV. EL 242.66 — Sos 5.35 — INV. EL 241.38
ORIG. GR. ELEV. N/A — L= 24 — ORIG. GR. ELEV. N/A

DISCHARGE'S USED
Q25 YR. 32.13 CFS
Q ___ CFS
Q ___ CFS
Q ___ CFS
Q ___ CFS

RISK ASSESSMENT — ADT —
RETURN AVAILABLE — LENGTH —
INCR TOPPING STAGE —
FLOOD PLAIN MANAGEMENT —
CRITERIA AND SIGNIFICANT IMPACT —

HEADWATER COMPUTATIONS

CULVERT TYPE & SIZE	Q	Q/D	INLET CONT. HW/D	INLET CONT. HW	OUTLET CONTROL ke	dc	Apf	ho	H	LSo	HW	CONT. HW ELEV.	OUTLET VELOCITY CFS	END TREAT.	COMMENTS
EX. 36" RCP CULVERT	32.13	N/A	0.98	2.94								245.60	13.91		

NOTE: 36" RCP CULVERTS ARE ADEQUATE TO CARRY 25 YEAR DESIGN FLOW WITHOUT OVER TOPPING

DESIGN FLOOD EXCEED. PROB ____ ELEV. ____
OVERTOP FLOOD EXCEED. PROB ____ ELEV. ____
BASE FLOOD 1% EXCEED. PROB ____ ELEV. ____

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(703) 532-0163 FAX (703) 532-3601

DATE: 8-15-06, 10-10-06, 2-15-08, 03-26-08 (1-22-08)
SCALE: AS SHOWN
DRAWN: MPE, RLJ, WE

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED BY
1	PER COMMENTS	10-10-06	RLJ
2	PER COMMENTS	2-15-08	RLJ
3	PER COMMENTS	3-26-08	RLJ

APPROVED BY: [illegible]

COMMONWEALTH OF VIRGINIA — CHARLES F. DRAKE — No. 13098 — 8/1/08 — LAND SURVEYOR

ADEQUATE OUTFALL ANALYSIS

PROPOSED NEW HOPE CHURCH
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

FOR INFORMATION ONLY

SHEET 9 OF 11

File No. FL-6 Tax Map No. 106-2 Job No. 04-065 Cadd Dwg. File: 040650UTFALL Xref:

STORM DRAIN DESIGN COMPUTATIONS

FROM	TO	DRAIN. AREA (ACRES)	RUNOFF COEF. C	C x A INCR.	C x A ACCUM	TIME TO PIPE (min.)	TIME IN PIPE (sec.)	TIME	I	Q INCR (c.f.s.)	Q ACCUM (c.f.s.)	PIPE DIA. in	SLOPE Ft/Ft	"n"	MAX Q (c.f.s.)	VEL Ft/Sec	LENGTH Ft	FALL Ft	UPPER INV	LOWER INV
17	16	0.26	0.35	0.091	0.091	5	-	5	7.27	0.66	0.66	FROM OFFSITE								
-	-	0.16	0.35	0.057	0.148	5	-	5	7.27	0.41	1.07	15	0.0050	0.013	4.58	3.04	38.00	0.15	263.25	263.10
16	15	0.17	0.70	0.119	0.267	5	-	5	7.27	0.87	1.94	15	0.0050	0.013	4.58	3.57	32.00	0.16	262.95	262.80
15	14	0.17	0.70	0.119	0.386	5	-	5	7.27	0.87	2.80	15	0.0680	0.013	16.85	8.61	107.00	7.19	282.44	275.25
14	13	0.39	0.30	0.117	0.503	5	-	5	7.27	0.85	3.65	15	0.0354	0.013	12.81	8.07	120.00	4.25	276.00	271.75
12B	12A	1.15	0.30	0.345	0.848	5	-	5	7.27	2.50	6.15	18	0.0300	0.013	18.24	9.30	14.80	0.44	263.57	263.13
12	11	1.97	0.30	0.591	1.439	5	-	5	7.27	4.30	10.46	18	0.0116	0.013	11.34	7.27	136.00	1.58	296.00	294.42
11	10	0.43	0.30	0.129	1.568	5	-	5	7.27	0.94	11.40	21	0.0309	0.013	27.88	10.49	54.00	1.67	294.17	292.50
9	8	1.66	0.35	0.581	0.581	5	-	5	7.27	4.22	4.22	FROM OFFSITE								
-	-	0.07	0.30	0.021	0.602	5	-	5	7.27	0.15	4.37	15	0.0799	0.013	18.85	12.22	170.00	10.47	281.09	[illegible]
8	7	0.92	0.35	0.322	0.924	5	-	5	7.27	2.34	6.72	FROM OFFSITE								
-	-	1.85	0.35	0.648	1.572	5	-	5	7.27	4.71	11.43	21	0.0060	0.013	13.26	5.80	186.00	1.12	267.50	266.38
7A	7	0.55	0.50	0.275	0.275	5	-	5	7.27	2.00	2.00	15	0.0050	0.013	4.58	3.60	32.00	0.16	276.75	276.59
7	6	0.65	0.55	0.358	2.204	5	-	5	7.27	2.60	16.03	21	0.0300	0.013	32.49	11.65	248.40	10.36	266.13	255.85
8A	6	0.75	0.35	0.263	0.263	5	-	5	7.27	1.91	1.91	FROM OFFSITE								
-	-	1.87	0.33	0.618	2.986	5	-	5	7.27	3.77	5.69	18	0.0050	0.013	7.43	4.08	90.00	0.45	259.60	259.15
6	5	0.56	0.45	0.252	3.238	5	-	5	7.27	1.83	23.54	24	0.0116	0.013	24.33	8.00	32.00	0.37	258.40	258.03
5	4	0.57	0.50	0.285	3.523	5	-	5	7.27	2.07	25.61	24	0.0150	0.013	27.71	10.02	108.00	1.62	257.93	256.31
4	3	0.50	0.55	0.275	3.798	5	-	5	7.27	2.00	27.61	24	0.0251	0.013	35.83	12.60	114.00	2.86	256.06	253.20
2	1	0.84	0.35	0.294	5.680	FROM DETENTION COMPUTATIONS					16.31	24	0.0090	0.013	21.38	7.48	50.00	0.50	251.78	251.28

OUTFALL NARRATIVE

THE SUBJECT PROPERTY DRAINS FROM WEST TO EAST INTO AN ON-SITE STORM DRAINAGE SYSTEM AND DRY DETENTION POND. DEVELOPMENT OF THE SITE WILL GENERALLY HONOR THESE DRAINAGE PATTERNS. THE DETENTION POND WILL DISCHARGE INTO AN OPEN CHANNEL AND CULVERT SYSTEM IN CROSSPOINTE CONSISTING OF 36" AND 42" R.C.P.S., THEN INTO A WELL-DEFINED, STABILIZED CHANNEL WHICH OUTFALLS INTO GILES RUN AND ITS FLOODPLAIN.

THE EXISTING STORM SYSTEM AT CROSS CHASE CIRCLE HAS BEEN ANALYZED AS FOLLOWS:

Q10 TO EXISTING 36" PIPE AT CROSS CHASE CIRCLE (EX. STRUCTURE # 3A) = Q10 DISCHARGED FROM THE ON-SITE DETENTION POND = 16.31 CFS PLUS REMAINING SHED TO EXISTING 36" OR 10.8 ACRES OF OFF-SITE + 0.5 ACRES OF ON-SITE UNCONTROLLED = 11.3 ACRES X 5.92 X 0.35 = 23.41 CFS + 16.31 CFS = 39.72 CFS.

THE ORIGINAL SHED TO EX. STRUCTURE # 3A, AS OBTAINED FROM THE DEWBERRY & DAVIS PLANS FOR "CROSSPOINTE, SEC. 18," = 19.74 ACRES WITH A Q10 OF 43.36 CFS. THE RUNOFF TO EX. STRUCTURE # 3A HAS THEREFORE BEEN REDUCED BY 3.64 CFS OR BY 8.4%. THE ADDITIONAL AREA TO THE EXISTING STORM SYSTEM (STORM LINE 1, 2, 3 AND 3A) AND CROSS-SECTION "B-B" JUST DOWNSTREAM OF THE STORM SYSTEM = 2.02 ACRES OF ON-SITE UNCONTROLLED PLUS 10.16 ACRES OF CROSSPOINTE OR 12.18 ACRES, APPROXIMATE "C" FACTOR = 0.45.

Q10 = 12.18 ACRES X 5.92 X 0.45 = 32.46 CFS

THE ACTUAL Q10 WITHIN THE SYSTEM IS APPROXIMATED TO BE 32.45 CFS + 39.72 CFS = 72.2 CFS. THE 10-YEAR FLOW PURSUANT TO THE DEWBERRY & DAVIS PLANS FOR CROSSPOINTE, SEC. 18 WAS ESTIMATED TO BE 90.2 CFS. THE NOMINAL CAPACITY OF THESE PIPES IS 120 CFS AS VERIFIED BY THE "AS-BUILT" (SEE DATA BELOW). AT CROSS-SECTION "B-B" (SEE THIS SHEET), THE DOWNSTREAM CHANNEL PROVIDES CAPACITY AND BED AND BANKS ALL THE WAY TO GILES RUN. THEREFORE, IT IS THE ENGINEER'S OPINION THAT AN ADEQUATE OUTFALL EXISTS FOR THIS SITE AND THAT ITS DEVELOPMENT WILL NOT ADVERSELY IMPACT DOWNSTREAM PROPERTIES.

AS-BUILT:

3A-3, 24' OF 36" @ 8.33% (185 CFS)
2-3, 38' OF 36" @ 6.61 (170 CFS)
2-1, 30.5' OF 42" @ 1.42% (120 CFS)

OVERLAND RELIEF

THE LOTS FOR THIS PROJECT WILL BE GRADED WITH THE HOUSE GRADING PLANS IN SUCH A MANNER AS TO PROVIDE OVERLAND RELIEF FOR THE 100-YEAR STORM EVENT.

DITCH DETAIL TO STRUCTURE #2

Date: 07-10-2002
Project: COOKE PROPERTY
Description: DITCHOUT LEADING TO STRUCTURE #2 10 YEAR STORM

** Open Channel Flow - Trapezoidal Cross Section **

Side slope (H/V)= 3

Discharge (cfs)	Ave. Vel. (ft/s)	Depth (ft)	Area (sq ft)	Top Width (ft)	Froude No.	Slope (ft/ft)	n Value	Bottom Width (ft)
4.38	3.36	0.66	1.31	3.96	1.01	.05000	.0300	0.00

DITCH DETAIL TO STRUCTURE #12

Date: 07-10-2002
Project: COOKE PROPERTY
Description: DITCHOUT LEADING TO STRUCTURE #12 10 YEAR STORM

** Open Channel Flow - Trapezoidal Cross Section **

Side slope (H/V)= 3

Discharge (cfs)	Ave. Vel. (ft/s)	Depth (ft)	Area (sq ft)	Top Width (ft)	Froude No.	Slope (ft/ft)	n Value	Bottom Width (ft)
10.5	3.16	0.77	3.31	6.61	0.79	.03300	.0542	2.00

SCALE: N.T.S.

FOR INFORMATION ONLY

COMMONWEALTH OF VIRGINIA
CHARLES F. DUNLAP
No. 1308
LAND SURVEYOR
8/5/05

Date: 07-17-2002
Project: COOKE PROPERTY
Description: CROSS-SECTION B-B 10 YEAR STORM

** Open Channel Flow - Trapezoidal Cross Section **

Side slope (H/V)= 2.5

Discharge (cfs)	Ave. Vel. (ft/s)	Depth (ft)	Area (sq ft)	Top Width (ft)	Froude No.	Slope (ft/ft)	n Value	Bottom Width (ft)
71.0	3.36	1.55	21.17	17.75	0.53	.01000	.0500	10.00

