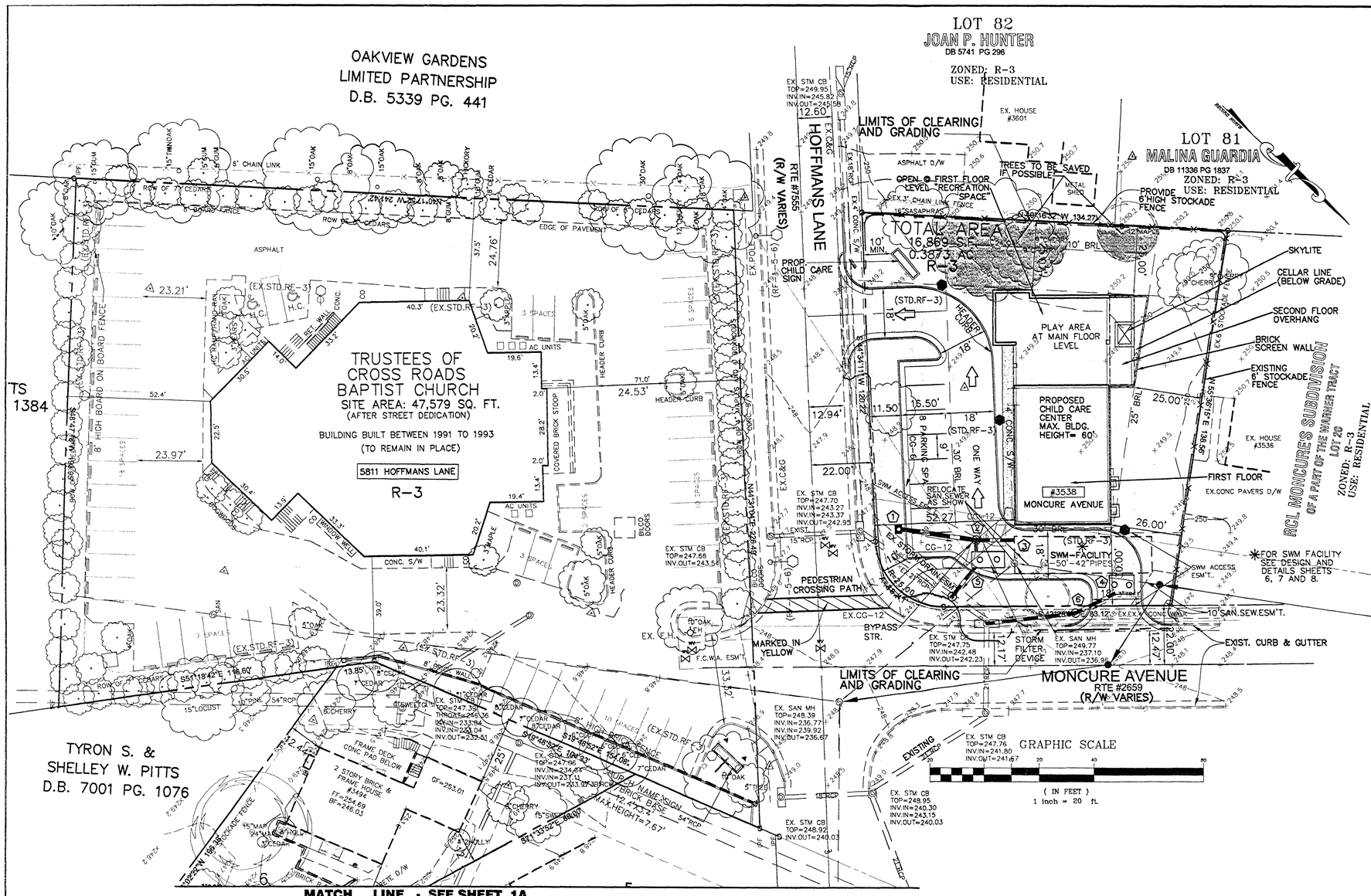

SITE TABULATION:

5811 HOFFMANS LANE	3538 MONCURE AVENUE
CROSSROADS BAPTIST CHURCH	CHILD CARE AND PRIVATE SCHOOL
TOTAL SITE AREA = 47,579 SF (1.0923 AC) GROSS FLOOR AREA FIRST FLOOR = 8,479 SF MEZZANINE = 2,837 SF TOTAL = 11,316 SF F.A.R. PROVIDED = 0.2378 F.A.R .ALLOWABLE = 0.25 ZONED: R-3 MINIMUM YARD REQUIREMENTS FRONT-30' SIDE-10' REAR-25' MAX. BLDG. HEIGHT = 60 FT	TOTAL SITE AREA = 16,869 SF (0.3873 AC) GROSS FLOOR AREA = 4,217.25 SF F.A.R. PROVIDED = 0.25 F.A.R. ALLOWABLE = 0.25 ZONED: R-3 PLAY AREA (UNDER ROOF AND FENCE AREA) TOTAL = 1,890SF SET BACK REQUIREMENTS: FRONT = CONTROLLED BY A 40 ANGLE OF BULK PLANE BUT NOT LESS THAN 30 FEET SIDE = CONTROLLED BY A 35 ANGLE OF BULK PLANE BUT NOT LESS THAN 10 FEET. REAR=CONTROLLED BY A 35 ANGLE OF BULK PLANE BUT NOT LESS THAN 25 FEET. MAX. BLDG. HEIGHT=60 FEET

3494 PAUL STREET – DUNLEIGH COURT LOT 6
OWNER: CROSSROADS BAPTIST CHURCH
TOTAL SITE AREA: 11,456 SF (0.2630 AC)
GROSS FLOOR AREA: 2,700 SF (0.0620 AC)
F.A.R. PROVIDED: 0.2357
F.A.R. ALLOWABLE: 0.25
ZONED: R-3
USE: RESIDENTIAL (SINGLE FAMILY DWELLING)

SITE TABULATION FOR THIS APPLICATION
AREA EXISTING CHURCH=47,579 SF
AREA PROPOSED (CHILD CARE CENTER) = 16,869 SF
DUNLEIGH CT. LOT 6 = 11,456 SF
TOTAL = 75,904 SF

1) TOTAL GROSS FLOOR AREA:

CHILD CARE & PRIVATE SCHOOL	= 4,217.25 SF
EXISTING CHURCH	11,316.00 SF
RESIDENCE AT 3494 PAUL ST.	= 2,700.00 SF
TOTAL	=18,233.25 SF

PROPOSED F.A.R. (ENTIRE SITE) = 18,233.25 / 75,904 = 0.2402

PARKING REQUIREMENTS:

5811 HOFFMANS LANE
CROSSROADS BAPTIST CHURCH
SEATING CAPACITY OF CHURCH=232 SEATS
1 SPACE PER 4 SEATS = 58 SPACES REQUIRED
PARKING PROVIDED: 59 REGULAR, 2 HANDICAPPED
TOTAL = 61 SPACES PROVIDED (WITH APPLICATION SPA-90-M-036)
PARKING TABULATIONS AS PER APPLICATION # SP-90-M-036
APPROVED DECEMBER 18, 1999
3494 PAUL STREET – DUNLEIGH COURT LOT 6
4 SPACES (2 IN GARAGE, 2 ON DRIVEWAY
TOTAL PROVIDED = 4 SPACES

3538 MONCURE AVENUE
PRIVATE SCHOOL OF GENERAL EDUCATION
REQUIRED: 3 SPACES FOR TEACHERS
4 VISITOR SPACES
0.3 SPACE PER STUDENT (25 STUDENTS) = 8 SPACES
TOTAL REQUIRED = 15 SPACES

CHILD CARE
REQUIRED: 16 SPACES FOR STAFF EMPLOYEES
5 SPACES FOR CHURCH STAFF
0.16 SPACE PER CHILD (125 CHILDREN) = 20 SPACES
TOTAL REQUIRED = 41 SPACES

PARKING TABULATIONS FOR THE ENTIRE SITE:

CROSSROADS BAPTIST CHURCH	= 61 SPACES
CHILD CARE AND PRIVATE SCHOOL	= 8 SPACES
3494 PAUL STREET RESIDENCE	= 4 SPACES
TOTAL	= 73 SPACES

- A SHARED PARKING ARRANGEMENT WAS PREVIOUSLY APPROVED BY DPWES. THERE ARE PRESENTLY 61 PARKING SPACES PROVIDED ON THE CHURCH PROPERTY (WHICH ARE LOCATED WITHIN 500 FT OF THE PROPOSED STRUCTURE), AND AN ADDITIONAL 8 PARKING SPACES PROPOSED ON THE CHILD CARE CENTER PROPERTY (INCLUDING 1 HANDICAP SPACE)
- TOTAL REQUIRED SPACES BETWEEN THE SCHOOL AND THE DAY CARE IS 56 SPACES DURING THE WEEK AND 58 SPACES ON SUNDAY FOR CHURCH SERVICES (232 SEATS/4).

NOTES:

THE PROPERTY DELINEATED ON THIS PLAT IS LOCATED ON FAIRFAX COUNTY TAX MAP # 061-4-0030-0022, 061-4-01-0112, 061-4-39-0006 AND IS ZONED R-3.

EXISTING USE: PLACE OF WORKSHIP, DAY CARE, SCHOOL OF GENERAL EDUCATION, VACANT LAND AND RESIDENCE.

THE FOLLOWING INFORMATION IS PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF THE SUBMISSION REQUIREMENTS FOR A SPECIAL PERMIT AMENDMENT PER SECTION 8-011 PARAGRAPH 1, 2 AND 3.

THE AMENDMENT IS TO ALLOW THE CONSTRUCTION OF 1 CHILD CARE CENTER.

A. BOUNDARIES OF THE PROPERTY WITH BEARING AND DISTANCES SHOWN HEREON.
B. TOTAL AREA OF SITE IS 1.7425 ACRES.
C. SCALE AND NORTH ARROW SHOWN HEREON.
D. ALL EXISTING AND PROPOSED ADDITIONS SHOWN HEREON.
E. BUILDING RESTRICTION LINES AND DISTANCES FROM ALL EXISTING AND PROPOSED STRUCTURES TO LOT LINES SHOWN HEREON.
F. PUBLIC STREET RIGHT-OF-WAY SHOWN HEREON WITH TIES FROM CENTERLINE TO PROPERTY LINE AND FROM CENTERLINE TO EDGE OF PAVEMENT.
G. FOR CHILD CARE CENTER ACCESS TO PROPERTY FROM MONCURE AVENUE, ROUTE #2659 AND EXIT TO HOFFMANS LANE, ROUTE #7555, SHOWN HEREON.
H. SEE SITE TABULATIONS.
I. SITE IS SERVED BY PUBLIC WATER AND PUBLIC SEWER.
J. STORMWATER MANAGEMENT FACILITY AND COMPUTATIONS ARE SHOWN HEREON,THE APPLICANT RESERVES THE RIGHT TO REQUEST A WAIVER OF STORM WATER DETENTION AT THE TIME OF SITE PLAN SUBMISSION AND REVIEW .
K. TOPOGRAPHY IS FIELD RUN BY HUNTLEY, NYCE & ASSOCIATES, LTD. AUGUST,2007. WITH 2 FOOT CONTOUR INTERVALS. NO TITLE REPORT FURNISHED.
L. SEE LANDSCAPE SHEET FOR LIMITS OF CLEARING, EXISTING VEGETATION, AND PROPOSED LANDSCAPING AND SCREENING.
M. THERE IS NO FLOOD PLAIN OR R.P.A. ON THIS SITE.
N. USABLE OUTDOOR RECREATION AREA SHOWN HEREON.
O. THERE ARE NO KNOWN EXISTING UTILITY EASEMENTS HAVING A WIDTH OF 25 FEET OR MORE.
P. THERE ARE NO TRAILS SHOWN ON FAIRFAX COUNTY COMPREHENSIVE TRAIL PLAN FOR MONCURE AVENUE OR HOFFMANS LANE.
Q. THERE ARE NO VISIBLE GRAVES, OBJECTS OR STRUCTURES MARKING PLACE OF BURIAL LOCATED ON THIS PROPERTY.
R. SEAL AND SIGNATURE SHOWN HEREON.

