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Department of Planning & Zoning
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Zoning Evaluation Division

SPECIAL EXCEPTION AMENDMENT PLAT
KOREAN CENTRAL PRESBYTERIAN CHURCH

SE 2005-SU-007
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

JUNE 21,2007

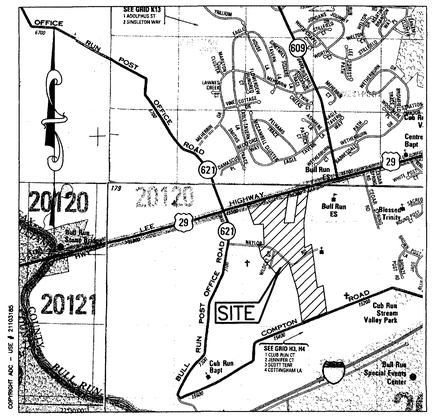
LEGEND

EXISTING

- EXISTING INTERMEDIATE CONTOUR
- EXISTING CONTOUR INDEX
- EXISTING EDGE OF PAVEMENT
- EXISTING CURB AND GUTTER
- EXISTING WATERLINE W/TEE
- EXISTING OVERHEAD WIRE
- EXISTING TELEPHONE LINE
- EXISTING ELECTRIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING FENCE
- EXISTING STORM SEWER
- EXISTING STORM STRUCTURE
- EXISTING SANITARY SEWER W/ MANHOLE
- PROPERTY LINE
- EXISTING CENTER LINE
- EXISTING STREAM
- EXISTING TREE LINE
- EXISTING TREE
- EXISTING UTILITY POLE
- EXISTING WATER METER
- BENCH MARK
- EXISTING SPOT ELEVATIONS

PROPOSED

- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED CONTOUR INDEX
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB AND GUTTER
- PROPOSED TRANSITION FROM CG-6 TO CG-6R
- PROPOSED WATERLINE W/TEE
- PROPOSED OVERHEAD WIRE
- PROPOSED TELEPHONE LINE
- PROPOSED ELECTRIC LINE
- PROPOSED GAS LINE
- PROPOSED FENCE
- PROPOSED STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED SANITARY SEWER W/ MANHOLE
- PROPOSED CENTER LINE
- LIMITS OF CLEARING AND GRADING
- DRAINAGE DIVIDE
- PROPOSED TREE LINE
- PROPOSED TREE
- PROPOSED UTILITY POLE
- PROPOSED FIRE HYDRANT
- WATER METER
- PROPOSED SPOT ELEVATIONS
- PROPOSED SIGN
- PARKING INDICATOR INDICATES THE NUMBER OF PARKING SPACES
- TEST PIT
- CLEANOUT
- STREET LIGHT
- OVERLAND RELIEF



VICINITY MAP
SCALE 1"=2000'

OWNER: KOREAN CENTRAL PRESBYTERIAN CHURCH
TAX MAP 64-1 ((1)) PARCELS 8, 9, 25, 26 AND 27;
64-1 ((3)) PARCEL 16 AND 64-2 ((3)) PARCEL 18;
64-2 ((5)) PARCELS 1, 2 AND 3

ENGINEER: BURY & PARTNERS-VA. INC.
3810 CONCORDE PARKWAY
SUITE 1000
CHANTILLY, VIRGINIA 20151
TEL:(703) 968-9090 FAX:(703) 968-4866
CONTACT: MARIUS BURDUBUS

Application No SEA-2005-SU-007 Staff T. Strunk

APPROVED (SE) (SP) PLAN

See Development Conditions Dated 9-21-2007
Date of (BOS) (BZA) Approval 9-24-2007

Sheet 1 of 13

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REVISION BLOCK

NO.	DATE ISSUED	DESCRIPTION	DATE APPROVED
1	08/17/07	REVISED PER STAFF COMMENTS	

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COMMONWEALTH OF VIRGINIA
THOMAS C. PICKERING
Lic. No. 034739
8/17/07
PROFESSIONAL ENGINEER

SOILS MAP
1" = 1000'

IREDELL SOILS GROUP
IREDELL SOILS GROUP INCLUDES THE KELLY SOILS. IN MOST CASES THE SOILS IN THIS GROUP OCCUR ON NEARLY LEVEL TOPOGRAPHY AND THERE IS NO PROBLEM WITH LAND SLIPPAGE. THE MAIN PROBLEM IS THAT THE CLAY SUBSOIL BECOMES SOFT, PLASTIC AND STICKY AND HAS A VERY LOW VALUE FOR SUPPORT WHEN IT BECOMES SATURATED WITH WATER. WHEN THIS CLAY DRIES IT SHRINKS AND LEAVES A VOID UNDER THE FOOTINGS AND CRACKED WALLS, ALL FOOTINGS SHOULD BE TAKEN THROUGH ALL OF THIS CLAY TO THE UNDERLYING WEATHERED ROCK MATERIAL. IN MOST CASES THE WEATHERED ROCK MATERIAL WILL BE REACHED 3 TO 5 FEET BELOW THE SURFACE.

SOIL ID NUMBER	SOIL SERIES NAME	FOUNDATION SUPPORT	SUBSURFACE DRAINAGE	SLOPE STABILITY	ERODABILITY	PROBLEM CLASS
14B+	MANASSAS	FAIR	MARGINAL	GOOD	MODERATE	B
41C1	ROCKY LAND-IREDELL	MARGINAL	MARGINAL	GOOD	MODERATE	A
50B2	IREDELL MECKLENBURG	MARGINAL	MARGINAL	GOOD	MODERATE	A
52A+	ELBERT-IREDELL	POOR	POOR	GOOD	LOW	A
73B2	PENN SILT LOAM	GOOD	MARGINAL	GOOD	HIGH	C
73C2	PENN SILT LOAM	GOOD	MARGINAL	GOOD	HIGH	C
80B+	CROTON	POOR	POOR	GOOD	LOW	A
104B2	CATLETT	GOOD	FAIR	GOOD	MODERATE	C
104C2	CATLETT	GOOD	FAIR	GOOD	MODERATE	C
148B2	IREDELL MECKLENBURG	POOR	MARGINAL	GOOD	MODERATE	A
148C2	IREDELL MECKLENBURG	POOR	MARGINAL	GOOD	MODERATE	A
273B1	READINGTON	GOOD	MARGINAL	GOOD	MODERATE	B

REFERENCE: FAIRFAX COUNTY SOILS MAP

SITE TABULATIONS:

TOTAL SITE AREA:	80.22± AC
AREA OF DEDICATION:	1.61± AC
ZONING:	R-C
PROPOSED GFA:	171,800 SF

BUILDING AREA

FIRST FLOOR	88,950 SF
LESS BASEMENT	2,550 SF
SUBTOTAL	86,400 SF
SECOND FLOOR	84,200 SF
PLUS CHAPEL MEZZANINE	1,200 SF
SUBTOTAL	85,400 SF
BUILDING TOTAL	171,800 SF

	REQUIRED	PROVIDED
MAX. FAR	0.10	0.050
BUILDING HEIGHT	60' MAX.	42' MAX.
YARDS - FRONT	50° BULK PLANE (40' MIN.)	120'±
SIDE	45° BULK PLANE (20' MIN.)	70'±
REAR	45° BULK PLANE (25' MIN.)	1,160'±
OPEN SPACE	0%	65% ±
UNDISTURBED		45.49± AC. OR
OPEN SPACE	50%	58% ±
PARKING		
CHURCH	1 SPACE/4 SEATS 2,100 SEATS 525 SPACES	1 SPACE/2.225 SEATS 937
PRIVATE SCHOOL OF GENERAL EDUCATION 100 CHILDREN	1/STAFF + 4 VISITOR 25 STAFF 29 SPACES	29
NURSERY SCHOOL 100 CHILDREN	0.16 SPACES/CHILD 16 SPACES	16
OVERFLOW PARKING	N/A	198
TOTAL	670	1,180
HANDICAP SPACES	18	18
VAN ACCESSIBLE SPACES	3	3
LANDSCAPING		
INTERIOR PARKING LOT	5%	7% ±
TREE COVER	20%	50% ±

GENERAL NOTES:

1. THE SUBJECT PROPERTY IS LOCATED ON FAIRFAX COUNTY TAX MAP 64-1 ((1)) PARCELS 8, 9, 25, 26 AND 27; 64-1 ((3)) PARCEL 16; 64-2 ((3)) PARCEL 18; AND 64-2 ((5)) PARCELS 1, 2 AND 3.

2. ALL PROPERTIES ABOVE ARE OWNED BY:
THE KOREAN CENTRAL PRESBYTERIAN CHURCH
8526 AMANDA PLACE
VIENNA, VA 22180
DB 12468 PG 967, 991, 995, 1000; DB 12296 PG 754; DB 15641 PG 1056; DB 14079 PG 115.

3. IN ACCORDANCE WITH THE CHESAPEAKE BAY PRESERVATION ORDINANCE AMENDMENTS ADOPTED ON JULY 7, 2003 AND THE CHESAPEAKE BAY PRESERVATION MAPS EFFECTIVE ON NOVEMBER 18, 2003, THERE ARE NO 100-YEAR FLOOD LIMITS OR RESOURCE PROTECTION AREAS (RPA) ON THE SUBJECT PROPERTY.

4. THERE ARE NO KNOWN GRAVES OR OBJECTS OR STRUCTURES MARKING PLACES OF BURIAL WITHIN THE SITE.

5. THE PROPOSED DEVELOPMENT WILL NOT POSE ANY ADVERSE EFFECT ON ADJACENT OR NEIGHBORING PROPERTIES.

6. THERE ARE NO EXISTING STRUCTURES ON THE PROPOSED SITE AND ANY EXISTING UTILITIES WILL BE EITHER UTILIZED OR RELOCATED AS WILL BE DETERMINED UPON FINAL ENGINEERING OF THE PROJECT.