SECTION B–B'
NOT TO SCALE

STORM WATER INLET COMPUTATIONS

INLET NUMBER	INLET TYPE	LENGTH (Ft.)	DRAINAGE AREA (Ac.)	C	C x A	RAINFALL INTENSITY (in/hr)	Q INCR (cfs)	Q CARRY OVER (cfs)	Q TOTAL (cfs)	Sx GUTTER SLOPE (Ft/Ft)	Sx CROSS SLOPE (Ft/Ft)	T SPREAD (Ft.)	W (Ft.)	W/T	Sw (Ft/Ft)	Sw/Sx	Eo	a	S'w	Se	Lt (Ft.)	P EFF. ECT LENGTH (Ft.)	L/Lt	d (Ft.)	E	h (Ft.)	Q INT (cfs)	d/h	Qb CARRY OVER (cfs)	T SP HEAD AT SAG (Ft.)	REMARKS
17	DI-12	GRATE	0.45	0.33	0.148	4.00	0.59	-	0.59	SUMP	-	-	-	-	-	-	-	-	-	-	-	4.0	-	0.13	-	-	0.59	-	-	-	SEE NOTE
16	DI-3BB	6	0.17	0.70	0.119	4.00	0.48	-	0.48	0.0100	0.0208	2.07	2.0	0.97	0.0833	4.0	1.00	3.5	0.146	0.167	4.4	-	1.36	-	1.00	-	0.48	-	0.00	-	-
15	DI-3BB	6	0.17	0.70	0.119	4.00	0.48	-	0.48	0.0100	0.0208	2.07	2.0	0.97	0.0833	4.0	1.00	3.5	0.146	0.167	4.4	-	1.36	-	1.00	-	0.48	-	0.00	-	-
14	YI-1	4	0.39	0.30	0.117	7.27	0.85	-	0.85	SUMP	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20	-	-	0.50	0.40	0.00	-	Q/L=0.21
11	YI-1	4	0.43	0.30	0.129	7.27	0.94	-	0.94	SUMP	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20	-	-	0.50	0.39	0.00	-	Q/L=0.23
9	YI-1	8	1.73	0.35	0.602	7.27	4.37	-	4.37	SUMP	-	-	-	-	-	-	-	-	-	-	-	-	-	0.36	-	-	0.50	0.72	0.00	-	Q/L=0.55
8	YI-1	16	2.77	0.35	0.970	7.27	7.05	-	7.05	SUMP	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31	-	-	0.50	0.62	0.00	-	Q/L=0.44
7	DI-3BB	14	0.65	0.55	0.358	4.00	1.43	-	1.43	0.0640	0.0208	2.28	2.0	0.71	0.0833	4.0	0.96	3.5	0.146	0.165	12.2	-	1.15	-	1.00	-	1.43	-	0.00	-	-
7A	DI-3B	12	0.55	0.50	0.275	4.00	1.10	-	1.10	0.0640	0.0208	2.01	2.0	0.99	0.0833	4.0	1.00	3.5	0.146	0.167	10.9	-	1.10	-	1.00	-	1.10	-	0.00	-	-
6	DI-3B	10	0.56	0.45	0.252	4.00	1.01	-	1.01	0.0393	0.0208	2.49	2.0	0.80	0.0833	4.0	1.00	3.5	0.146	0.167	9.1	-	1.10	-	1.00	-	1.01	-	0.00	-	-
6A	YI-1	12	2.32	0.35	0.813	7.27	5.90	-	5.90	SUMP	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39	-	-	0.50	0.78	0.00	-	Q/L=0.49
5	DI-3B	10	0.57	0.50	0.285	4.00	1.14	-	1.14	0.0393	0.0208	2.87	2.0	0.70	0.0833	4.0	0.99	3.5	0.146	0.165	9.6	-	1.04	-	1.00	-	1.14	-	0.00	-	-
4	DI-3C	8	0.50	0.55	0.276	4.00	1.10	-	1.10	SUMP	0.0139	8.33	2.0	-	0.0833	-	-	-	-	-	-	11.6	-	0.12	-	0.50	1.10	-	-	8.58	-

NOTE: COMPUTATION FOR DI-12 ASSUME 50% CLOGGED.

Culvert Design Form

Manning's Roughness (n) =	0.012
Invert of Pipe Inlet =	290.4
Length of Pipe (ft) =	110
Slope of Pipe (ft/ft) =	0.012
Invert of Pipe Outlet =	289.08
Area =	1.16
Intensity =	7.27
C Factor =	0.66
Q =	4.89

**NOTE: For Concrete Pipes n = 0.013, For Metal Pipes n = 0.024

COMPUTATIONS FOR CULVERT 14-18 TO 14-19 (15" RCP)

Pipe Size (in.)	Number of Barrels	Q in Each Barrel	Inlet Control HW/D	Inlet Control HW	Inlet Control El(hi)	Outlet Control TW	dc	(dc+D)/2	ho	Ke	H	HW	El(hout)	Control HW Elevation
15	1	4.89	0.91	1.14	291.54	0	0.87	1.06	1.06	0.5	0.62	0.68	291.06	291.54

Culvert Design Form

Manning's Roughness (n) =	0.024
Invert of Pipe Inlet =	284.5
Length of Pipe (ft) =	60
Slope of Pipe (ft/ft) =	0.012
Invert of Pipe Outlet =	283.78
Area =	0.58
Intensity =	7.27
C Factor =	0.53
Q =	3.44

**NOTE: For Concrete Pipes n = 0.013, For Metal Pipes n = 0.024

COMPUTATIONS FOR CULVERT 22-21 (15" CMP)

Pipe Size (in.)	Number of Barrels	Q in Each Barrel	Inlet Control HW/D	Inlet Control HW	Inlet Control El(hi)	Outlet Control TW	dc	(dc+D)/2	ho	Ke	H	HW	El(hout)	Control HW Elevation
15	1	3.44	0.73	0.91	285.41	0	0.75	1.06	1.06	0.5	0.75	1.06	285.50	285.56

HEADWATER CALCULATIONS

CULVERT TYPE & SIZE	TOTAL FLOW Q (CFS)	INLET CONTROL HW/D	INLET CONTROL HW	OUTLET CONTROL ke	OUTLET CONTROL dc	OUTLET CONTROL (dc+D)/2	OUTLET CONTROL ho	OUTLET CONTROL H	OUTLET CONTROL L So	OUTLET CONTROL HW	CONTROLLING HW ELEV.	CONTROLLING ORIFICE
24" R.C.P. ROUND	10	0.92	1.84	0.50	1.13	1.57	1.57	0.35	0.50	1.42	253.64	INLET
	15	1.05	2.10	0.50	1.40	1.70	1.70	0.72	0.50	1.92	254.10	INLET
	20	1.30	2.60	0.50	1.61	1.81	1.81	0.25	0.50	2.56	254.60	INLET
	25	1.60	3.20	0.50	1.76	1.88	1.88	2.00	0.50	3.38	255.38	OUTLET
	30	2.10	4.20	0.50	1.88	1.93	1.93	2.89	0.50	4.23	256.23	OUTLET
	35	2.50	5.00	0.50	1.88	1.93	1.93	3.80	0.50	5.23	257.23	OUTLET
	40	3.00	6.00	0.50	1.88	1.93	1.93	6.9	0.50	6.43	258.43	OUTLET
	50	4.30	8.60	0.50	1.88	1.93	1.93	7.90	0.50	9.03	261.03	OUTLET

NOTE: A 48" RISER REQUIRES A FLOW OF 75 CFS OR GREATER TO BECOME ORIFICE FLOW. Qmax IN RISER IS APPROX. 21 CFS, AND THAT IS THE CAPACITY OF THE PIPE OUTFALL THEREFORE WEIR FLOW OCCURS AT RISER, AND PIPE FLOWS FULL BEFORE ORIFICE FLOW CAN EVER OCCUR.

STORM SEWER COMPUTATIONS
AND OUTFALL NARRATIVE

REMINGTON PLACE

(formerly COOKE PROP)
SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
PAUL B. JOHNSON
No. 018450
2/25/03
PROFESSIONAL ENGINEER

NO.	DATE	REVISION PRIOR TO APPROVAL

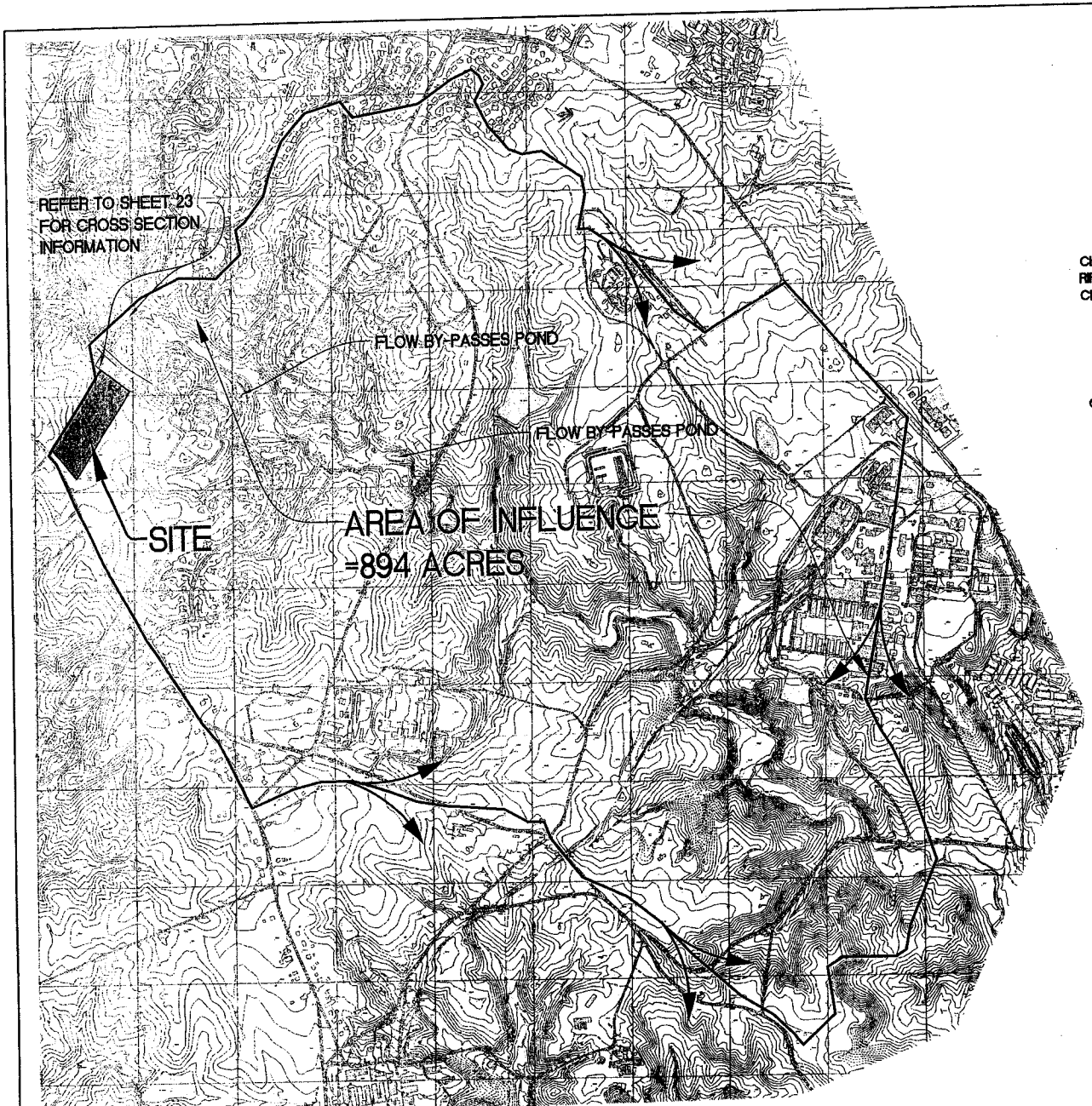
CPJ Associates
Charles P. Johnson & Associates, Inc.
PLANNERS ENGINEERS LANDSCAPE ARCHITECTS SURVEYORS
3959 PENDER DRIVE SUITE 210 FAIRFAX, VIRGINIA 22030 (703)385-7555
SILVER SPRING, MD FAX(703)273-6385

NO.	DESCRIPTION REVISIONS	REVIEW	APPROVED	DATE

DESIGN JPS | DRAFT RAR | APPROVED RJG | DATE JULY, 2002 | SCALE HORIZ. — VERT. —

SHEET 8 OF 27

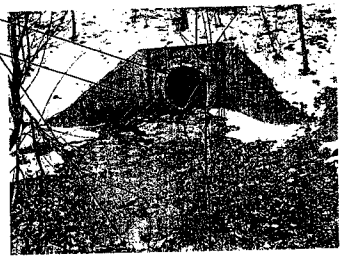
FILE NO: 01-020-508



AREA OF INFLUENCE NARRATIVE

THE PROPERTY DRAINS TO THE GILES RUN FLOOD PLAIN. AS THE PLAN VIEW SHOWS THERE ARE NO AREAS OF IMPOUNDMENT WITH THE 100 TIMES GREATER THAN DISTURBED AREA. THERE ARE APPROXIMATELY 7.2 ACRES OF DISTURBED AREA THUS 7.2 x 100 = 720 ACRE WHICH IS LESS THAN THE 894 OF THIS STUDY. PLEASE NOTE THAT THERE ARE SEVERAL PONDS THAT ARE NEAR GILES RUN BUT ARE NOT DIRECTLY FEED BY GILES THUS THESE ARE NOT AREAS OF IMPOUNDMENT.
THEREFORE, IT IS THE SUBMITTING ENGINEER'S OPINION THAT THERE ARE NO AREAS OF IMPOUNDMENT WITHIN THE ARE OF INFLUENCE.

