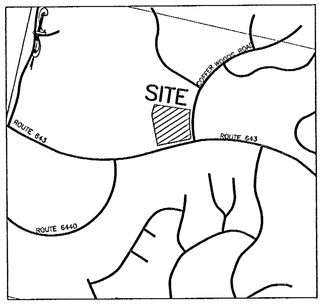
SPECIAL PERMIT AMENDMENTS

SPA 82-S-028-4

KNOLLWOOD COMMUNITY CHURCH

BRADDOCK DISTRICT
FAIRFAX COUNTY, VIRGINIA

MAY 9, 2006



VICINITY MAP
SCALE - 1"=2000'

GENERAL NOTES:

1. LOCATION: THE PROPERTY DELINEATED ON THIS PLAT IS SHOWN ON FAIRFAX COUNTY TAX MAP NO. 78-3 ((1)) PARCEL 40 AND IS CURRENTLY ZONED PRC. THIS PLAN ACCOMPANIES AN APPLICATION TO AMEND APPROVED SPECIAL PERMIT 82-S-028-3 TO ALLOW THE PHASED INCREASE OF THE SIZE OF THE EXISTING SANCTUARY USE FROM 168 SEATS TO A MAXIMUM OF 400 SEATS AND TO AMEND SPECIAL PERMIT S-82-S-099 TO ALLOW AN INCREASE IN ENROLLMENT FROM 80 CHILDREN WITH 40 CHILDREN ON-SITE AT ANY ONE TIME TO 99 CHILDREN WITH 50 CHILDREN ON-SITE AT ANY ONE TIME.

2. ADDRESS: THE SUBJECT PROPERTY, LOCATED AT 10000 COFFER WOODS ROAD, IS OWNED BY THE APPLICANT, THE TRUSTEES FOR THE KNOLLWOOD BAPTIST CHURCH, D.B.A. KNOLLWOOD COMMUNITY CHURCH IN BURKE CENTRE.

3. EXISTING USES. THE PROPERTY IS CURRENTLY USED AS A CHURCH, NURSERY SCHOOL, AND RELATED FACILITIES.

4. COMPREHENSIVE PLAN PROVISIONS. THE PROPERTY IS IDENTIFIED AS SUB-UNIT P6 IN THE MIDDLE RUN PLANNING SECTOR OF THE POHICK PLANNING DISTRICT - AREA III OF THE FAIRFAX COUNTY COMPREHENSIVE PLAN, AND IS LOCATED WITHIN THE PLANNED RESIDENTIAL COMMUNITY OF BURKE CENTRE. BURKE CENTRE INCLUDES A MIXTURE OF USES INCLUDING SINGLE-FAMILY, TOWNHOUSE AND MULTI-FAMILY UNITS, AS WELL AS A SMALL VILLAGE CENTER, A COMMUNITY CENTER AND PARK AND OPEN SPACE USES. THE MIDDLE RUN COMMUNITY PLANNING SECTOR IS LARGELY DEVELOPED AS STABLE RESIDENTIAL NEIGHBORHOODS. INFILL DEVELOPMENT IN THESE NEIGHBORHOODS SHOULD BE OF COMPATIBLE USE, TYPE, AND INTENSITY IN ACCORDANCE WITH THE GUIDANCE PROVIDED BY THE POLICY PLAN UNDER LAND USE OBJECTIVES 8 AND 14.

5. PROPOSED USES/PHASING. THE APPLICANT IS SEEKING AN AMENDMENT TO EXISTING SPECIAL PERMIT 82-S-028-3, IN FIVE PHASES (1, 2A, 2B, 2C, & 3), TO INCREASE THE SANCTUARY SEATING CAPACITY FROM 168 SEATS TO 400 SEATS AND PROVIDE ADDITIONAL SPACE FOR EXISTING ANCILLARY USES, TO RELOCATE THE OUTDOOR PLAY AREA, TO PROVIDE ADDITIONAL PARKING, TO RELOCATE THE ENTRANCE ON COFFER WOODS ROAD IN FAVOR OF ONE IMPROVED ENTRANCE (WITH ONE LANE IN AND TWO LANES OUT) AND TO PROVIDE A NEW RIGHT-IN/RIGHT-OUT ENTRANCE ON BURKE CENTRE PARKWAY. THE EXISTING NURSERY SCHOOL AND PRESCHOOL USES WILL CONTINUE AS APPROVED UNDER SPECIAL PERMIT S-82-S-099, WITH THE EXCEPTION OF AN INCREASE IN ENROLLMENT AS DESCRIBED IN NOTE 1 ABOVE. AN EXACT DEVELOPMENT TIMETABLE OR SCHEDULE IS UNKNOWN SINCE IT WILL BE BASED ON FUTURE CONGREGATION NEEDS AND FUNDING. THE HIGHLIGHTS OF EACH PHASE ARE SUMMARIZED BELOW AND ARE CONTAINED IN TABULAR FORM ON THESE SHEETS.

A. PHASE 1. SEE SHEET 3. GENERALLY TO INCLUDE CONSTRUCTION OF PROPOSED BUILDING 3 (2 LEVELS + CELLAR) INCLUDING A 300-SEAT SANCTUARY TO REPLACE THE EXISTING 168-SEAT CHURCH SANCTUARY, A CELLAR BENEATH THE NEW SANCTUARY, RELOCATION OF THE PLAYGROUND ALONG THE NORTHERN PROPERTY LINE, RELOCATION OF THE NORTHERNMOST SITE ENTRANCE OFF OF COFFER WOODS ROAD AND REMOVAL OF A PORTION OF THE EXISTING PAVED PARKING LOT, A NEW PARKING LOT, A NEW RIGHT-IN/RIGHT-OUT SITE ENTRANCE OFF OF BURKE CENTRE PARKWAY TO INCLUDE A NEW RIGHT-TURN LANE INTO THE SITE AT THIS POINT, A STORMWATER MANAGEMENT FACILITY, AND ANCILLARY USE SUPPORT FACILITES (E.G. STORAGE SHED, MAINTENANCE DRIVES, TRAIL CONNECTIONS, TRASH DUMPSTER & ENCLOSURE, ETC.). THE SITE'S TWO EXISTING BUILDINGS, BUILDING 1 (EXISTING CHURCH) AND BUILDING 2 (EXISTING CLASSROOMS) SHALL REMAIN IN THIS PHASE.

B. PHASE 2A. SEE SHEET 3. GENERALLY TO INCLUDE FINISHING THE SANCTUARY'S CELLAR LEVEL. THE SITE'S TWO EXISTING BUILDINGS, BUILDING 1 (EXISTING CHURCH) AND BUILDING 2 (EXISTING CLASSROOMS) SHALL REMAIN IN THIS PHASE.

C. PHASE 2B. SEE SHEET 4. GENERALLY TO INCLUDE CONSTRUCTION OF PROPOSED BUILDING 4 (EDUCATION AND ADMINISTRATION) COMPRISED OF A FINISHED FIRST FLOOR, SECOND FLOOR SHELL AND CELLAR LEVEL SHELL AND INSTALLATION OF AN INTERIOR COURTYARD BETWEEN PROPOSED BUILDINGS 3 AND 4. THE SITE'S TWO EXISTING BUILDINGS, BUILDING 1 (EXISTING CHURCH) AND BUILDING 2 (EXISTING CLASSROOMS) SHALL REMAIN IN THIS PHASE.

D. PHASE 2C. SEE SHEET 5. GENERALLY TO ADD A 100-SEAT SANCTUARY BALCONY ON THE SECOND LEVEL OF PROPOSED BUILDING 3, FINISH THE CELLAR LEVEL AND SECOND FLOOR LEVEL OF PROPOSED BUILDING 4, COMPLETE THE CELLAR OF THE SANCTUARY IN PROPOSED BUILDING 3, DEMOLITION AND REMOVAL OF EXISTING BUILDING 2 (CLASSROOMS), RECONFIGURE THE ENTRANCE DRIVE OFF COFFER WOODS ROAD TO ITS FINAL LOCATION, AND CONSTRUCT AN ADDITIONAL 46 PARKING SPACES TO YIELD 119 SPACES AND COMPLETE THE REVISED PARKING LOT. THE SITE'S EXISTING BUILDING 1 (EXISTING CHURCH) SHALL REMAIN IN THIS PHASE.

E. PHASE 3. SEE SHEET 6. GENERALLY TO INCLUDE DEMOLITION OF BUILDING 1 (EXISTING CHURCH) AND CONSTRUCTION OF A 1 LEVEL ON GRADE PROPOSED BUILDING 5 (GYMNASIUM + KITCHEN).

6. EXISTING STRUCTURES. SEE SHEET 2 IN THIS SET REGARDING THE PROPERTY'S EXISTING STRUCTURES, LOCATIONS, DATES OF CONSTRUCTION, AND STATUS.

7. BOUNDARY AND TOPOGRAPHY INFORMATION. BOUNDARY INFORMATION IS TAKEN FROM AN 'ALTA' SURVEY PREPARED BY ROSS, FRANCE & RATLIFF, LTD. ON MAY 27, 2000 AND DOES REFLECT TITLE INFORMATION. TOPOGRAPHIC INFORMATION PRESENTED IS AT A TWO-FOOT CONTOUR INTERVAL AND IS BASED ON A FIELD-RUN SURVEY.

8. IMPROVEMENTS TO THE PUBLIC RIGHT-OF-WAY. IN RELOCATING THE SITE'S NORTHERN (ONE WAY) ENTRANCE ON COFFER WOODS ROAD, THE APPLICANT WILL IMPROVE ITS PUBLIC STREET FRONTAGE ALONG THE EXISTING DITCH SECTION ON COFFER WOODS ROAD BY INSTALLING CURB AND GUTTER AND SIDEWALK. AS SHOWN ON THE COMPREHENSIVE PLAN. THERE ARE NO PLANNED ROADWAY IMPROVEMENTS TO BURKE CENTER PARKWAY AND COFFER WOODS ROAD ALONG THE PROPERTY.

9. LIGHTING/NOISE. THE APPLICANT AND THIS APPLICATION WILL COMPLY WITH ALL RELEVANT PROVISIONS OF ARTICLE 9 SECTION 14-900 (OUTDOOR LIGHTING STANDARDS). NOTE THAT ALL EXTERIOR PARKING LOT LIGHTS AND LIGHTING FIXTURES ATTACHED TO THE EXTERIOR OF THE CHURCH BUILDINGS AND VISIBLE FROM ADJACENT PARCELS SHALL BE OF A FULL CUT-OFF SPECIFICATION SO AS TO NOT PRODUCE OFF-SITE GLARE. AUXILIARY LIGHTING WILL BE PROVIDED THAT ATTACHES TO THE CHURCH STRUCTURE AND TO AREAS ON THE SANCTUARY COURTYARD. NO OUTDOOR LOUDSPEAKER SYSTEM WILL BE USED.

10. UTILITY EASEMENTS. THERE ARE NO KNOWN UTILITY EASEMENTS ON THE PROPERTY HAVING A WIDTH OF 25 FEET OR MORE: ALL KNOWN UNDERGROUND UTILITY EASEMENTS ARE PRESENTED.

11. WATER/SEWER: AS SHOWN, THE PROPERTY IS SERVICED BY PUBLIC WATER AND SANITARY SEWER.

12. WAIVERS AND MODIFICATIONS: THE PROPOSED USE WILL BE IN CONFORMANCE WITH ALL APPLICABLE ORDINANCES, REGULATIONS, AND ADOPTED STANDARDS, EXCEPT AS FOLLOWS:

A. SCREENYARD BARRIERS. IN ACCORDANCE WITH SEC. 13-304 PARA. 1 AND 2, THE APPLICANT SEEKS A WAIVER OF THE BARRIER REQUIREMENT ON THE SITE'S NORTH, SOUTH, EAST, AND A PORTION OF THE WEST SIDES BASED ON COMPATIBILITY WITH THE EXISTING PRC NEIGHBORHOODS AND A COMBINATION OF ARCHITECTURAL AND LANDSCAPING TECHNIQUES AS SHOWN HEREIN.