7. THIS DEVELOPMENT WILL CONFORM TO THE PROVISIONS OF ALL APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED STANDARDS, OR IF ANY WAIVER, EXCEPTION OR VARIANCES IS SOUGHT BY THE APPLICANT, SUCH SHALL BE SPECIFICALLY NOTED WITH THE JUSTIFICATION FOR SUCH MODIFICATION.

8. THERE ARE NO KNOWN HAZARDOUS OR TOXIC SUBSTANCES LOCATED ON THIS SITE AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS PARTS 116.4, 302.4 AND 355. ALL HAZARDOUS WASTES AS SET FORTH IN COMMONWEALTH OF VIRGINIA/DEPARTMENT OF WASTE MANAGEMENT VR 672-10-1- VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATIONS; AND/OR PETROLEUM PRODUCTS AS DEFINED IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 280; TO BE GENERATED, UTILIZED, STORED, TREATED AND/OR DISPOSED OF ON SITE AND THE SIZE AND CONTENTS OF ANY EXISTING OR PROPOSED STORAGE TANKS OR CONTAINERS.

9. BOUNDARY AND TOPOGRAPHY INFORMATION SHOWN WAS BASED ON THE FIELD RUN SURVEY BY RICE AND ASSOCIATES DATED JULY 5, 2005.

10. THIS PROJECT IS TO BE DEVELOPED IN ONE PHASE.

11. IT IS ANTICIPATED THAT CONSTRUCTION OF THIS PROJECT WILL COMMENCE AS SOON AS ALL NECESSARY APPROVALS AND PERMITS ARE OBTAINED.

12. THE BUILDING FOOTPRINTS REPRESENTED HEREON ARE APPROXIMATE, THE BUILDING FOOTPRINTS MAY BE INCREASED OR DECREASED SO LONG AS THE OPEN SPACE PROVIDED IN THE TABULATION AND THE MINIMUM DIMENSION TO THE PERIPHERAL LOT LINES AND BUILDING SETBACKS AS SHOWN ON THE PLAN ARE NOT DIMINISHED AND SUCH MODIFICATIONS DO NOT DIMINISH LANDSCAPING.

13. PARKING WILL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 11 OF THE ZONING ORDINANCE. SEE TABULATION THIS SHEET.

14. IN ACCORDANCE WITH SECTION 9-004 OF THE ZONING ORDINANCE, MINOR MODIFICATIONS TO THE SIZES, DIMENSIONS, AND/OR FOOTPRINTS AND LOCATIONS OF BUILDINGS, SIDEWALKS, TRAILS AND UTILITIES MAY OCCUR WITH FINAL ENGINEERING AND DESIGN WITHOUT REQUIRING AN AMENDMENT TO THIS SE, SO LONG AS SUCH MODIFICATIONS ARE IN SUBSTANTIAL CONFORMANCE WITH THE SE AND DEVELOPMENT CONDITIONS.

15. IN ACCORDANCE WITH SECTION 9-004 OF THE ZONING ORDINANCE, THE LIMITS OF CLEARING AND GRADING AND THE LANDSCAPE OPEN SPACE AREA REPRESENTED ON GRAPHIC MAY BE SUBJECT TO MINOR MODIFICATION AT THE TIME OF FINAL ENGINEERING AND DESIGN. LANDSCAPING AND TREE COVER CONSISTING OF A COMBINATION OF EVERGREEN AND DECIDUOUS TREES WILL BE PROVIDED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF ARTICLE 13 AND DEVELOPMENT CONDITIONS.

16. PUBLIC WATER AND SEWER SHALL BE PROVIDED. ALL OTHER PUBLIC UTILITIES SHALL BE PROVIDED TO THE SITE BY EXTENSION OF EXISTING SERVICE IN THE AREA. SOLID WASTE REMOVAL SHALL BE PROVIDED BY PRIVATE CONTRACTOR.

17. THE DEVELOPER RESERVES THE RIGHT TO LOCATE TEMPORARY CONSTRUCTION TRAILERS ON THE SITE IN ACCORDANCE WITH FAIRFAX COUNTY REQUIREMENTS.

18. THE PROPERTY IS LOCATED IN THE BULL RUN PLANNING DISTRICT AND IS PLANNED FOR LOW DENSITY RESIDENTIAL.

19. THERE IS AN EXISTING 192' TRANSCONTINENTAL GAS PIPELINE EASEMENT THROUGH THE NORTHWESTERN CORNER OF THE SITE. WORK WITHIN THIS EASEMENT WILL BE COORDINATED WITH TRANSCONTINENTAL GAS COMPANY.

20. EMERGENCY INGRESS/EGRESS TO BE COORDINATED AT THE TIME OF FINAL SITE PLAN.

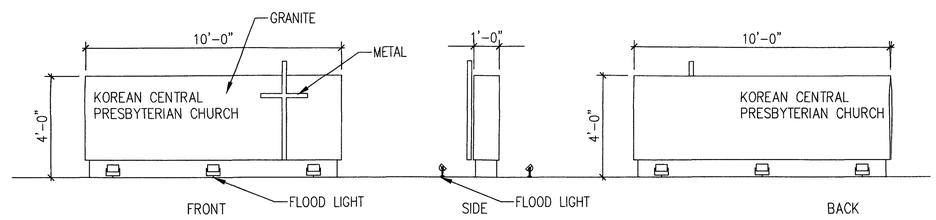
21. THE SITE IS LOCATED WITHIN THE CUB RUN WATERSHED.

22. A FLOODPLAIN STUDY IS REQUIRED FOR THIS PROJECT. A FLOODPLAIN STUDY SHALL BE COMPLETED AND A 100-YEAR FLOODPLAIN AND DRAINAGE EASEMENT WILL BE DEDICATED PRIOR TO FINAL APPROVAL OF THE SITE PLAN. A LETTER OF PERMISION WILL BE OBTAINED FROM THE DIRECTOR FOR ANY ENCROACHMENT INTO THE FLOODPLAIN EASEMENT.

23. EXISTING 50' PRIVATE ACCESS EASEMENT RECORDED @ DB. 7673 PG 1891 TO BE VACATED.

24. A 24' PRIVATE INGRESS/EGRESS EASEMENT TO BE GRANTED ALONG EXISTING NAYLOR ROAD.

25.THE PROPOSED CELLAR SHALL BE USED ONLY FOR LOADING, STORAGE AND MECHANICAL EQUIPMENT.



CONCEPTUAL SIGNAGE DESIGN
SIGNAGE DESIGN INCLUDING NAME OF THE FACILITY IS SUBJECT TO CHANGE.
SIGNAGE SHALL NOT EXCEED 40 SF IN AREA AND 8 FT IN HEIGHT.
SIGN SHALL BE LOCATED AT THE MAIN ENTRANCE AS SHOWN ON SHEET 5.

PROPOSED SIGNAGE
NTS

Application No SEA-2005-SU-007 Staff T. Strunk
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Date of (BOS) (BZA) Approval 9-24-2007
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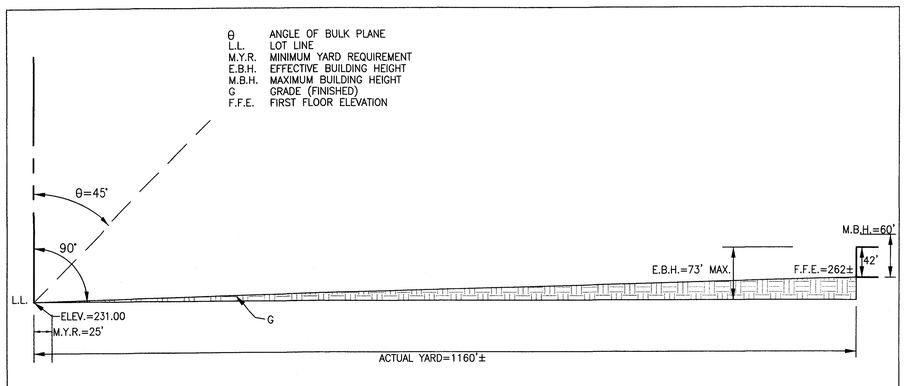
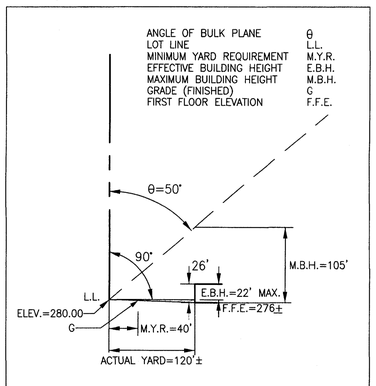
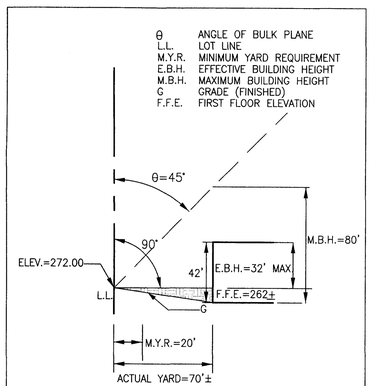


REAR YARD BULK PLANE
SCALE: 1"=100'



FRONT YARD BULK PLANE
SCALE: 1"=100'



SIDE YARD BULK PLANE
SCALE: 1"=50'

BuryPartners
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Tel: 703/968-9000 Fax: 703/968-4886
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KOREAN CENTRAL PRESBYTERIAN CHURCH
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA
NOTES