VIEW LOOKING DOWNSTREAM
FROM CROSS SECTION P-P



VIEW LOOKING UPSTREAM
FROM CROSS SECTION M-M

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE, FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1521 WWW.WLPINC.COM

SCALE 1"=300'
DATE 8-5-05, CD, 10/6, 2-15-06
CD, 8/30/06, 10-17-06
DRAWN BY: WLPINC

REVISION APPROVED BY:

NO	DESCRIPTION	DATE	REV BY	APPROVED	DATE

AREA OF INFLUENCE STUDY

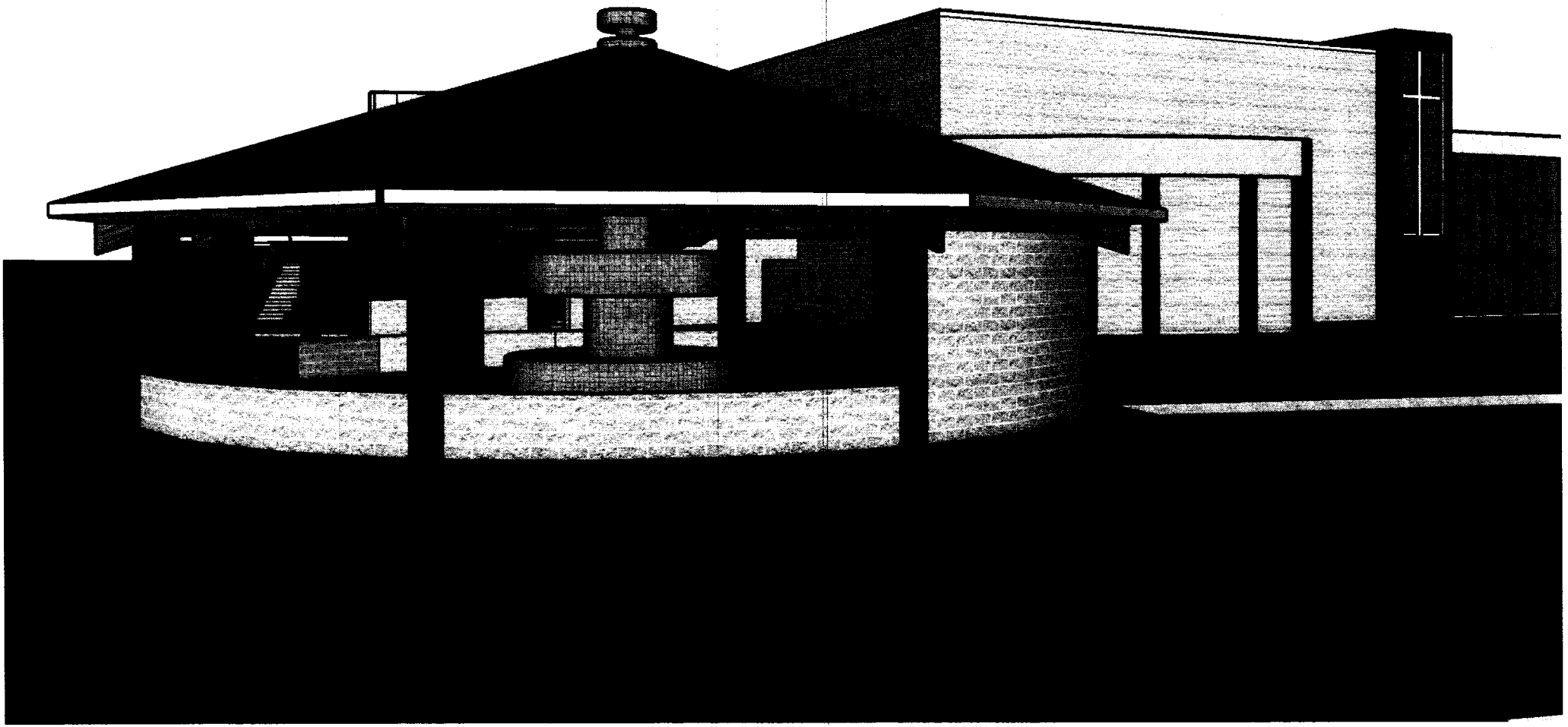
PROPOSED NEW HOPE CHURCH

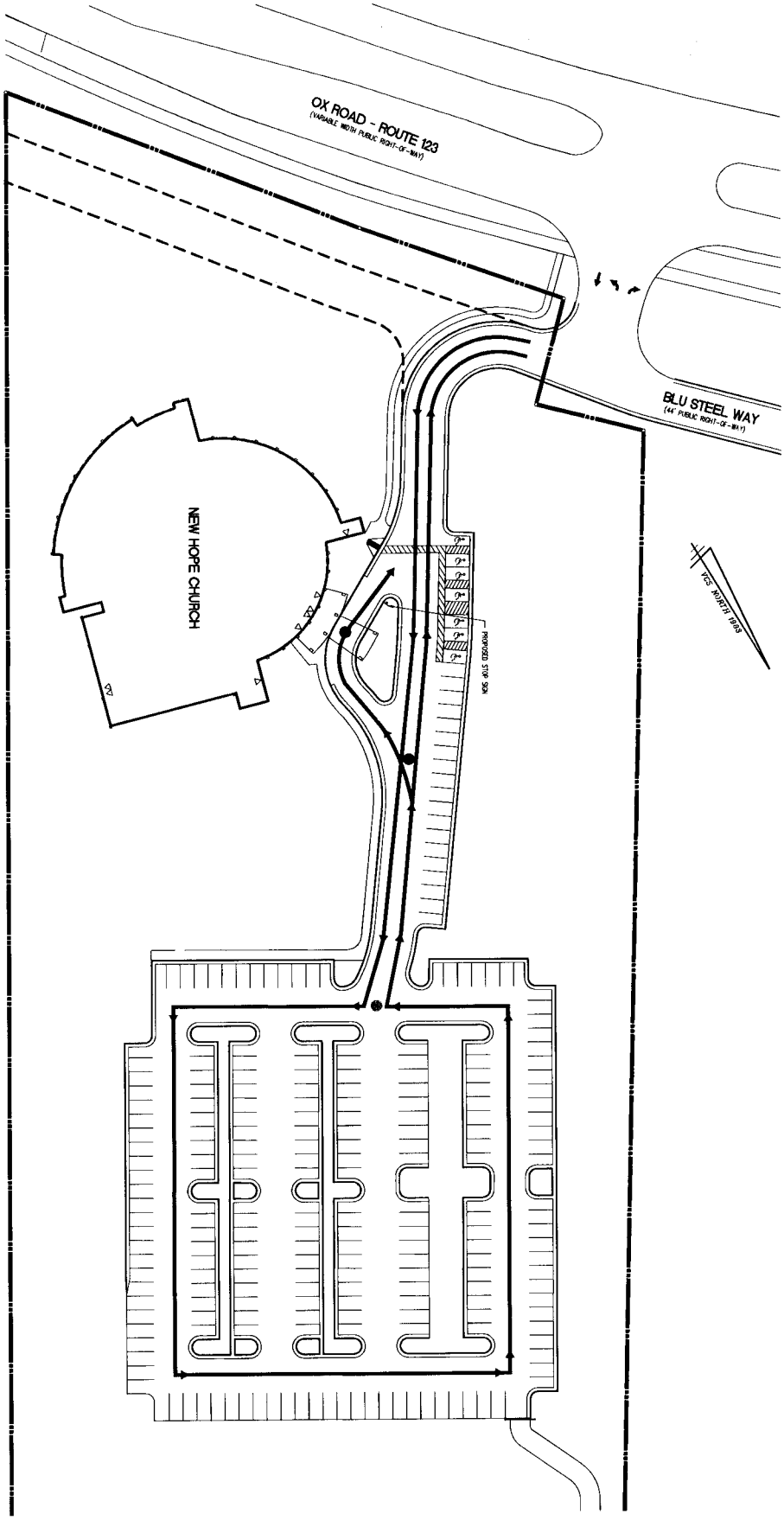
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

FOR INFORMATION ONLY

SHEET 11 OF 11

File No. FI-6 Tax Map No. 108-2 Job No. 04-065 Cadd Dwg. File: 04065A0E Xref:





NOTES

1. TRAFFIC FLOW WILL ENTER PICK-UP AREA AT (●) WITH THE ASSISTANCE OF TWO ADULT PERSONNEL.
2. PARENTS WILL FOLLOW POSTED PATH, PICK UP THEIR CHILDREN UNDER THE COVERED PICK-UP AREA (●) AND PROCEED TO THE PICK-UP LANE EXIT.
3. ADDITIONALLY, WE WILL HAVE DIRECTIONAL SIGNS IN THE PARKING LOT TO ASSIST WITH THE FLOW OF TRAFFIC (●).

CHILDCARE ONSITE TRAFFIC CIRCULATION EXHIBIT

NEW HOPE CHURCH

MT. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV BY	APPROVED	DATE

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1001
WWW.WLPINC.COM

SCALE: 1" = 30' | DATE: 6/11/08; REV. 8/24/08 | DRAWN: MPW

SHEET 1 OF 1

DESCRIPTION OF THE APPLICATION

Special Permit Request: To amend SP 2005-MV-010 previously approved for a church with child care center add Silo Center, LLC as a permittee, to increase the total maximum number of children enrolled in the child care center from 99 students to 250, and to make site design modifications to include addition of an outdoor gathering area with baptistry and covered picnic area.

Existing Church (No Changes Requested)

Size:	8.79 acres
Parking Spaces:	246 spaces
Seats:	685
Gross Floor Area:	55,241 SF
FAR:	0.15

Child Care Center

Number of Students	250 maximum per day (increase from maximum of 99 daily)
Employees:	25 (increase from 20)
Hours:	Monday through Friday: 6:30 a.m. to 7: 00 p.m.

Waivers and Modifications

Approved Previously & With Site Plan

- Modify transitional screening/waive barrier along rear property line, adjacent to Parcel B and Lots 29, 30, & 31 in Crosspointe Sec. 16;
- Modify transitional screening/waive barrier along southeastern property line along Parcel 8 in area of conservation easement;
- Waive transitional screening and barrier along northwestern property line adjacent to Remington Place due to existing VEPCO easement and landscaping provided within easement;
- Waive transitional screening and barrier along southwestern property line adjacent

to Route 123.

New:

- Waiver of barrier requirement on southeastern property line adjacent to parcel 8

LOCATION AND CHARACTER

Existing Site Description: The church is located at 8905 Ox Road, just north of the Ox and Furnace Road intersection and south of the Ox Road and Hampton Road intersection in Lorton. The church on the site recently opened and was constructed under an approved site plan. A 100 foot wide utility easement traverses the western portion of the site from front to back. Two transmission towers are located on site within the easement. The site is accessed from a single entrance on Blu Steel Way.

Background

Site History:

SP 2005-MV-010 was approved on May 24, 2005 by the Board of Zoning Appeals to permit a church and child care center. A copy of the Resolution and Plat approved in conjunction with SP 2005-MV-010 is attached at Appendix 4. The approval included Phase I and Phase II. Phase I consisted of the sanctuary and parking lot, Phase II included an attached gymnasium. A total of 58,000 square feet and a FAR of 0.15 was approved, including a 440 square foot shed at the center of the site. Currently the site is developed with Phase I consisting of the sanctuary, parking lot, landscaping and stormwater management facilities. Staff notes that the sanctuary and gymnasium approved by SP 2005-MV-010 had a footprint of 34,332 square feet while the current SPA Plat shows the combined footprint of both buildings at 32,896 square feet. In 2001, the site was granted Special Exception SE 01-V-002 for the operation of a plant nursery. Though additional time was granted in 2004, this special exception was never established and has expired.

Surrounding Area Description:

SURROUNDING AREA DESCRIPTION			
Direction	**Use**	**Zoning**	**Plan**
North	Single Family Detached Dwelling (Crosspointe Sec. 16)	PDH-1	Residential, .5-1 du/ac
South	Single Family Detached Dwelling	R-1	Residential, .5-1 du/ac
East	Single Family Detached Dwelling (Proposed Sunrise Assisted Living Facility)	R-1 (current rezoning request pending to R-5)	Residential, .5-1 du/ac
West	Single Family Detached Dwelling (Remington Place)	R-1	Residential, .5-1 du/ac

COMPREHENSIVE PLAN PROVISIONS

Plan Area: Area III, Pohick Planning District
Planning Sector: Dominion Community Planning Sector (P5)
Plan Map: Residential Use 0.5-1 du/acre

Special Permit Plat

Title of SP Plat: New Hope Church, Mount Vernon District
Prepared By: Walter L. Phillips, Incorporated
Dated: March 13, 2008, revised through July 10, 2008

Proposed Use

The applicant's proposal maintains the existing layout as approved by the Board of Zoning Appeals in 2005 but adds two new areas that were not contemplated at the time of approval. The site is accessed via Blu Steel Way, a service drive that connects the church's entrance to the Remington Place Subdivision to the immediate northwest. The 44,241 GFA sanctuary and approved attached 8,800 SF gymnasium are located in the southwest portion of the site, adjacent to the site's entrance. Also near the entrance is a half circle drop off/pick up area for the building—to include the sanctuary and gymnasium. Parking spaces are located along the entrance driveway and a parking area is situated to

the northwest of the sanctuary, in the center of the site. Staff notes that the original approval included a total of 58,000 square foot building, and the current application shows the square footage as 53041 SF.

With regard to the site layout, the changes presented include a proposed outdoor gathering area with outdoor baptistry and a proposed covered picnic area. Both of these areas are located to the northeast of the building, between the building and the southeast property line. According to the applicant, the gathering area and baptistry will be natural surfaces and at grade or below grade. As shown on the elevation provided by the applicant, the covered picnic area will be approximately 2200 square feet with a standing seam metal roof. The area will be largely open, with a low wall and periodic columns and the primary material will be split block, similar to the church structure. The eave of the roof will be approximately 10 feet high, with the top of the chimney at the very top of the roof at 17 feet. As shown on the elevation, one wall will be significantly higher in order to shield the patrons from the cars in the parking lot. The covered picnic are will represent an increased GFA of no more than 2200 SF as well.