13. SWM AND BMP- SEE SHEET 8 ENTITLED 'PRELIMINARY SWM / BMP PLAN'.

14. ENVIRONMENTAL AREAS/SITE ASSETS: THERE ARE NO 100-YEAR FLOOD PLAIN LIMITS, RESOURCE PROTECTION AREAS (RPAs), OR ENVIRONMENTAL QUALITY CORRIDORS (EQCs) ON THE SUBJECT PROPERTY AS INDICATED WITHIN EXISTING RECORDS.

15. CLEARING AND GRADING: THE APPROXIMATE LIMITS OF CLEARING AND GRADING ARE PRESENTED FOR EACH PHASE OF DEVELOPMENT AND INCLUDE OFF-SITE CLEARING FOR OUTFALL AND DOWNSTREAM DRAINAGE IMPROVEMENTS.

16. GRAVES: TO THE BEST OF OUR KNOWLEDGE THERE ARE NO GRAVES NOR PLACES OF BURIAL ON THE PROPERTY.

17. ADJACENT & NEIGHBORING PROPERTIES.

A. EXISTING VEGETATION. EXISTING VEGETATION, AS DEPICTED HEREIN BY FIELD SURVEY AND LOCATED ALONG THE PROPERTY LINE WILL BE PROTECTED BY LIMITS OF CLEARING AND GRADING TO THE EXTENT POSSIBLE SUBJECT TO INSTALLATION OF UTILITIES, TRAILS, AND SITE ENTRANCES AND SUPPLEMENTED WITH PROPOSED ENHANCED LANDSCAPING, BUFFERING, AND SCREENING AS SHOWN.

B. TREE PRESERVATION. THE APPLICANT WILL PROTECT AND PRESERVE EXISTING VEGETATION, TO THE EXTENT PRACTICAL AND IN KEEPING WITH THE APPLICANT'S DESIGN. SUCH PRESERVATION EFFORTS WILL BE TO A LEVEL MUTUALLY ACCEPTABLE TO THE APPLICANT, DPWES AND THE URBAN FORESTER. FINAL CLEARING AND GRADING LIMITS MAY BE ADJUSTED BASED ON FINAL DESIGN AND SUBJECT TO ON-SITE FIELD ADJUSTMENTS DURING CONSTRUCTION FOR ADDITIONAL TREE PRESERVATION PURPOSES.

18. SIGNAGE. EXISTING SIGN SHALL BE REPLACED AS SHOWN, ALL GROUND-MOUNTED LIGHTED ENTRANCE SIGNS PROPOSED FOR THE SITE'S ENTRANCE AS SHOWN SHALL COMPLY WITH THE SIGN ORDINANCE.

19. HAZMAT. TO THE BEST OF THE APPLICANT'S KNOWLEDGE AND BELIEF, THERE ARE NO HAZARDOUS OR TOXIC SUBSTANCES (AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS PARTS 116.4, 302.4, AND 355, COMMONWEALTH OF VIRGINIA/DEPARTMENT OF WASTE MANAGEMENT REGULATIONS VR 672-10-1-VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATIONS, AND/OR PETROLEUM PRODUCTS AS DEFINED IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 280) OR STORAGE TANKS OR CONTAINERS ON SITE. SUCH SUBSTANCES WILL NOT BE GENERATED, UTILIZED, STORED, TREATED AND/OR DISPOSED OF ON SITE. IN THE EVENT THAT SUCH SUBSTANCES ARE FOUND TO BE ON SITE, THEY WILL BE DISPOSED OF IN AN APPROPRIATE MANNER. TO THE BEST OF THE APPLICANT'S KNOWLEDGE, NO CURRENT EMERGENCY GENERATORS EXIST NOR ARE ANY FUTURE GENERATORS PROPOSED.

20. AFFIDAVIT. A STATEMENT CONFIRMING OWNERSHIP OF THE PROPERTY AND THE APPLICANT'S RELATIONSHIP INTEREST IN THE SAME IS CONTAINED ON THE AFFIDAVIT SUBMITTED SEPARATELY.

21. PARKING SPACES. THE PARKING SPACES AS DEPICTED ON THE PLAT REPRESENT BOTH THE EXISTING AND PROPOSED SPACES. THE APPLICANT RESERVES THE RIGHT TO MAKE MINOR MODIFICATIONS TO THE LAYOUT AND INCREASE OR DECREASE THE QUANTITIES SHOWN PROVIDED THE MINIMUM SETBACKS AND BUFFER YARDS ARE NOT REDUCED AND THE MINIMUM NUMBER OF PARKING SPACES REQUIRED BY ARTICLE 11 OF THE ZONING ORDINANCE ARE PROVIDED.

22. LANDSCAPING. LANDSCAPING WILL BE PROVIDED IN ACCORDANCE WITH ARTICLE 13 OF THE ZONING ORDINANCE AND SHALL ADDRESS PARKING LOT LANDSCAPING, PERIPHERAL PARKING LOT LANDSCAPING, TREE COVERAGE, AND PERIMETER BUFFER REQUIREMENTS AS SHOWN. THE APPLICANT IS SATISFYING THE REQUIREMENTS OF ARTICLE 13 BY PROVIDING A TYPE "F" BARRIER (CONSISTING OF A 6-FOOT-HIGH SOLID WOOD FENCE) ALONG A PORTION OF THE WESTERN LOT LINE. NOTE THAT THE LANDSCAPING SHOWN HEREON IS PRELIMINARY AND IS REPRESENTATIVE OF THE TYPE AND EXTENT OF LANDSCAPING TO BE PROVIDED. THE SPECIFIC PLANT TYPES AND THEIR EXACT LOCATIONS WILL BE DETERMINED AT THE TIME OF FINAL DESIGN.

23. 'SPECIAL AMENITIES'. THE SITE'S OPEN INTERIOR COURTYARD AND ENTRY PLAZA SHALL SERVE AS THE SITE'S 'SPECIAL AMENITIES' AND WILL BE USED FOR PASSIVE RECREATION. THESE AREAS WILL INCLUDE SPECIAL PAVING, BENCHES, AND LANDSCAPE AREAS/PLANTERS ARRANGED TO CREATE CONTEMPLATIVE AND GATHERING SPACES FOR PARISHIONERS.

24. MODIFICATIONS. THE APPLICANT RESERVES THE RIGHT TO MAKE MINOR MODIFICATIONS UNDER SECTION 8-004 PARA. 4B, INCLUDING ADJUSTMENTS TO THE GROSS SQUARE FOOTAGE (GSF) REPRESENTED IN THE TABULATIONS FOR EACH PHASE BASED ON FINAL BUILDING DESIGN, PROVIDED OVERALL GSF REPRESENTED IN PHASE 3 IS NOT EXCEEDED.

25. ADDED SITE/STRUCTURE FEATURES. IT SHALL BE UNDERSTOOD THAT ADDITIONAL SITE FEATURES SUCH AS PLANTERS, BENCHES, TABLES, GAZEBOS, FENCES, AND/OR WALLS NOT REPRESENTED HEREIN MAY BE PROVIDED. IT IS FURTHER UNDERSTOOD THAT ARCHITECTURAL FEATURES SUCH AS PORTE-COCHERES, FLAG POLES, ETC. MAY ALSO BE PROVIDED.

26. TRAILS. AN APPROX. 8-FOOT-WIDE COUNTY-WIDE TRAIL EXISTS ALONG THE SITE'S BURKE CENTRE PARKWAY FRONTAGE AND LIES WHOLLY WITHIN THE R.O.W. IT WILL BE RELOCATED AT THE APPLICANT'S EXPENSE WITHIN THE R.O.W. AT SUCH TIME AS THE RIGHT TURN LANE IS CONSTRUCTED AS SHOWN ON SHEETS 3 THRU 7. THE APPLICANT IS PROPOSING ADDITIONAL RIGHT OF WAY DEDICATION FOR TRAIL AS GENERALLY SHOWN ON THE PLAT AND SUBJECT TO DPWES APPROVAL.

SITE TABULATIONS

ZONING

EXISTING ZONING	PRC (PARCEL 40)
PROPOSED ZONING	PRC (PARCEL 40)

TOTAL SITE AREA

PARCEL 40 — 217,869 SF / 5.0016 AC

EXISTING/PROPOSED BUILDING PROGRAM & PHASING

STRUCTURE	EXISTING	PHASE 1	PHASE 2A	PHASE 2B	PHASE 2C	PHASE 3
CHURCH (BLDG. 1)	4,554 +/- GSF	4,554 +/- GSF	4,554 +/- GSF	4,554 +/- GSF	4,554 +/- GSF	REMOVED
CLASSROOM BLDG. (BLDG. 2)	4,368 +/- GSF	4,368 +/- GSF	4,368 +/- GSF	4,368 +/- GSF	REMOVED	———
STORAGE SHEDS(1)	205 +/- GSF	100 +/- GSF	100 +/- GSF	100 +/- GSF	100 +/- GSF	100 +/- GSF
SANCTUARY (BLDG. 3)		9,300 +/- GSF	9,300 +/- GSF	9,300 +/- GSF	13,550 +/- GSF (*)	13,550 +/- GSF
TOTAL SEATING CAPACITY	168 SEATS +/-	300 SEATS +/- (2)	300 SEATS +/-	300 SEATS +/-	400 SEATS +/- (4)	400 SEATS +/-
(EDUCATION/ADMINISTRATION) (BLDG. 4)				7,100 +/- GSF	15,050 +/- GSF	15,050 +/- GSF
(GYM/KITCHEN) (BLDG. 5)	———	———	———	———	———	13,300 +/- GSF
TOTAL FAR GROSS S.F. (NOT INCL. CELLAR)	9,121 +/- GSF	*18,322 +/- GSF	*18,322 +/- GSF	*26,022 +/- GSF	*33,254 +/- GSF	***42,000 +/- GSF**
TOTAL USABLE GROSS S.F. (INCL. CELLAR SF) (3)	9,121 +/- GSF	18,322 +/- GSF	27,622 +/- GSF	35,322 +/- GSF	50,254 +/- GSF	**59,000 +/- GSF** (INCLUDES 17,000 +/- SF CELLAR)

* SEE GENERAL NOTE 24 ABOVE

DENSITY (F.A.R.)

F.A.R. PROVIDED (3)	0.042	0.084	0.084	0.119	0.153	**0.193**

PARKING

NURSERY SCHOOL						
PKG. REQ'D. (0.19 SP/CHILD)	16 SP (80 CHILDREN)	19 SP (99 CHILDREN)	19 SP (99 CHILDREN)	19 SP (99 CHILDREN)	19 SP (99 CHILDREN)	19 SP (99 CHILDREN)
PKG. PROVIDED	16 SP	19 SP	19 SP	19 SP	19 SP	19 SP
CHURCH USES						
PKG. REQ'D. (1 SP/4 SEATS)	42 SP	75 SP	75 SP	75 SP	100 SP	100 SP
PKG. PROVIDED	79 SP +/-	104 SP +/-	104 SP +/-	104 SP +/-	151 SP +/-	151 SP +/-
TOTAL PKG. REQ'D. (CHURCH + NURSERY)	58 SP +/-	94 SP +/-	94 SP +/-	94 SP +/-	119 SP +/-	119 SP +/-
TOTAL PKG. PROVIDED	95 SP +/-	136 SP +/-	136 SP +/-	136 SP +/-	171 SP +/-	171 SP +/-

(ALL PARKING SPACES SHOWN ARE 8.5' WIDE)

OPEN SPACE

OPEN SPACE REQUIRED	N/A	10% / 21,787 SF	10% / 21,787 SF	10% / 21,787 SF	10% / 21,787 SF	10% / 21,787 SF
OPEN SPACE PROVIDED	N/A	61% / 132,500 +/- SF	61% / 132,500 +/- SF	56% / 123,000 +/- SF	53% / 115,500 +/- SF	46% / 101,000 +/- SF

TABULATION FOOTNOTES:

(1.) EXISTING SHED 1 (75± SF) + EXISTING SHED 2 (130± SF) TO BE REMOVED AT PHASE 1 AND REPLACED WITH A PROPOSED SHED 3 (100± SF).
(2.) IN PHASE 1 THE SANCTUARY USE IS RELOCATED FROM THE EXISTING CHURCH BUILDING (BLDG. 1) TO THE NEW PHASE 1 SANCTUARY (BLDG. 3), AND SEATING IS INCREASED FROM 168± SEATS TO 300± SEATS.
(3.) CELLAR AREAS OF PROPOSED BLDGs 3 AND 4 ARE, BY COUNTY DEFINITION, NOT INCLUDED IN THE SITE'S DENSITY (F.A.R.) CALCULATIONS. THEY ARE, HOWEVER, INCLUDED IN THE TABULATION UNDER "USABLE" GROSS SF. FOR GENERAL INFORMATIONAL PURPOSES.
(4.) 100 SEAT BALCONY LOCATED IN THE SANCTUARY ABOVE THE FIRST LEVEL FOR SEATING PURPOSES ONLY.