DATE	NO.	REVISION
08/17/07	1	REVISED PER STAFF COMMENTS

COMMONWEALTH OF VIRGINIA
THOMAS C. PICKERING
Lic. No. 034739
8/17/07
PROFESSIONAL ENGINEER

SCALE: AS SHOWN
DATE: JUNE 2007
DRAWN BY: STG/VM
DESIGNED BY: GNC/MB
REVIEWED BY: TCP
PROJ. NO.: 20193-02

SHEET 2 OF 12

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TABLE 1. COVER TYPE SUMMARY TABLE						
	Cover Type	Primary Species	Successional Stage	Condition*	Acreage	comments
A	upland forest	Virginia pine, eastern redcedar	early	good	45.90 ±	*see condition
B	upland forest	white oak, redoak, hickory	lond-term subclimax	fair	11.23 ±	*see condition
C	bottomland forest	ash, red maple, sycamore, tulip poplar	subclimax	good	6.76 ±	*see condition
D	upland forest	white oak, red oak, hickory	subclimax	good	2.90 ±	*see condition
E	bottomland forest	ash, red maple, redcedar, persimmon	early	fair	2.93 ±	*see condition
F	old field	Virginia pine, redcedar, black cherry, autumn olive, sumac	pioneer	fair	5.51 ±	*see condition
G	open field	grasses	pioneer	fair	4.99 ±	*see condition
TOTAL ACREAGE:					80.22±	

***Condition descriptions:**

Cover Type A:	This area contained upland forest with dense stands of Virginia pine and redcedar. Some stands are younger in age than others. The stands are in good condition but could use some thinning. No apparent insect or disease problems were seen.
Cover Type B:	This was an upland forest in a long-term subclimax stage. A decent understory existed consisting of dogwoods, vburnum, and redbud. Trees were in good to fair condition with some disturbance from neighboring property. Several trees had smooth patch can
Cover Type C:	This was a bottomland forest in subclimax stage. The stand was in good condition with a dense understory. No apparent insect or disease problems were seen.
Cover Type D:	Upland forest in a subclimax stage. This stand was in good condition with a good understory. No insect or disease problems present.
Cover Type E:	Bottomland forest consisting mainly of dense red maple stand in fair condition. This area was wet due to springs in the area. No insect problems present.
Cover Type F:	This was an old field with an old home site present. Pioneer species were in fair condition. Good area for tree transplants. Some invasive species present included autumn olive, mulberry, and honeysuckle.

REFERENCE: CARE OF TREES, INC.

LEGEND

- OHW — OVERHEAD POWER LINE
- EXISTING GRAVEL ROAD
- STREAM
- A – UPLAND FOREST (EARLY SUCCESSIONAL)
- B – UPLAND FOREST (LONG-TERM SUBCLIMAX)
- C – BOTTOMLAND FOREST (SUBCLIMAX)
- D – UPLAND FOREST (SUBCLIMAX)
- E – BOTTOM LAND FOREST (EARLY SUCCESSIONAL)
- F – OLD FIELD (PIONEER)
- G – OPEN FIELD (PIONEER)

Application No SEA-2005-SU-007 Staff T. Strunk

APPROVED (SE) (SP) PLAN

See Development Conditions Dated 9-21-2007
Date of (BOS) (BZA) Approval 9-24-2007

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200 100 0 200 400 600

GRAPHICAL SCALE: 1" = 200'

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KOREAN CENTRAL PRESBYTERIAN CHURCH

SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

EXISTING VEGETATION MAP

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COMMONWEALTH OF VIRGINIA
THOMAS C. PICKERING
Lic. No. 034739
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PROFESSIONAL ENGINEER

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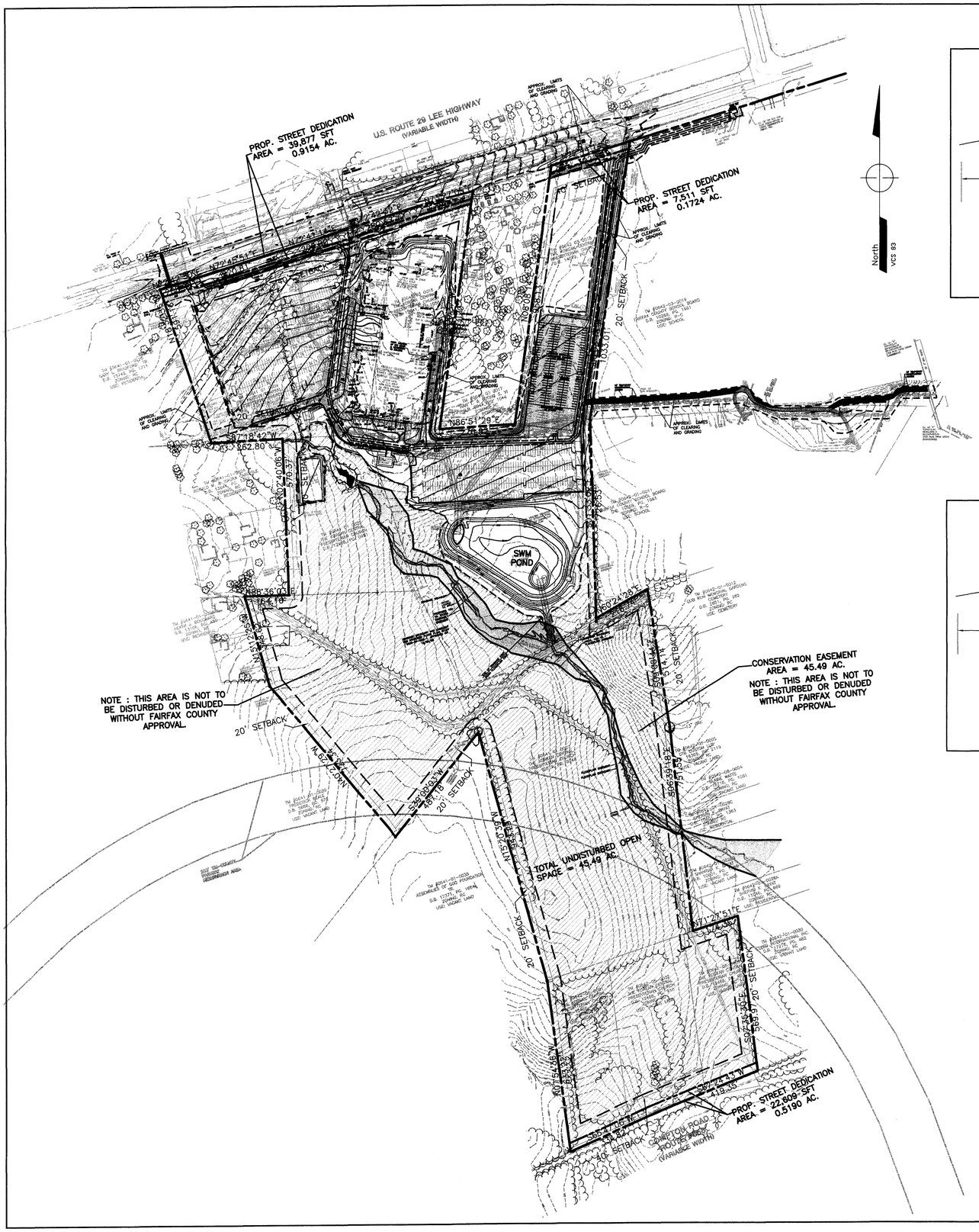
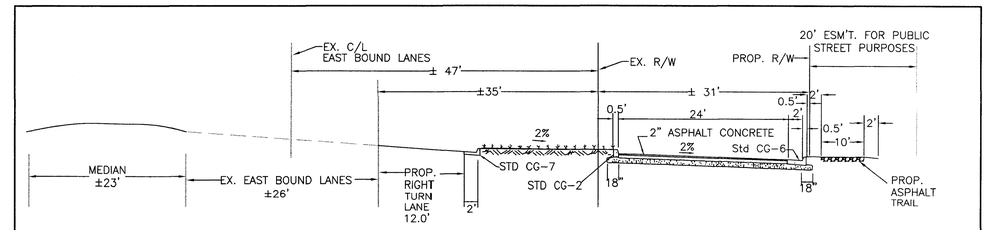
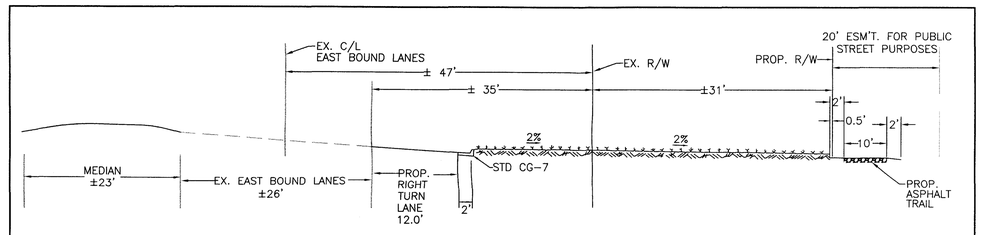




TYPICAL CROSS SECTION OF ROUTE 29 FRONTAGE

SCALE: NTS



TYPICAL CROSS SECTION OF INTERIM ROUTE 29 FRONTAGE

SCALE: NTS

PROPOSED CONSERVATION EASEMENT

Application No SEA-2005-SU-007 Staff T. Strunk

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FOR INFORMATION PURPOSES ONLY

200 100 0 200 400 600

GRAPHICAL SCALE: 1" = 200'

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KOREAN CENTRAL PRESBYTERIAN CHURCH

SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

OVERALL SITE PLAN

DATE	NO.	REVISION
08/17/07	1	REVISED PER STAFF COMMENTS

COMMONWEALTH OF VIRGINIA
THOMAS C. PICKERING
Lic. No. 034739
PROFESSIONAL ENGINEER
8/17/07

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SHEET 4 OF 12

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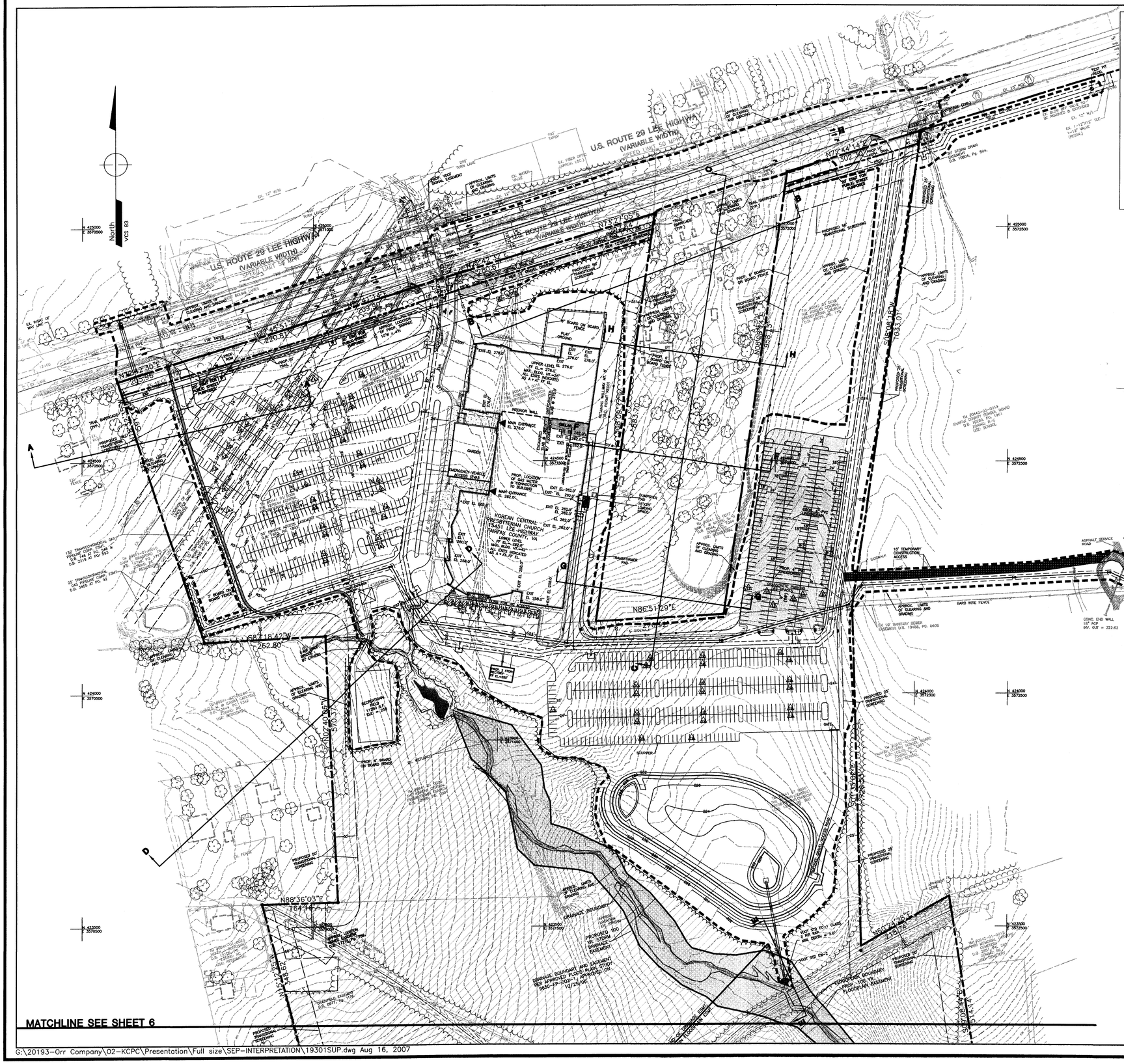
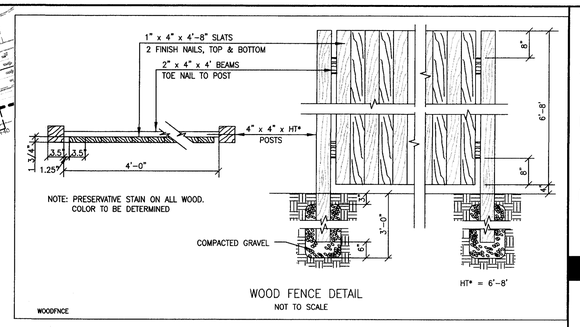
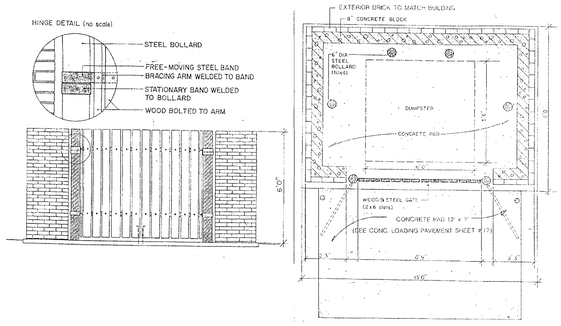




WOOD FENCE DETAIL
NOT TO SCALE



DUMPSTER ENCLOSURE DETAIL
FOR ILLUSTRATIVE PURPOSES ONLY
N.T.S.

REQUESTED WAIVERS

1. MODIFICATION OF 25-FOOT TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS.
2. WAIVER OF SERVICE DRIVE CONSTRUCTION PER PFM SECTION 7-0104. SERVICE DRIVE WILL BE DEDICATED BUT NOT CONSTRUCTED. FUTURE CONSTRUCTION ESCROW WILL BE PROVIDED IN LIEU OF CONSTRUCTION.

UNDISTURBED OPEN SPACE/CONSERVATION EASEMENT

DISTURBED AREA	=	33.12± AC. (42±%)
UNDISTURBED AREA	=	45.49± AC. (58±%)
		78.61± AC.
AREA OF DEDICATION	=	1.61± AC.
	TOTAL =	80.22± AC.

NOTES

1. THE MINIMUM TRANSITIONAL SCREENING AND BARRIER REQUIREMENT BETWEEN CHURCH/SCHOOL AND RESIDENTIAL USES SURROUNDING THE SITE, PER THE ZONING ORDINANCE IS 25 FEET OF LANDSCAPING AND 6-FOOT HIGH SOLID WOOD FENCE.

PROPOSED TRANSITIONAL SCREENING AND BARRIERS ARE AS FOLLOWS:

- A 100-FOOT TRANSITIONAL SCREENING AREA WILL BE PROVIDED AT THE WESTERN SIDE OF SITE ALONG PARCEL 10 THAT WILL CONSIST LARGELY OF EXISTING TREES. A 7-FOOT HIGH SOLID WOOD FENCE WILL BE PROVIDED ON THE EASTERN SIDE OF THE SCREENING AND IN THE AREA OF THE GAS LINES, THE WESTERN EXPOSURE OF FENCE WILL BE SUPPLEMENTED WITH PLANTINGS. PLANTING TYPES TO BE COORDINATED WITH TRANSCONTINENTAL GAS COMPANY AND THE FAIRFAX URBAN FORESTER.
- A 50-FOOT TRANSITIONAL SCREENING WILL BE PROVIDED ALONG THE MAJORITY OF THE SITE AND WILL CONSIST OF EXISTING TREES.
- A 35-FOOT TRANSITIONAL SCREENING AREA WILL BE PROVIDED AROUND PARCEL 17 TOGETHER WITH A 6-FOOT HIGH SOLID WOOD BARRIER.
- A 25-FOOT TRANSITIONAL SCREENING AREA WILL BE PROVIDED ALONG THE EASTERN SIDE OF SITE ADJACENT TO THE FAIRFAX COUNTY SCHOOL BOARD SITE.
- THE 35-FOOT AND 25-FOOT TRANSITIONAL SCREENING AREAS WILL BE SUPPLEMENTED WITH ADDITIONAL PLANTINGS IN AREAS WHERE EXISTING STANDS OF TREES ARE NOT SUFFICIENT. SUPPLEMENTAL PLANTINGS, IF REQUIRED WILL BE COORDINATED WITH FAIRFAX COUNTY URBAN FORESTER.

2. RETAINING WALL WILL BE CONCRETE OR MASONRY. TO BE DETERMINED AT TIME OF SITE PLAN APPROVAL.
3. SAFETY RAILING ON RETAINING WALL PER FAIRFAX COUNTY PFM REQUIREMENTS.
4. SEE SHEET 10 FOR TYPICAL POND DESIGN AND SHEET 10A FOR POND PLANTINGS.

SEE COVER SH

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GRAPHICAL

Application No SEA-2005-SU-007 Staff T. Strunk

APPROVED (SE) (SP) PLAN

See Development Conditions Dated 9-21-2007
Date of (BOS) (BZA) Approval 9-24-2007

Sheet 5 of 13

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SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