ATTORNEY FOR APPLICANT:

ARLENE LYLES PRIPETON,P.C.
FAIRFAX TOWNE-SUITE B
10195 MAIN STREET
FAIRFAX, VIRGINIA 22031
PHONE: 703-385-2858

ARCHITECT:

ROBSON GROUP ARCHITECTS, INC.
14900 BOGLE DRIVE, SUITE 203
CHANTILLY, VIRGINIA 20151
FAIRFAX, VIRGINIA 22031
CONTACT PERSON: BILL ROBSON
PHONE: 703-802-9075

SHEET INDEX:

1. SPECIAL PERMIT AMENDMENT PLAN
2. SPECIAL PERMIT AMENDMENT- BULK PLANE EXHIBIT-DETAILS
3. EXISTING CONDITIONS PLAN- SOIL EVALUATION
4. SPECIAL PERMIT AMENDMENT-EXISTING CONDITION
5. LANDSCAPE PLAN
6. DRAINAGE ANALYSIS & OUTFALL NARRATIVE
7. DETENTION FACILITY & BMP CALCULATIONS
8. DETENTION FACILITY ROUTINGS & SWM NARRATIVE
9. SPECIAL PERMIT APPLICATION SP 90-M-036 } PREVIOUSLY
10. SPECIAL PERMIT APPLICATION SP 90-M-036 } APPROVED

APPLICANT:

TRUSTEES OF CROSS ROADS BAPTIST CHURCH
5811 HOFFMANS LANE
BAILEY'S CROSSROADS, VIRGINIA 22041
CONTACT PERSON: DR. LOUIS C. BALDWIN, PASTOR
PHONE: 703-845-0017
FAX: 703-845-0020

Application No. SPA 90-M-036-2
Approved
RECEIVED
Department of Planning & Zoning
SEP 24 2008
Zoning Evaluation Division
Chairman, Board of Zoning Appeals

REQUIREMENTS PER SEC. 8-011 PAR. 1, 2 & 3 FAIRFAX COUNTY ZONING ORDINANCE

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COMMONWEALTH OF VIRGINIA
ROBERT J. SPEELS
Lic. No. 24835
9-24-08
PROFESSIONAL ENGINEER

CROSS ROAD CHILD CARE CENTER

LOT 22
MASON DISTRICT, FAIRFAX COUNTY, VIRGINIA
SPECIAL PERMIT AMENDMENT PLAN - SPA 2007-0420

SCALE: 1"= 20'
DATE: 10-30-2007
REVISIONS:
09-24-2008

DESIGN: | CADD: | CHECK:
SHEET: 1 OF 10
FILE NO. PL-3851

OAKVIEW GARDENS
LIMITED PARTNERSHIP
D.B. 5339 PG. 441

DAVID A. PITTS
D.B. 4776 PG. 1384

TRUSTEES OF
CROSS ROADS
BAPTIST CHURCH
SITE AREA: 47,579 SQ. FT.
(AFTER STREET DEDICATION)

BUILDING BUILT BETWEEN 1991 TO 1993
(TO REMAIN IN PLACE)

5811 HOFFMANS LANE
R-3

TYRON S. &
SHELLEY W. PITTS
D.B. 7001 PG. 1076

3494 PAUL STREET

11,456 SQ. FT.

MATCH LINE

D.B. 7600 PG. 612
DUNLEIGH COURT

PAUL STREET

LOT 82
JOAN P. HUNTER
DB 5741 PG 296
ZONED: R-3
USE: RESIDENTIAL

LOT 81
MALINA GUARDIA
DB 11336 PG 1837
ZONED: R-3
PROVIDE USE: RESIDENTIAL
6'HIGH STOCKADE FENCE

HOFFMANS LANE
RTE #7555
(R/W VARIES)

LIMITS OF CLEARING AND GRADING

TOTAL AREA
16,869 S.F.
0.3873 AC
R-3

PLAY AREA AT MAIN FLOOR LEVEL

3538 MONCURE AVENUE

PROPOSED
CHILD CARE
CENTER
MAX. BLDG.
HEIGHT= 60'

R/L MONCURE'S SUBDIVISION
OF A PART OF THE WARNER TRACT
LOT 20
ZONED: R-3
USE: RESIDENTIAL

SWM-FACILITY
(50'-42" PIPES)

PEDESTRIAN
CROSSING PATH

BYPASS
STR.

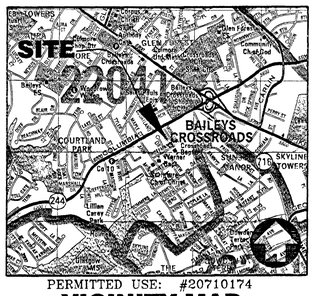
STORM
FILTER
DEVICE

MONCURE AVENUE
RTE #2659
(R/W VARIES)

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

PERMITTED USE: #20710174

VICINITY MAP
SCALE 1" = 2000'



REQUIREMENTS PER SEC. 8-011 PAR. 1, 2 & 3 FAIRFAX COUNTY ZONING ORDINANCE

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COMMONWEALTH OF VIRGINIA
ROBERT J. SPARKS
LIC. NO. 2462
PROFESSIONAL ENGINEER
10-28-08

CROSS ROAD CHILD CARE CENTER

LOT 22

MASON DISTRICT, FAIRFAX COUNTY, VIRGINIA

OVERALL PLAN

SPECIAL PERMIT AMENDMENT PLAN - SPA 2007-0420

SCALE: 1"= 20'

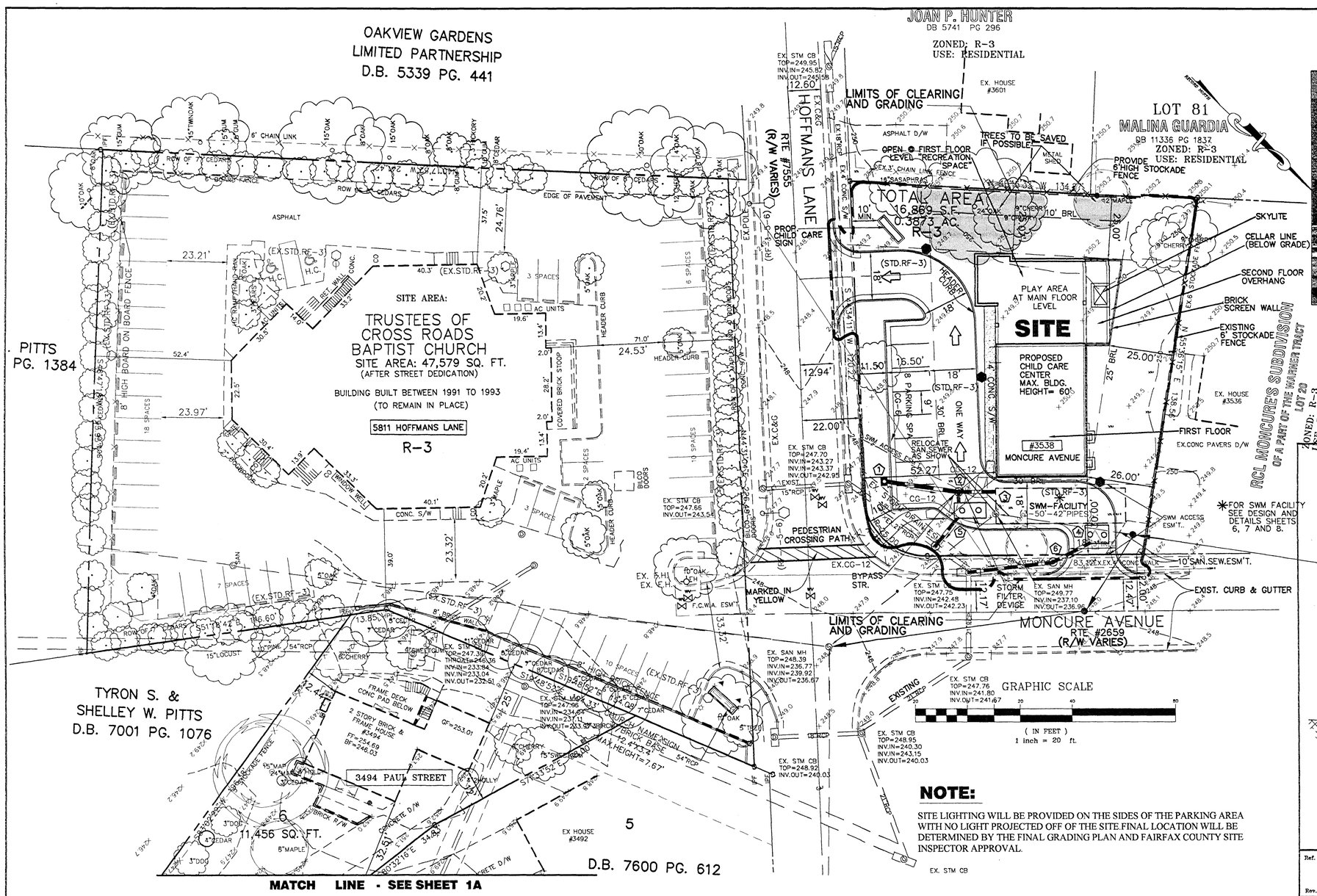
DATE: 10-30-2007

REVISIONS:
09-24-2008

DESIGN: | CADD: | CHECK:

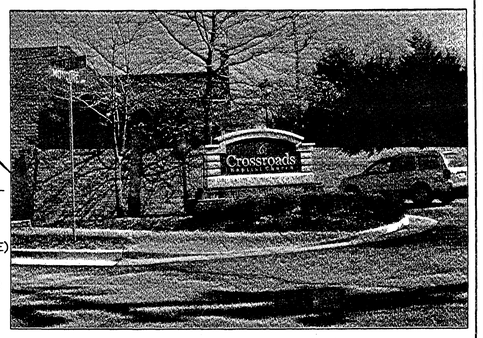
SHEET: 1A OF 10

FILE NO. PL-3851



NOTE:

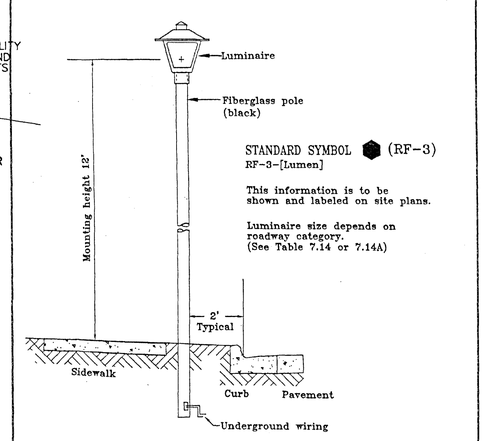
SITE LIGHTING WILL BE PROVIDED ON THE SIDES OF THE PARKING AREA WITH NO LIGHT PROJECTED OFF OF THE SITE.FINAL LOCATION WILL BE DETERMINED BY THE FINAL GRADING PLAN AND FAIRFAX COUNTY SITE INSPECTOR APPROVAL.



EXISTING CHURCH SIGN

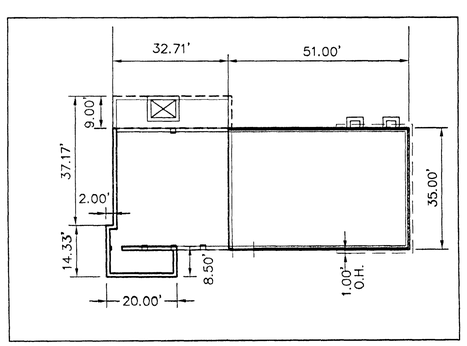
(SIMILAR SIGN WILL BE PROVIDED FOR THE CHILD CARE FACILITY)

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



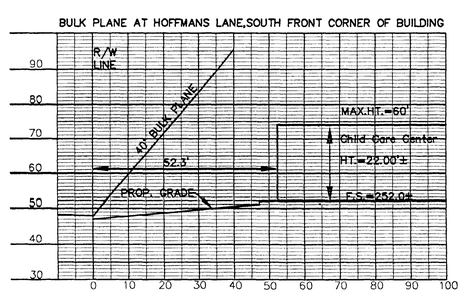
ON-SITE

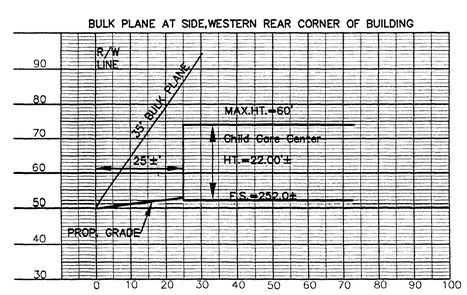
Ref. Sec. 7-1004	ALTERNATE SECURITY LIGHTING FIXTURE COLONIAL STYLE FOR PROPOSED CURB AND GUTTER STREETS	PLATE NO.	STD. NO.
Rev. 1-00		32-7	RF-3

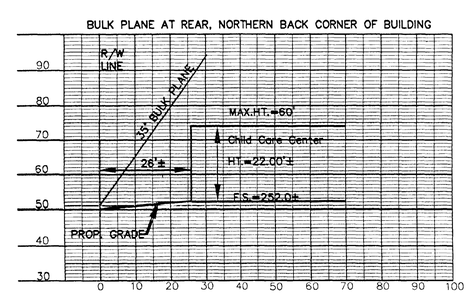


BUILDING DIMENSIONS

(SCALE: 1"=20')







ANGLE OF BULK PLANE

(SCALE: 1"=20')

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COMMONWEALTH OF VIRGINIA
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PROFESSIONAL ENGINEER
09-28-08

CROSS ROAD CHILD CARE CENTER

LOT 22

MASON DISTRICT, FAIRFAX COUNTY, VIRGINIA

SPECIAL PERMIT AMENDMENT-BULK PLANE EXHIBIT-DETAILS

SCALE: 1"= 20'

DATE: 10-30-2007

REVISIONS:

09-24-2008

DESIGN: | CADD: | CHECK:

SHEET: 2 OF 10

FILE NO. PL-3851

Stephen A. Cromer
8116 Arlington Boulevard, #130
Falls Church, VA 22042
Telephone 703-282-0977
Fax 703-327-3835

STEPHEN A. CROMER
VA CPSS#3401-000004
Expires 06-30-2009

COMMONWEALTH OF VIRGINIA
STEPHEN A. CROMER
No. 3401-000004
CERTIFIED SOIL SCIENTIST

Soil Evaluation for Construction of Additions & or Accessory Structures in an Unmapped Soils Area

Requested by: Huntley, Nyce, and Associates
Proposed Use: Residential
Location: 3538 Moncure Avenue, Falls Church, VA
Evaluation By: Stephen A. Cromer VA CPSS #3401-000004

Map No(s): 061-4-30-0022
Date: 9/25/2007

SOIL MAP

Coastal Plain Physiographic Province

SCALE: 1" =500'

Map Legend
Soil Map symbol: 54B1
Soil Number: 54
Slope: B
Erosion: 1

Slope Symbols
A: 0-2% slopes
B: 2-7% slopes
C: 7-15% slopes
D: 15-25% slopes
E: 25% and greater

Erosion Symbols
+: Soil Accumulation
0: No Erosion
1: Slight Erosion
2: Moderate Erosion
3: Severe Erosion

SOIL MAP SYMBOL	SOIL SERIES NAME	SLOPE RANGE %	PROBLEM CLASS	ESTIMATED % OF SITE
Soil Map Number	Soil Series Name	Slope range in Percent	A, B, or C	Estimated percent Of Each Soil Type
54B1	**Sassafras**	**2-7%**	**C**	**100%**
			TOTAL:	100%

POTENTIAL SOIL PROBLEMS	YES/NO	SOIL NO(S)
Slope instability	NO	
Marginal to Low Bearing Capacity	NO	
High Seasonal Water Table	NO	
High Shrink-Swell Clays	NO	
Poor Surface Drainage	NO	
Shallow Depth to Bedrock	NO	
High Erodibility	YES	54
Flood Plain (Alluvial)	NO	
Poor Septic Field Potential	NO	
Hydric Soils Potential Wetlands	NO	

GEOTECHNICAL REQUIREMENTS

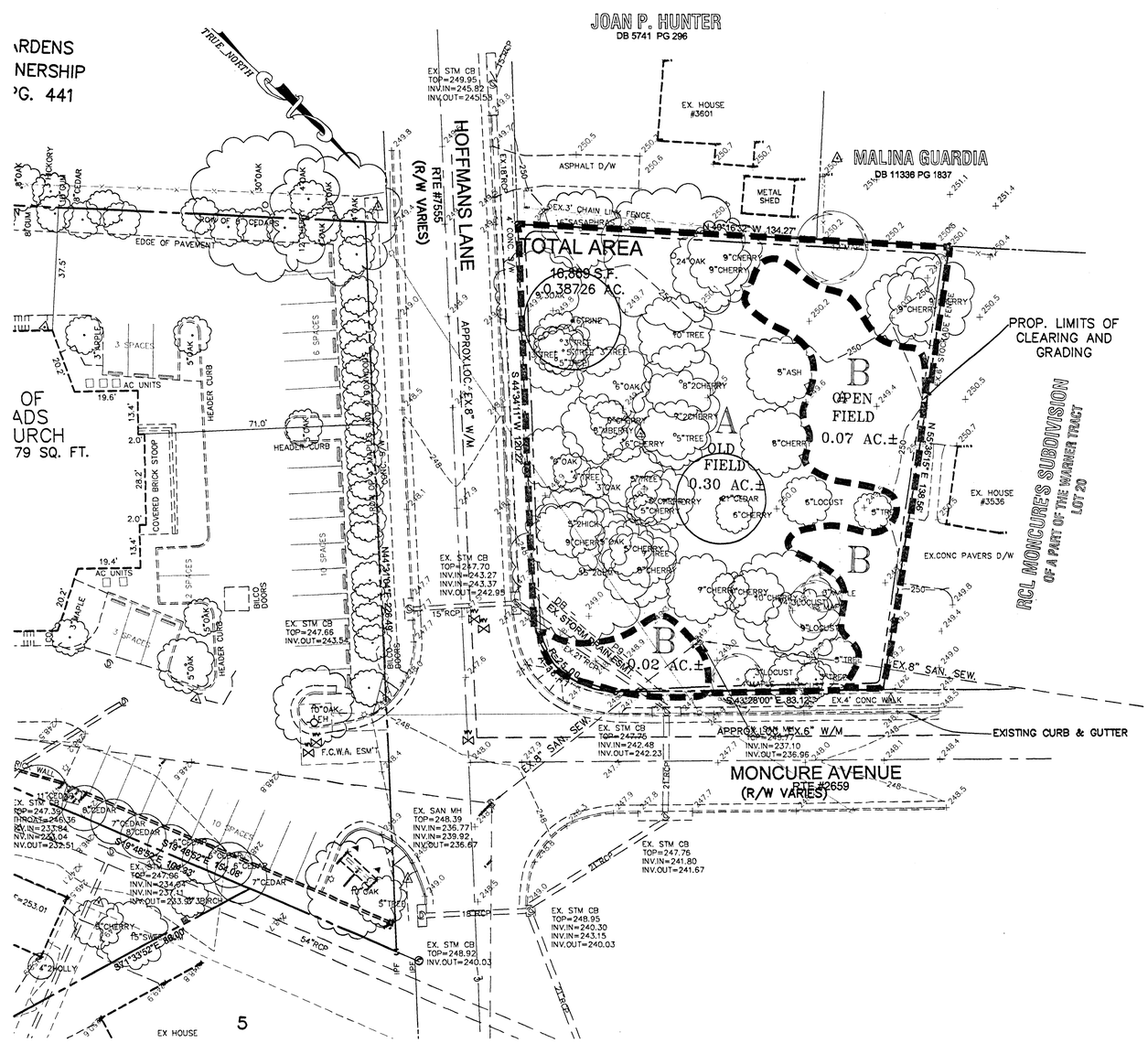
A geotechnical report is not required for construction in **(54) Sassafras** soil as long as construction is in natural soils and not in disturbed soil or fill.

DESCRIPTION OF SOIL CHARACTERISTICS

(54) Sassafras

This soil occurs on hilltops and sideslopes in sandy and clayey Coastal Plain sediments. The upper five feet consists of predominantly sandy and sandy clay loam materials. Depth to hard bedrock is greater than 200 feet. Permeability is moderate to moderately rapid. The soil typically provides adequate support for small buildings (three stories or less) and is suitable for most urban and residential uses.

NOTE:
This report and the accompanying soil map are based on a site investigation of the property. Soil Characteristics, descriptions, and potential problems are based on the site conditions at the time of the investigation. Any disturbance that drastically alters the original site conditions may affect the interpretations of this report.



LEGEND

TITLE	SYMBOL
POWER POLE	
CENTER LINE	C/L
EX.LIGHT	
GAS LINE	G
HANDYCAP PARKING SPACE	
WATER METER	
EX.2' CONTOUR	253
EX.10' CONTOUR	250
EX. BUILDING	
EX.SPOT ELEV.	318.00
PROPERTY LINE	
TREE LINE	
BUILDING RESTRICTION LINE	B.R.L.
S.L. CLEAN OUT	C.O.
WATER VALVE	WV
DRAIN PIPE	
SANITARY MANHOLE	S
GUY WIRE	
FIRE HYDRANT	FH

EXISTING VEGETATION MAP CHART

	COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION	ACREAGE	COMMENTS
A	OLD FIELD	CHERRY, MAPLE, LOCUST, OAK, ASH	CLIMAX	GOOD	0.30 AC.	.
B	OPEN FIELD	LAWN AREA	N/A	GOOD	0.09 AC.	.
TOTAL ACREAGE					0.39 AC.	

REQUIREMENTS PER SEC. 8-011 PAR. 1, 2 & 3 FAIRFAX COUNTY ZONING ORDINANCE

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COMMONWEALTH OF VIRGINIA
ROBERT SPARLES
Lic. No. 2465
09-24-2008
PROFESSIONAL ENGINEER

CROSS ROAD CHILD CARE CENTER

LOT 22
MASON DISTRICT, FAIRFAX COUNTY, VIRGINIA
SPECIAL PERMIT AMENDMENT - EXISTING CONDITIONS

SCALE: 1"= 20'
DATE: 10-30-2007
REVISIONS:
09-24-2008

DESIGN: CADD: CHECK:
SHEET: 3 OF 10
FILE NO. PL-3851

LANDSCAPING NOTES

1. PROVIDE PLANT MATERIAL TRUE TO BOTANICAL NAME AND LEGIBLY TAGGED.
2. COMPLY WITH SIZING AND GRADING STANDARDS OF THE LATEST EDITION OF THE "AMERICAN STANDARD FOR NURSERY STOCK". A PLANT SHALL BE DIMENSIONED AS IT STANDS IN ITS NATURAL POSITION.
3. PLANT DECIDUOUS MATERIALS IN A DORMANT CONDITION. IF PLANTED IN-LEAF, PLANTS SHALL BE SPRAYED WITH AN ANTI-DESICCANT PRIOR TO PLANTING.
4. COVER PLANTS TRANSPORTED ON OPEN VEHICLES WITH A PROTECTIVE COVERING TO PREVENT WIND BURN.
5. A COMPLETE LIST OF PLANTS, INCLUDING A SCHEDULE OF SIZES, QUANTITIES, AND OTHER REQUIREMENTS IS SHOWN ON THE DRAWINGS. IN THE EVENT THAT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR IN THE PLANT MATERIALS LIST, THE PLANTING PLANS SHALL GOVERN.
6. PROTECT EXISTING UTILITIES, PAVING AND OTHER FACILITIES FROM DAMAGE CAUSED BY LANDSCAPING OPERATIONS.
7. LOCATE PLANTS AS INDICATED OR AS APPROVED IN THE FIELD AFTER STAKING BY THE CONTRACTOR. IF OBSTRUCTIONS ARE ENCOUNTERED THAT ARE NOT SHOWN ON THE DRAWINGS, DO NOT PROCEED WITH PLANTING OPERATIONS UNTIL ALTERNATE PLANT LOCATIONS HAVE BEEN SELECTED.
8. PERFORM CLEANING DURING INSTALLATION OF THE WORK AND UPON COMPLETION OF THE WORK. REMOVE FROM SITE ALL EXCESS MATERIALS, SOIL, DEBRIS, AND EQUIPMENT. REPAIR DAMAGE RESULTING FROM PLANTING OPERATIONS.
9. ALL LANDSCAPING WILL CONFORM TO "GUIDELINES FOR PLANTING ALONG VIRGINIA'S ROADWAYS".