The child care facility is located in the church and the applicant has provided a schematic showing the planned circulation for children arriving and leaving the site. The applicant proposes to significantly increase enrollment up to 250 students per day, with the facility offering before and after school care and preschool during the morning hours. According to the applicant and the provided schematic, parents of the children in the before school program will park and walk their children to the building between 6:30 and 8:00 a.m. A bus will take them to the Halley Elementary School, just to the southeast of the church. The children in the after school program will be brought by bus from the school to the church and will be picked up by their parents between 3:00 and 7:00 p.m. Their parents will park and come get them at the building. The parents of the preschoolers will bring them to the church at 9:00 a.m., parking and walking the children to the building. At 1:00 p.m. the parents will pick up the preschoolers following the attached pick up plan.

Land Use Analysis

According to the Comprehensive Plan Map, the site is planned for residential use. The site meets the Locational Guidelines for siting of child care facilities as noted in the Comprehensive Plan. There are no land use issues associated with this request.

Transportation Analysis (Appendix 5)

Issue: Service Drive Along Ox Road

Section 7-0104.1 of the Public Facilities Manual (PFM) requires a service drive along Ox Road in this location. In this case, this service drive will provide a needed access link between the residential development to the north in Remington Place, the proposed uses on the subject parcel, Parcel 8, and the shopping center use at its southern terminus without requiring traffic to access Route 123. This service drive will aid the traffic

circulation in the area. Staff notes that a rezoning and special exception application, RZ 2008-MV-005/SE 2008-MV-012, has been filed on Tax Map 106-2 ((1)) 008 for a Sunrise Assisted Living Facility. Sunrise has also been asked to provide a service drive connection to the New Hope parcel and Tax Map 106-2 ((1)) 9A, which is currently developed with a shopping center, The Shoppes of Lorton Valley. For the rezoning associated with the Shoppes of Lorton Valley, the shopping center has a proffered commitment to construct its portion of a service drive should a connection become available.

A service drive along Ox Road will also support the increased use associated with this subject application, especially in terms of the nature of the increased traffic associated with the pick up and drop off of the students. The ultimate connection of this parcel and the two parcels to the south on Ox Road has been contemplated in previous and current applications. Specifically, at the time of the previous Special Permit approval, the applicant provided an interparcel easement for full public access to the southern adjoining parcel, Parcel 8, Tax Map 106-2 ((1)), if and when it redeveloped.

Staff feels that redevelopment is quite likely to the south and that this transportation improvement will assist in the traffic circulation in the area.. The applicant was further advised that the service drive would be required unless a waiver and/or modification is granted during site plan review and approval.

Resolution:

The applicant has agreed that if a service drive connecting the three parcels here is required, the applicant will construct the section required along its frontage. However, the applicant has expressed concern that they not be required to construct access merely to Tax Map 106-2 ((1)) 8, the Sunrise Assisted Living Facility parcel, if the service drive, for whatever reason, does not extend along the three parcel's frontage. Staff understands these concerns and notes that that the Generalized Development Plan (GDP) for RZ 2008-MV-005 shows only a drive to the Sunrise facility at this time. However, staff is requesting a full connection between New Hope Church and the Shoppes of Lorton Valley at this time in both of the applications submitted. Staff thus believes that proper traffic circulation in this area depends on providing a service drive along the Ox Road frontage. Staff does not object to any private coordination for construction that may be possible with the Sunrise facility. However, staff notes that, since the service drive will be considered at the time of site plan approval, these issues are more appropriately determined at the time of site plan approval. Therefore, the Fairfax County Department of Transportation (FCDOT) will make the final decision on any requested service drive waiver at the time of site plan review and staff notes that FCDOT has expressed that it will not support such a waiver request.

Issue: Pro-Rata Share Contribution for Future Signal at Entrance on Ox Road

With the approved special permit, the applicant complied with staff's request for a pro-rata share contribution for a future signal at the entrance on Ox Road. With the requested increase in the maximum number of students from 99 to 250 and the accompanying increased traffic impact, staff has requested an increased pro rata share contribution for a future signal at the entrance onto Ox Road

***Resolution*:**

The applicant has agreed to provide the pro rata share and staff finds that this issue is resolved.

Issue: Reconstruction of Church Entrance

With the approved special permit, the approval was conditioned on reconstruction of the church entrance to a 90 degree angle intersection when and if an interparcel connection is constructed. This condition is carried forward in light of the pending interparcel access construction.

Resolution:

The applicant has agreed that this condition be continued with the present special permit amendment and will reconstruct the entrance as required by the condition.

Environmental Analysis

Issue: Noise and Intensity of Use for Outdoor Facilities

The applicant is proposing two new outdoor facilities as site modifications with this application. Both the outdoor baptistry and outdoor picnic area represent increased outdoor site usage and are situated close to the southeast property boundary. The southern property, as mentioned above, is currently the subject of a rezoning from R-1 to R-5 and an SE for an assisted living facility. Given the proximity of these new outdoor uses, staff has expressed concern over the appearance and use of these facilities.

Resolution:

The applicant has indicated that these outdoor facilities would not be used past 9 pm at any time. The applicant has also indicated that the baptistry would not feature music or loudspeakers. Staff has further suggested that microphones and loudspeakers would be limited by condition in this SPA. The applicant has agreed that limiting the use of these outdoor facilities by condition would be an acceptable way to mitigate any adverse impacts of these uses. In addition, staff has proposed a development condition that the outdoor covered picnic area be consistent in terms of architecture style, materials and colors to the attached exhibit. With implementation of the proposed development conditions, staff is satisfied that this issue is resolved.

Issue: Trail Requirement

The Trails Plan depicts a 6 foot wide asphalt trail within a 10 foot wide trail easement in the AT&T easement. The applicant is not proposing such a trail and has indicated that a waiver will be requested during site plan review of this plan.

Resolution:

The subject property is served by a 10 foot wide asphalt trail along its frontage, as required by the Trails Map, which provides an east to west pedestrian connection along Ox Road. However, as this issue will be resolved during the site plan process, staff notes that the issue is resolved with respect to the subject application.

Issue: Tree Cover and Landscaping

Staff notes that as this case is part of an on-going site plan for construction of the church facility, there does not appear to be any substantial impacts on the trees to remain associated with this request. Staff asked the applicant to confirm that the tree cover calculations would remain the same with this application as shown on the approved site plan. The applicant has recalculated the tree cover required for the entire site based on in the footprints of the proposed structures and indicated that the tree cover square footage is the same as approved on the site plan, at 94,116 SF and is approximately 27% of the site. The square footage of tree cover here is actually higher than originally approved with the SP, which noted 87,003 Square feet of tree cover. Therefore, staff notes that this SPA will have no impact on the tree cover associated with this development

Staff has also encouraged the applicant to provide additional landscaping surrounding the new facilities.

Resolution:

The applicant has indicated that additional landscaping around the outdoor baptistry and gathering area would be unnecessary since that facility is largely at grade, with just the podium for the actual baptism as the new built feature. The applicant has, however, agreed that additional landscaping around the outdoor picnic area may be feasible. As such, staff has proposed a development condition requiring additional landscaping in the form of small plants and shrubbery around the picnic area. With implementation of that condition, staff is satisfied that this issue has been resolved.

ZONING ORDINANCE PROVISIONS

Bulk Standards (R-1)		
Standard	**Required**	**Provided**
Lot Size	36,000 sq. ft.	383,090 sq. ft.
Lot Width	150 feet	428 feet
Front Yard	Controlled by a 50° angle of bulk plane, but not less than 40 feet	134 feet
Side Yard	Controlled by a 45° angle of bulk plane, but not less than 20 feet	22 feet
Rear Yard (to North)	Controlled by a 45° angle of bulk plane, but not less than 25 feet	518 feet
Building Height	60 feet	50 feet
Tree Cover	20 %	27 %
FAR	0.15	0.15
Parking	Church: 172 spaces Child Care: 48 spaces Total: 220 spaces	246
Transitional Screening		
Northwest	TS 1 (Abuts Remington Place, Single Family Detached)	Landscaping along parking lot within Dominion Power Easement, (modification approved per special permit and further granted with site plan approval)
Northeast	TS 1(abuts Cross Point, Single Family Detached)	Area of Conservation Easement (modification approved per special permit and further granted with site plan approval)
Southeast	TS1 (abuts single family detached, application for Sunrise Assisted Living	TS1 & area of conservation easement (modification approved per special permit and further granted with site plan approval)
Southwest	TS 1 (across Ox Road from Single Family Detached)	Landscaping with trees along Ox road and in front of building (modification approved per special permit and further granted with site plan approval)
Barriers		
Northwest	Barrier D, E, or F(Abuts Remington Place, Single Family Detached)	None, waiver approved per special permit and granted with site plan approval
Northeast	Barrier D, E, or F (abuts Cross Point, Single Family Detached)	None, waiver approved per special permit and granted with site plan approval

Bulk Standards (R-1)		
Standard	**Required**	**Provided**
Southeast	Barrier D, E, or F (abuts single family detached, application for Sunrise Assisted Living	675 length of 7 foot high wood fence (modification of length approved per special permit and granted site plan approval.)
Southwest	Barrier D, E, or F (across Ox Road from Single Family Detached)	None, waiver approved per special permit and granted with site plan approval

WAIVERS/MODIFICATIONS REQUESTED

The applicant is requesting that the modifications of the transitional screening requirements and the waiver of the barrier requirements along the lot lines to the northwest, northeast, portions of the southeast and southwest that were approved with the special permit and the approved site plan for this structure, be approved with this amendment.

The applicant is further requesting waiver of the barrier requirement along the southeastern property line to remove the required 7 foot high barrier in that area.

Basis: Par. 3 of Sect. 13-304 states that transitional screening and barrier requirements may be waived or modified where the building, a barrier and/or the land between that building and the property line has been specifically designed to minimize adverse impact through the combination of architectural and landscaping techniques. With regard to the northeast, the conservation easement continues to provide a buffer by using existing vegetation sufficient to meet the transitional screening requirements, and as during the original staff report, staff does not believe that any vegetation should be removed to install a fence.

Also the outdoor play areas and new outdoor uses will be to the rear and side of the church, and will not be immediately adjacent to the residential uses of Remington Place to the northwest or to the frontage along Ox Road. The applicant has shown on the SPA Plat, that additional landscaping along the northwest side of the parking lot has been added in the Dominion Power easement, providing a needed buffer near the actual site of the development. As such, staff continues to believe that there is a suitable basis for modifying the transitional screening and and waiving barrier requirements along the Ox Road frontage and the northwest property boundary.

However, staff does not support the request for a waiver of the barrier requirement along the southeastern property line adjacent to the current single family residence and possible Sunrise Assisted Living Facility. The new outdoor uses will be as close as 22 feet from property boundary and as these are outdoor facilities the impact is such that as much buffer as possible should be provided. Staff would prefer more, not less, buffering when outdoor uses are requested this close to a property boundary. Therefore, staff does not support the requested barrier waiver.

Special Permit Requirements (Appendix 6)

General Special Permit Standards (Sect. 8-006)
Group 3 Standards (Sect. 8-303)
Additional Standards (Sect. 8-308)

Summary of Zoning Ordinance Provisions

Subject to the proposed development conditions, all applicable standards have been satisfied.

CONCLUSIONS

Staff concludes that the subject application is in harmony with the Comprehensive Plan and in conformance with the applicable Zoning Ordinance provisions with the implementation of the Proposed Development Conditions contained in Appendix 1 of the Staff Report.

RECOMMENDATIONS

Staff recommends approval of SPA 2005-MV-010 subject to the Proposed Development Conditions in Appendix 1. It should be noted that it is not the intent of 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.

The approval of this application does not interfere with, abrogate or annul any easements, covenants, or other agreements between parties, as they may apply to the property subject to the application.

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 Zoning Appeals.

APPENDICES

1. Proposed Development Conditions
2. Affidavit
3. Statement of Justification
4. Special Permit Plat and Development Conditions Approved for SP 2005-MV-010
5. Transportation Analysis
6. Environmental Analysis
7. Stormwater Management Analysis
8. Urban Forestry Management Analysis
9. Applicable Zoning Ordinance Provisions Checklist

PROPOSED DEVELOPMENT CONDITIONS

June 29, 2008

If it is the intent of the Board of Zoning Appeals to approve SPA 2005-MV-010 located at Tax Map 106-2 ((1)) 7, for an amendment to SP 2005-MV-010 previously approved for a church and child care center center to permit a change in permittee, increase in enrollment, building additions, and modifications of development conditions. Staff recommends that the Board condition the approval by requiring conformance with the following development conditions. Those conditions carried forward from the previous special permit are marked with an asterisk. Minor edits have been made to these conditions to conform to current terminology. Edits have been underlined.

1. This approval is granted to the applicant only, New Hope Church, Inc and Silo Center LLC., and is not transferable without further action of this Board, and is for the location indicated on the application, 8905 Ox Road, Lorton, Virginia and is not transferable to other land.*

2. This Special Permit is granted only for the purpose(s), structures and/or use(s) indicated on the special permit amendment plat prepared by Charles F. Dunlap (Walter L. Phillips, Inc.) dated March 13, 2008, revised through July 10, 2008 and approved with this application, as qualified by these development conditions.*

3. A copy of this Special Permit and the Non-Residential Use Permit SHALL BE POSTED in a conspicuous place on the property of the use and be made available to all departments of the County of Fairfax during the hours of operation of the permitted use.*

4. This Special Permit Amendment is subject to the provisions of Article 17, Site Plans. Any plan submitted to the Department of Public Works and Environmental Services (DPWES) pursuant to this special permit shall be in substantial conformance with these conditions. Minor modifications to the approved special permit may be permitted pursuant to Par. 4 of Sect. 8-004 of the Zoning Ordinance.*

5. The number of seats in the sanctuary shall not exceed 685.*

6. Upon issuance of a new Non-RUP, the total maximum daily enrollment for the child care center shall not exceed 250 children with a maximum of 125 students onsite at any one given time.