SHEET INDEX

1 — COVER SHEET
2 — EXISTING CONDITIONS
3 — PHASE 1 - 2A
4 — PHASE 2B
5 — PHASE 2C
6 — PHASE 3
7 — ARCHITECTURAL ELEVATION/ROOF PLAN
8 — CROSS SECTIONS
9 — PRELIMINARY SWM/BMP PLAN
10 — OUTFALL ANALYSIS

Application No. SPA 82-S-028-05

Chairman, Board of Zoning Appeals

RECEIVED
Department of Planning & Zoning
MAY 11 2006
Zoning Evaluation Division

COMMONWEALTH OF VIRGINIA
STEVEN E. BLEASON
5/11/06
LICENSE No. 001104
CERTIFIED LANDSCAPE ARCHITECT

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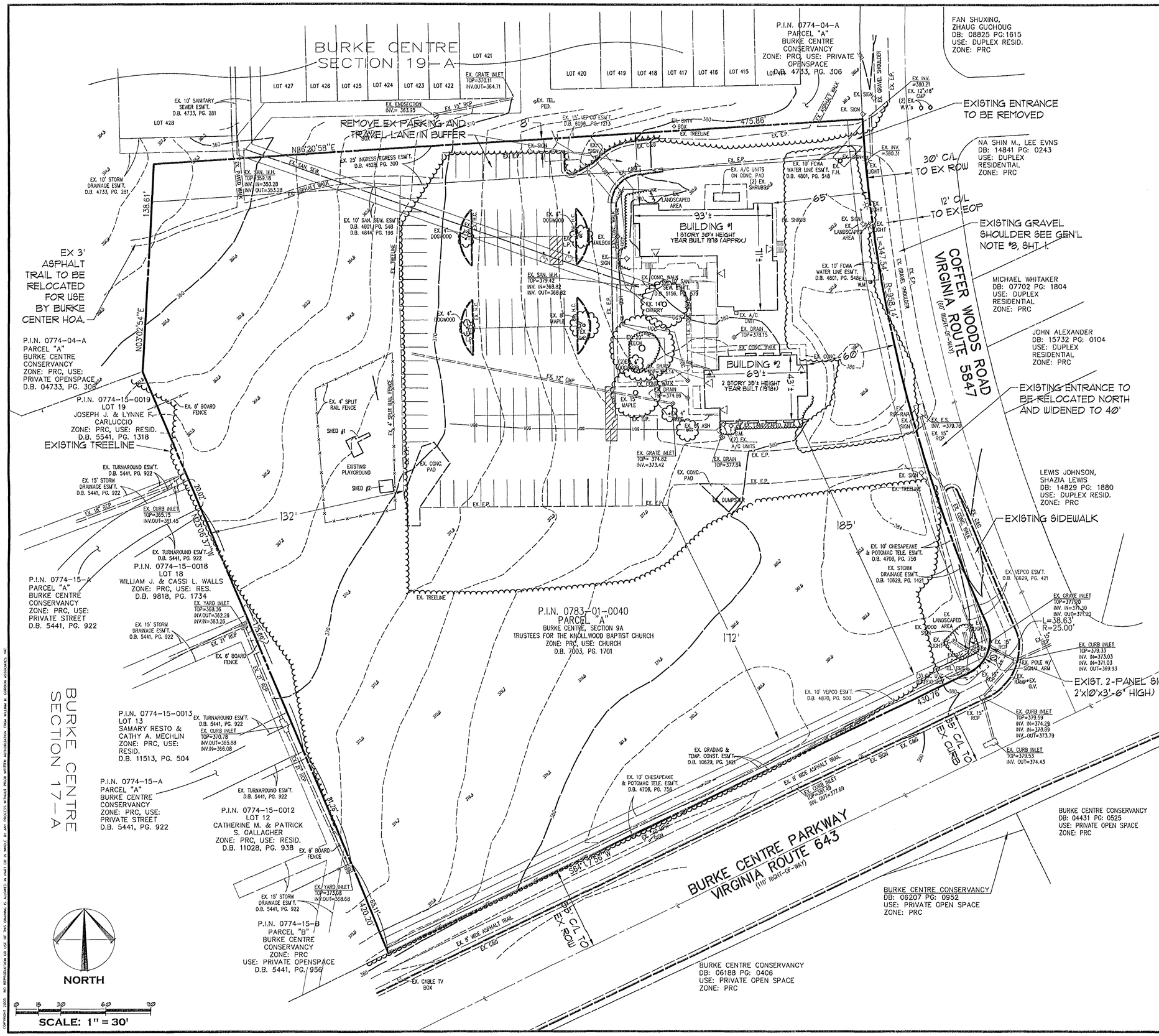

LEGEND

- EX PROPERTY LINE
- EX ADJACENT PROPERTY LINE
- EX EASEMENT LINE
- EX EDGE OF PAVEMENT (EOP)
- EX CENTERLINE
- EX FENCE LINE
- EX UNDERGROUND GAS LINE
- EX UNDERGROUND ELECTRIC LINE
- EX UNDERGROUND TELEPHONE LINE
- EX UNDERGROUND CABLE TV LINE
- EX SANITARY SEWER
- EX STORM SEWER
- EX WATER MAIN
- EX BUILDING
- EX RETAINING WALL
- EX SIDEWALK
- EX HEADER CURB
- EX CURB & GUTTER
- EX TREES
- EX TREE LINE
- EX CONTOUR LINE
- EX SPOT ELEVATION

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SEAL

COMMONWEALTH OF VIRGINIA
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REVISIONS

3/11/06 ADDRESS STAFF COMMENTS
3/1/06 ADDRESS STAFF COMMENTS
4/3/06 ADD TREES AND SIDEWALK
5/3/06 ADDRESS STAFF COMMENTS
5/3/06 ADDRESS STAFF COMMENTS

EXISTING CONDITIONS

KNOLLWOOD COMMUNITY CHURCH

BRADDOCK DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE	1"=30'
DATE	DECEMBER 2005
DRAWN	N.Y.
CHECKED	SEG
JOB #	2142-0102
CAD FILE	0101EX.dwg
SHEET #	2 OF 10

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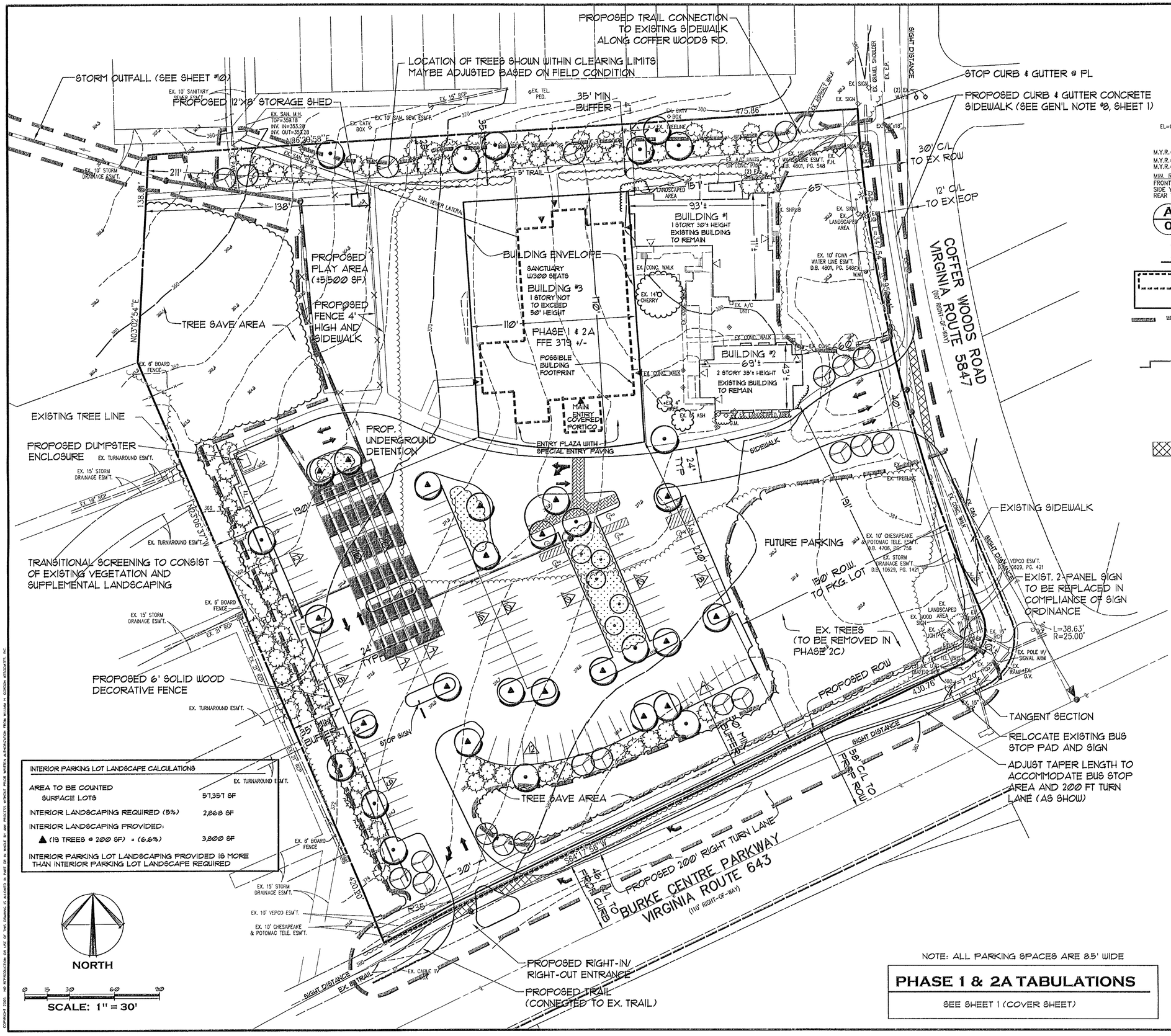


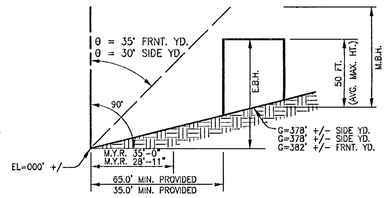
INTERIOR PARKING LOT LANDSCAPE CALCULATIONS	
AREA TO BE COUNTED SURFACE LOTS	57,357 SF
INTERIOR LANDSCAPING REQUIRED (5%)	2,868 SF
INTERIOR LANDSCAPING PROVIDED: ▲ (19 TREES @ 200 SF) = (6.6%)	3,800 SF

INTERIOR PARKING LOT LANDSCAPE PROVIDED IS MORE THAN INTERIOR PARKING LOT LANDSCAPE REQUIRED

NOTE: ALL PARKING SPACES ARE 8.5' WIDE

PHASE 1 & 2A TABULATIONS

SEE SHEET 1 (COVER SHEET)



M.Y.R.= E.B.H. * tan θ
M.Y.R.= 50' * tan 35 = 35.0' min. setback
M.Y.R.= 50' * tan 30 = 28.9' min. setback

MIN. REQ'RMNTS: COMP TO R-4 CONVENTIONAL
FRONT YARD: 35' OR 25' MIN.
SIDE YARD: 30' OR 10' MIN.
REAR YARD: 30' OR 25' MIN.