SPECIAL EXCEPTION PLAT

DATE	NO.	REVISION
08/17/07	1	REVISED PER STAFF COMMENTS

COMMONWEALTH OF VIRGINIA
THOMAS C. PICKERING
Lic. No. 034739
8/17/07
PROFESSIONAL ENGINEER

SCALE:	1"=100'
DATE:	JUNE 2007
DRAWN BY:	STG/VM
DESIGNED BY:	GNC/MB
REVIEWED BY:	TCP

W. NO.: 20193-02

SHEET 5 OF 12

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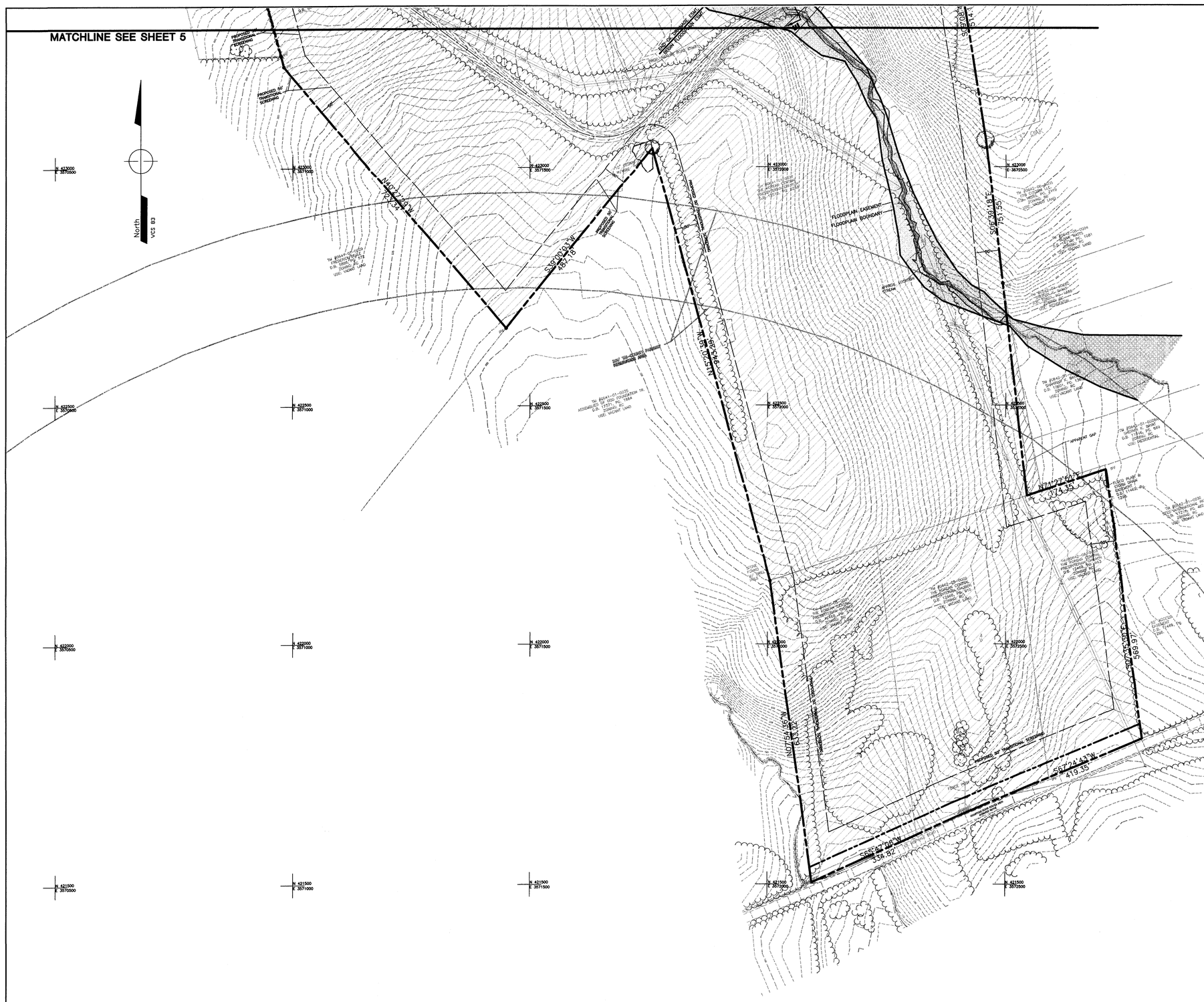

REQUESTED WAIVERS

1. MODIFICATION OF 25-FOOT TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS.
2. WAIVER OF SERVICE DRIVE CONSTRUCTION PER PFM SECTION 7-0104. SERVICE DRIVE WILL BE DEDICATED BUT NOT CONSTRUCTED. FUTURE CONSTRUCTION ESCROW WILL BE PROVIDED IN LIEU OF CONSTRUCTION.

UNDISTURBED OPEN SPACE/CONSERVATION EASEMENT

DISTURBED AREA	= 33.12± AC. (42±%)
UNDISTURBED AREA	= 45.49± AC. (58±%)
	78.61± AC.
AREA OF DEDICATION	= 1.61± AC.
	TOTAL = 80.22± AC.

NOTES

1. THE MINIMUM TRANSITIONAL SCREENING AND BARRIER REQUIREMENT BETWEEN CHURCH/SCHOOL AND RESIDENTIAL USES SURROUNDING THE SITE, PER THE ZONING ORDINANCE IS 25 FEET OF LANDSCAPING AND 6-FOOT HIGH SOLID WOOD FENCE.

PROPOSED TRANSITIONAL SCREENING AND BARRIERS ARE AS FOLLOWS:

- A 100-FOOT TRANSITIONAL SCREENING AREA WILL BE PROVIDED AT THE WESTERN SIDE OF SITE ALONG PARCEL 10 THAT WILL CONSIST LARGELY OF EXISTING TREES. A 7-FOOT HIGH SOLID WOOD FENCE WILL BE PROVIDED ON THE EASTERN SIDE OF THE SCREENING AND IN THE AREA OF THE GAS LINES, THE WESTERN EXPOSURE OF FENCE WILL BE SUPPLEMENTED WITH PLANTINGS. PLANTING TYPES TO BE COORDINATED WITH TRANSCONTINENTAL GAS COMPANY AND THE FAIRFAX URBAN FORESTER.
- A 50-FOOT TRANSITIONAL SCREENING WILL BE PROVIDED ALONG THE MAJORITY OF THE SITE AND WILL CONSIST OF EXISTING TREES.
- A 35-FOOT TRANSITIONAL SCREENING AREA WILL BE PROVIDED AROUND PARCEL 17 TOGETHER WITH A 6-FOOT HIGH SOLID WOOD BARRIER.
- A 25-FOOT TRANSITIONAL SCREENING AREA WILL BE PROVIDED ALONG THE EASTERN SIDE OF SITE ADJACENT TO THE FAIRFAX COUNTY SCHOOL BOARD SITE.
- THE 35-FOOT AND 25-FOOT TRANSITIONAL SCREENING AREAS WILL BE SUPPLEMENTED WITH ADDITIONAL PLANTINGS IN AREAS WHERE EXISTING STANDS OF TREES ARE NOT SUFFICIENT. SUPPLEMENTAL PLANTINGS, IF REQUIRED WILL BE COORDINATED WITH FAIRFAX COUNTY URBAN FORESTER.

2. RETAINING WALL WILL BE CONCRETE OR MASONRY. TO BE DETERMINED AT TIME OF SITE PLAN APPROVAL.
3. SAFETY RAILING ON RETAINING WALL PER FAIRFAX COUNTY PFM REQUIREMENTS.
4. SEE SHEET 10 FOR TYPICAL POND DESIGN AND SHEET 10A FOR POSSIBLE POND PLANTINGS.

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SEE COVER SHEET FOR LEGEND

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THOMAS C. PICKERING
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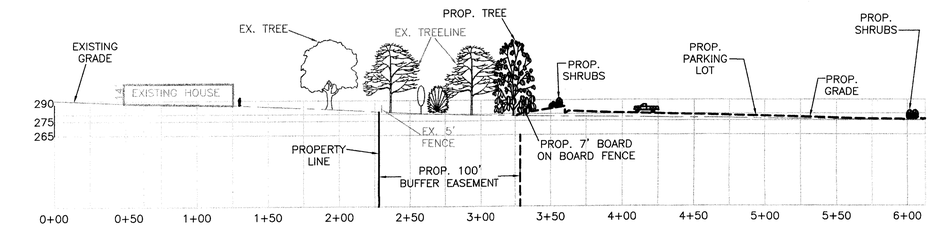
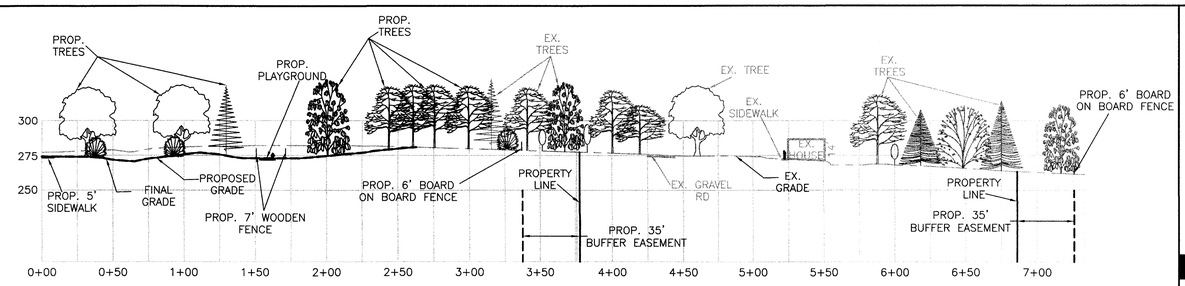


SITE SECTION A-A



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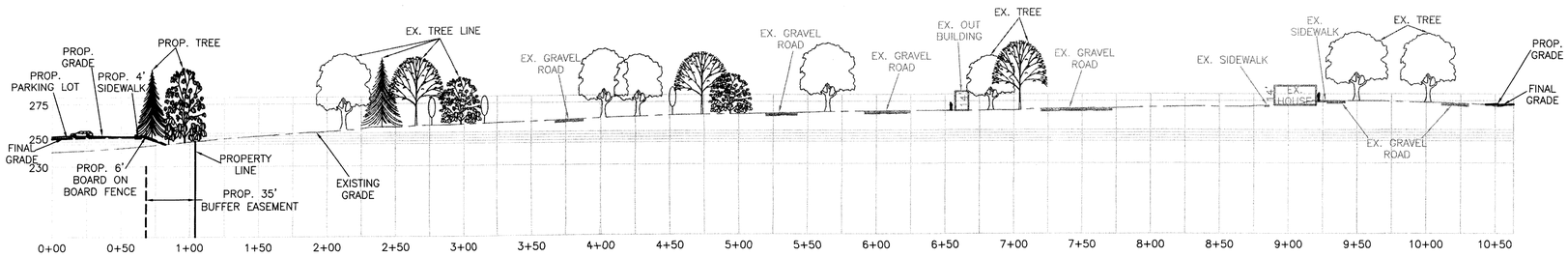