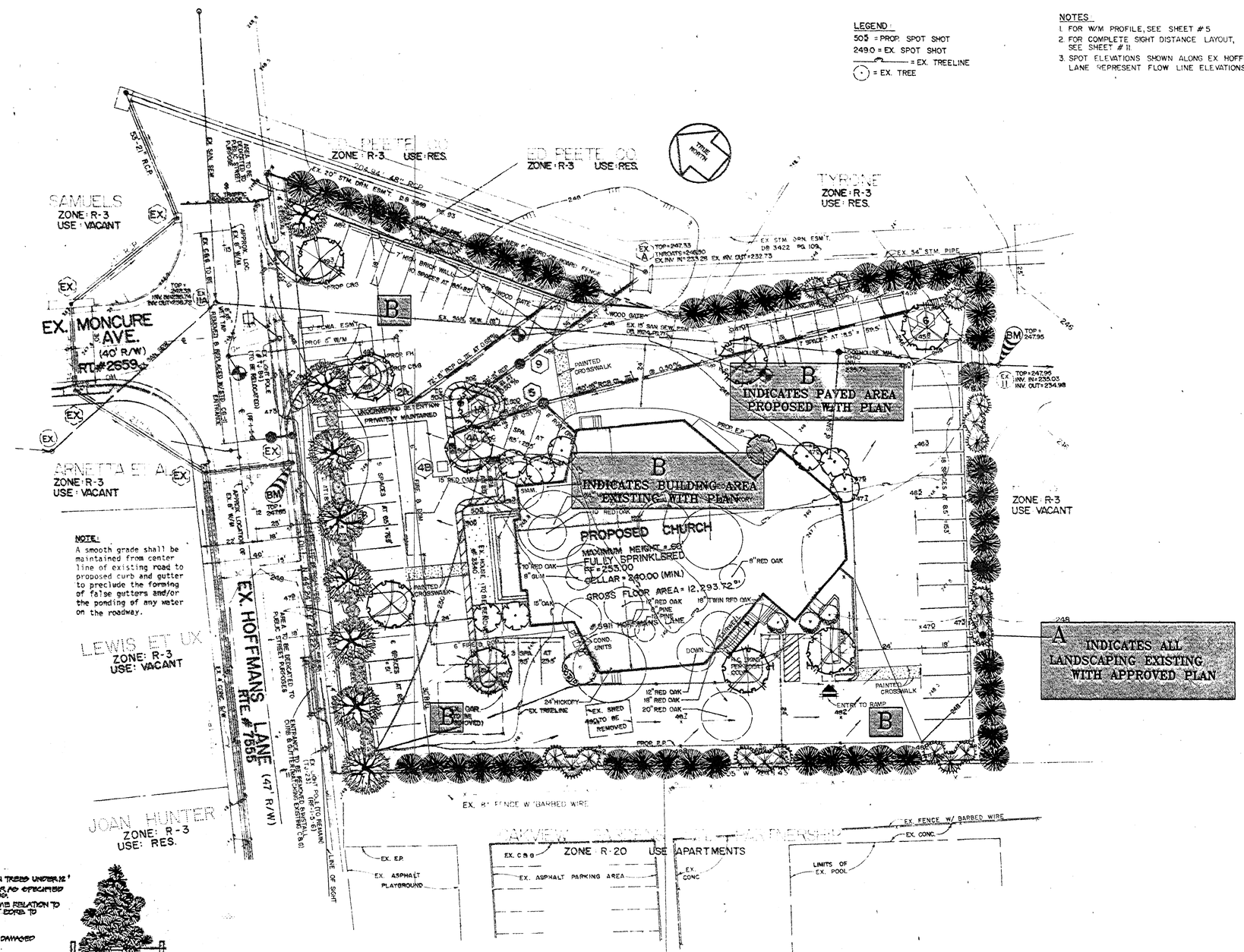
TREE COVER REQUIREMENTS

1. GROSS SITE AREA	=	49,174.88 SQ. FT.
2. BUILDING FOOTPRINTS	=	- 12,293.72 SQ. FT.
ADJUSTED SITE AREA	=	36,881.16 SQ. FT.
3. PERCENT TREE COVER REQUIRED (20%)	=	x 0.20
4. AREA OF EXISTING TREES TO BE SAVED	=	7,376.23 SQ. FT. / 0.00 SQ. FT.
5. PROPOSED TREE COVER	=	12,850.00 SQ. FT.
6. TREE COVER REQUIRED	=	7,376.23 SQ. FT.
7. TOTAL TREE COVER	=	12,850.00 SQ. FT.

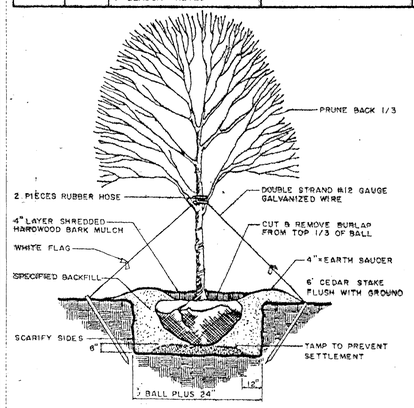
NOTES
1. PROPOSED OAKS TO BE PRUNED AS NECESSARY TO ASSURE ADEQUATE LINE OF SIGHT.
2. FOR INTERIOR PARKING LOT LANDSCAPING CALCULATIONS SEE COVER SHEET.

PLANTING SCHEDULE

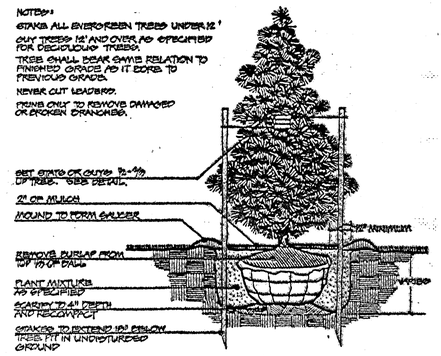
SYMBOL	QUANT.	BOTANICAL NAME	COMMON NAME	SIZE & CONDITION
	10	QUERCUS PHELLOS	WILLOW OAK	2½" CAL. B&B
	8	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	2½" CAL. B&B
	22	JUNIPERUS VIRGINIANA 'MANHATTAN BLUE'	MANHATTAN BLUE CEDAR	6'-8" HT. B&B
	50	CUPRESSOCYPARIS LEYLANDII	LEYLAND CYPRESS	10' HT. CONTAINER
	9	CORNUS FLORIDA	FLOWERING DOGWOOD	2" CAL. B&B
	1	MALUS FLORIBUNDA	JAPANESE FLOWERING CRAB	2" CAL. B&B
	1	HALESIA CAROLINA	CAROLINA SILVERBELL	2" CAL. B&B
	3	MAGNOLIA SOULANGIANA	SAUCER MAGNOLIA	2" CAL. B&B
	18	JUNIPERUS GLAUCA 'HETZI'	HETZ BLUE JUNIPER	3' HT. B&B



NOTE:
A smooth grade shall be maintained from center line of existing road to proposed curb and gutter to preclude the forming of false gutters and/or the ponding of any water on the roadway.



DETAIL - TREE PLANTING
NOT TO SCALE



EVERGREEN TREE PLANTING
NOT TO SCALE

EXISTING VEGETATION MAP CHART

	COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION	ACREAGE	COMMENTS
A	EXISTING WITH PLAN	SEE PLANTING SCHEDULE	EXISTING AS APPROVED WITH PLAN	GOOD	12,850 SF OR .30 AC	
B	EXISTING SITE PAVED AREA	N/A	N/A	N/A	36,325 SF OR .83 AC.	
TOTAL ACREAGE					49,175 SFF OR 1.13 AC.	

REQUIREMENTS PER SEC. 8-011 PAR. 1, 2 & 3 FAIRFAX COUNTY ZONING ORDINANCE

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10-30-07

CROSS ROAD BAPTIST CHURCH

MASON DISTRICT, FAIRFAX COUNTY, VIRGINIA

SPECIAL PERMIT AMENDMENT - EXISTING CONDITIONS

SCALE: 1" = 20'
DATE: 10-30-2007
REVISIONS:
09-24-2008

DESIGN: | CADD: | CHECK:

SHEET: 4 OF 10
FILE NO. PL-3851

TRANSITIONAL SCREENING

NORTHWEST SIDE TRANSITIONAL SCREENING TYPE I REQUIRED
(APPROX. LENGTH OF TRANSITIONAL SCREEN 130 LF)

ONE LARGE EVERGREEN/10 LINEAR FEET
ONE MEDIUM EVERGREEN/5 LINEAR FEET

REQUIRED:

13 LARGE EVERGREENS
26 MEDIUM EVERGREENS

PROVIDED

18 LARGE EVERGREENS
11 MEDIUM EVERGREENS

NORTHEAST SIDE TRANSITIONAL SCREENING TYPE 1 REQUIRED
(APPROX. LENGTH OF TRANSITIONAL SCREEN 110 LF)

ONE LARGE EVERGREEN/10 LINEAR FEET
ONE MEDIUM EVERGREEN/5 LINEAR FEET

REQUIRED:

11 LARGE EVERGREENS
22 MEDIUM EVERGREENS

PROVIDED

13 LARGE EVERGREENS
9 MEDIUM EVERGREENS

BARRIER REQUIREMENTS ARE TO BE MET WITH A 6' HIGH BOARD ON BOARD FENCE FOR THE NW AND NE SIDES

INTERIOR PARKING LOT LANDSCAPING

PER 12-0703.1 INTERIOR LOT PARKING LANDSCAPING IS REQUIRED FOR ALL PARKING LOTS WITH 20 OR MORE SPACES. THEREFORE, CALCULATIONS DO NOT APPLY TO THIS SITE.

TREE COVER CALCULATIONS

ZONING CATEGORY: R-3

GROSS SITE AREA.....0.38726 AC. OR 16,859 SF

BUILDING FOOTPRINT.....3,157 SF

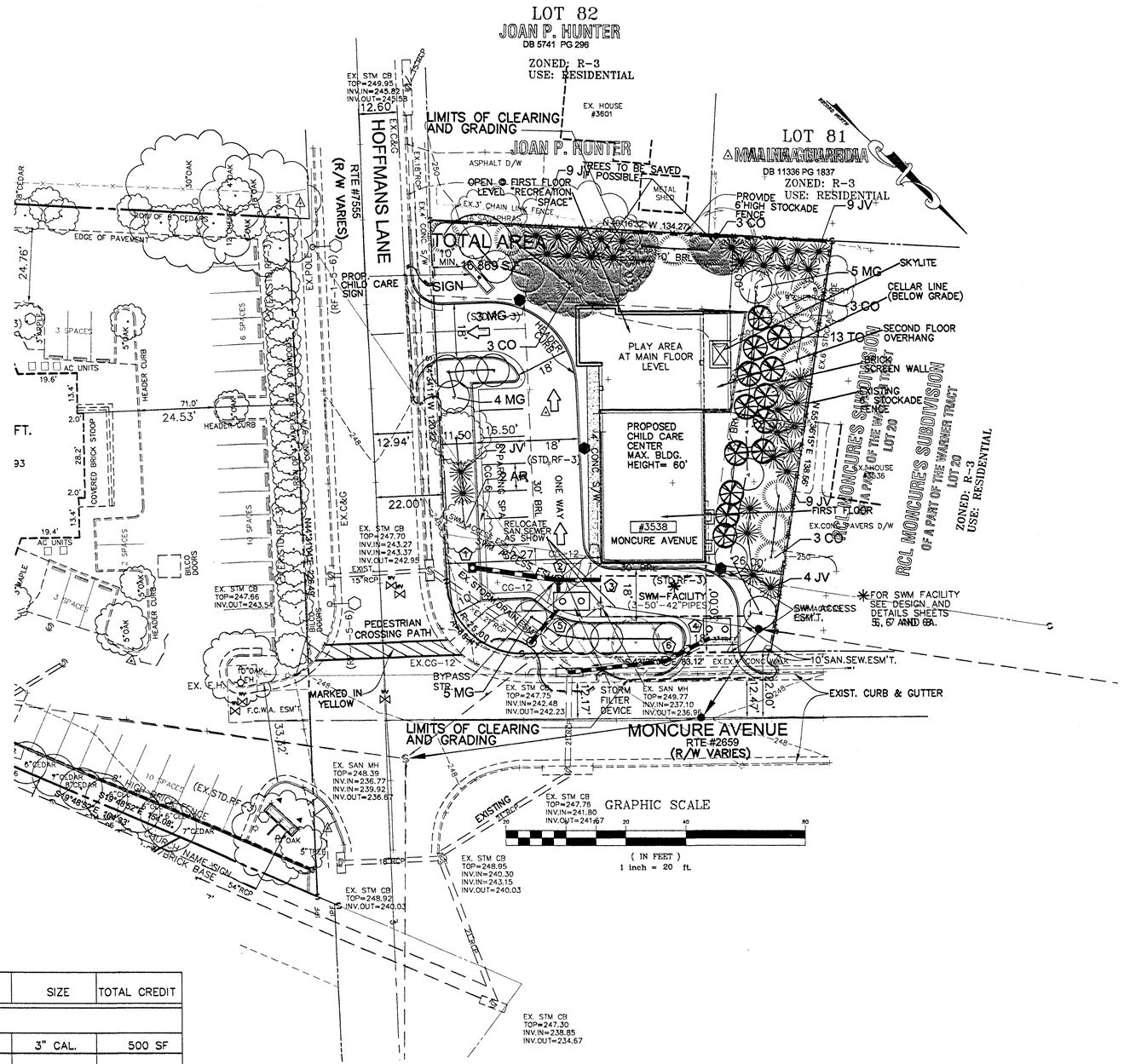
ADJUSTED SITE AREA.....13,712 SF

MULTIPLY PERCENT REQUIRED.....20%

EQUALS REQUIRED TREE COVER.....2,742 SF

PROVIDED.....5,275 SF

PERCENTAGE OF TREE COVER PROVIDED.....38%



LANDSCAPE SCHEDULE

KEY	QUANTITY	% OF SPECIES	BOTANICAL NAME	COMMON NAME	REMARKS	CREDIT	SIZE	TOTAL CREDIT
CANOPY								
AR	2	3%	Acer rubrum	Red Maple	B & B	250 SF	3" CAL.	500 SF
EVERGREEN								
CO	13	17.5%	Chameacyparis obtusa 'Gracilis'	Slender Hinoki False Cypress	B & B	100 SF	8'-10" HT.	650 SF
JV	29	39%	Juniperus virginiana	Eastern Red Cedar	B & B	75 SF	6'-8' HT.	1,450 SF
MG	17	23%	Magnolia Grandiflora	Magnolia "Little Gem"	B & B	100 SF	6'-8' HT.	1,700 SF
TO	13	17.5%	Thuga occidentalis 'nigra'	American Arborvitae	B & B	75 SF	6'-8' HT	975 SF
TOTAL	74	100%						5,275 SF