7. The child care center's maximum hours of operation shall be 6:30 A.M. and 7:00 P.M., Monday through Friday.*

8. Parking shall be provided as depicted on the Special Permit Plat. All parking shall be on site.*

9. All worship services shall be scheduled to avoid vehicles entering and exiting the site for services at the same time. Therefore, services shall be staggered so that no one service ends within a minimum of one hour of the next service's beginning and no Sunday School classes shall be held between services. The multi-use space (Phase II) shall not be used for services or other activities that coincide with services in the sanctuary other than Sunday School activities.*

10. The transitional screening requirements shall be modified along the lot lines as shown on the special permit amendment plat

11. Notwithstanding any notes on the Plat, the barrier requirement shall be waived along all lot lines, except that seven (7) foot high wood fence shall be provided along a portion of the southeastern lot line as shown on the special permit amendment plat.*

12. Additional landscaping, as coordinated with Urban Forest Management, shall be provided along the perimeter of the proposed covered picnic area.

13. Lighting shall be provided in accordance with the Performance Standards contained in Part 9 (outdoor Lighting Standards) of Article 14 of the Zoning Ordinance. There shall be no uplighting on site, including any sign or the building, and lights shall be turned off when the site is not in use except as reasonably necessary for security purposes.*

14. The limits of clearing and grading shall be at a minimum of that shown on the Special Permit Amendment Plat. The proposed conservation easement areas shall remain undisturbed.

15. Stormwater Management/Best Management Practices facilities shall be provided as depicted on the Special Permit Amendment Plat.

16. At such time as Blu Steel Way is extended across the frontage of the property, the applicant shall reconfigure its driveway so that the driveway shall intersect Blu Steel Way an an approximately 90 degree angle.*

17. One year after the applicant is granted a Non-Residential Use Permit and every three (3) years thereafter ending 10 years after issuance of non-Rup, the applicant shall perform and submit to Fairfax County Department of Transportation (FCDOT) a queuing analysis for the southbound left turn lane

on Ox Road at the site entrance. In the event that the analysis indicates that the queue exceeds the capacity of the left turn bay, the applicant shall either extend the length of the left turn lane as necessary or commence an appropriate staggering of its Sunday morning services as determined by FCDOT.*

18. Prior to issuance of the new Non-RUP, the applicant shall contribute to Fairfax County its increased pro rata share, to reflect the increase in enrollment in the child care center, of a traffic signal to be installed at the intersection of Ox Road and the joint entrance in an amount determined by FCDOT. The applicant's pro rata share shall be held in escrow for three years. In the event VDOT determines that a traffic signal is not warranted at the end of the three years, the funds may be used by Fairfax County for other transportation improvements.

19. Arrangements for police direction shall be made at the entrance on Sunday morning, if necessary.*

20. No structure shall exceed 50 feet in height.*

21. The pick up and drop off of children shall be in general conformance with the process depicted in Attachment 2.

22. If required by Fairfax County County Department of Transportation, an interparcel connection in the form of a service drive shall be provided to the adjacent parcel identified on the Fairfax County Zoning Map as 106-2 ((7)) 8 prior to bond release for Phase 2 construction on the subject site or when the owner of Parcel 8 initiates construction of a service drive connection to the subject property.

23. At such time that Blu Steel Way is extended across the frontage of the property, vegetation lost during construction shall be replaced with like kind.

24. The architecture of the covered picnic area shall be generally as depicted in the elevation included in Attachment 1.

25. Hours for use of the outdoor baptistry, gathering area and covered picnic area shall be limited to daylight hours.

26. There shall be no use of loudspeakers in either the outdoor gathering area with baptistry or the covered picnic area.

27. Acoustic music shall be allowed in the outdoor gathering area/baptistry and covered picnic area, but music shall not be broadcast using stereo or other electronic equipment.

These conditions incorporate and supersede all previous conditions. 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 responsible for obtaining the required Non-Residential Use Permit through established procedures, and this special permit shall not be valid until this has been accomplished.

Pursuant to Sect.8-015 of the Zoning Ordinance, this special permit shall automatically expire, without notice, thirty (30) months after the date of approval unless a new Non-RUP has been issued. The Board of Zoning Appeals may grant additional time to commence construction of Phase II and/or the site modifications approved here if a written request for additional time is filed with the Zoning Administrator prior to the date of expiration of the special permit. 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.

Application No.(s): _____
(county-assigned application number(s), to be entered by County Staff)

SPECIAL PERMIT/VARIANCE AFFIDAVIT

DATE: March 19, 2008
(enter date affidavit is notarized)

I, Sarah E. Hall, do hereby state that I am an
(enter name of applicant or authorized agent)

(check one) [ ] applicant
[✓] applicant's authorized agent listed in Par. 1(a) below

and that, to the best of my knowledge and belief, the following is true:

1(a). The following constitutes a listing of the names and addresses of all **APPLICANTS, TITLE OWNERS, CONTRACT PURCHASERS,** and **LESSEES** of the land described in the application,* and, if any of the foregoing is a **TRUSTEE,**** each **BENEFICIARY** of such trust, and all **ATTORNEYS** and **REAL ESTATE BROKERS,** and all **AGENTS** who have acted on behalf of any of the foregoing with respect to the application:

(**NOTE**: All relationships to the application listed above in **BOLD** print must be disclosed. Multiple relationships may be listed together, e.g., **Attorney/Agent, Contract Purchaser/Lessee, Applicant/Title Owner**, etc. For a multiparcel application, list the Tax Map Number(s) of the parcel(s) for each owner(s) in the Relationship column.)

NAME (enter first name, middle initial, and last name)	**ADDRESS** (enter number, street, city, state, and zip code)	**RELATIONSHIP(S)** (enter applicable relationships listed in **BOLD** above)
New Hope Church, Inc.	8905 Ox Road Lorton, Virginia 22079	Co-Applicant/Title Owner
Silo Center, LLC	8905 Ox Road Lorton, Virginia 22079	Co-Applicant/Lesee
Walter L. Phillips, Inc. Charles F. Dunlap Jenifer L. T. Hornback Monica R. Westgate	207 Park Avenue Falls Church, Virginia 22046	Engineers Engineer/Agent Engineer/Agent Engineer/Agent
Blankingship & Keith, P.C. Sarah E. Hall Jeremy B. Root	4020 University Drive, Suite 300 Fairfax, Virginia 22030	Attorneys Attorney/Agent Attorney/Agent

(check if applicable) [ ] There are more relationships to be listed and Par. 1(a) is continued on a "Special Permit/Variance Attachment to Par. 1(a)" form.

* In the case of a condominium, the title owner, contract purchaser, or lessee of 10% or more of the units in the condominium.

** List as follows: Name of trustee, Trustee for (name of trust, if applicable), for the benefit of: (state name of each beneficiary).

Application No.(s): _____
(county-assigned application number(s), to be entered by County Staff)

SPECIAL PERMIT/VARIANCE AFFIDAVIT

DATE: March 19, 2008
(enter date affidavit is notarized)

1(b). The following constitutes a listing*** of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 10 or less shareholders, a listing of all of the shareholders:

(NOTE: Include **SOLE PROPRIETORSHIPS, LIMITED LIABILITY COMPANIES,** and **REAL ESTATE INVESTMENT TRUSTS** herein.)

CORPORATION INFORMATION

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)

New Hope Church, Inc.
8905 Ox Road
Lorton, Virginia 22079
A not-for-profit corporation, so it has no shareholders

DESCRIPTION OF CORPORATION: (check one statement)

[ ] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF SHAREHOLDERS: (enter first name, middle initial, and last name)

(check if applicable) [✓] There is more corporation information and Par. 1(b) is continued on a "Special Permit/Variance Attachment 1(b)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. ***In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed.*** Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

Application No.(s): _____

(county-assigned application number(s), to be entered by County Staff)

SPECIAL PERMIT/VARIANCE AFFIDAVIT

DATE: March 19, 2008

(enter date affidavit is notarized)

1(c). The following constitutes a listing*** of all of the **PARTNERS,** both **GENERAL** and **LIMITED**, in any partnership disclosed in this affidavit:

PARTNERSHIP INFORMATION

PARTNERSHIP NAME & ADDRESS: (enter complete name, number, street, city, state, and zip code)

(check if applicable) [ ] The above-listed partnership has no limited partners.

NAMES AND TITLE OF THE PARTNERS (enter first name, middle initial, last name, and title, e.g. **General Partner, Limited Partner, or General and Limited Partner)**

(check if applicable) [ ] There is more partnership information and Par. 1(c) is continued on a "Special Permit/Variance Attachment to Par. 1(c)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. ***In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed.*** Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

Application No.(s): _____

(county-assigned application number(s), to be entered by County Staff)

SPECIAL PERMIT/VARIANCE AFFIDAVIT

DATE: March 19, 2008

(enter date affidavit is notarized)

1(d). One of the following boxes **must** be checked:

[ ] In addition to the names listed in Paragraphs 1(a), 1(b), and 1(c) above, the following is a listing of any and all other individuals who own in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER,** or **LESSEE*** of the land:

[✓] Other than the names listed in Paragraphs 1(a), 1(b), and 1(c) above, no individual owns in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER,** or **LESSEE*** of the land.

2. That no member of the Fairfax County Board of Zoning Appeals, Planning Commission, or any member of his or her immediate household owns or has any financial interest in the subject land either individually, by ownership of stock in a corporation owning such land, or through an interest in a partnership owning such land.

EXCEPT AS FOLLOWS: (**NOTE**: If answer is none, enter "**NONE**" on the line below.)

None

(check if applicable) [ ] There are more interests to be listed and Par. 2 is continued on a "Special Permit/Variance Attachment to Par. 2" form.

Application No.(s): _____

(county-assigned application number(s), to be entered by County Staff)

SPECIAL PERMIT/VARIANCE AFFIDAVIT

DATE: March 19, 2008

(enter date affidavit is notarized)

3. That within the twelve-month period prior to the public hearing of this application, no member of the Fairfax County Board of Zoning Appeals, Planning Commission, or any member of his or her immediate household, either directly or by way of partnership in which any of them is a partner, employee, agent, or attorney, or through a partner of any of them, or through a corporation in which any of them is an officer, director, employee, agent, or attorney or holds 10% or more of the outstanding bonds or shares of stock of a particular class, has, or has had any business or financial relationship, other than any ordinary depositor or customer relationship with or by a retail establishment, public utility, or bank, including any gift or donation having a value of more than $100, singularly or in the aggregate, with any of those listed in Par. 1 above.

EXCEPT AS FOLLOWS: (NOTE: If answer is none, enter "NONE" on line below.)

None

(NOTE: Business or financial relationships of the type described in this paragraph that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings. See Par. 4 below.)

(check if applicable) [ ] There are more disclosures to be listed and Par. 3 is continued on a "Special Permit/Variance Attachment to Par. 3" form.

4. **That the information contained in this affidavit is complete, that all partnerships, corporations, and trusts owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land have been listed and broken down, and that prior to each and every public hearing on this matter, I will reexamine this affidavit and provide any changed or supplemental information, including business or financial relationships of the type described in Paragraph 3 above, that arise on or after the date of this application.**

WITNESS the following signature:

Sarah E Hall

(check one) [ ] Applicant [✓] Applicant's Authorized Agent

Sarah E. Hall Attorney/Agent

(type or print first name, middle initial, last name, and title of signee)

Subscribed and sworn to before me this 19th day of March 2008, in the State/Comm. of Virginia, County/City of Fairfax.

Teresa A. Fletcher

Notary Public

My commission expires: 2/28/2011

Registration number: 272503

TERESA A. FLETCHER COMMONWEALTH OF VIRGINIA Comm. # 272503 NOTARY PUBLIC

Application No.(s): _____

(county-assigned application number(s), to be entered by County Staff)

Special Permit/Variance Attachment to Par. 1(b)

DATE: March 19, 2008
(enter date affidavit is notarized)

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)

Silo Center, LLC
8905 Ox Road
Lorton, Virginia 22079

DESCRIPTION OF CORPORATION: (check one statement)

- [✓] There are 10 or less shareholders, and all of the shareholders are listed below.
- [ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- [ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)

New Hope Church, Inc.

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)

Blankingship & Keith, P.C.
4020 University Drive, Suite 300
Fairfax, Virginia 22030
All shareholders are listed below.

DESCRIPTION OF CORPORATION: (check one statement)

- [ ] There are 10 or less shareholders, and all of the shareholders are listed below.
- [ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- [ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)

A. Hugo Blankingship, Jr.	Peter S. Everett	Wm. Quinton Robinson	Mary McGowan
John A.C. Keith	David Rust Clarke	John F. Cafferky	
William H. Casterline, Jr.	David J. Gogal	William B. Porter	
Sarah Elizabeth Hall	Elizabeth Chichester Morrogh	Gifford R. Hampshire	
Paul B. Terpak	Robert J. Stoney	William L. Carey	

(check if applicable) [✓] There is more corporation information and Par. 1(b) is continued further on a "Special Permit/Variance Attachment to Par. 1(b)" form.