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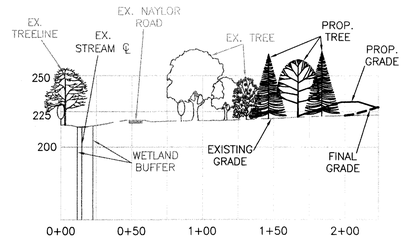

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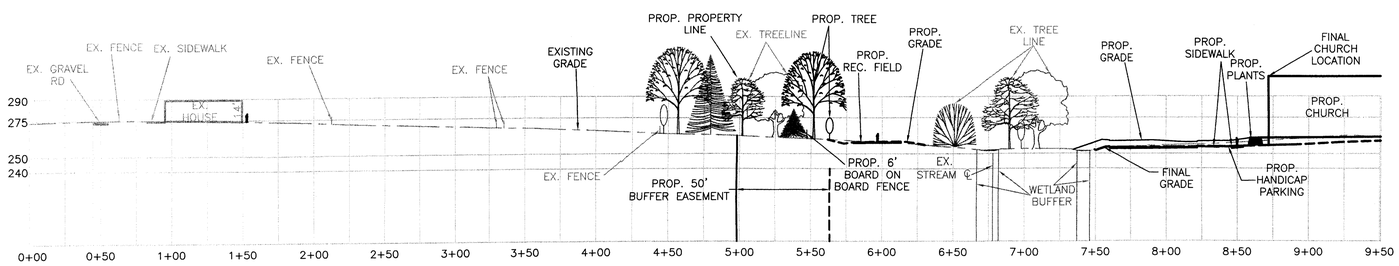

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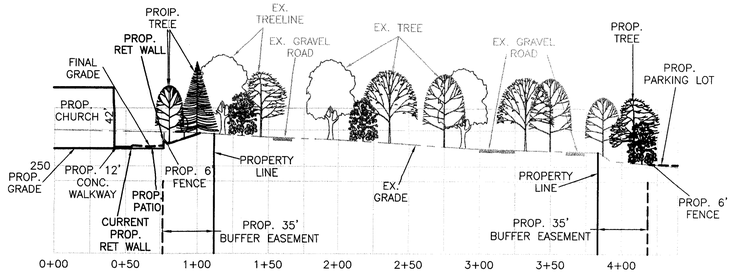

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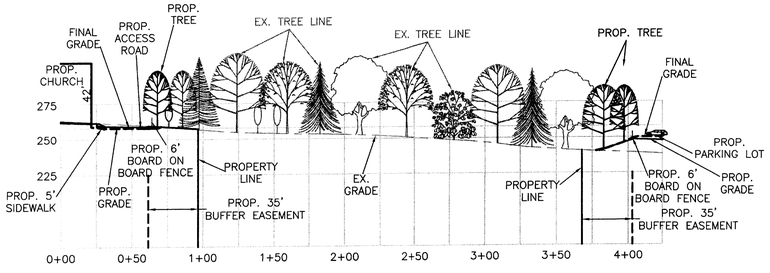

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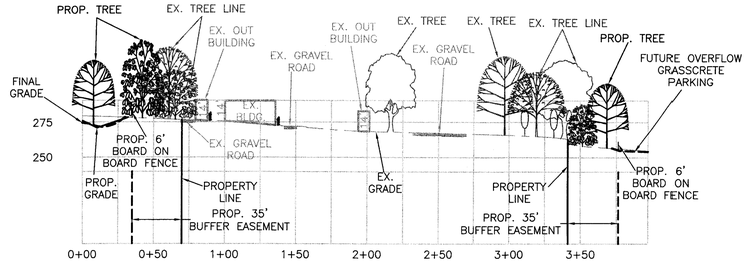

SITE SECTION H-H

Application No SEA-2005-SU-007 Staff T. Strunk

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LEGEND:

PROP. GRADE
FINAL GRADE
EXISTING GRADE

ALL SECTIONS ARE V: 1" = 50'
H: 1" = 50'

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SITE SECTIONS

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COMMONWEALTH OF VIRGINIA
THOMAS C. PICKERING
Lic. No. 034739
8/17/07
PROFESSIONAL ENGINEER

SCALE: 1" = 50'
DATE: JUNE 2007
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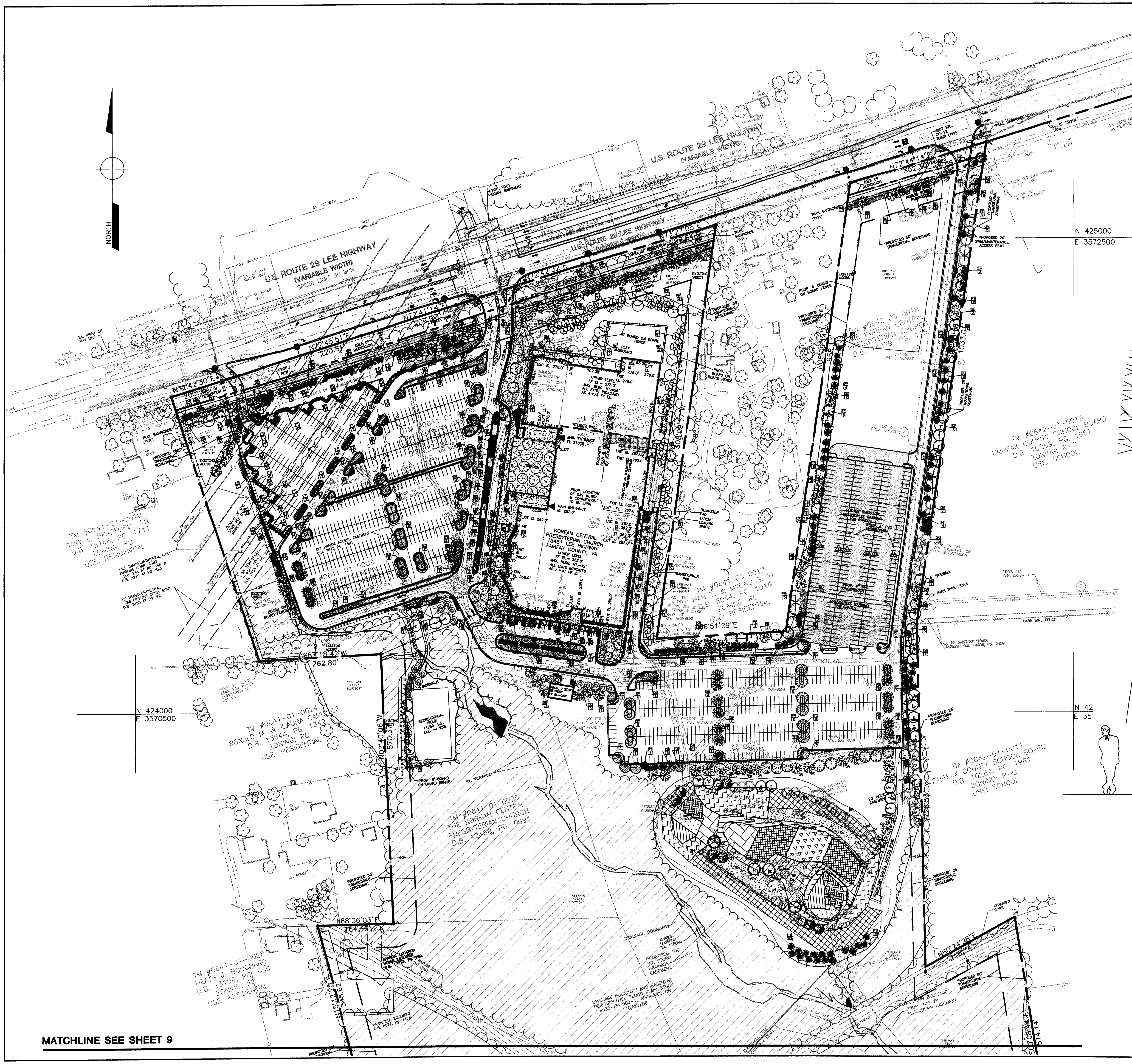
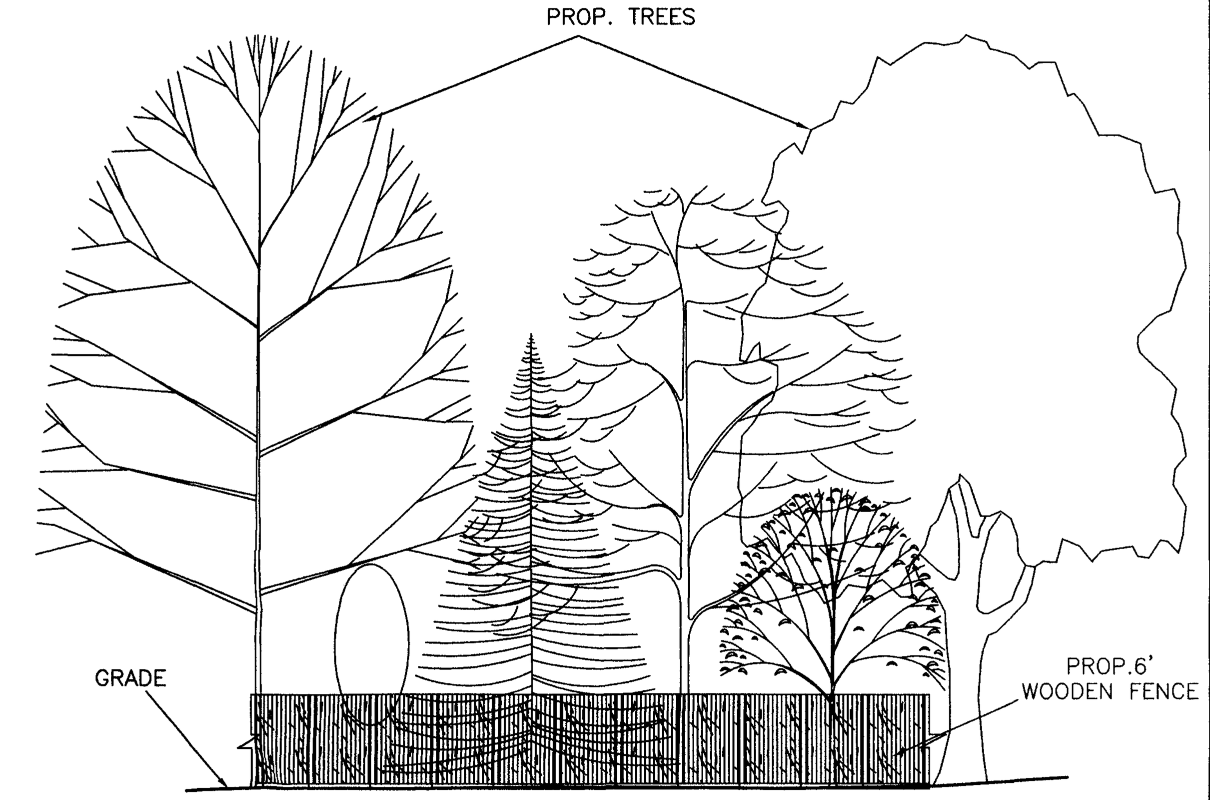