θ ANGLE OF BULK PLANE
L.L. LOT LINE
M.Y.R. MINIMUM YARD REQUIREMENT
E.B.H. EFFECTIVE BUILDING HEIGHT
M.B.H. MAXIMUM BUILDING HEIGHT
G GRADE (FINISHED)

A/0 BULK PLANE ANGLE @ SECT. 'A'

N.T.S. COMPARE TO R-4 CONVENTIONAL ZONE DISTRICT

LEGEND

- BUILDING ENVELOPE
- ENTRIES (APPROXIMATE LOCATIONS SHOWN)
- BUILDING FOOTPRINT
- APPROXIMATE LIMITS OF CLEARING & GRADING (SUBJECT TO FINAL ENGINEERING DESIGN)
- PROPOSED 6' SOLID WOOD FENCE
- TRAFFIC ARROW
- FFE — PROPOSED FIRST FLOOR ELEVATION
- PROPOSED PAINTED OR PAVED CROSSWALK
- SHADE TREE: 2-1/2" - 3" caliper — Willow Oak, Maple, Littleleaf Linden
- ORNAMENTAL TREE: 6' - 8' Height — Redbud, Flowering Crabapple, Yoshiro Cherry
- EVERGREEN TREE: 6'- 7' Height — Black Pine, Leyland Cypress, Spruce
- BIORETENTION AREA TREE (NATIVE SPECIES)
- SHRUB
- EXISTING TREE LINE
- PROPOSED TREE SAVE AREA
- F — UNDERGROUND FILTERA SYSTEM (APPROX. LOCATION)
- PROPOSED BIORETENTION AREA (EG. RAIN GARDEN)

PHASE 1

BUILDING PROGRAM

- BUILD 400 SEAT SANCTUARY
- SHELL CELLAR.
- RELOCATE PLAYGROUND
- BUILD ENTRANCES AND 136 PARKING SPACES, INCLUDING 6 HANDICAPPED SPACES.
- BUILD STORMWATER DETENTION SYSTEM AND UTILITY CONNECTIONS.

PHASE 2A

BUILDING PROGRAM

- FINISH CELLAR OF SANCTUARY.
- NO CHANGE TO SITE.

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COMMONWEALTH OF VIRGINIA — STEVEN E. GLEASON — 5/10/06 — LICENSE No. 001104 — CERTIFIED LANDSCAPE ARCHITECT

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2/17/06	ADDRESS STAFF COMMENTS
3/1/06	ADDRESS STAFF COMMENTS
4/3/06	ADD TREES AND SIDEWALK
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PHASE 1 & 2A

KNOLLWOOD COMMUNITY CHURCH

BRADDOCK DISTRICT
FAIRFAX COUNTY, VIRGINIA

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CAD FILE	0101PH1.dwg
SHEET #	3 OF 10

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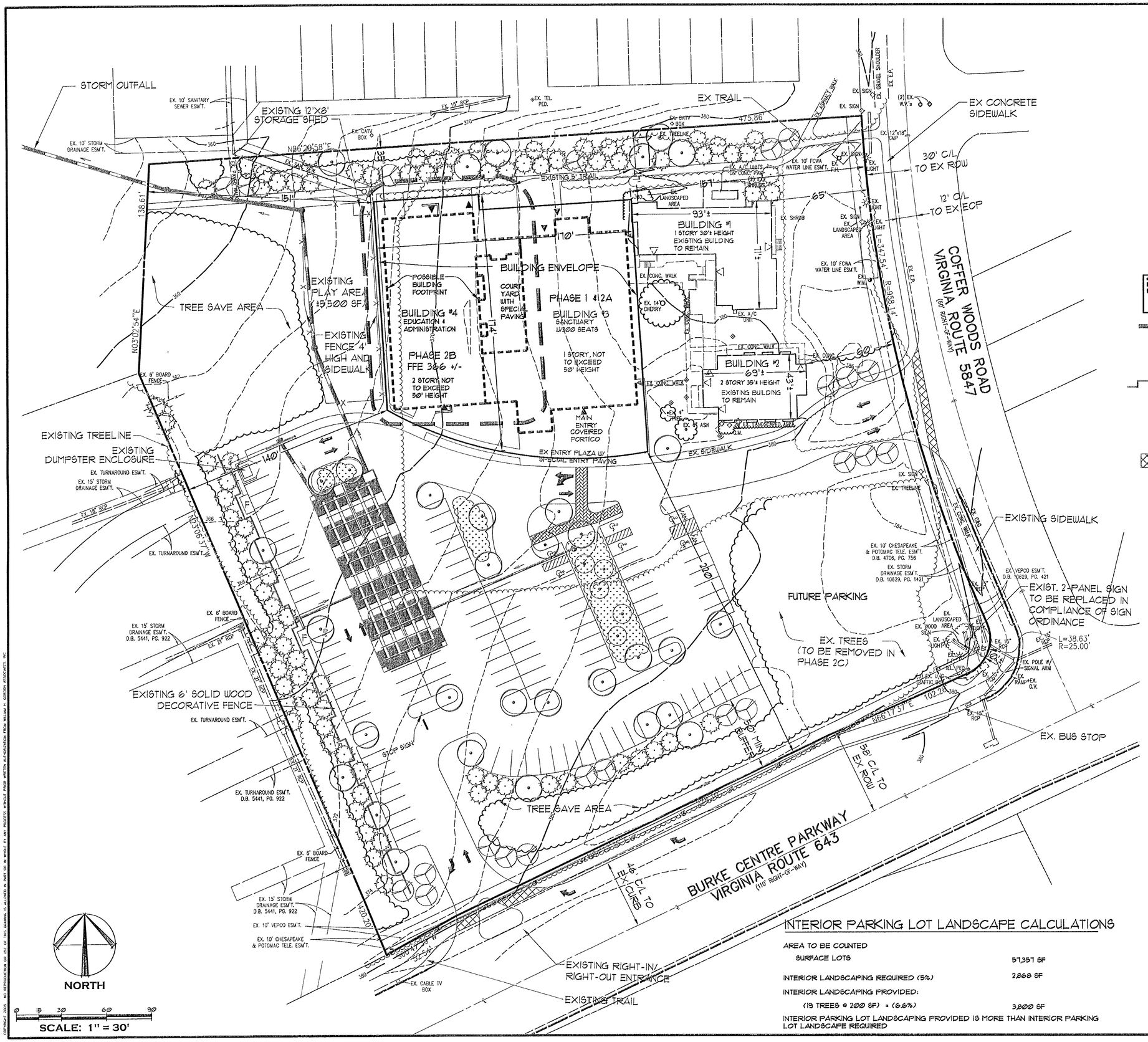

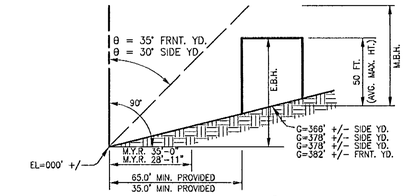

M.Y.R.= E.B.H. * tan θ
M.Y.R.= 50' * tan 35 = 35.0' min. setback
M.Y.R.= 50' * tan 30 = 28.9' min. setback

MIN. REQ'RMNTS: COMP TO R-4 CONVENTIONAL
FRONT YARD: 35' OR 25' MIN.
SIDE YARD: 30' OR 10' MIN.
REAR YARD: 30' OR 25' MIN.

θ ANGLE OF BULK PLANE
L.L. LOT LINE
M.Y.R. MINIMUM YARD REQUIREMENT
E.B.H. EFFECTIVE BUILDING HEIGHT
M.B.H. MAXIMUM BUILDING HEIGHT
G GRADE (FINISHED)

A/0 BULK PLANE ANGLE @ SECT. 'A'

N.T.S. COMPARE TO R-4 CONVENTIONAL ZONE DISTRICT

LEGEND

- BUILDING ENVELOPE
- ENTRIES (APPROXIMATE LOCATIONS SHOWN)
- BUILDING FOOTPRINT
- APPROXIMATE LIMITS OF CLEARING & GRADING (SUBJECT TO FINAL ENGINEERING DESIGN)
- EXISTING 6' SOLID WOOD FENCE
- FFE — PROPOSED FIRST FLOOR ELEVATION
- EXISTING PAINTED OR PAVED CROSSWALK
- SHADE TREE: 2-1/2" - 3" caliper — Willow Oak, Maple, Littleleaf Linden
- ORNAMENTAL TREE: 6' - 8' Height — Redbud, Flowering Crabapple, Yoshiro Cherry
- EVERGREEN TREE: 6'- 7' Height — Black Pine, Leyland Cypress, Spruce
- BIORETENTION AREA TREE (NATIVE SPECIES)
- SHRUB
- EXISTING TREE LINE
- PROPOSED TREE SAVE AREA
- F — UNDERGROUND FILTERA SYSTEM (APPROX. LOCATION)
- PROPOSED BIORETENTION AREA (EG. RAIN GARDEN)

PHASE 2B BUILDING PROGRAM

- BUILD EDUCATION AND ADMINISTRATION BUILDING.
- FINISH FIRST FLOOR.
- SHELL CELLAR AND SECOND FLOOR.

INTERIOR PARKING LOT LANDSCAPE CALCULATIONS

AREA TO BE COUNTED	
SURFACE LOTS	57,357 SF
INTERIOR LANDSCAPING REQUIRED (5%)	2,868 SF
INTERIOR LANDSCAPING PROVIDED:	
(19 TREES @ 200 SF) = (6.6%)	3,800 SF

INTERIOR PARKING LOT LANDSCAPING PROVIDED IS MORE THAN INTERIOR PARKING LOT LANDSCAPE REQUIRED

NOTE:
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COMMONWEALTH OF VIRGINIA
STEVEN E. GLEASON
5/10/06
LICENSE No. 001104
CERTIFIED LANDSCAPE ARCHITECT

REVISIONS
2/17/06 ADDRESS STAFF COMMENTS
3/1/06 ADDRESS STAFF COMMENTS
4/3/06 ADD TREES AND SIDEWALK
5/3/06 ADDRESS STAFF COMMENTS
5/9/06 ADDRESS STAFF COMMENTS

PHASE 2B

KNOLLWOOD COMMUNITY CHURCH

BRADDOCK DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE	1"=30'-0"
DATE	DECEMBER 2005
DRAWN	N.Y.
CHECKED	SEG
JOB #	2142-0102
CAD FILE	0101PH2.dwg
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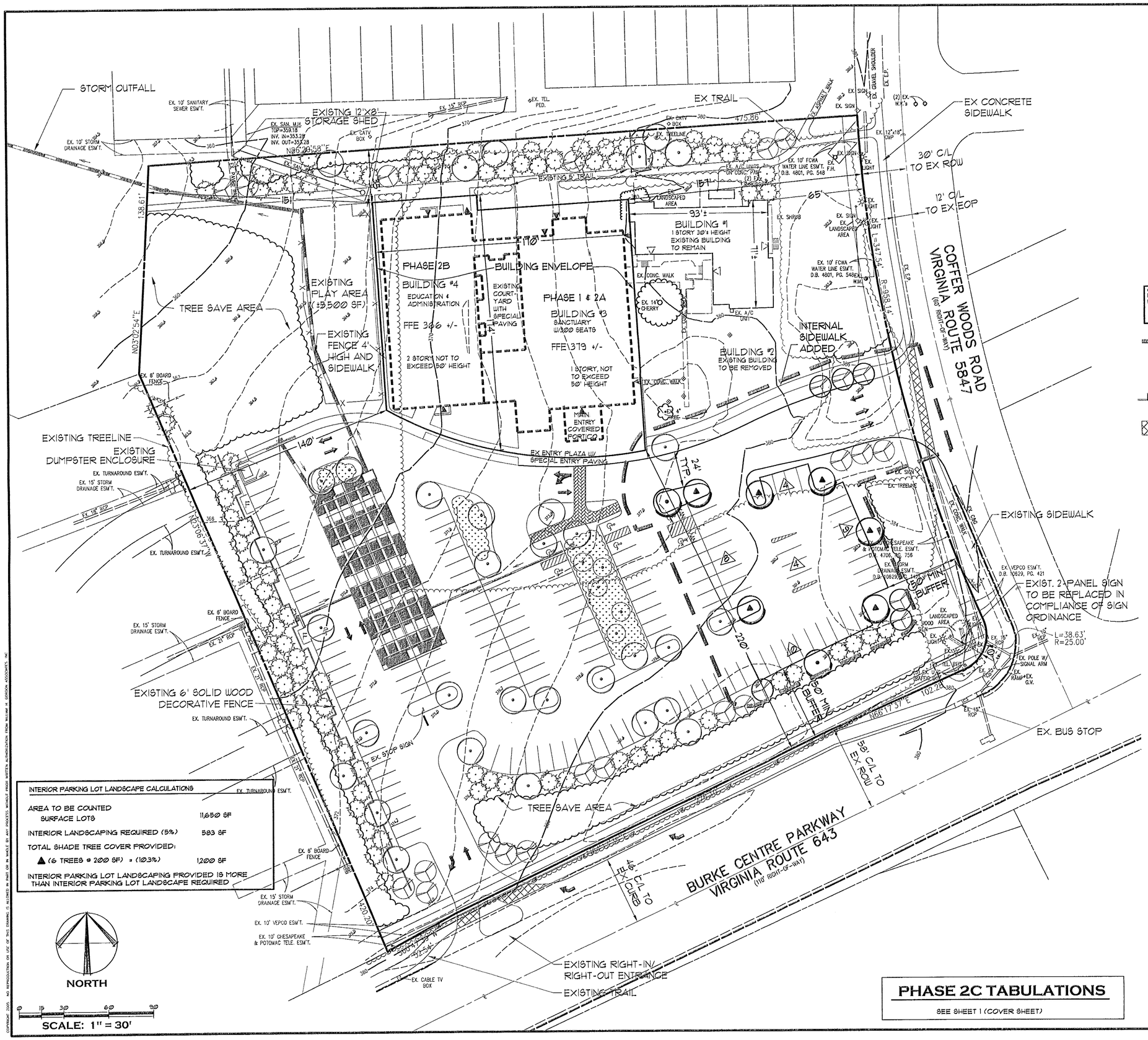
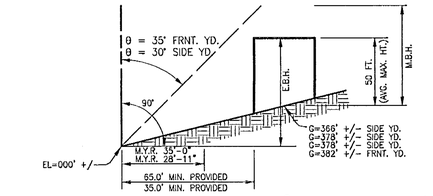