Application No.(s): _____

(county-assigned application number(s), to be entered by County Staff)

Special Permit/Variance Attachment to Par. 1(b)

DATE: March 19, 2008
(enter date affidavit is notarized)

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)

Walter L. Phillips, Inc.
207 Park Avenue
Falls Church, Virginia 22046

DESCRIPTION OF CORPORATION: (check one statement)

- [✓] There are 10 or less shareholders, and all of the shareholders are listed below.
- [ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- [ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)

Jeffrey J. Stuchel
Brian G. Baillargeon

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)

DESCRIPTION OF CORPORATION: (check one statement)

- [ ] There are 10 or less shareholders, and all of the shareholders are listed below.
- [ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- [ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)

(check if applicable) [ ] There is more corporation information and Par. 1(b) is continued further on a "Special Permit/Variance Attachment to Par. 1(b)" form.

SILO CENTER, LLC

By: NEW HOPE CHURCH, INC., Sole Member

By: _____
Senior Pastor/President

County of Fredericksburg
State of Virginia

ACKNOWLEDGEMENT

The foregoing was acknowledged before me this 18th day of March, 2008, by Albert R. Coram, Senior Pastor/President of New Hope Church, Inc.

_____
Notary Public
My Commission Expires: 3/31/08
My registration number is: _____

LU/SEH/New Hope Church/Agent Form

The undersigned New Hope Church, Inc. is the sole owner of that property identified on the Fairfax County Tax Map as TM 106-2 ((1))-7, having address of 8905 Ox Road, Lorton, Fairfax 22079.

Sarah E. Hall and Jeremy B. Root of Blankingship & Keith, P.C. are authorized to act as agents for co-applicant New Hope Church, Inc. and co-applicant Silo Center, LLC in applying for a Special Permit Amendment relating to the above-referenced property.

NEW HOPE CHURCH, INC.

By: _____
Senior Pastor/President

County of Fredericksburg
State of Virginia

ACKNOWLEDGEMENT

The foregoing was acknowledged before me this 18th day of March, 2008, by Albert R. Coram, Senior Pastor/President of New Hope Church, Inc.

_____
Notary Public
My Commission Expires: 3/31/08
My registration number is: _____

STATEMENT OF JUSTIFICATION

On May 24, 2005, the Board of Zoning Appeals unanimously approved Special Permit Number SP 2005-MV-010. This Special Permit permitted New Hope Church, Inc. to establish a church and child care center use on the Church's property on Ox Road. Phase I of the project is now under construction, and it is anticipated that the first services will be held there this summer.

The purposes of this Special Permit Amendment application are to add as a co-applicant Silo Center, LLC, a company wholly owned by New Hope Church, Inc., which will operate the child care center; to provide that the total maximum number of children enrolled in the child care center each day shall not exceed 250; to delete the required seven foot high wood fence along a portion of the southeastern property line; to revise the special permit plat to show an outdoor gathering area, an outdoor baptistry and a covered picnic area; and to revise the development conditions imposed in connection with SP 2005-MV-010 to reflect decisions made by Fairfax County during the Phase I site plan approval process.

In addition to child care from 9:00 a.m. to 1:00 p.m., the child care program will include a before school program from 6:30 a.m. to 8:00 a.m. and an after school program in the afternoon. During the summer there will also be a summer camp program. At no time will the number of children enrolled each day exceed 250, and the maximum number of teachers and administrators on the site each day will not exceed 25. The hours of the child care center will be from 6:30 a.m. to 7:00 p.m. The child care center will be a tremendous resource the fast growing Lorton area, and particularly for the families of children who attend the nearby Halley Elementary School.

No changes are anticipated with regard to the church use. During the week the Church will be open during normal office hours and will also have meetings and other activities in the evening. The proposed church facility will accommodate 685 seats. The Church currently has

three (3) pastors and six (6) administrative staff. The Church and the child care center will serve not only the immediate area but also the entire southern portion of Fairfax County.

The traffic impact of the Church and the child care center will be negligible. The Church's traffic impact will be greatest on Sundays, when it is estimated that the maximum number of trips will be approximately 1048. The child care center will generate approximately 1,132 weekday average trips. Because of the three different components of the child care center, these trips will be spread out over the weekdays. The Church and the child care center will be accessed by an entrance at the median break of Ox Road which will also serve the Remington Place neighborhood to the west. An ingress/egress easement has been granted across the front of the Church property to provide future access for the property immediately to the east.

As shown on the Special Permit Amendment plat, the Church seeks to add an outdoor gathering area, a small baptistry, and a covered picnic area in the southeastern portion of its property. These additions will support the community building aspects of the Church's ministry. The Church also seeks to delete the seven foot high wood fence along a portion of the southeastern property line. Given the topography in this area, the fence is not necessary and would be expensive to construct and maintain. Sunrise Development, Inc., the contract purchaser of the adjoining property, supports elimination of the fence and the addition of the gathering area, the baptistry, and the covered picnic area.

To the best of the co-applicants' knowledge, there are no hazardous or toxic substances or hazardous waste or petroleum products on site. The co-applicants will not generate, utilize, store, treat, and/or dispose of such products on site except in conformance with the applicable laws and regulations.

The proposed development will conform with all applicable ordinances, regulations, adopted standards, and applicable conditions save for transitional screening requirements.

ZONING TABULATION

R-1 RESIDENTIAL DISTRICT ONE DWELLING USE/ACRE

	REQUIRED	PROVIDED
SITE	N/A	388,920 SF/8.93 AC
MAX. BLDG. HT.	60 FT	±50 FT
MIN. YARD REQUIREMENTS		
FRONT	50' MIN. 40 FT	±134 FT
SIDE	45' MIN. 20 FT	±25 FT
REAR	45' MIN. 25 FT	±810 FT
MAX. FAR	0.55	0.10
OPEN SPACE	N/A	±55%
MIN. PARKING LOT LANDSCAPING	5%	6.7%

PARKING TABULATION

CHURCH: 688 SEATS @ 1 SP/4 SEATS

REQUIRED = 688/4 = 172 SPACES

DAYCARE: 98 CHILDREN @ 0.10 SP/CHILD

REQUIRED = 98*0.10 = 10 SPACES

TOTAL REQUIRED: 172+10 = 182 SPACES

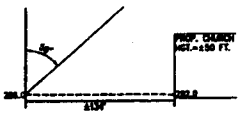
PARKING PROVIDED: 244 PARKING SPACES (INCLUDING 7 ACCESSIBLE SPACES)

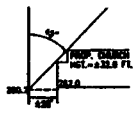
TREE COVER CALCULATIONS

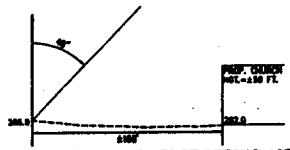
TOTAL SITE AREA	388,920 S.F.
BUILDING FOOTPRINT	- 34,332 S.F.
PLAYGROUND	- 5,000 S.F.
ABANDED SITE AREA	347,588 S.F.
PERCENT REQUIRED	X 20 %
TREE COVER REQUIRED	80,548 S.F.
DECIDUOUS TREES PROVIDED	48*250 S.F.
LARGE EVERGREEN TREES PROVIDED	74*125 S.F.
MEDIUM EVERGREEN TREES PROVIDED	148*90 S.F.
FLOWERING TREES PROVIDED	26*150 S.F.
EXISTING TREE COVERAGE	± 412,271.25 S.F.
TOTAL TREE COVERAGE	887,833 S.F.

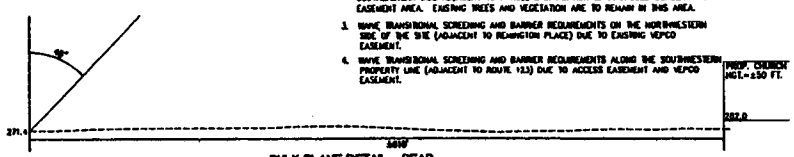
NOTES:

1. OWNER: FIELD, PETER AND VIRGINIA — APPLICANT: NEW HOPE CHURCH; 6905 OX ROAD; LORTON, VA 22079 — PO BOX 19417; ALEXANDRIA, VA 22320
2. THIS APPLICATION REQUESTS A GROUP 3 SPECIAL PERMIT FOR A CHURCH AND DAYCARE.
3. THE PROPERTY IS DESIGNATED BY FAIRFAX COUNTY, VIRGINIA, AS TAX ASSESSMENT MAP NUMBER 108-3-01-0007, AND IS ZONED R-1.
4. THE PROPERTY IS NOW IN THE NAME OF PETER A. AND VIRGINIA W. FIELD, AS RECORDED IN DEED BOOK 10070 AT PAGE 1656.
5. TOTAL AREA OF THE PROPERTY IS 388,920 SQUARE FEET OR 8.93 ACRES.
6. TO THE BEST OF OUR KNOWLEDGE, ALL UTILITY EASEMENTS HAVING A WIDTH OF 25 FEET OR MORE ON THE PROPERTY ARE SHOWN.
7. THIS PLAT DOES NOT SHOW ALL CONDITIONS, EASEMENTS, RESTRICTIONS OR DEDICATIONS WHICH MAY EXIST IN THE CHAIN OF TITLE.
8. THE PROPOSED DEVELOPMENT CONFORMS TO ALL APPLICABLE FAIRFAX COUNTY ORDINANCES, REGULATIONS AND ADOPTED STANDARDS, EXCEPT AS NOTED IN THE WAIVERS REQUESTED SECTION.
9. BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM A FIELD SURVEY PERFORMED BY THIS FIRM. CONTOUR INTERVAL IS 2 FOOT.
10. PROPERTY IS SERVED BY PUBLIC WATER AND SEWER.
11. ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP 5153250130E, DATED MARCH 1998, THIS PROPERTY IS SHOWN AS ZONE X, AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOOD PLAIN.
12. NO RESOURCE PROTECTION AREAS OR ENVIRONMENTAL QUALITY CORRIDORS, AS DEFINED, ARE DELINEATED ON THIS PROPERTY.
13. NO GRAVES OR OTHER EVIDENCE OF BURIAL PLACES HAVE BEEN FOUND ON THIS PROPERTY.
14. THIS PLAN IS CONCEPTUAL AND IS INTENDED TO BE USED IN CONJUNCTION WITH THE LAND USE APPROVAL PROCESS ONLY. IT IS NOT AN ENGINEERING CONSTRUCTION DRAWING, AND, MINOR DEVIATIONS AND ADJUSTMENTS MAY BE REQUIRED.
15. SITE SIGNAGE WILL BE PROVIDED IN ACCORDANCE WITH ARTICLE 12 OF THE FAIRFAX COUNTY ZONING ORDINANCE.
16. EXISTING ONE STORY DWELLING AND DETACHED GARAGE, CONSTRUCTED IN 1964, WILL BE DEMOLISHED.
17. THE MAIN VEPCO EASEMENT ON THIS PROPERTY WAS GRANTED PRIOR TO THE EFFECTIVE DATE OF FAIRFAX COUNTY ZONING ORDINANCE.
18. PHASE I OF THE PROPOSED CHURCH WILL INCLUDE CONSTRUCTION OF A 688 SEAT SANCTUARY. PHASE II WILL INCLUDE THE ADDITION OF A MULTI-PURPOSE AREA. PHASE I OUTDOOR RECREATION AREA TO BE LOCATED IN THE AREA OF THE FUTURE PHASE II ADDITION. THE OUTDOOR RECREATION AREA WILL BE RELOCATED DURING PHASE II TO LOCATION AS SHOWN.
19. LIGHTING WILL BE IN ACCORDANCE WITH FAIRFAX COUNTY STANDARDS.
20. TWO ALTERNATIVE LOCATIONS HAVE BEEN SHOWN FOR THE CONNECTION TO THE PUBLIC SANITARY SEWER SYSTEM. FINAL LOCATION WILL BE DETERMINED AT SITE PLAN BASED ON AVAILABILITY OF EASEMENTS.