LANDSCAPE LEGEND:

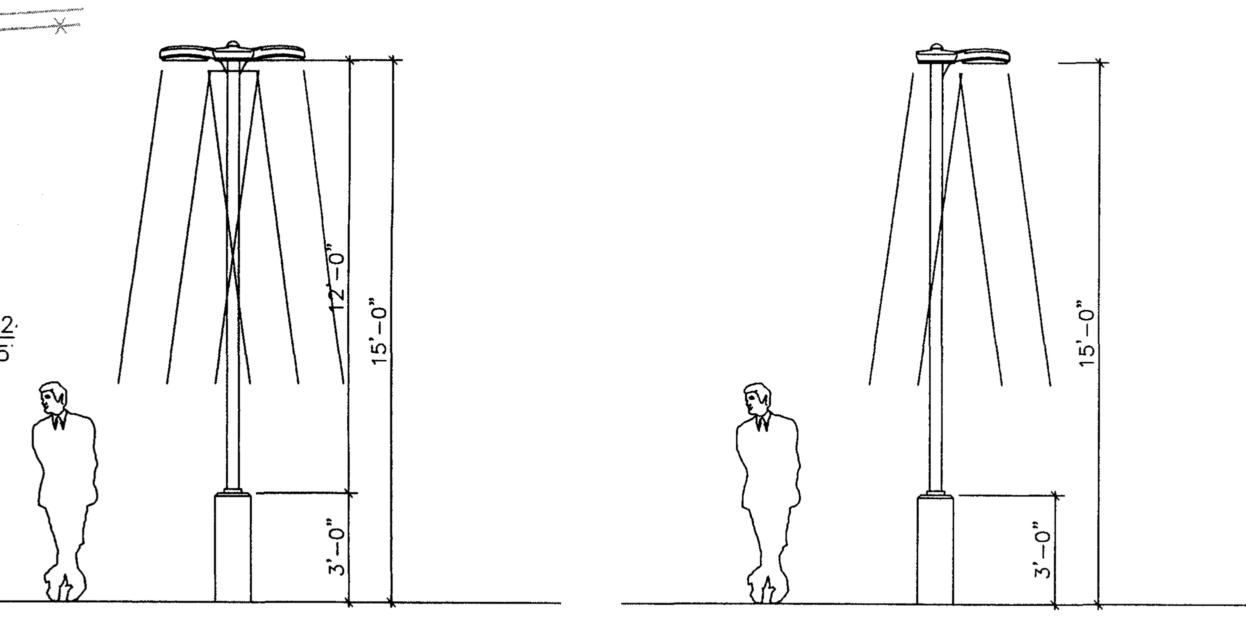
- MEDIUM EVERGREEN TREE 6'–8' HEIGHT AT PLANTING
- LARGE EVERGREEN TREE 6'–8' HEIGHT AT PLANTING
- LARGE CANOPY DECIDUOUS TREE 2–2½" CALIPER
- ORNAMENTAL TREE 1–1½" CALIPER
- TREE SAVE AREA
- LIMITS OF CLEARING & GRADING

UNDISTURBED OPEN SPACE/CONSERVATION EASEMENT



TYPICAL TRANSITIONAL SCREENING
AREA VIEW ALONG PARCEL 17
SCALE 1" = 10'

NOTE: TREE TYPES PLANTED WITHIN THE GAS LINE EASEMENT WILL BE COORDINATED WITH TRANSCONTINENTAL GAS COMPANY AND FAIRFAX COUNTY.



NTS — QUAD   NTS — TWIN

TWIN OR QUAD LOADED POLE TYPE'S OR SINGLE WALL MOUNT LOCATION IS SHOWN IN THE SITE PLAN AS FOLLOWING SYMBOLS

QUAD TYPE   TWIN TYPE   SINGLE TYPE

PARKING LOT LIGHTING WILL COMPLY WITH FAIRFAX COUNTY LIGHTING STANDARDS.

TYP. LIGHT POLE CONCEPTUAL ELEVATION

SEE COVER S

100 50 0
GRAPHICAL

Application No SEA-2005-SU-007 Staff T. Strunk
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LANDSCAPE PLAN

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COMMONWEALTH OF VIRGINIA
THOMAS C. PICKERING
Lic. No. 034739
8/17/07
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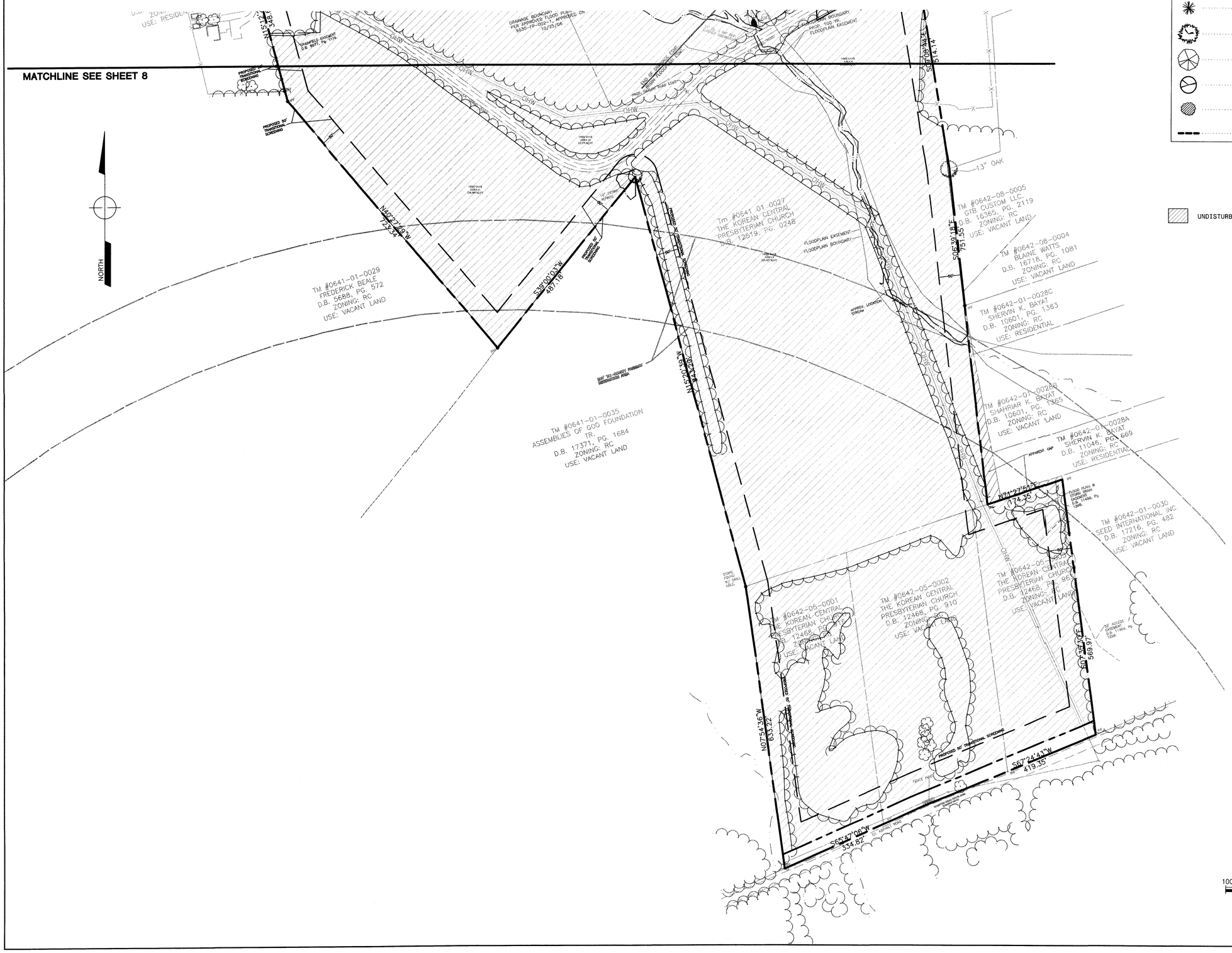

LANDSCAPE LEGEND:

- MEDIUM EVERGREEN TREE 6'-8' HEIGHT AT PLANTING
- LARGE EVERGREEN TREE 6'-8' HEIGHT AT PLANTING
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- TREE SAVE AREA
- LIMITS OF CLEARING & GRADING

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SEE COVER SHEET FOR LEGEND

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GRAPHICAL SCALE: 1" = 100'