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08-28-07

CROSS ROAD CHILD CARE CENTER

LOT 22

MASON DISTRICT, FAIRFAX COUNTY, VIRGINIA

LANDSCAPE PLAN

SCALE: AS SHOWN

DATE: 10-30-2007

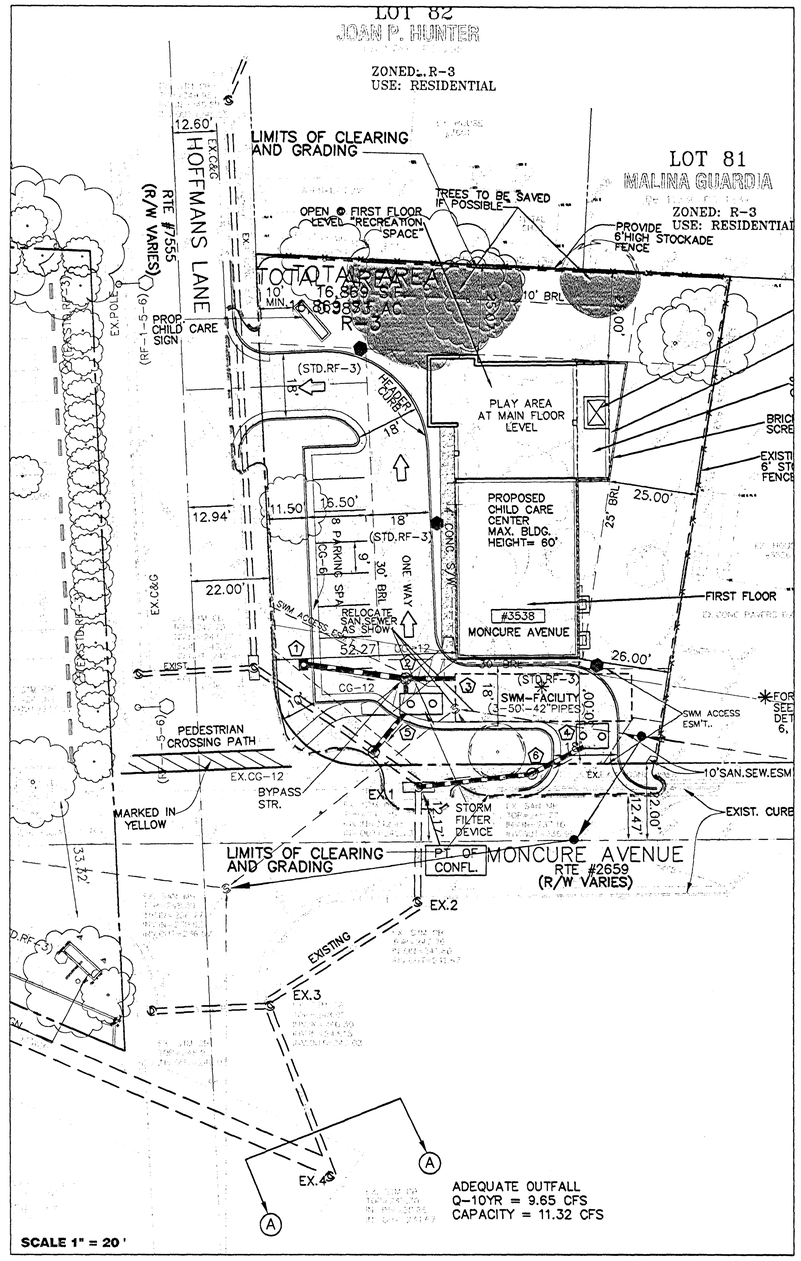
REVISIONS:

09-24-2008

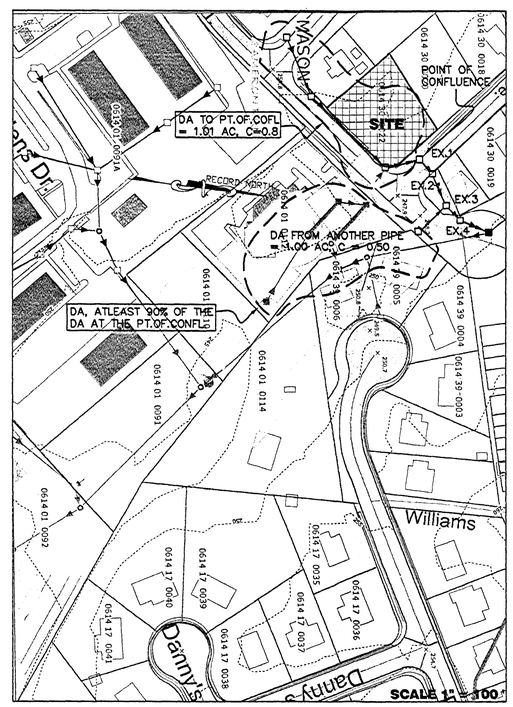
DESIGN: | CADD: | CHECK:

SHEET: 5 OF 10

FILE NO. PL-3851



EXISTING STORM PIPE NETWORK



OUTFALL MAP SHOWING THE EXTENT OF DRAINAGE

OUTFALL NARRATIVE

THE CROSS ROAD CHILD CARE CENTER IS 0.39 AC SITE (TAX MAP # 061-4-30-00-0022),LOCATED IN MASON DISTRICT, FAIRFAX COUNTY, VA. THE SITE IS WITH IN THE "CAMERON RUN" WATER SHED. THE RUNOFF FROM THE SITE IS TREATED FOR QUALITY AND QUANTITY AND ULTIMATELY DRAINS INTO A CLOSED SYSTEM FLOWING IN NORTH EASTERLY DIRECTION AND ULTIMATELY INTO THE TRIBUTARY OF "LONG BRANCH".

IN THE PRESENT CONDITION, THE SITE HAS BRUSH AND WOODS. THE PROPOSED CHILD CARE CENTER WILL INCREASE THE IMPERVIOUS AREA OF THE SITE FROM "0 SQ.FT" TO APPROXIMATELY "9,150 SQ.FT". THE RESULTANT INCREASE IN RUNOFF WILL BE SUBJECT TO QUALITY AND QUANTITY CONTROL UTILIZING STRUCTURAL PRACTICES.

THE RUNOFF FROM ROOF TOPS AND OTHER IMPERVIOUS AREAS IS COLLECTED VIA THE PROPOSED STORM SEWER SYSTEM. THE FIRST HALF INCH OF RUNOFF IS DIVERTED TO A "STORM FILTER" STRUCTURE TO ACHIEVE A 50% PHOSPHOROUS REMOVAL, THUS PROVIDING THE REQUIRED BMPs.

RUNOFF GREATER THAN THE FIRST HALF INCH IS COLLECTED INTO AN "UNDERGROUND DETENTION FACILITY". THERE THE RUNOFF IS CONTROLLED FOR THE 2-YR AND 10-YR STORMS TO THE PRE RUNOFF RATES. THE RESULTANT OUFLOW FROM BOTH THE STORM FILTER STRUCTURE AND UNDERGROUND DETENTION TANK, WILL BE CONNECTED TO THE EXISTING MAJOR STORM DRAINAGE SYSTEM LOCATED ALONG THE HOFFMAN'S LANE. THIS SYSTEM IS ADQUATE TO HANDLE THE CONCENTRATED RUNOFF GENERATED FROM THE SWM & BMP OUTLET STRUCTURES.

COMPLIANCE WITH PFM 6-0203.2, THE EXTENT OF REVIEW OF THE DOWNSTREAM DRAINAGE SYSTEM

6-0203.2A, STATES THAT THE EXTENT OF REVIEW SHALL BE TO A POINT THAT IS AT LEAST 150' DOWNSTREAM OF A POINT WHERE THE RECEIVING PIPE OR CHANNEL IS JOINED BY ANOTHER, THAT HAS A DRAINAGE AREA OF AT LEAST 90% OF THE DRAINAGE AREA AT THE POINT OF CONFLUENCE.

THE SITE COMPLIES WITH PFM 6-0203.2A. THE POINT OF CONFLUENCE IS STRUCTURE # "EX.1" WITH A DRAINAGE AREA OF APPROXIMATELY 1.01 AC. FOLLOWING DOWNSTREAM TO STRUCTURE # "EX.3", THE RECEIVING PIPE IS JOINED BY ANOTHER PIPE WITH A DRAINAGE AREA OF APPOX. 1.00AC. PLEASE SEE THE DRAINAGE AREAS IDENTIFIED ALONG WITH STORM SEWER TABULATIONS.

BASED ON THESE CONDITIONS, IT IS OUR OPINION THAT AN ADQEUATE OUTFALL EXISTS FOR THIS SITE AND THE RUNOFF GENERATED FROM THIS SITE WILL NOT HAVE ADVERSE EFFECT ON ANY DOWNSTREAM PROPERTY OR EXISTING STRUCTURES.

COMPLIANCE WITH LETTER TO INDUSTRY # 06-04

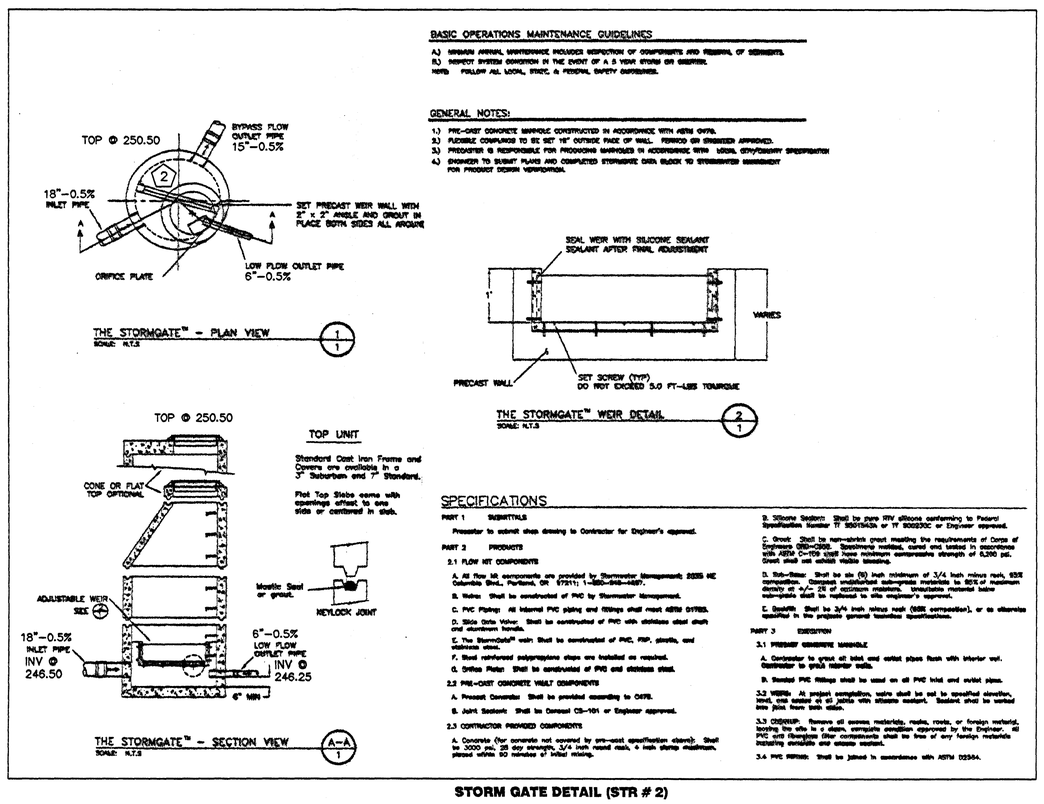
THE DEVELOPMENT OF THIS SITE DOES NOT CREATE ANY ADVERSE IMPACT ON THE DOWNSTREAM PROPERTIES. THIS DEVELOPMENT ESTABLISHES AN IMPROVED OUTFALL BY PROVIDING STORM FILTER AND UNDERGROUND DETENTION, THUS CONTROLLING THE RUNOFF BEFORE DISCHARGING INTO THE MAJOR STORM DRAINAGE SYSTEM.