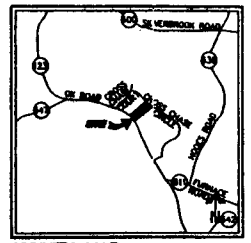


SHEET INDEX:

1. SPECIAL PERMIT PLAN
2. EXISTING VEGETATION MAP
3. PRELIMINARY STORMWATER MANAGEMENT PLAN
4. FOR INFORMATION ONLY SHEET
5. FOR INFORMATION ONLY SHEET

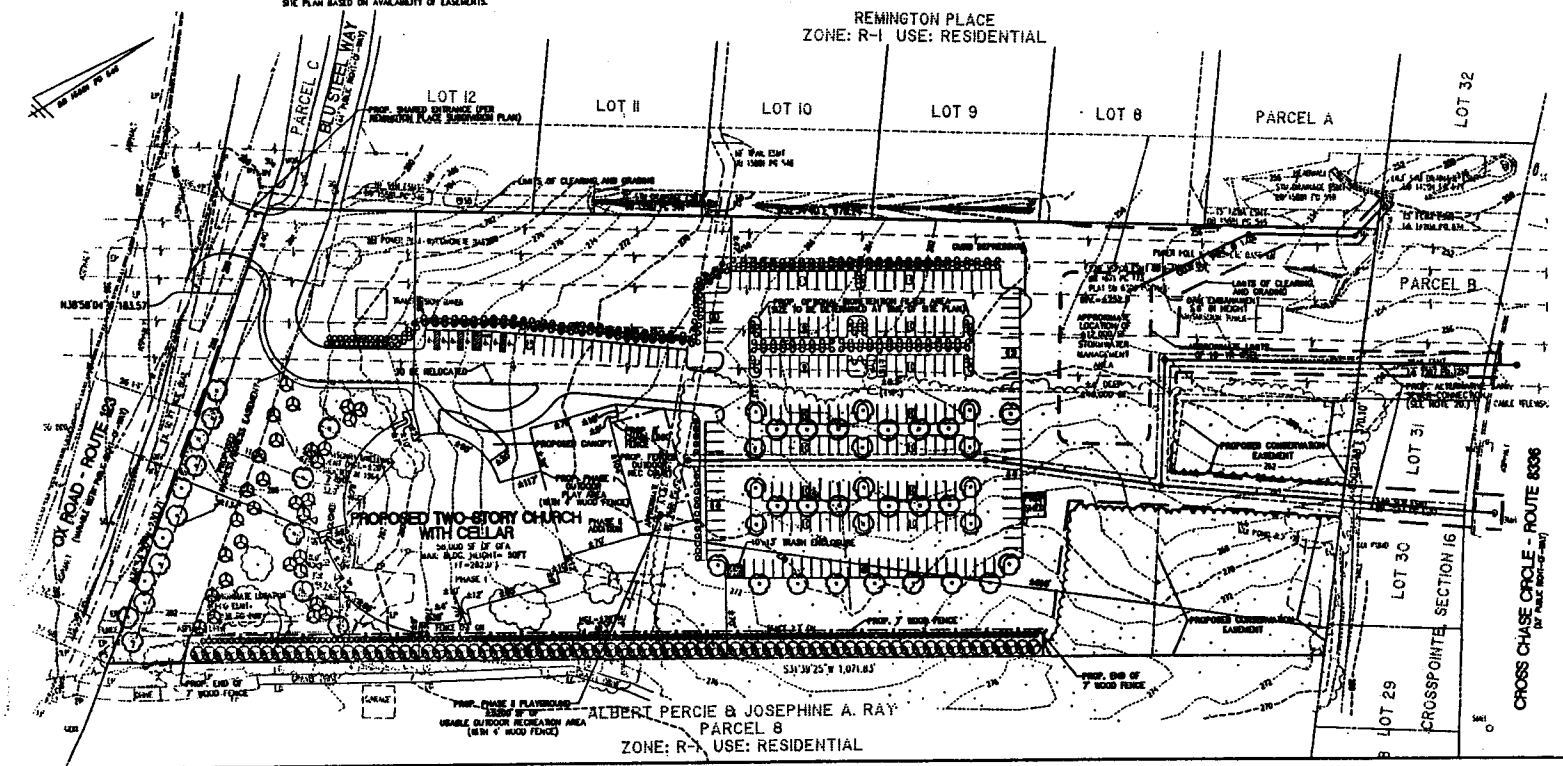
LEGEND

- PROPOSED DECIDUOUS TREES
- PROPOSED FLOWERING TREES
- PROPOSED LARGE EVERGREEN TREES
- PROPOSED MEDIUM EVERGREEN TREES
- PROP. SHRUBS (36" MAX. HEIGHT) SELECTED FROM SUGGESTED SPECIES TO PLANT IN TRANSMISSION RIGHT OF WAY PER DOMINION VIRGINIA POWER)



WAIVERS/MODIFICATIONS REQUESTED:

1. MODIFY TRANSITIONAL SCREENING REQUIREMENT AND WAIVE BARRIER REQUIREMENT ON THE NORTHEASTERN SIDE ADJACENT TO LOTS 29, 30, 31, AND PARCEL B IN THE PORTION OF THE PROPOSED CONSERVATION EASEMENT AREA AND VEPCO EASEMENT. EXISTING TREES AND VEGETATION ARE TO REMAIN IN THE PROPOSED CONSERVATION EASEMENT AREA.
2. MODIFY TRANSITIONAL SCREENING REQUIREMENT AND WAIVE BARRIER REQUIREMENT ON THE SOUTHEASTERN SIDE ADJACENT TO PARCEL B IN PORTION OF PROPOSED CONSERVATION EASEMENT AREA. EXISTING TREES AND VEGETATION ARE TO REMAIN IN THIS AREA.
3. WAIVE TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS ON THE NORTHWESTERN SIDE OF THE SITE (ADJACENT TO REMINGTON PLACE) DUE TO EXISTING VEPCO EASEMENT.
4. WAIVE TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS ALONG THE SOUTHWESTERN PROPERTY LINE (ADJACENT TO ROUTE 123) DUE TO ACCESS EASEMENT AND VEPCO EASEMENT.



WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 532-8601 WWW.WLPINC.COM

SCALE: 1" = 50'

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	BY	APPROVED	DATE

SPECIAL PERMIT PLAT

PROPOSED NEW HOPE CHURCH
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

SHEET 1 OF 5

SPECIAL PERMIT RESOLUTION OF THE BOARD OF ZONING APPEALS

NEW HOPE CHURCH, INC., SP 2005-MV-010 Appl. under Sect(s). 3-103 of the Zoning Ordinance to permit a church and child care center. Located at 8905 Ox Rd. on approx. 8.88 ac. of land zoned R-1. Mt. Vernon District. Tax Map 106-2 ((1)) 7. (Admin. Moved from 4/26/05 at appl. req.) Mr. Pammel moved that the Board of Zoning Appeals adopt the following resolution:

WHEREAS, the captioned application has been properly filed in accordance with the requirements of all applicable State and County Codes and with the by-laws of the Fairfax County Board of Zoning Appeals; and

WHEREAS, following proper notice to the public, a public hearing was held by the Board on May 24, 2005; and

WHEREAS, the Board has made the following findings of fact:

1. The applicant is the owner of the land.
2. The applicant met the prescribed requirements as set forth in the Zoning Ordinance for the use.
3. There is no opposition to the application.
4. There are numerous letters in support of the application, particularly one from the South County Federation.

AND WHEREAS, the Board of Zoning Appeals has reached the following conclusions of law:

THAT the applicant has presented testimony indicating compliance with the general standards for Special Permit Uses as set forth in Sect. 8-006 and the additional standards for this use as contained in Sect(s). 3-103 of the Zoning Ordinance.

NOW, THEREFORE, BE IT RESOLVED that the subject application is **APPROVED** with the following limitations:

1. This approval is granted to the applicant only, New Hope Church, Inc. and is not transferable without further action of this Board, and is for the location indicated on the application, 8905 Ox Road, Lorton, Virginia, and is not transferable to other land.

2. This Special Permit is granted only for the purpose(s), structures and/or use(s) indicated on the special permit plat prepared by Charles F. Dunlap (Walter L. Phillips, Inc.) dated 1/10/05 through 5/13/05, and approved with this application, as qualified by these development conditions.

3. A copy of this Special Permit and the Non-Residential Use Permit SHALL BE POSTED in a conspicuous place on the property of the use and be made available to all departments of the County of Fairfax during the hours of operation of the permitted use.

4. This Special Permit Amendment is subject to the provisions of Article 17, Site Plans. Any plan submitted to the Department of Public Works and Environmental Services (DPWES) pursuant to this special permit, shall be in substantial conformance with these conditions. Minor modifications to the approved special permit may be permitted pursuant to Par. 4 of Sect. 8-004 of the Zoning Ordinance.

5. The number of seats in the sanctuary shall not exceed 685.

6. The total maximum number of children in the child care center shall not exceed 99.

7. The child care center's maximum hours of operation shall be 6:30 A.M. and 7:00 P.M., Monday through Friday.

8. Parking shall be provided as depicted on the Special Permit Plat. All parking shall be on site.

9. All worship services shall be scheduled to avoid vehicles entering and exiting the site for services at the same time. Therefore, services shall be staggered so that no one service ends within a minimum of one hour of the next service's beginning and no Sunday School classes shall be held between services. The multi-use space (Phase II) shall not be used for services or other activities that coincide with services in the sanctuary other than Sunday School activities.

10. The transitional screening requirements shall be modified along all lot lines as shown on the special permit plat except that along the entire northwestern lot line, adjoining Remington Place, the intent of Transitional Screening 1 shall be realized to the maximum extent reasonably possible as determined by Urban Forestry Management (UFM) in consultation with Virginia Dominion Power.

11. A landscaping plan shall be developed and implemented to provide additional landscaping over and above that shown on the Special Permit plat, around the perimeter of the parking lot, the perimeter of the stormwater management pond and around the church structure, and along the northwest property line. Plant selection, including size, species, and number shall be coordinated with Virginia Dominion Power and Urban Forestry Management (UFM). Plant material, including ornamental trees and shrubs, grasses, and flower perennials may be used.

12. The barrier requirement shall be waived along all lot lines, except that seven (7) foot high wood fence shall be provided along a portion of the southeastern lot line as shown on the special permit plat.

13. Lighting shall be provided in accordance with the Performance Standards contained in Part 9 (Outdoor Lighting Standards) of Article 14 of the Zoning Ordinance. There shall be no uplighting on site, including any sign or the building, and lights shall be turned off when the site is not in use except as reasonably necessary for security purposes.

14. The limits of clearing and grading shall be at a minimum of that shown on the Special Permit plat. The proposed conservation easement areas, shall remain undisturbed. The tree save areas shall be protected by tree protection fencing in the form of four (4) foot high, 14-gauge welded wire, attached to six (6) foot steel posts driven eighteen (18) inches into the ground and placed no further than ten (10) feet apart. Prominent signs shall be placed on the fencing "TREE SAVE AREA – DO NOT DISTURB" to prevent construction from encroaching on these areas. The tree protection fencing shall be made clearly visible to all construction personnel, and shall be installed prior to any clearing and grading activities on the site. The installation of tree protection fencing shall be performed under the supervision of a certified arborist. Prior to the commencement of any clearing, grading or demolition activities, the Applicant's certified arborist shall verify in writing that the tree protection fencing has been properly installed.

15. Notwithstanding the note on the Special Permit plat, the bioretention area shall be provided in the northwestern parking lot island subject to the requirements of Virginia Dominion Power.

16. Stormwater Management/Best Management Practices facilities shall be provided as depicted on the Special Permit Plat or as determined by DPWES, provided, however, no additional vegetation shall be cleared over which is shown on the plat. Bioretention/infiltration trenches and/or other low-impact design techniques for stormwater management and Best Management Practices shall be provided around the perimeter of the parking lot, in the parking lot islands or in other areas on site as determined feasible by DPWES.

17. A right turn lane shall be constructed at the site entrance/Blu Steel Way, to VDOT standards.

18. At such time as Blu Steel Way is extended across the frontage of the property the applicant shall reconfigure its driveway so that the driveway shall intersect Blu Steel Way at an approximately 90 degree angle.

19. One year after the applicant is granted a Non-Residential Use Permit and every three (3) years thereafter ending 10 years after issuance of Non-RUP, the applicant shall perform and submit to Fairfax County Department of Transportation (FCDOT) a queuing analysis for the southbound left turn lane on Ox Road at the site entrance. In the event that the analysis indicates that the queue exceeds the capacity of the left turn bay, the applicant shall either extend the length of the left turn land as necessary or commence an appropriate staggering of its Sunday morning services as determined by FCDOT.

20. At the time of site plan approval the applicant shall contribute to Fairfax County its *pro rata* share of a traffic signal to be installed at the intersection of Ox Road and the joint entrance in an amount determined by FCDOT. The applicant's *pro rata* share shall be held in escrow for three years. In the event VDOT determines that a traffic signal is not warranted at the end of the three years, the funds may be used by Fairfax County for other transportation improvements.

21. At the time of site plan approval the applicant shall grant a 44 foot wide public ingress/egress easement across the frontage of the Property from the joint entrance to TM 106-2((1))8.

22. Arrangements for police direction shall be made at the entrance on Sunday morning, if necessary.

23. No structure shall exceed 50 feet in height.

24. The architecture of the church shall be generally as depicted in the elevation included in Attachment 1.

25. The applicant shall work with VDOT and shall connect the sidewalk to the trail in the right-of-way along Route 123.

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.

Pursuant to Sect.8-015 of the Zoning Ordinance, this special permit shall automatically expire, without notice, thirty (30) months after the date of approval* unless construction has commenced and been diligently pursued. Completion of Phase I shall commence construction as outlined above. The Board of Zoning Appeals may grant additional time 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 permit. 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.

Mr. Hammack seconded the motion, which carried by a vote of 6-0. Mr. Pammel moved to waive the 8-day waiting period. Mr. Hammack seconded the motion, which carried by a vote of 6-0. Chairman DiGiulian was absent from the meeting.

*This decision was officially filed in the office of the Board of Zoning Appeals and became final on May 24, 2005. This date shall be deemed to be the final approval date of this special permit.

A Copy Teste:

K.A. Knoth

Kathleen A. Knoth
Clerk to the Board of Zoning Appeals

County of Fairfax, Virginia

MEMORANDUM

TO: Regina Coyle, Director
Zoning Evaluation Division, DPZ

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

FILE: 3-6 (SP 2005-MV-010)

SUBJECT: SPA 2005-MV-010; New Hope Church, Inc.
Land Identification Map: 106-2 ((1)) 7

DATE: July 7, 2008

This department has reviewed the subject request including the special permit plat dated March 13, 2008. We can support the subject application if the following issues are adequately addressed.