INTERIOR PARKING LOT LANDSCAPE CALCULATIONS	
AREA TO BE COUNTED SURFACE LOTS	11,650 SF
INTERIOR LANDSCAPING REQUIRED (5%)	583 SF
TOTAL SHADE TREE COVER PROVIDED:	
▲ (6 TREES @ 200 SF) = (103%)	1200 SF
INTERIOR PARKING LOT LANDSCAPING PROVIDED IS MORE THAN INTERIOR PARKING LOT LANDSCAPE REQUIRED	



M.Y.R.= E.B.H. * tan θ
M.Y.R.= 50' * tan 35 = 35.0' min. setback
M.Y.R.= 50' * tan 30 = 28.9' min. setback

MIN. REQ'RMNTS: COMP TO R-4 CONVENTIONAL
FRONT YARD: 35' OR 25' MIN.
SIDE YARD: 30' OR 10' MIN.
REAR YARD: 30' OR 25' MIN.

θ ANGLE OF BULK PLANE
LL LOT LINE
M.Y.R. MINIMUM YARD REQUIREMENT
E.B.H. EFFECTIVE BUILDING HEIGHT
M.B.H. MAXIMUM BUILDING HEIGHT
G GRADE (FINISHED)

A/O BULK PLANE ANGLE @ SECT. 'A'

N.T.S. COMPARE TO R-4 CONVENTIONAL ZONE DISTRICT

LEGEND

- BUILDING ENVELOPE
- ENTRIES (APPROXIMATE LOCATIONS SHOWN)
- BUILDING FOOTPRINT
- APPROXIMATE LIMITS OF CLEARING & GRADING (SUBJECT TO FINAL ENGINEERING DESIGN)
- EXISTING 6' SOLID WOOD FENCE
- EXISTING PAINTED OR PAVED CROSSWALK
- SHADE TREE: 2-1/2" - 3" caliper
  Willow Oak
  Maple
  Littleleaf Linden
- ORNAMENTAL TREE: 6' - 8' Height
  Redbud
  Flowering Crabapple
  Toshiro Cherry
- EVERGREEN TREE: 6'- 7' Height
  Black Pine
  Leyland Cypress
  Spruce
- BIORETENTION AREA TREE (NATIVE SPECIES)
- SHRUB
- EXISTING TREE LINE
- PROPOSED TREE SAVE AREA
- UNDERGROUND FILTERA SYSTEM (APPROX. LOCATION)
- PROPOSED BIORETENTION AREA (EG. RAIN GARDEN)

PHASE 2C BUILDING PROGRAM

- BUILD 100 SEAT BALCONY.
- FINISH CELLAR AND SECOND FLOOR OF EDUCATION AND ADMINISTRATION BUILDING.
- RENOVATE CELLAR OF SANCTUARY.
- DEMOLISH EXISTING CLASSROOM BUILDING.
- RECONFIGURE ENTRANCE DRIVE TO FINAL LOCATION.
- BUILD REMAINING 35 SPACES FOR A TOTAL PARKING LOT OF 171 SPACES, INCLUDING THE SAME 6 HANDICAPPED SPACES.

NOTE:
FOR PURPOSES OF CLARITY, ITEMS THAT WERE PROPOSED IN PREVIOUS PHASES ARE SHOWN AS EXISTING ON THIS SHEET.

PHASE 2C TABULATIONS

SEE SHEET 1 (COVER SHEET)

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8/10/06
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CERTIFIED LANDSCAPE ARCHITECT

REVISIONS
2/1/06 ADDRESS STAFF COMMENTS
3/1/06 ADDRESS STAFF COMMENTS
4/3/06 ADD TREES AND SIDEWALK
5/3/06 ADDRESS STAFF COMMENTS
6/3/06 ADDRESS STAFF COMMENTS

PHASE 2C

KNOLLWOOD COMMUNITY CHURCH

BRADDOCK DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE	1"=30'-0"
DATE	DECEMBER 2005
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SHEET #	5 OF 10

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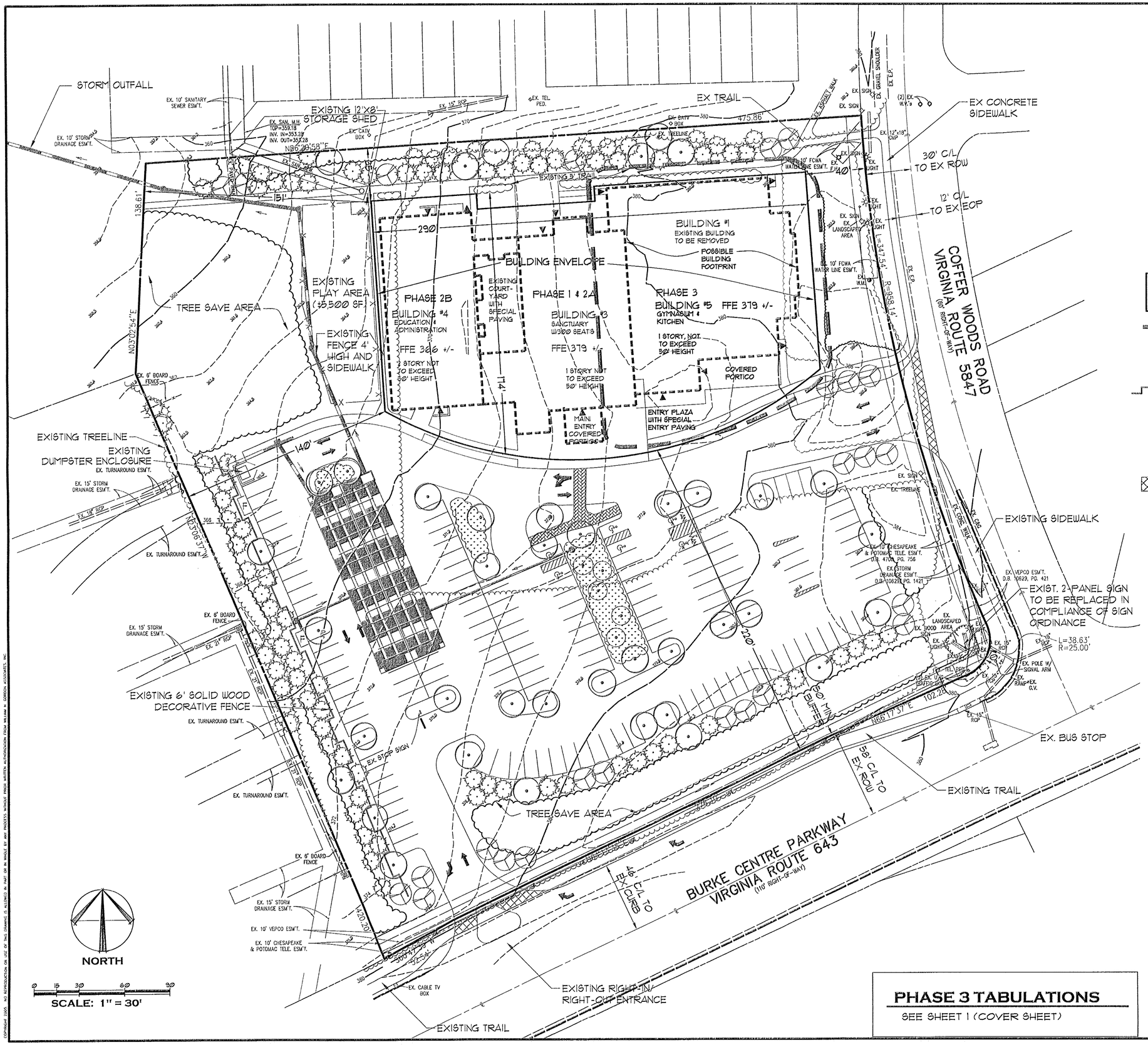

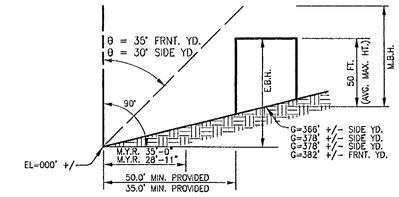

M.Y.R.= E.B.H. * tan θ
M.Y.R.= 50' * tan 35 = 35.0' min. setback
M.Y.R.= 50' * tan 30 = 28.9' min. setback

MIN. REQ'RMNTS: COMP TO R-4 CONVENTIONAL
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SIDE YARD: 30' OR 10' MIN.
REAR YARD: 30' OR 25' MIN.

θ ANGLE OF BULK PLANE
L.L. LOT LINE
M.Y.R. MINIMUM YARD REQUIREMENT
E.B.H. EFFECTIVE BUILDING HEIGHT
M.B.H. MAXIMUM BUILDING HEIGHT
G GRADE (FINISHED)

A/0 BULK PLANE ANGLE @ SECT. 'A'

N.T.S. COMPARE TO R-4 CONVENTIONAL ZONE DISTRICT

LEGEND

- BUILDING ENVELOPE
- ENTRIES (APPROXIMATE LOCATIONS SHOWN)
- BUILDING FOOTPRINT
- APPROXIMATE LIMITS OF CLEARING & GRADING (SUBJECT TO FINAL ENGINEERING DESIGN)
- EXISTING 6' SOLID WOOD FENCE
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- EXISTING PAINTED OR PAVED CROSSWALK
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- EVERGREEN TREE: 6'- 7' Height — Black Pine, Leyland Cypress, Spruce
- BIORETENTION AREA TREE (NATIVE SPECIES)
- SHRUB
- EXISTING TREE LINE
- PROPOSED TREE SAVE AREA
- F — UNDERGROUND FILTERA SYSTEM (APPROX. LOCATION)
- PROPOSED BIORETENTION AREA (EG. RAIN GARDEN)

PHASE 3 BUILDING PROGRAM

- DEMOLISH REMAINING CHURCH BUILDING.
- BUILD GYMNASIUM / KITCHEN BUILDING.