EX. STORM SEWER DESIGN COMPUTATIONS

FROM POINT	TO POINT	AREA DRAIN "A" ACRES	RUNOFF COEF. C	CA INCRES MENT	CA ACCUM-ULATED	INLET TIME MIN.	RAIN FALL IN/HR	RUNOFF Q C.F.S.	INVERT ELEV. UPPER END	INVERT ELEV. LOWER END	LENGTH FT	DIA INCHES	SLOPE F/T/FT	CAPA-CITY C.F.S.	VEL. F.P.S.	FLOW TIME SEC.	REMARKS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
EX.1	EX.2	1.01	0.80	0.81	0.81	5.00	7.27	5.87	242.48	242.23	34	21	0.01	13.4	5.53	6.15	
EX.2	EX.3	0.05	0.40	0.02	0.83	5.00	7.27	5.02	241.80	241.67	50	21	0.003	8.70	3.60	13.89	
EX.3	EX.4	1.00	0.50	0.50	1.33	5.00	7.27	9.65	240.30	240.03	53	21	0.005	11.32	4.70	11.28	SEC. A-A

TOTAL FLOW TO THE EXISTING SYSTEM

TOTAL CAPACITY OF THE EXISTING SYSTEM



STORM GATE DETAIL (STR # 2)

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COMMONWEALTH OF VIRGINIA
ROBERT J. SPRIDLES
Lic. No. 24833
11-28-08
PROFESSIONAL ENGINEER

CROSS ROAD CHILD CARE CENTER

LOT 22

MASON DISTRICT, FAIRFAX COUNTY, VIRGINIA

DRAINAGE ANALYSIS & OUTFALL NARRATIVE

SCALE: AS SHOWN

DATE: 10-30-2007

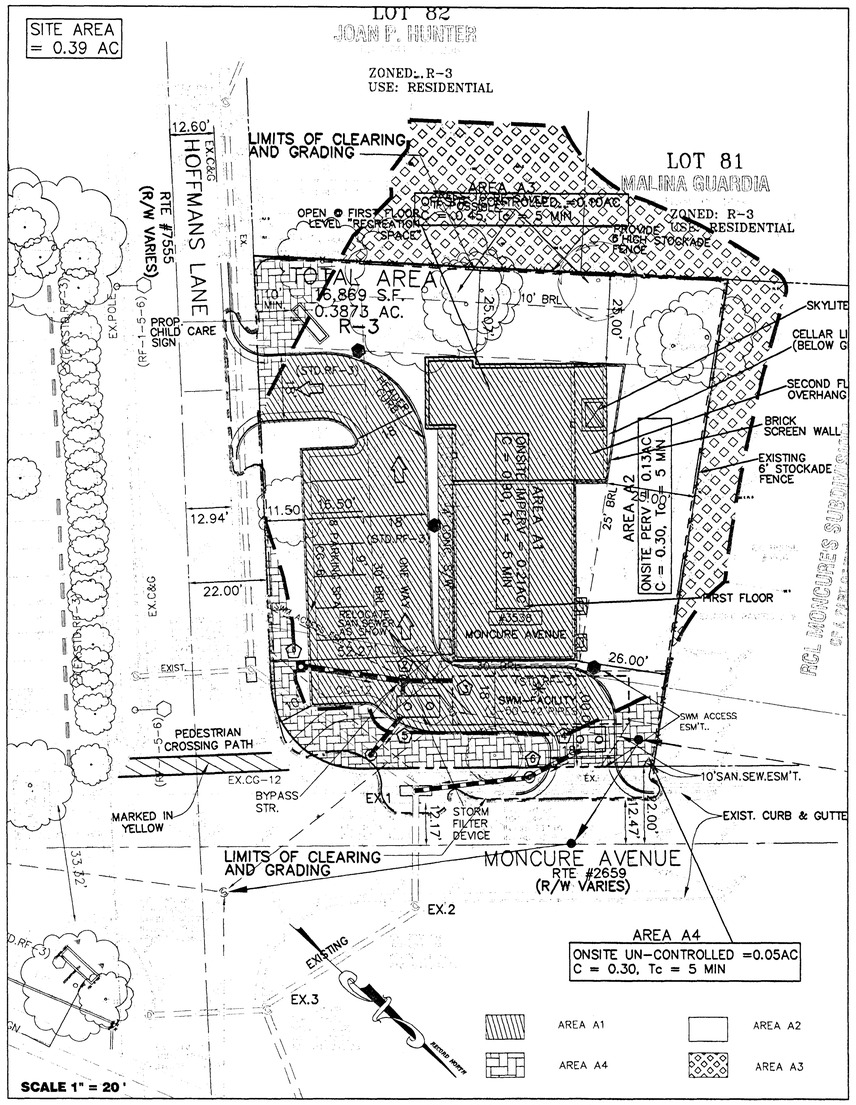
REVISIONS:

09-24-2008

DESIGN: | CADD: | CHECK:

SHEET: 6 OF 10

FILE NO. PL-3851



SWM DRAINAGE MAP

BMP Facility Design Calculations

Plan Name: CROSS RD CHILD CARE CENTER Date: 09-26-07
Plan Number: GP-3851 Engineer: SRI

I. Water Quality Narrative

STORM FILTER DEVICE WILL BE UTELIZED TO PROVIDE WATER QUALITY (BMP). THE PROPOSED BMP FACILITY WILL PROVIDE AT LEAST 50% EFFICIENCY.

II. Watershed Information

Part 1: List all of the Subareas and "C" Factors used in the BMP Computations

Subarea Designation and Description (1)	"C" (2)	Acres (3)
IMPERV. LOT,PARKING & DWAY (A1)	0.90	0.21
PERVIOUS AREA CONTROLLED (A2)	0.30	0.13
OFFSITE AREA CONTROLLED (A3)	0.45	0.10
ONSITE UNCONTROLLED (A4)	0.30	0.05

NOTE: Rational formula "C" factors are taken from the general zoning values listed in Appendix 4-1 or 4-2 depending on the location of the BMP facility (Fairfax County Public Facilities Manual Chart A6-19 or Prince William County Design and Construction Standards Manual, Exhibit 1).

Appendix 4-4a
Calculations Worksheet

Part 2: Compute the Weighted Average "C" Factor for the Site

(A) Area of the site (a) 0.39 acres

(B) Subarea Designation (1)	"C" (2)		Acres (3)		Product (4)
(A1) IMPERVIOUS LOT,DWAY & PARKING	0.90	X	0.21	=	0.18
(A2) PERVIOUS AREA	0.30	X	0.13	=	0.03
(A4) UNCONTROLLED	0.30	X	0.05	=	0.01

(b) Total = 0.22

(C) Weighted average "C" factor (b) / (a) = (c) 0.56

Part 3: Compute the Total Phosphorus Removal for the Site

Subarea Designation (1)	BMP Type (2)	Removal Eff. (%) (3)	Area Ratio (4)	"C" Factor Ratio (5)	Product (6)
(A1)	BMP	50	x 0.21 /0.39	x 0.9 /0.56	= 43.27
(A2)	BMP	50	x 0.13 /0.39	x 0.3 /0.56	= 6.87
(A3)	BMP	50	x 0.10 (0.2)	x 0.45 /0.56	= 2.06
			x /0.39		

(a) Total = 52.20 %

Appendix 4-4c
Calculations Worksheet

Part 4: Determine Compliance with Phosphorus Removal Requirement

(A) Select Requirement (a) 50 %

- 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) = [1-0.9 x ("l"pre / "l"post)] x 100 = __%

(B) If Line 3(a) 56.9% ≥ Line 4(a) 50% then Phosphorus removal requirement is satisfied.

IIIb. Phosphorus Removal Calculations - "Chesapeake Bay Method"

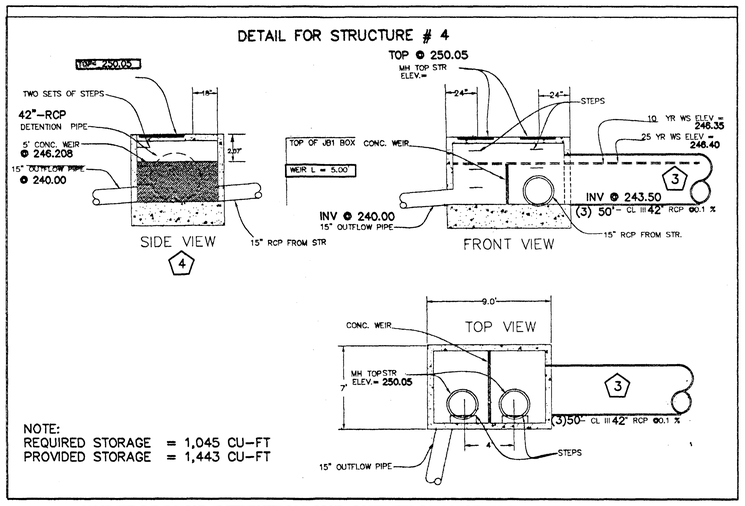
This section is for use by jurisdictions which utilize the CBLAD "Chesapeake Bay Method." Please check with the local jurisdiction to determine which method to use. The "Chesapeake Bay Method" used in these calculations is as follows:

$L = P \times Pj \times (0.05 + 0.009(I)) \times C \times A \times 2.72 / 12$

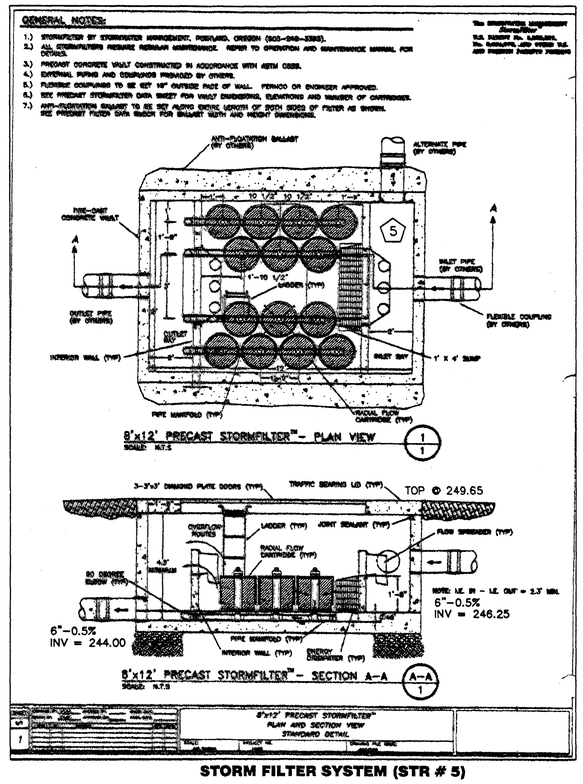
Where:
L = phosphorus loadings (lbs / yr)
P = average rainfall depth (inches)
P = 40 inches per year for Northern Virginia
Pj = unitless correction factor for storms that produce no runoff
Pj = 0.9
I = the percent of site imperviousness in whole numbers.
C = flow-weighted mean pollutant concentration (mg / l)
C = 0.26 mg / l when I<20%
C = 1.08 mg / l when I>20%
A = area of development site (acres)

NOTE: Section IIIb Phosphorus Removal Calculations replaces Parts 2 Through 4 of Section IIIa.

Appendix 4-4d
Calculations Worksheet



UNDERGROUND DETENTION AND OUTLET STRUCTURE (STR # 3 & 4)



STORM FILTER SYSTEM (STR # 5)

EXISTING CONDITIONS

TOTAL SITE AREA = 0.39 AC
C10 = 0.30; C2 = 0.15
I-10 = 7.27 "/HR; I-2 = 5.45 "/HR

Q = C I A; Q2-PRE = 0.32 CFS; Q10-PRE = 0.85 CFS

PROPOSED CONDITIONS

TOTAL SITE AREA = 0.39 AC
IMP AREA (A1) = 0.21 AC; ONSITE PERV AREA CONTROLLED (A2) = 0.13AC
ONSITE AREA UNCONTROLLED (A4) = 0.05 AC
C-A1 = 0.90; C-A2 = 0.30; C-A4 = 0.30; Cavg = 0.62
I-10 = 7.27 "/HR; I-2 = 5.45 "/HR

Q = C I A; Q2-POS = 1.32 CFS; Q10-POS = 1.76 CFS
INCREASE IN RUNOFF Q2-INC = 1.32 - 0.32 = 1.00 CFS
INCREASE IN RUNOFF Q10-INC = 1.76 - 0.85 = 0.91 CFS

DISCHARGE COMPS

TARGET PEAK TO BE ACHIEVED IN DETENTION POND

TOTAL DRAINAGE AREA TO DETENTION POND = 0.49 AC
IMP AREA (A1) = 0.21 AC; ONSITE PERV AREA CONTROLLED (A2) = 0.13AC
OFFSITE CONTROLLED (A3) = 0.1 AC; ONSITE AREA UNCONTROLLED (A4) = 0.05 AC
C-A1 = 0.90; C-A2 = 0.30; C-A3 = 0.30; C-A4 = 0.30; Cavg = 0.56
I-10 = 7.27 "/HR; I-2 = 5.45 "/HR

Q = C I A; Q2 = 1.50 CFS; Q10 = 2.00 CFS

TARGET Q2-TRG = 1.50 - (INCREASE IN 2YR RUNOFF) = 1.50 - 1.00 = 0.50 CFS
TARGET Q10-TRG = 2.00 - (INCREASE IN 10YR RUNOFF) = 2.00 - 0.91 = 1.09 CFS

TARGET RATES

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COMMONWEALTH OF VIRGINIA
RODERICK J. SPRALES
Lic. No. 24855
PROFESSIONAL ENGINEER
10-30-07

CROSS ROAD CHILD CARE CENTER

LOT 22
MASON DISTRICT, FAIRFAX COUNTY, VIRGINIA
DETENTION FACILITY & BMP CALCULATIONS

SCALE: 1"= 20'
DATE: 10-30-2007
REVISIONS:
09-24-2008

DESIGN: | CADD: | CHECK:

SHEET: 7 OF 10
FILE NO. PL-3851

Type.... Vol: Pipe — Page 1.01
Name.... DETENTION

File.... P:\3851\POND PK\3851 DETENTION.PPW

COMPUTED VOLUMES FOR A PIPE

US Invert Elev.= 243.50 ft
DS Invert Elev.= 243.45 ft
Barrel Length = 50.00 ft
Computed Slope = .001000 ft/ft
Diameter = 3.5000 ft
# of Barrels = 3.00