- The applicant commits to construction of a service drive connection to Parcel 8, Tax Map 106-2 ((1)). This service drive will provide access between residential development to the north, the proposed uses on the subject parcel and Parcel 8, and the shopping center use at its southern terminus without requiring traffic to access Route 123.

- A pro rata share contribution for a future signal at the entrance onto Route 123 is provided which is associated with the increase in the number of students from 99 to 250.

- Reconstruction of the church entrance to a 90 degree angle intersection when the interparcel connection is constructed.

AKR/MAD

Fairfax County Department of Transportation
12055 Government Center Parkway, Suite 1034
Fairfax, VA 22035-5500
Phone: (703) 324-1100 TTY: (703) 324-1102
Fax: (703) 324 1450
www.fairfaxcounty.gov/fcdot

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Serving Fairfax County for 25 Years and More

County of Fairfax, Virginia

MEMORANDUM

July 10, 2008

TO: Regina Coyle, Director
Zoning Evaluation Division, DPZ

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

SUBJECT: Environmental Assessment: SPA 2005-MV-010, New Hope Church

Mary Ann Welton, AICP, has reviewed the proposed development as depicted on the revised Special Permit Amendment Plan dated March 13, 2008. No significant environmental impacts are anticipated with the proposed development. However, the proposal is subject to planned trail requirements. In accordance with the Countywide Trails Plan and Public Facilities Manual, the applicant should provide an 8 foot wide, Type I (asphalt) trail within a 12 foot wide trail easement or a 10 foot wide, Type I (asphalt) trail within the VDOT right-of-way along the property's Ox Road (Route 123) frontage. The applicant should also provide a 5 foot wide, on-road bike lane if frontage improvement is required for Ox Road. The Fairfax County Department of Transportation will determine whether frontage improvement and the bike lane are required. Lastly, a 6 foot wide, Type I asphalt trail within a 10 foot wide trail easement is required for the AT&T easement. The revised Special Permit Amendment Plan dated March 13, 2008, addresses the trail requirements in the following manner:

- Ox Road – A 10 foot wide asphalt trail is shown along the frontage as an existing trail. No bike lane is shown.
- AT & T easement – no trail is shown.

PGN: MAW

Department of Planning and Zoning
Planning Division
12055 Government Center Parkway, Suite730
Fairfax, Virginia 22035-5509
Phone 703-324-1380
Fax 703-324-3056
www.fairfaxcounty.gov/dpz/

County of Fairfax, Virginia

MEMORANDUM

DATE: JUL 3 - 2008

TO: Suzanne Lin
Zoning Evaluation Division
Department of Planning and Zoning

FROM: Sharad Regmi, Stormwater Engineer
Stormwater and Geotechnical Section
Environmental and Site Review Division
Department of Public Works and Environmental Services

SUBJECT: Special Permit Amendment Application, SPA 2005-MV-010, New Hope Church, March 13, 2008, Tax Map #106-2-01-0007, Mount Vernon District

We have reviewed the subject submission and offer the following comments related to Stormwater management (SWM):

Chesapeake Bay Preservation Ordinance
There is no Resource Protection Areas on the Property.

Floodplain Regulations
There are no regulated floodplains on the Property.

SWM
The applicant has indicated that the SWM facilities were designed for all of Phase I and Phase II development activities.

If further assistance is desired, please contact me at 703-324-1720.

cc: Craig Carinci, Director, Stormwater Planning Division, DPWES
Zoning Application File

Department of Public Works and Environmental Services
Land Development Services, Environmental and Site Review Division
12055 Government Center Parkway, Suite 535
Fairfax, Virginia 22035-5503
Phone 703-324-1720 • TTY 711 • FAX 703-324-8359

County of Fairfax, Virginia

MEMORANDUM

July 9, 2008

TO: Suzanne Lin, Staff Coordinator
Zoning Evaluation Division, DPZ

FROM: Jessica Strother, Urban Forester II
Forest Conservation Section, UFMD, DPWES

SUBJECT: New Hope Church, SPA 2005-MV-010

RE: Your Request for Additional Comments

This review is based on the Special Permit Amendment Plat (SPA Plat) stamped as received by DPZ on May 7, 2008. These comments are a follow-up to a response from the Applicant.

1. **Comment:** The tree cover calculations on sheet 4 of the SPA Plat have been revised from that shown on the approved site plan. However, there are issues that need clarification on the following points:

   - The new addition and outdoor bapistry structure should be deducted in the cover calculations. It does not appear that was done.
   - What is the rationale for a reduction in the total square footage of the site area at this time ? This figure differs from that on the approved site plan.
   - Why is there an increase in the amount of tree cover credited per trees planted, versus that shown on the approved site plan?

   Recommendation: These clarifications should be coordinated by the Applicant, and in conjunction with the Urban Forest Management Division at this time.

2. **Comment:** The Applicant is providing some shrubs in the vicinity of the proposed building addition, as reflected on the approved site plan. Additional shrubs and ground cover, will contribute to minimizing run-off from the increase in impervious area.

   Recommendation: The SPA Plat should be revised to reflect these changes and improvements.

3. *(New Comment)* **Comment:** The Applicant should clarify if and when the adjacent property is developed, whether the 12 trees in the vicinity of the future access road will be removed and replaced on the New Hope Church property.

   Recommendation: The Applicant should commit to planting these 12 trees in another location should future development of an access road, necessitate their removal.

JGS/

Department of Public Works and Environmental Services
Land Development Services, Urban Forest Management Division
12055 Government Center Parkway, Suite 518
Fairfax, Virginia 22035-5503
Phone 703-324-1770, TTY: 703-324-1877, Fax: 703-803-7769
www.fairfaxcounty.gov/dpwes

appropriate areas for such uses, all special permit uses are divided into groups of associated or related uses, hereinafter set forth in this Article 8.

8-006 General Standards

In addition to the specific standards set forth hereinafter with regard to particular special permit uses, all special permit uses shall satisfy the following general standards:

1. The proposed use at the specified location shall be in harmony with the adopted comprehensive plan.

2. The proposed use shall be in harmony with the general purpose and intent of the applicable zoning district regulations.

3. The proposed use shall be such that it will be harmonious with and will not adversely affect the use or development of neighboring properties in accordance with the applicable zoning district regulations and the adopted comprehensive plan. The location, size and height of buildings, structures, walls and fences, and the nature and extent of screening, buffering and landscaping shall be such that the use will not hinder or discourage the appropriate development and use of adjacent or nearby land and/or buildings or impair the value thereof.

4. The proposed use shall be such that pedestrian and vehicular traffic associated with such use will not be hazardous or conflict with the existing and anticipated traffic in the neighborhood.

5. In addition to the standards which may be set forth in this Article for a particular group or use, the BZA shall require landscaping and screening in accordance with the provisions of Article 13.

6. Open space shall be provided in an amount equivalent to that specified for the zoning district in which the proposed use is located.

7. Adequate utility, drainage, parking, loading and other necessary facilities to serve the proposed use shall be provided. Parking and loading requirements shall be in accordance with the provisions of Article 11.

8. Signs shall be regulated by the provisions of Article 12; however, the BZA, under the authority presented in Sect. 007 below, may impose more strict requirements for a given use than those set forth in this Ordinance.

8-007 Conditions and Restrictions

In addition to those standards set forth in this Article, the BZA, in approving a special permit, may impose such conditions and restrictions upon the proposed use as it may deem necessary in the public interest to secure compliance with the provisions of this Ordinance and to protect the viability of the implementation of the adopted comprehensive plan. Such conditions or restrictions may include but need not be limited to a time limitation on the length of the permit in accordance with the provisions of Sect. 008 below and may require the posting of a guarantee or bond in a reasonable amount by the applicant.

I-I District: Limited to use 10
I-1, I-2, I-3 Districts: Limited to uses 3 and 10
I-4, I-5, I-6 Districts: Limited to use 10

8-303 Standards for all Group 3 Uses

In addition to the general standards set forth in Sect. 006 above, all Group 3 special permit uses shall satisfy the following standards:

1. Except as may be qualified in the following Sections, all uses shall comply with the lot size and bulk regulations of the zoning district in which located; however, subject to the provisions of Sect. 9-607, the maximum building height for a Group 3 use may be increased.

2. All uses shall comply with the performance standards specified for the zoning district in which located.

3. Before establishment, all uses, including modifications or alterations to existing uses, except home child care facilities, shall be subject to the provisions of Article 17, Site Plans.

8-304 (Deleted by Amendment #83-72, Adopted January 31, 1983)

8-305 Additional Standards for Home Child Care Facilities

1. The number of children that may be cared for in a home child care facility may exceed the number of children permitted under Par. 6A of Sect. 10-103, but in no event shall the maximum number of children permitted at any one time exceed ten (10), excluding the provider's own children. The BZA may also allow more than one nonresident person to be involved with the use.

2. The BZA shall review all existing and/or proposed parking to determine if such parking is sufficient. The BZA may require the provision of additional off-street parking spaces based on the maximum number of vehicles expected to be on site at any one time and such parking shall be in addition to the requirement for the dwelling unit.

3. The provisions of Article 13 shall not apply to home child care facilities, however, the BZA may require the provision of landscaping and screening based on the specifics of each application.

4. Notwithstanding Par. 2 of Sect. 011 above, all applications shall be accompanied by ten (10) copies of a plan drawn to scale. The plan, which may be prepared by the applicant, shall contain the following information:

   A. The dimensions, boundary lines and area of the lot or parcel.

   B. The location, dimensions and height of any building, structure or addition, whether existing or proposed.

alternative facilities and/or services in existence or approved for construction, and the present and projected utilization of specialized treatment equipment available to persons proposed to be served by the applicant.

B. Any proposed specialized treatment or care facility has or can provide for a working relationship with a general hospital sufficiently close to ensure availability of a full range of diagnostic and treatment services.

C. The proposed facility will contribute to, and not divert or subvert, implementation of a plan for comprehensive health care for the area proposed to be served; such consideration shall take into account the experience of the applicant, the financial resources available and projected for project support and operation, and the nature and qualifications of the proposed staffing of the facility.

3. All such uses shall be designed to accommodate service vehicles with access to the building at a side or rear entrance.

4. No freestanding nursing facility shall be established except on a parcel of land fronting on, and with direct access to, an existing or planned collector or arterial street as defined in the adopted comprehensive plan.

5. No building shall be located closer than 45 feet to any street line or closer than 100 feet to any lot line which abuts an R-A through R-4 District.

6. In the R-E through R-5 Districts, no such use shall be located on a lot containing less than five (5) acres.

7. For hospitals, the Board of Supervisors may approve additional on-site signs when it is determined, based on the size and nature of the hospital, that additional signs are necessary in order to provide needed information to the public and that such signs will not have an adverse impact on adjacent properties. All proposed signs shall be subject to the maximum area and height limitations for hospital signs set forth in Article 12. All requests shall show the location, size, height and number of all signs, as well as the information to be displayed on the signs.

9-309 Additional Standards for Child Care Centers and Nursery Schools

1. In addition to complying with the minimum lot size requirements of the zoning district in which located, the minimum lot area shall be of such size that 100 square feet of usable outdoor recreation area shall be provided for each child that may use the space at any one time. Such area shall be delineated on a plat submitted at the time the application is filed.

For the purpose of this provision, usable outdoor recreation area shall be limited to:

A. That area not covered by buildings or required off-street parking spaces.

B. That area outside the limits of the minimum required front yard, unless specifically approved by the Board in commercial and industrial districts only.

C. Only that area which is developable for active outdoor recreation purposes.

D. An area which occupies no more than eighty (80) percent of the combined total areas of the required rear and side yards.

2. All such uses shall be located so as to have direct access to an existing or programmed public street of sufficient right-of-way and cross-section width to accommodate pedestrian and vehicular traffic to and from the use as determined by the Director. To assist in making this determination, each applicant, at the time of application, shall provide an estimate of the maximum expected trip generation, the distribution of these trips by mode and time of day, and the expected service area of the facility. As a general guideline, the size of the use in relation to the appropriate street type should be as follows, subject to whatever modification and conditions the Board deems to be necessary or advisable:

Number of Persons	**Street Type**
1-75	Local
76-660	Collector
660 or more	Arterial

3. All such uses shall be located so as to permit the pick-up and delivery of all persons on the site.

4. Such use shall be subject to the regulations of Chapter 30 of The Code or Title 63.1, Chapter 10 of the Code of Virginia.

9-310 Additional Standards for Private Schools of General Education and Private Schools of Special Education

1. In addition to complying with the minimum lot size requirements of the zoning district in which located, the minimum lot area for a private school of general education shall be of such size that:

A. 200 square feet of usable outdoor recreation area shall be provided for each child in grades K-3 that may use the space at any one time, and

B. 430 square feet of usable outdoor recreation area shall be provided for each child in grades 4-12 that may use the space at any one time.

Such usable outdoor recreation area shall be delineated on a plat submitted at the time the application is filed.

For the purpose of this provision, usable outdoor recreation area shall be limited to:

A. That area not covered by buildings or required off-street parking spaces.

B. That area outside the limits of the required front yard.

C. Only that area which is developable for active outdoor recreation purposes.