PHASE 3 TABULATIONS

SEE SHEET 1 (COVER SHEET)

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6/6/06
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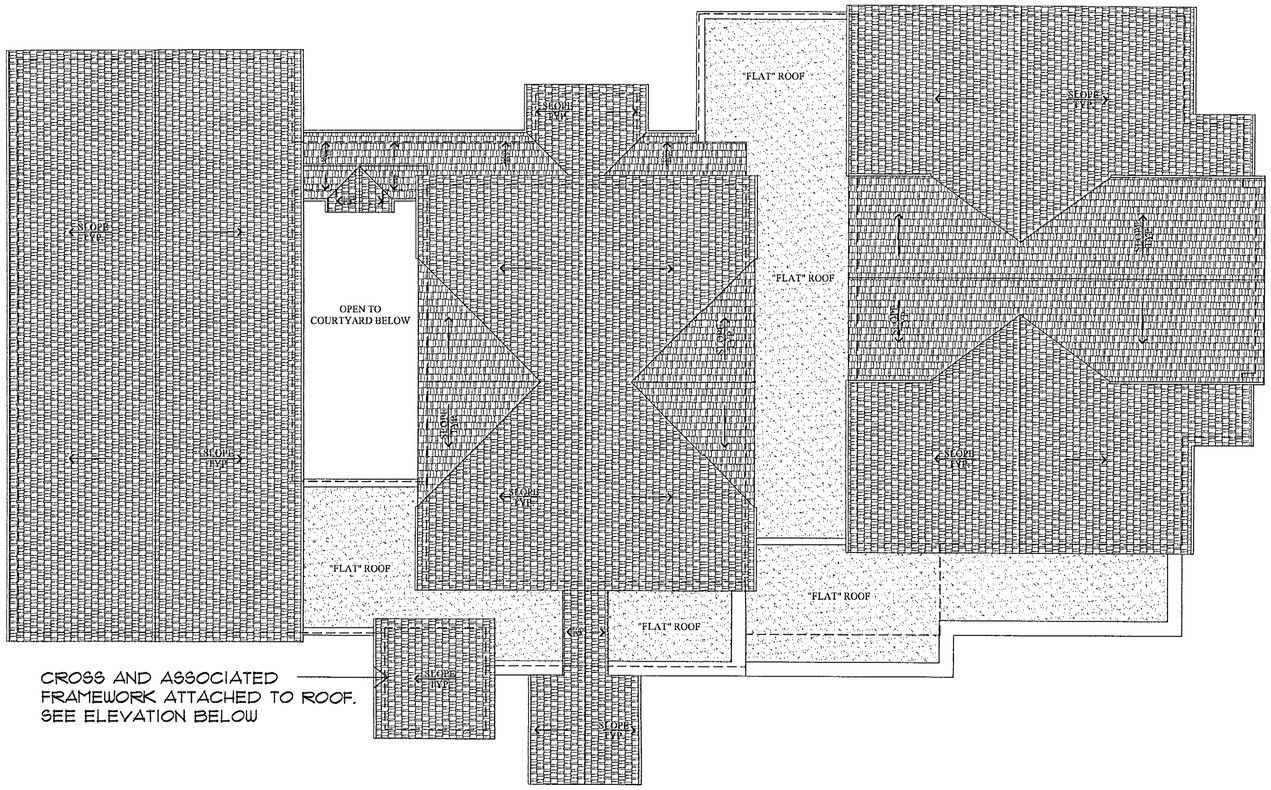
2/11/06 ADDRESS STAFF COMMENTS
3/1/06 ADDRESS STAFF COMMENTS
4/3/06 ADD TREES AND SIDEWALK
5/3/06 ADDRESS STAFF COMMENTS
6/9/06 ADDRESS STAFF COMMENTS

PHASE 3

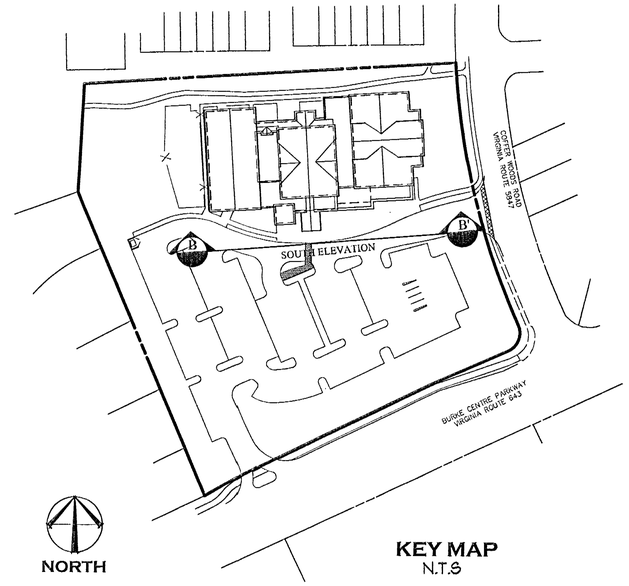
KNOLLWOOD COMMUNITY CHURCH

BRADDOCK DISTRICT
FAIRFAX COUNTY, VIRGINIA

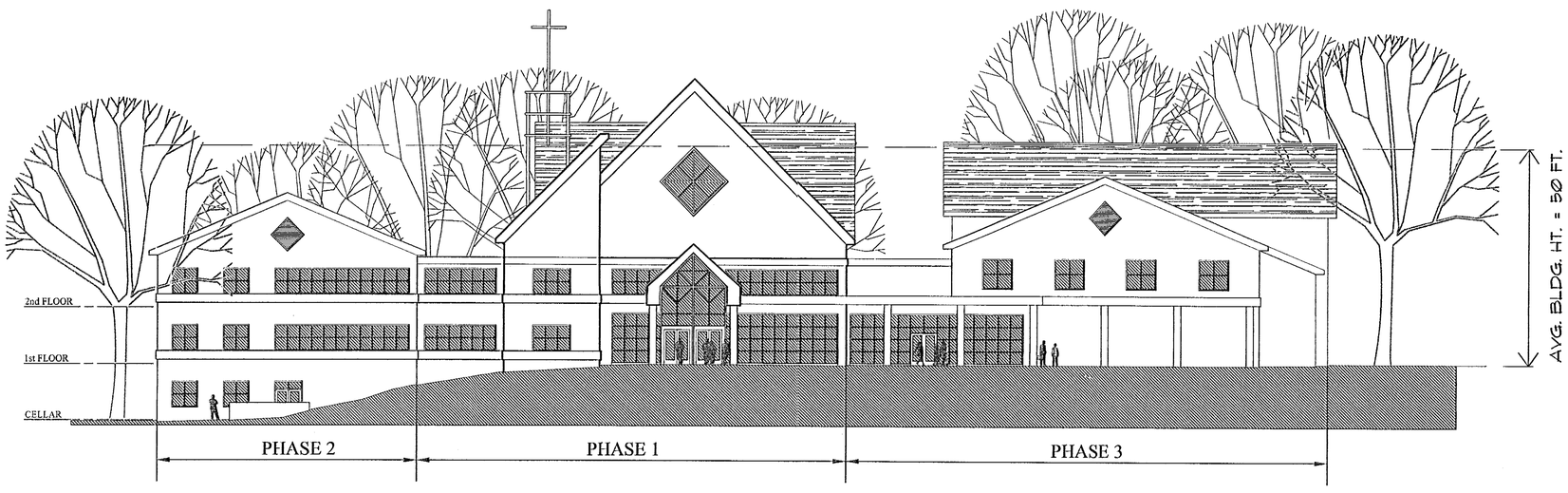
SCALE	1"=30'-0"
DATE	DECEMBER 2005
DRAWN	N.Y.
CHECKED	SEG
JOB #	2142-0102
CAD FILE	0101PH4.dwg
SHEET #	6 OF 10



A ROOF PLAN
SCALE: 1" = 16'-0"



KEY MAP
N.T.S



B B-B' SOUTH ELEVATION (PHASE 3)
SCALE: 1" = 16'-0"

NORTH
SCALE: 1" = 16'-0"

NOTE:
THIS ELEVATION AND ROOF PLAN DEPICT A GENERAL CONCEPT OF THE APPEARANCE, MASS, AND SCALE OF THE BUILDING AND IS ILLUSTRATIVE ONLY. THE ACTUAL ELEVATION AND ROOF PLANS ARE SUBJECT TO CHANGE DUE TO FURTHER ARCHITECTURAL AND ENGINEERING DESIGN STUDIES, ANALYSIS, AND REQUIREMENTS.

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Architects Engineers
8032 Leesburg Pike, Suite 201
Vienna, Virginia 22182-2741
(703) 556-0700, FAX (703) 448-7555

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5/3/06 ADDRESS STAFF COMMENTS
9/3/06 ADDRESS STAFF COMMENTS

ARCHITECTURAL ELEVATION/ROOF PLAN

KNOLLWOOD COMMUNITY CHURCH
BRADDOCK DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE	1"=30'-0"
DATE	DECEMBER 2005
DRAWN	N.Y.
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CAD FILE	0101AE.dwg
SHEET #	7 OF 10

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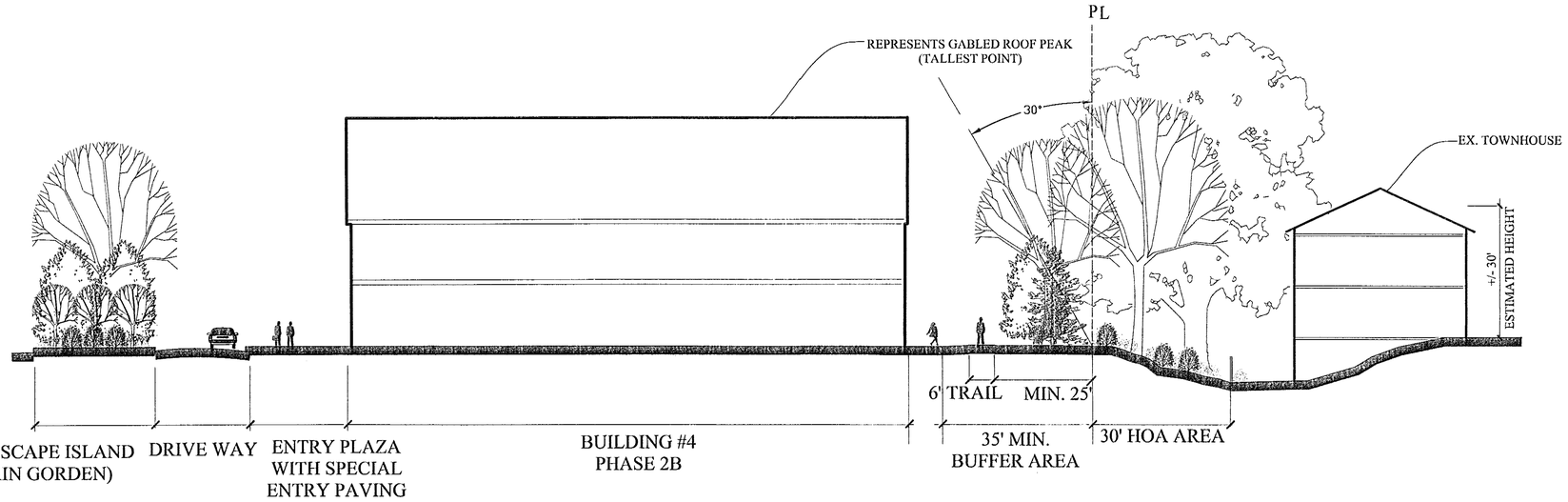
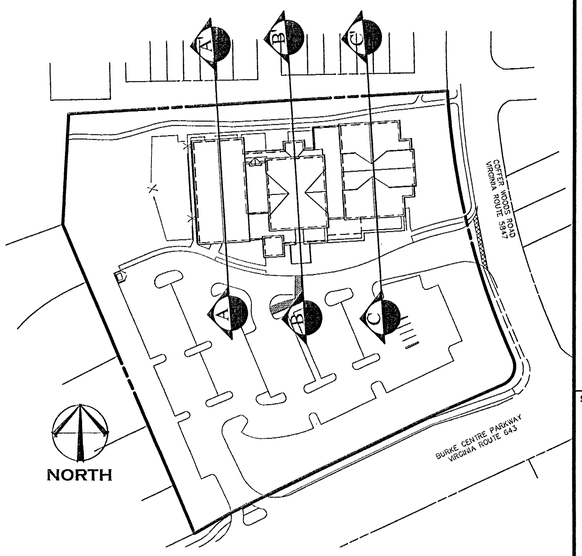
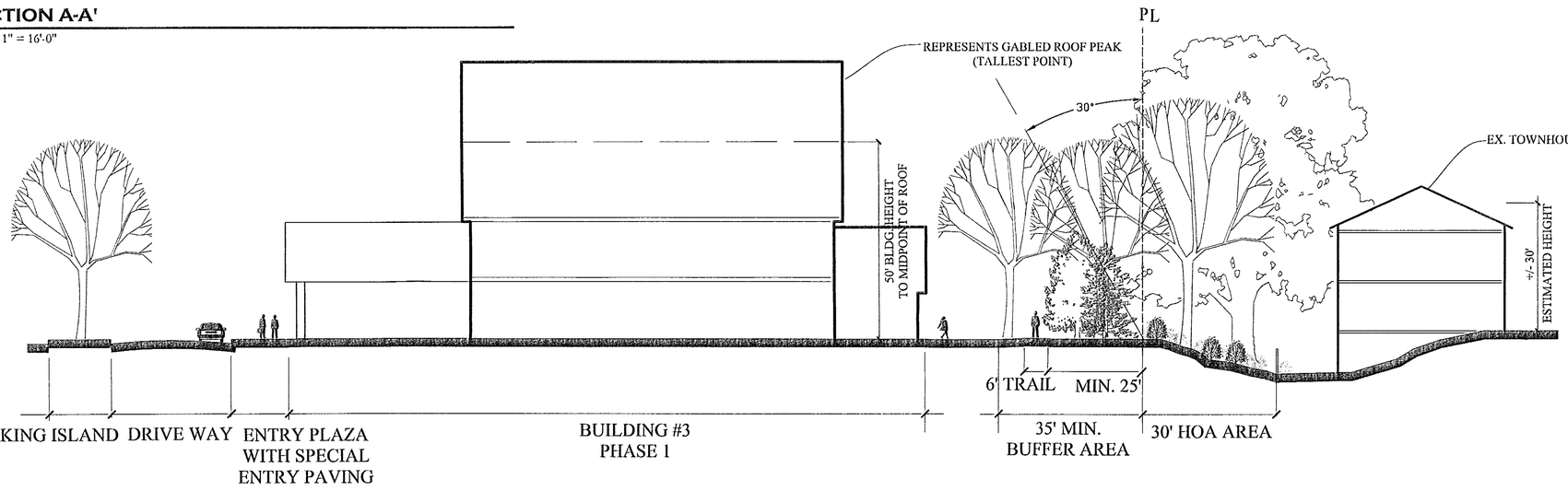