Slice Width = 2.00 ft
Vertical Incr. = .10 ft

Elevation (ft)	Perpendicular DS Depth (ft)	Perpendicular DS Area (sq.ft)	Wetted Length (ft)	Filled Length (ft)	Perpendicular US Depth (ft)	Perpendicular US Area (sq.ft)	Total Volume (cu.ft)
243.45	.00	.0000	.00	.00	.00	.0000	0
244.05	.60	1.0925	50.00	.00	.55	.9681	155
244.55	1.10	2.5825	50.00	.00	1.05	2.4276	376
245.05	1.60	4.2793	50.00	.00	1.55	4.1121	630
245.55	2.10	6.0205	50.00	.00	2.05	5.8554	891
246.05	2.60	7.6580	50.00	.00	2.55	7.5097	1138
246.55	3.10	9.0077	50.00	.00	3.05	8.8979	1343
247.00	3.50	9.6211	50.00	50.00	3.50	9.6211	1443

PROVIDED STORAGE

Type.... Outlet Input Data — Page 2.01
Name.... OUTLET

File.... P:\3851\POND PK\3851 DETENTION.PPW

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 243.45 ft
Increment = .10 ft
Max. Elev.= 247.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Weir-Rectangular	WR	--->	TW	246.208	247.000
TW SETUP, DS Channel					

Type.... Outlet Input Data — Page 2.02
Name.... OUTLET

File.... P:\3851\POND PK\3851 DETENTION.PPW

OUTLET STRUCTURE INPUT DATA

Structure ID = WR
Structure Type = Weir-Rectangular

# of Openings = 1
Crest Elev. = 246.21 ft
Weir Length = 5.00 ft
Weir Coeff. = 3.000000

Weir TW effects (Use adjustment equation)

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 40
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .00 cfs
Max. Q tolerance = .00 cfs

Type.... Pond Routing Summary — Page 3.03
Name.... DETENTION OUT Tag: 2 — Event: 2 yr
File.... P:\3851\POND PK\3851 DETENTION.PPW
Storm... 2 Tag: 2

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\3851\POND PK\
Inflow HYG file = work_pad.hyg - DETENTION IN 2
Outflow HYG file = work_pad.hyg - DETENTION OUT 2

Pond Node Data = DETENTION
Pond Volume Data = DETENTION
Pond Outlet Data = OUTLET

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 243.45 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 5.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow = 1.50 cfs at 5.00 min
Peak Outflow = .50 cfs at 30.00 min

Peak Elevation = 246.30 ft
Peak Storage = 1250 cu.ft

MASS BALANCE (cu.ft)

+ Initial Vol = 0
+ HYG Vol IN = 2200
- Infiltration = 0
- HYG Vol OUT = 992
- Retained Vol = 1209

Unrouted Vol = - cu.ft (.000% of Inflow Volume)

Type.... Pond Routing Summary — Page 3.04
Name.... DETENTION OUT Tag: 10 — Event: 10 yr
File.... P:\3851\POND PK\3851 DETENTION.PPW
Storm... 10 Tag: 10

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\3851\POND PK\
Inflow HYG file = work_pad.hyg - DETENTION IN 10
Outflow HYG file = work_pad.hyg - DETENTION OUT 10

Pond Node Data = DETENTION
Pond Volume Data = DETENTION
Pond Outlet Data = OUTLET

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 243.45 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 5.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow = 1.99 cfs at 5.00 min
Peak Outflow = .77 cfs at 20.00 min

Peak Elevation = 246.35 ft
Peak Storage = 1267 cu.ft

MASS BALANCE (cu.ft)

+ Initial Vol = 0
+ HYG Vol IN = 2929
- Infiltration = 0
- HYG Vol OUT = 1720
- Retained Vol = 1209

Unrouted Vol = - cu.ft (.000% of Inflow Volume)

Type.... Pond Routing Summary — Page 3.05
Name.... DETENTION OUT Tag: 25 — Event: 25 yr
File.... P:\3851\POND PK\3851 DETENTION.PPW
Storm... 25 Tag: 25

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\3851\POND PK\
Inflow HYG file = work_pad.hyg - DETENTION IN 25
Outflow HYG file = work_pad.hyg - DETENTION OUT 25

Pond Node Data = DETENTION
Pond Volume Data = DETENTION
Pond Outlet Data = OUTLET

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 243.45 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 5.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow = 2.27 cfs at 5.00 min
Peak Outflow = 1.31 cfs at 20.00 min

Peak Elevation = 246.40 ft
Peak Storage = 1288 cu.ft

MASS BALANCE (cu.ft)

+ Initial Vol = 0
+ HYG Vol IN = 3365
- Infiltration = 0
- HYG Vol OUT = 2156
- Retained Vol = 1209

Unrouted Vol = 0 cu.ft (.000% of Inflow Volume)

Type.... Pond Routing Summary — Page 3.06
Name.... DETENTION OUT Tag: 100 — Event: 100 yr
File.... P:\3851\POND PK\3851 DETENTION.PPW
Storm... 100 Tag: 100

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\3851\POND PK\
Inflow HYG file = work_pad.hyg - DETENTION IN 100
Outflow HYG file = work_pad.hyg - DETENTION OUT 100

Pond Node Data = DETENTION
Pond Volume Data = DETENTION
Pond Outlet Data = OUTLET

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 243.45 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 5.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

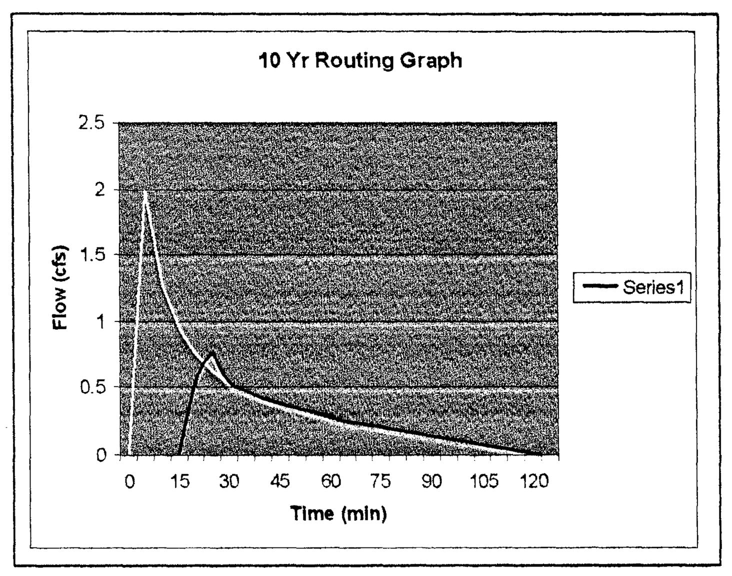
Peak Inflow = 2.70 cfs at 5.00 min
Peak Outflow = 1.54 cfs at 15.00 min

Peak Elevation = 246.43 ft
Peak Storage = 1298 cu.ft

MASS BALANCE (cu.ft)

+ Initial Vol = 0
+ HYG Vol IN = 4052
- Infiltration = 0
- HYG Vol OUT = 2843
- Retained Vol = 1209

Unrouted Vol = 0 cu.ft (.000% of Inflow Volume)



STORM WATER MANAGEMENT NARRATIVE

THE CROSS ROAD CHILD CARE CENTER IS 0.39 AC SITE (TAX MAP # 061-4-30-00-0022) ,LOCATED IN MASON DISTRICT, FAIRFAX COUNTY, VA. THE SITE IS WITH IN THE "CAMERON RUN" WATER SHED.

IN THE PRESENT CONDITION, THE SITE HAS BRUSH AND WOODS. THE PROPOSED CHILD CARE CENTER WILL INCREASE THE IMPERVIOUS AREA OF THE SITE FROM "0 SQ.FT" TO APPROXIMATELY "9,150 SQ.FT". THE RESULTANT INCREASE IN RUNOFF WILL BE SUBJECT TO QUALITY AND QUANTITY CONTROL UTILIZING A COMBINATION OF STORM FILTER STRUCTURE AND AN UNDERGROUND DETENTION SYSTEM.

THE TOTAL DRAINAGE AREA CONTRIBUTING RUNOFF TO THE ABOVE SYSTEM IS APPROXIMATELY 0.49 AC. THIS INCLUDES APPROXIMATELY 0.1 AC OF OFFSITE DRAINAGE, 0.34 AC OF ONSITE DRAINAGE AND 0.05 AC OF ONSITE DRAINAGE UNCONTROLLED. THE AREAS ARE DESIGNATED AS,

A1 - ONSITE IMPERVIOUS AREA CONTROLLED = 0.21 AC
A2 - ONSITE PERVIOUS AREA CONTROLLED = 0.13 AC
A3 - OFFSITE AREA CONTROLLED = 0.10 AC
A4 - ONSITE AREA UN CONTROLLED = 0.05 AC.
PLEASE SEE THE AREAS MAP IN SHEET 6.

THE RUNOFF FROM THE DRAINAGE AREA IS COLLECTED VIA THE PROPOSED STORM SEWER SYSTEM. THE FIRST HALF INCH OF RUNOFF IS DIVERTED THROUGH A BY-PASS STRUCTURE TO A STORM FILTER TO ACHIEVE A 50% PHOSPHOROUS REMOVAL. PLEASE SEE THE BY-PASS STRUCTURE DETAIL IN SHEET 5.

RUNOFF GREATER THAN THE FIRST HALF INCH IS COLLECTED INTO AN "UNDERGROUND DETENTION FACILITY". THE NEEDED STORAGE TO ACHIEVE THIS CONTROL IS APPROXIMATELY 1,045 CU-FT. THIS STORAGE IS PROVIDED IN THE DETENTION FACILTY USING THREE 42" RCP PIPES EACH 50' LONG. THE PROVIDED STORAGE IS 1,443 CU-FT. THE CONTROL STUCTURE IS COMPRISED OF A 5' WEIR OUTLET. THE RUNOFF IS CONTROLLED FOR THE 2-YR AND 10-YR STORMS TO THE PRE RUNOFF RATES. PLEASE SEE THE ROUTING CHARTS IN SHEET 6A FOR MORE INFORMATION.

THE RESULTANT OUFLOW FROM BOTH THE STORM FILTER STRUCTURE AND UNDERGROUND DETENTION TANK, WILL BE CONNECTED TO THE EXISTING MAJOR STORM DRAINAGE SYSTEM LOCATED ALONG THE HOFFMAN'S LANE. THIS SYSTEM IS ADEQUATE TO HANDLE THE CONCENTRATED RUNOFF GENERATED FROM THE SWM & BMP OUTLET STRUCTURES.

MINIMUM STORMWATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS

The following information is required to be shown or provided in all zoning applications, or a waiver request of the submission requirement with justification shall be attached. Note: Waivers will be acted upon separately. Failure to adequately address the required submission information may result in a delay in processing this application.

This information is required under the following Zoning Ordinance paragraphs:

Special Permits (8-011 2J & 2L)	Special Exceptions (9-011 2J & 2L)
Cluster Subdivision (9-615 1G & 1N)	Commercial Revitalization Districts (9-622 2A (12) & (14))
Development Plans PRC District (16-302 3 & 4L)	PRC Plan (16-303 1E & 1O)
FDP P Districts (except PRC) (16-502 1F & 1Q)	Amendments (18-202 10F & 10I)

☑ 1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100').

☑ 2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheet 6.

☑ 3. Provide:

Facility Name/ Type & No. (e.g. dry pond A, infil. trench, underground vault, etc.)	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage Volume (cf)	If pond, dam height (ft)
UNDERGROUND–DETENTION	0.34 AC.	0.1 AC.	0.49 AC.	600 S.F.	1,443	N/A
Totals						

☑ 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 6. Pond inlet and oulet pipe systems are shown on Sheet 6.

☑ 5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet 6. Type of maintenance access road surface noted on the plat is 6 (asphalt, geoblock, gravel, etc.).

☑ 6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet 5.

☑ 7. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet 8.

☑ 8. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet 6.

☑ 9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet 6.

☑ 10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets 3.

☑ 11. A submission waiver is requested for N/A.

☑ 12. Stormwater management is not required because N/A.