A SECTION A-A'

SCALE: 1" = 16'-0"

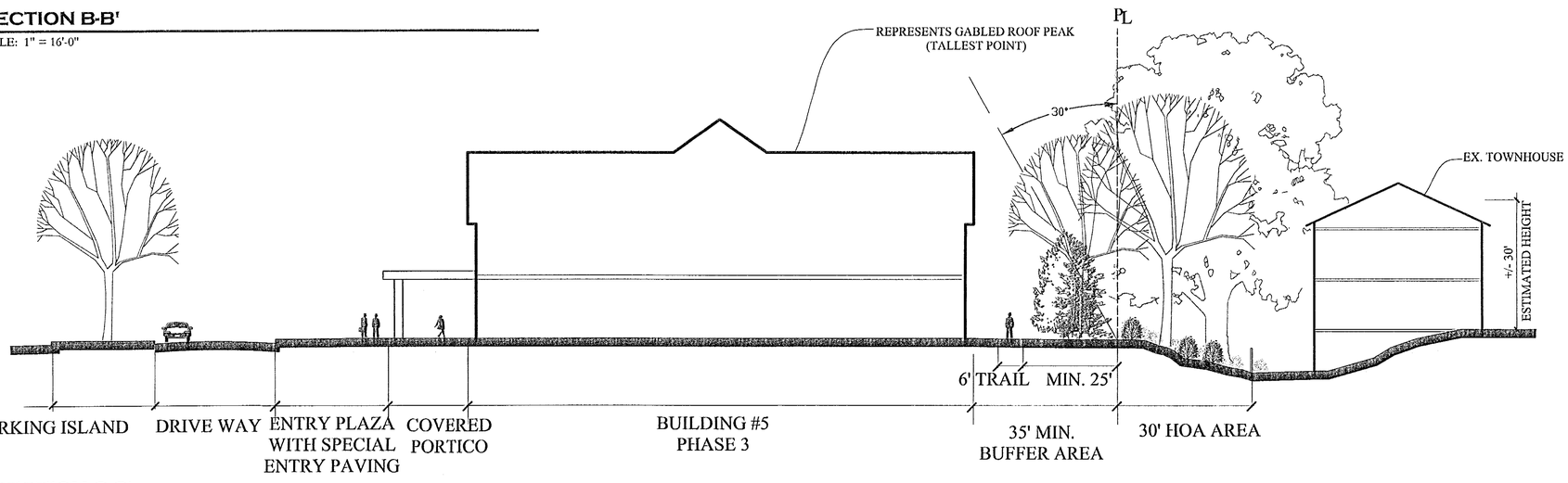


KEY MAP
N.T.S



B SECTION B-B'

SCALE: 1" = 16'-0"



C SECTION C-C'

SCALE: 1" = 16'-0"

NOTE:

REAR YARD SETBACK PROVIDED IS 30° ANGLE OF BULK PLANE OR 25' MIN. WHICHEVER IS GREATER FOR A COMPARABLE R-4 ZONE.

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REVISIONS

2/17/06 ADDRESS STAFF COMMENTS
5/3/06 ADDRESS STAFF COMMENTS
5/9/06 ADDRESS STAFF COMMENTS

CROSS SECTIONS

KNOLLWOOD COMMUNITY CHURCH

BRADDOCK DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE	
DATE	DECEMBER 2005
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B PRELIMINARY SWM / BMP NARRATIVE

SCALE: N.T.S.

DETENTION REQUIREMENTS FOR THE SITE WILL BE PROVIDED ON-SITE BY A COMBINATION OF ELEMENTS, INCLUDING UNDERGROUND DETENTION FACILITY(IES) AND EXCESS STORAGE VOLUME PROVIDED IN THE WATER QUALITY ELEMENT(S). DETENTION WILL BE PROVIDED FOR THE EXCESS RUNOFF FROM THE 2 YEAR AND 10 YEAR EVENTS. THE FACILITY WILL ALSO BE DESIGNED TO STORE EXCESS VOLUME AS REQUIRED TO MEET THE REQUIREMENTS FOR PROVISION OF ADEQUATE OUTFALL, WHICH INCLUDE REQUIREMENTS FOR BOTH NO ADVERSE IMPACT AND PROPORTIONAL IMPROVEMENT TO THE EXISTING CHANNEL. THE APPROXIMATE STORAGE CAPACITY OF THIS FACILITY IS 30,000 CUBIC FEET. THE FACILITY(IES) IS TO BE PRIVATELY OWNED AND MAINTAINED.

BMP REQUIREMENTS WILL BE PROVIDED ON-SITE BY A COMBINATION OF INFILTRATION, BIORETENTION, FILTERRA UNITS, AND CONSERVATION OF OPEN SPACE. THE BIORETENTION FACILITY WILL CONSIST OF A BIORETENTION BASIN (RAINGARDEN) AND AN OVERFLOW STRUCTURE CONNECTED IN LINE WITH THE PROPOSED UNDERGROUND DETENTION FACILITY. DURING FINAL ENGINEERING, THE DESIGN MAY BE MODIFIED TO INCLUDE THE USE OF OTHER STRUCTURAL BMP FACILITIES SUCH AS SAND FILTER(s) AND OTHER COUNTY APPROVED STRUCTURES, IN ORDER TO MEET THE MINIMUM PHOSPHOROUS REMOVAL RATE REQUIREMENT (40 %)

THE SURFACE AREA OF ANY BIORETENTION OR INFILTRATION PRACTICE WILL BE PROPORTIONAL TO THE DRAINAGE AREA TO THE FACILITY AND WILL PROVIDE TREATMENT FOR THE FIRST ONE INCH (1") OF RAINFALL ON THE IMPERVIOUS AREAS. THE FILTERRA MODULES ARE INTENDED TO SERVE THE PAVED AREAS OF THE SITE.

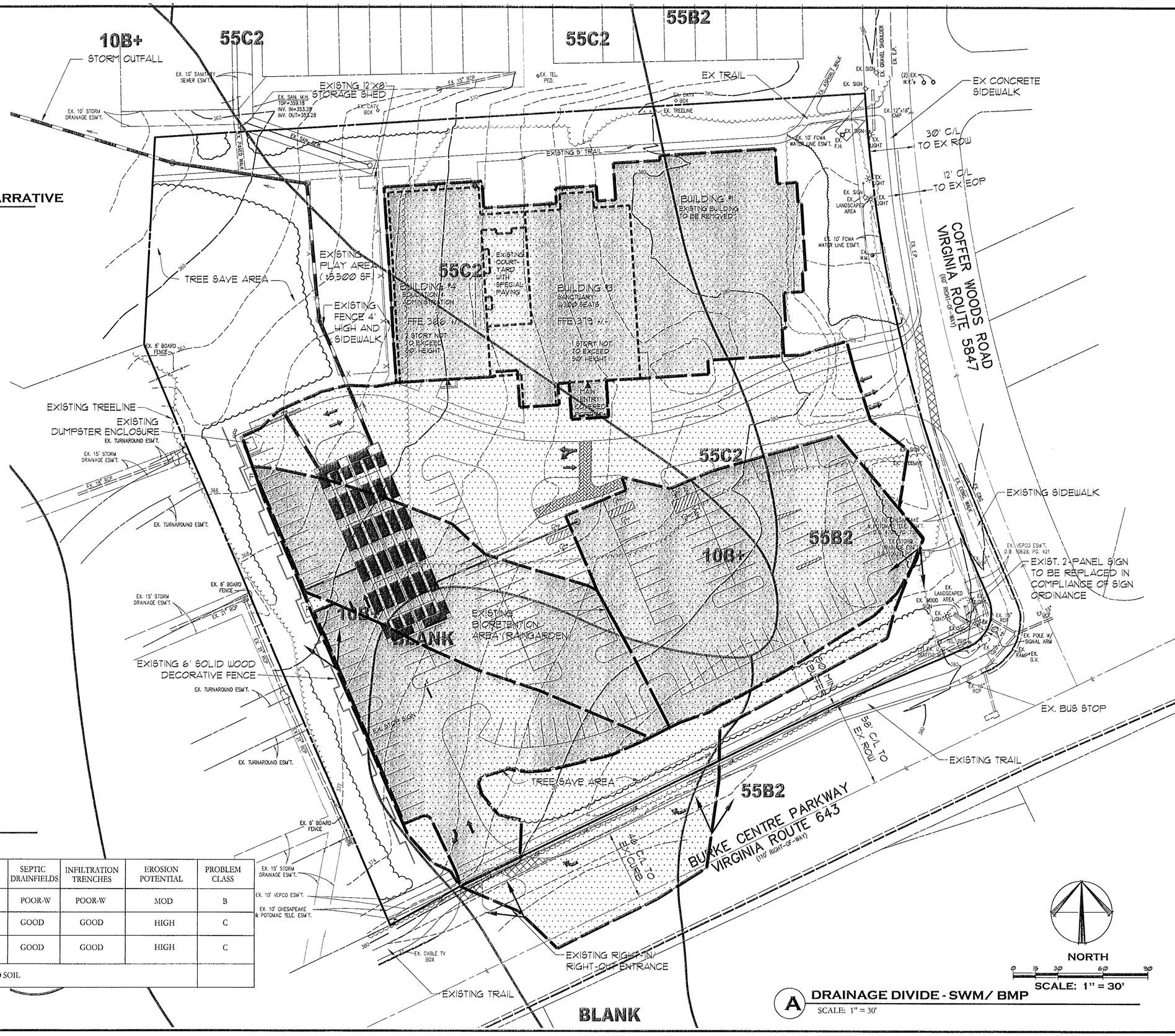
LEGEND:

- DRAINAGE AREA TO UNDERGROUND DETENTION
- DRAINAGE AREA TO BMP FACILITY
- SOIL TYPE DELINEATION
- DRAINAGE DIVIDE

C SOILS MAP

SCALE: N.T.S.