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COMMONWEALTH OF VIRGINIA
ROBERT L. SPROLES
Lic. No. 24833
2-28-08
PROFESSIONAL ENGINEER

CROSS ROAD CHILD CARE CENTER
LOT 22
MASON DISTRICT, FAIRFAX COUNTY, VIRGINIA
DETENTION FACILITY ROUTINGS & SWM NARRATIVE

SCALE: 1"= 20'
DATE: 10-30-2007
REVISIONS:
09-24-2008
DESIGN: CADD: CHECK:
SHEET: 8 OF 10
FILE NO. PL-3851

SITE TABULATION:

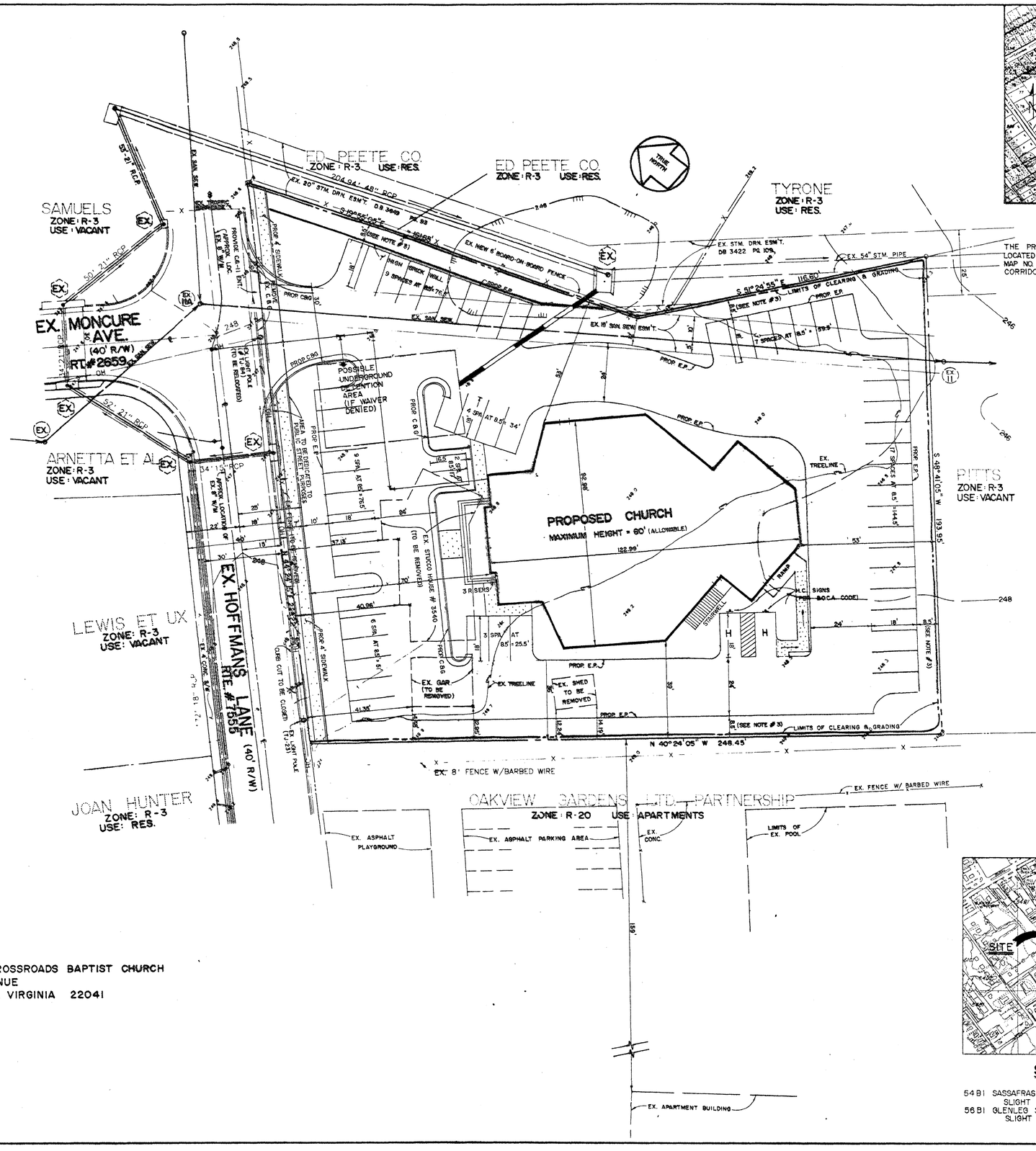
TOTAL AREA = 1.1289 ACRES
EXISTING ZONING = R-3 CONVENTIONAL, HIGHWAY CORRIDOR.
MINIMUM YARD REQUIREMENTS
FRONT - 30'
SIDE - 19'
REAR - 25'
SEATING CAPACITY OF CHURCH - 228 SEATS
PARKING TABULATION:
1 SPACE PER 4 SEATS = 57 SPACES REQUIRED
PARKING PROVIDED:
57 REGULAR
2 HANDICAPPED
59 TOTAL SPACES PROVIDED

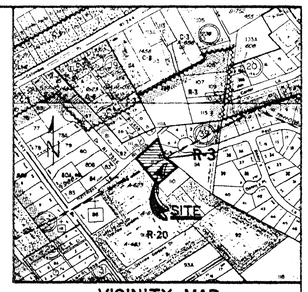
F.A.R. TABULATIONS:

TOTAL SITE AREA = 49,174.88 SQ. FT.
GROSS FLOOR AREA = 12,293.72 SQ. FT.
F.A.R. ALLOWABLE = 0.25
F.A.R. PROVIDED = 0.25

LANDSCAPING OPEN SPACE REQUIRED = 0
LAND SCAPING OPEN SPACE PROVIDED = 9,492 SQ. FT. = 19.3%
INTERIOR LANDSCAPING REQUIRED = 5%
INTERIOR LANDSCAPING PROVIDED = 7.5%

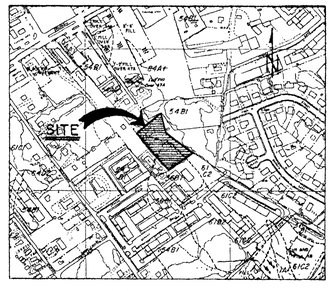
NOTES
1. THIS SITE WILL CONFORM TO ALL APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED STANDARDS.
2. THIS SITE IS TO BE SERVED BY PUBLIC SEWER AND PUBLIC WATER.
3. A MODIFICATION WILL BE REQUESTED FOR TRANSITIONAL SCREENING AND BARRIER AS PER CODE 13-111, PARAGRAPHS 2,4 & 10 OF THE FAIRFAX ZONING BOOK.
4. TOPOGRAPHY BY HUNTLEY, NYCE & ASSOCIATES, FIELD RUN.
5. A STORM WATER DETENTION WAIVER WILL BE REQUESTED
6. BOUNDARY BY PAYNE ASSOCIATES, DATED NOVEMBER 28, 1989.
7. ALL SIGNS POSTED WILL CONFORM TO ARTICLE 12, PAGE 12-7 OF THE FAIRFAX ZONING BOOK.
8. ALL LIGHTING WILL CONFORM TO ARTICLE 14, PART 9 OF THE FAIRFAX ZONING BOOK.
9. THERE ARE NO KNOWN GRAVES OR STRUCTURES MARKING PLACES OF BURIAL ON THIS SITE.
10. THERE ARE NO TRAILS PLANNED ON OR ADJACENT TO THIS SITE. (AS PER FAIRFAX COUNTY TRAILS MAP, REPRINTED 8/89.)





VICINITY MAP
SCALE: 1" = 500'

THE PROPERTY DELINEATED ON THIS PLAN IS LOCATED ON FAIRFAX COUNTY TAX ASSESSMENT MAP NO. 61-4-001-112 AND IS ZONED R-3, HIGHWAY CORRIDOR.



SOILS MAP
SCALE: 1" = 500'

54BI SASSAFRAS FINE SANDY LOAM, UNDULATING PHASE, SLIGHT EROSION
56BI GLENLEG SILT LOAM, UNDULATING PHASE, SLIGHT EROSION

CONTRACT OWNER:
TRUSTEES OF THE CROSSROADS BAPTIST CHURCH
3530 MONCURE AVENUE
BAILEYS CROSSROADS, VIRGINIA 22041

Huntley, Nyce & Associates, P.C.
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MANASSAS, VIRGINIA 703-361-1882 METRO 690-1532
LEESBURG, VIRGINIA 703-777-8914 METRO 478-1051
ROCKVILLE, MARYLAND 301-251-6730

COMMONWEALTH OF VIRGINIA
C. ROBERT PITERA
No. 4652
PROFESSIONAL ENGINEER

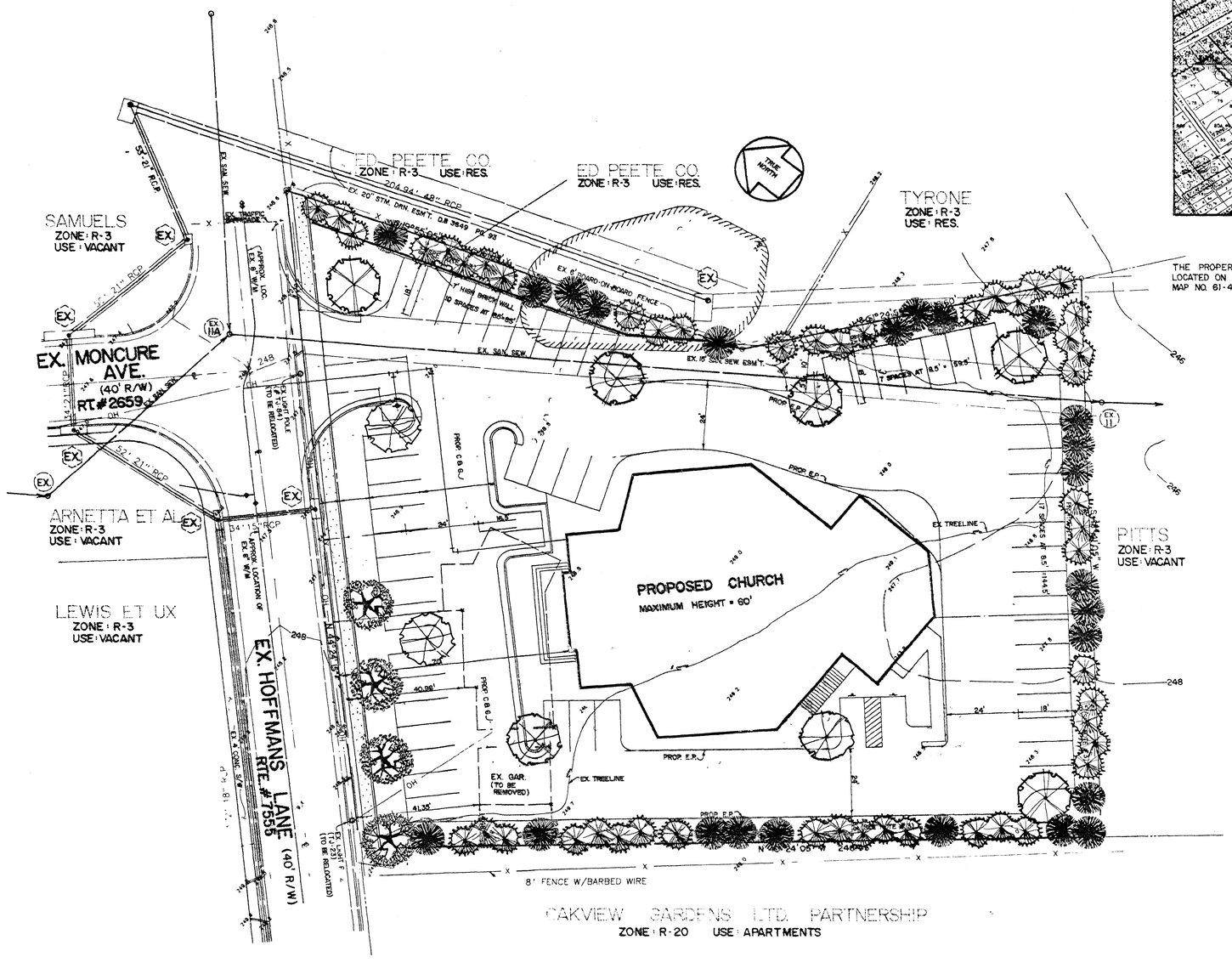
CROSSROADS BAPTIST CHURCH

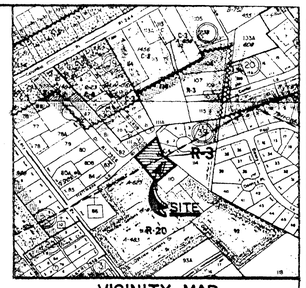
MASON DISTRICT FAIRFAX COUNTY VIRGINIA

SPECIAL USE PERMIT PLAN

SCALE 1" = 20'
DATE MAY, 1990
REVISIONS 09-24-2008

SHEET 1 OF 2
FILE NO PL-2543





VICINITY MAP
SCALE: 1" = 500'

THE PROPERTY DELINEATED ON THIS PLAN IS LOCATED ON FAIRFAX COUNTY TAX ASSESSMENT MAP NO. 61-4-001-112 AND IS ZONED R-3.

SYMBOL	QUANTITY	TREE TYPE	SIZE	CONDITION
	9	LARGE DECIDUOUS	2 1/2" CAL.	B & B
	4	LARGE DECIDUOUS	2 1/2" CAL.	B & B
	24	LARGE EVERGREEN	2 1/2" CAL.	B & B
	48	MEDIUM EVERGREEN	6' HT.	B & B

THIS SHEET TO BE USED FOR LANDSCAPING PURPOSES ONLY !!

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ROCKVILLE, MARYLAND
301-251-6730

COMMONWEALTH OF VIRGINIA
Robert Hunt
C. ROBERT PITTERA
No. 4552
PROFESSIONAL ENGINEER

CROSSROADS BAPTIST CHURCH

MASON DISTRICT FAIRFAX COUNTY VIRGINIA

SPECIAL USE PERMIT PLAN

SCALE 1" = 20'
DATE MAY, 1990
REVISIONS 09-24-2008

SHEET 2 OF 2
FILE NO PL-2543