SOIL ID NUMBERS	SOIL SERIES NAME	FOUNDATION SUPPORT	DRAINAGE	SEPTIC DRAINFIELDS	INFILTRATION TRENCHES	EROSION POTENTIAL	PROBLEM CLASS
10B+	GLENVILLE	FAIR-B, W	MARG-W	POOR-W	POOR-W	MOD	B
55B2	GLENELG	GOOD	GOOD	GOOD	GOOD	HIGH	C
55C2	GLENELG	GOOD	GOOD	GOOD	GOOD	HIGH	C
BLANK	UNMAPPED SOIL						



A DRAINAGE DIVIDE - SWM/ BMP

SCALE: 1" = 30'

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COMMONWEALTH OF VIRGINIA
LAURA F. MILLER
NO. 35537
5/9/06
PROFESSIONAL ENGINEER

REVISIONS

2/11/06 ADDRESS STAFF COMMENTS
5/3/06 ADDRESS STAFF COMMENTS
5/9/06 ADDRESS STAFF COMMENTS

PRELIMINARY SWM/BMP PLAN

KNOLLWOOD COMMUNITY CHURCH

BRADDOCK DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE	1"=30'-0"
DATE	DECEMBER 2005
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JOB #	2142-0102
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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 & 1Q)
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 9.

☑ 3. Provide:

Facility Name/ Type & No.	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage Volume (cf)	If pond, dam height (ft)
U/G DETENTION (e.g. dry pond, A-24, etc.)	2.4 AC	0.2 AC	2.6 AC	6,200 SF±	30,000 CF±	N/A
GRAVEL STORAGE (e.g. underground rock bed)	SEE	NOTE BELOW			11,000 CF±	N/A
Totals						

☑ 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet ____. Pond inlet and outlet pipe systems are shown on Sheet 9.

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

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

☑ 7. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet 9.

☑ 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 10.

☑ 9. A description of how the outfall requirements, including known changes to contributing drainage areas (i.e. drainage diversions), of the Public Facilities Manual will be satisfied is provided on Sheet 10

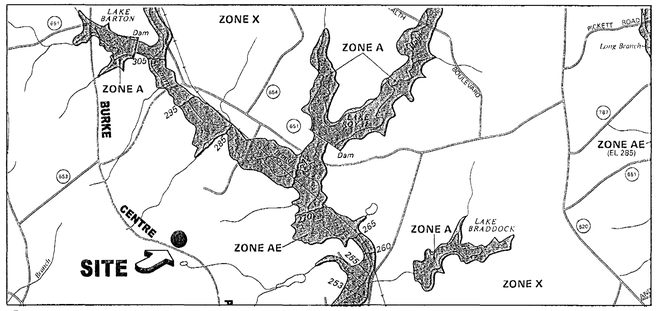
☑ 10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets 1.

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

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

Revised 2-21-2006

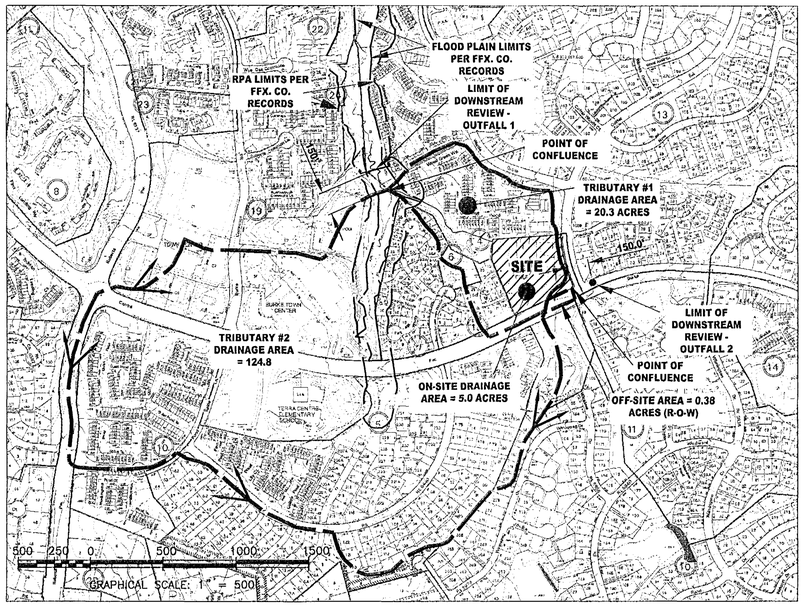
NOTE: GRAVEL STORAGE AREAS MAY BE PROVIDED BENEATH THE PLAYGROUND AND THE PROPOSED BIORETENTION AREA(S) TO PROVIDE ADDITIONAL STORAGE VOLUME TO MEET THE DETENTION REQUIREMENTS. THE GRAVEL STORAGE INDICATED ON THE FORM IS PART OF THE 30,000 CF± REQUIRED FOR DETENTION FOR THE PROJECT.



NORTH

C FEMA FLOOD AREA MAP - FEMA MAP PANEL 5155250075D

SCALE: N.T.S.



D OVERALL DRAINAGE DIVIDE MAP

SCALE: 1"=500'

NORTH

A ADEQUATE OUTFALL NARRATIVE

SCALE: N.T.S.

DESCRIPTION OF OUTFALLS FROM THE SITE

DRAINAGE FROM THE KNOLLWOOD CHURCH SITE DEPARTS THE SITE IN TWO DIRECTIONS. THE MAJORITY OF THE SITE DRAINS TO THE NORTHWEST INTO OPEN SPACE OWNED BY THE BURKE CENTRE CONSERVANCY. A SMALL PORTION OF THE SITE DRAINS TO THE SOUTHEAST INTO AN EXISTING CLOSED CONDUIT SYSTEM UNDER COFFER WOODS ROAD. THE OUTFALLS ARE HEREAFTER REFERRED TO AS OUTFALL 1 AND OUTFALL 2, RESPECTIVELY.

LIMITS OF DOWNSTREAM REVIEW

ACCORDING TO PFM SECTION 6-0203.2A, THE LIMITS OF DOWNSTREAM REVIEW IS TO A POINT THAT IS AT LEAST 150 FT DOWNSTREAM OF A POINT WHERE THE RECEIVING PIPE OR CHANNEL IS JOINED BY ANOTHER TRIBUTARY THAT HAS A DRAINAGE AREA AT LEAST 90% OF THE SIZE OF THE FIRST DRAINAGE AREA AT THE POINT OF CONFLUENCE.

OUTFALL 1

THE TOTAL DRAINAGE AREA OF TRIBUTARY 1, WHICH CONTAINS THE KNOLLWOOD CHURCH SITE IS 20.3 ACRES. AT THE DOWNSTREAM CONFLUENCE WITH THE NEXT TRIBUTARY, DEFINED AS TRIBUTARY 2, THE DRAINAGE AREA ADDED IS 128.2 ACRES, WHICH IS MORE THAN 90% OF THE FIRST. THE POINT 150' DOWNSTREAM OF THE CONFLUENCE IS THE LIMIT OF DOWNSTREAM REVIEW, WHICH IS LABELED ON THE MAP ON THIS SHEET.

OUTFALL 2

THE TOTAL DRAINAGE AREA TO THE SOUTHEAST IS 0.2 AC. THIS AREA ENTERS A CLOSED CONDUIT DRAINAGE SYSTEM THAT RUNS UNDER COFFER WOODS DRIVE TO THE EAST ALONG BURKE CENTER PARKWAY. DRAINAGE ENTERS A PIPE FROM BURKE CENTER PARKWAY AT A STRUCTURE WITHIN THE RIGHT OF WAY AT THE SOUTHEAST CORNER OF THE SITE. THE AREA JOINING THE SYSTEM IS 0.4 ACRES, WHICH IS MORE THAN 90% OF THE ONSITE DRAINAGE AREA. AS SUCH, THE STORM STRUCTURE AT THE SOUTHEAST CORNER OF THE SITE IS THE POINT OF CONFLUENCE AND THE LIMIT OF DOWNSTREAM REVIEW IS TO A POINT 150' BEYOND THE CONFLUENCE.

OUTFALL ANALYSIS

OUTFALL 1

AN ON-SITE AREA OF 5.0 ACRES DRAINS TO THE NORTHWEST INTO BURKE CENTRE CONSERVANCY PROPERTY. IMMEDIATELY DOWNSTREAM OF THE SITE, RUNOFF FROM THE SITE TRAVERSES EXISTING WOODED AREA BY SHEET FLOW FOR APPROXIMATELY 130' WHERE IT MEETS THE STARTING POINT OF A WELL DEFINED CHANNEL. THE CHANNEL INCREASES IN SIZE AS IT PICKS UP ADDITIONAL DRAINAGE AND TRAVELS APPROXIMATELY 800 FEET DOWNSTREAM OF THE SITE THROUGH A HEAVILY WOODED AREA TO ITS CONFLUENCE WITH ANOTHER TRIBUTARY. THE CHANNEL HAS SIGNIFICANT MEANDERING AND SPARSE OBSTRUCTIONS DUE TO FALLEN TREES AND DENSE VEGETATIVE LITTER. BEYOND THE LIMIT OF DOWNSTREAM REVIEW, THE ULTIMATE POINT OF DISCHARGE FOR THIS OUTFALL IS THE SIDEBURN BRANCH, A MAJOR DELINEATED FLOOD PLAIN WITHIN THE POHICK CREEK WATERSHED.

ANALYSIS OF THE 2-YEAR FLOW IN THE CHANNEL INDICATES THE EXISTING VELOCITY (PRIOR TO DEVELOPMENT OF THE KNOLLWOOD SITE) IS 4.2 FPS, WHICH IS EROSIVE FOR THE EXISTING SOIL TYPE IN THE CHANNEL (MIXED ALLUVIAL LAND * 1A). THE PERMISSIBLE VELOCITY FOR THE SOIL TYPE PRESENT IN THE CHANNEL IS 2.5 FPS.

THE ONSITE STORMWATER MANAGEMENT SYSTEM WILL CONSIST OF A CLOSED CONDUIT SYSTEM TO CONVEY RUNOFF FROM COLLECTION POINTS AROUND THE SITE, WATER QUALITY MEASURES, AND UNDERGROUND DETENTION. THESE MEASURES WILL BE DESIGNED TO CONTROL RUNOFF LEAVING THE SITE TO ENSURE THE GOALS OF ADEQUATE OUTFALL REQUIREMENTS ARE MET.

OUTFALL 2

THE MINOR OUTFALL CONSISTS OF AN EXISTING GRATE INLET ON THE SITE THAT TIES TO THE STORM SEWER SYSTEM UNDER COFFER WOODS ROAD. THE EXISTING ON-SITE AREA DISCHARGING INTO THIS STRUCTURE IS APPROXIMATELY 0.2 ACRES. THE OUTFALL CONSISTS OF CLOSED CONDUITS DESIGNED TO MEET THE REQUIREMENTS OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL, WHICH REQUIRES CAPACITY FOR THE 10-YEAR STORM EVENT. THE EXISTING SYSTEM IS ADEQUATE AND NO INCREASE IN PEAK RUNOFF IS PROPOSED. AS SUCH, THE SYSTEM WILL REMAIN ADEQUATE AFTER CONSTRUCTION OF THE IMPROVEMENTS PROPOSED WITH THIS PLAN.

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SEAL

COMMONWEALTH OF VIRGINIA
LAURA F. MILLER
NO. 35837
5/9/06
PROFESSIONAL ENGINEER

REVISIONS

2/17/06 ADDRESS STAFF COMMENTS
5/3/06 ADDRESS STAFF COMMENTS
5/9/06 ADDRESS STAFF COMMENTS

OUTFALL ANALYSIS

KNOLLWOOD COMMUNITY CHURCH

BRADDOCK DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE	
DATE	MAY 2006
DRAWN	WHGA
CHECKED	LFM
JOB #	2142-0102
CAD FILE	0101AO.DWG
SHEET #	10 OF 10

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