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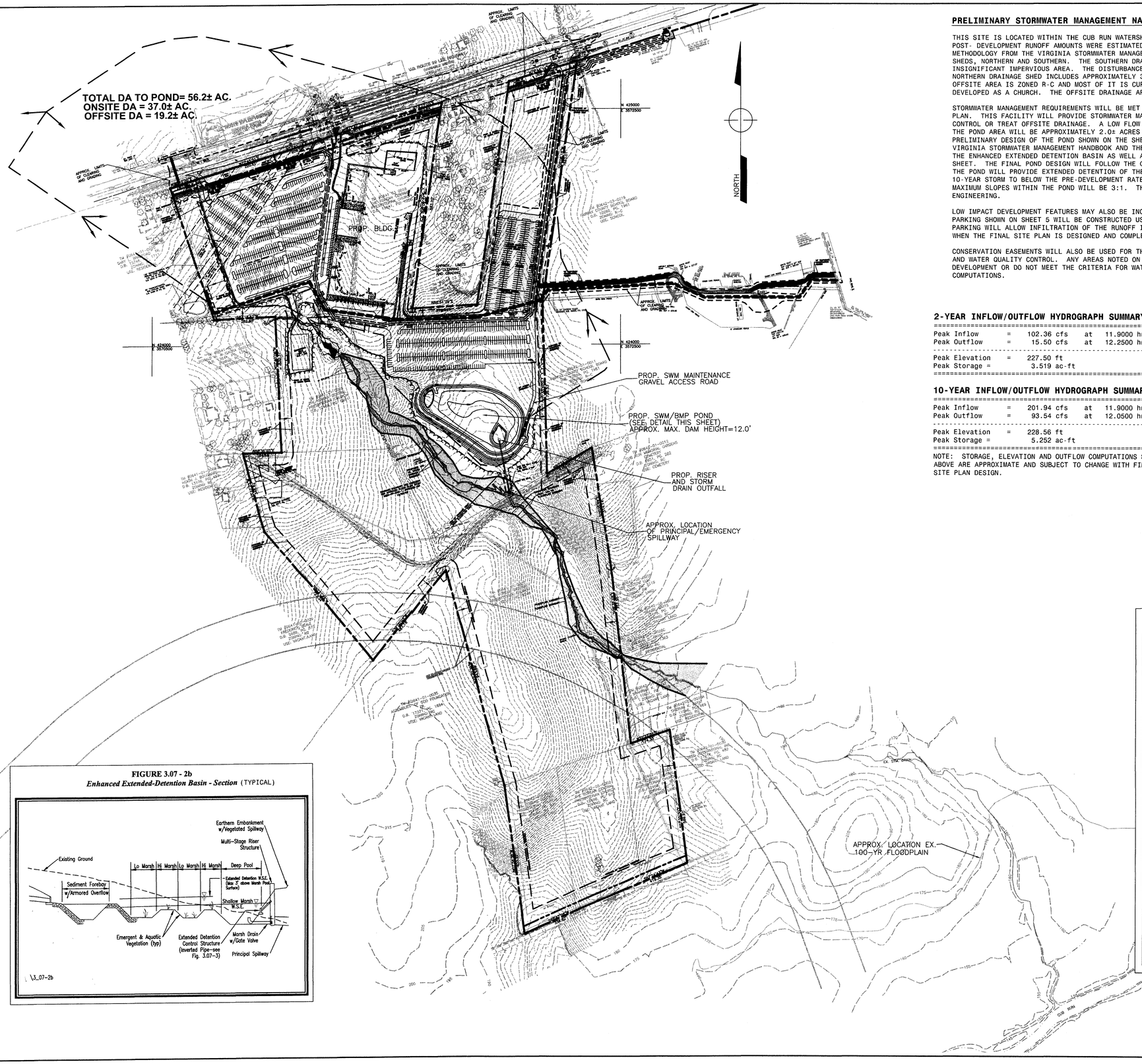


PRELIMINARY STORMWATER MANAGEMENT NARRATIVE

THIS SITE IS LOCATED WITHIN THE CUB RUN WATERSHED BETWEEN LEE HIGHWAY (ROUTE 29) AND COMPTON ROAD (ROUTE 658). PRE- AND POST- DEVELOPMENT RUNOFF AMOUNTS WERE ESTIMATED USING TR-55 METHODS AS WELL AS WATER QUALITY CALCULATIONS BASED ON METHODOLOGY FROM THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK ARE SHOWN ON THIS SHEET. THE SITE CONSISTS OF TWO DRAINAGE SHEDS, NORTHERN AND SOUTHERN. THE SOUTHERN DRAINAGE SHED WILL BE DISTURBED WITH THIS PROJECT, HOWEVER, THERE WILL BE INSIGNIFICANT IMPERVIOUS AREA. THE DISTURBANCE IN THE SOUTHERN DRAINAGE SHED WILL INCLUDE A RECREATION FIELD. THE NORTHERN DRAINAGE SHED INCLUDES APPROXIMATELY 37.0 ACRES ONSITE AND 19.2 ACRES OFFSITE, TOTALING 56.2± ACRES. ALL OF THE OFFSITE AREA IS ZONED R-C AND MOST OF IT IS CURRENTLY UNDEVELOPED. THE PROPERTY ACROSS LEE HIGHWAY TO THE NORTH IS DEVELOPED AS A CHURCH. THE OFFSITE DRAINAGE AREAS WILL NOT BE TREATED OR CONTROLLED WITH THIS PROJECT.

STORMWATER MANAGEMENT REQUIREMENTS WILL BE MET BY UTILIZING THE PROPOSED ENHANCED EXTENDED DETENTION BASIN SHOWN ON THE PLAN. THIS FACILITY WILL PROVIDE STORMWATER MANAGEMENT AS WELL AS BEST MANAGEMENT PRACTICES FOR THE SITE BUT WILL NOT CONTROL OR TREAT OFFSITE DRAINAGE. A LOW FLOW RIP-RAP CHANNEL WILL BE PROVIDED WITHIN THE POND FOR OFFSITE DRAINAGE. THE POND AREA WILL BE APPROXIMATELY 2.0± ACRES WITH A DAM HEIGHT OF APPROXIMATELY 12 FEET AT THE OUTFALL. THE PRELIMINARY DESIGN OF THE POND SHOWN ON THE SHEETS 6 AND 9 INCORPORATES THE WATER QUALITY REQUIREMENTS SET FORTH IN THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK AND THE EXTENDED DETENTION OF THE 1-YEAR FREQUENCY STORM. TYPICAL DETAILS FOR THE ENHANCED EXTENDED DETENTION BASIN AS WELL AS PRELIMINARY STORAGE COMPUTATIONS FOR THE FACILITY ARE SHOWN ON THIS SHEET. THE FINAL POND DESIGN WILL FOLLOW THE GUIDELINES FOR POND DESIGN FROM THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK. THE POND WILL PROVIDE EXTENDED DETENTION OF THE 1-YEAR STORM OVER A 24-HOUR PERIOD. THE POND WILL ALSO DETAIN THE 10-YEAR STORM TO BELOW THE PRE-DEVELOPMENT RATES AND TREAT THE WATER QUALITY VOLUME FOR THE PROPOSED SITE RUNOFF. THE MAXIMUM SLOPES WITHIN THE POND WILL BE 3:1. THE FINAL WATER SURFACE ELEVATIONS WILL BE DETERMINED WITH FINAL ENGINEERING.

LOW IMPACT DEVELOPMENT FEATURES MAY ALSO BE INCLUDED WITH THIS PROJECT BASED THE FINAL GEOTECHNICAL REPORT. THE OVERFLOW PARKING SHOWN ON SHEET 5 WILL BE CONSTRUCTED USING GRASS-CRETE OR OTHER PERMEABLE MATERIALS. THE DESIGN OF THE PERMEABLE PARKING WILL ALLOW INFILTRATION OF THE RUNOFF IN THOSE PARKING AREAS. OTHER LOW IMPACT DEVELOPMENT FACILITIES MAY BE USED WHEN THE FINAL SITE PLAN IS DESIGNED AND COMPLETED BASED ON THE FINAL GEOTECHNICAL REPORT.

CONSERVATION EASEMENTS WILL ALSO BE USED FOR THIS SITE BUT WILL NOT BE THE PRIMARY SOURCE FOR BEST MANAGEMENT PRACTICES AND WATER QUALITY CONTROL. ANY AREAS NOTED ON THE PLAN AS CONSERVATION EASEMENTS THAT HAVE BEEN DISTURBED PRIOR TO THIS DEVELOPMENT OR DO NOT MEET THE CRITERIA FOR WATER QUALITY CREDIT WILL NOT BE INCLUDED IN THE FINAL WATER QUALITY COMPUTATIONS.

2-YEAR INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	102.36 cfs	at	11.9000 hrs
Peak Outflow	=	15.50 cfs	at	12.2500 hrs
Peak Elevation	=	227.50 ft		
Peak Storage =		3.519 ac-ft		

10-YEAR INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	201.94 cfs	at	11.9000 hrs
Peak Outflow	=	93.54 cfs	at	12.0500 hrs
Peak Elevation	=	228.56 ft		
Peak Storage =		5.252 ac-ft		

NOTE: STORAGE, ELEVATION AND OUTFLOW COMPUTATIONS SHOWN ABOVE ARE APPROXIMATE AND SUBJECT TO CHANGE WITH FINAL SITE PLAN DESIGN.

PRELIMINARY STORMWATER MANAGEMENT COMPUTATIONS

WATER QUALITY REQUIREMENTS FOR ENHANCED EXTENDED DETENTION:
24 HOUR EXTENDED DETENTION 1-YEAR STORM
SHALLOW MARSH = 1x Vwq

Vwq = (IMPERVIOUS AREA)(1/2")/12 IN/FT
Vwq = (780,000 SF)(1/2")/12 IN/FT = 32,500 CF
Vwq = 0.75 ACRE-FEET ±

ON-SITE WATER QUANTITY FROM TR-55:

	PRE-DEVELOPED	POST-DEVELOPED
CN	75	86
1-YEAR	29.2 CFS	78.3 CFS
2-YEAR	42.7 CFS	102.4 CFS
10-YEAR	108.3 CFS	201.9 CFS

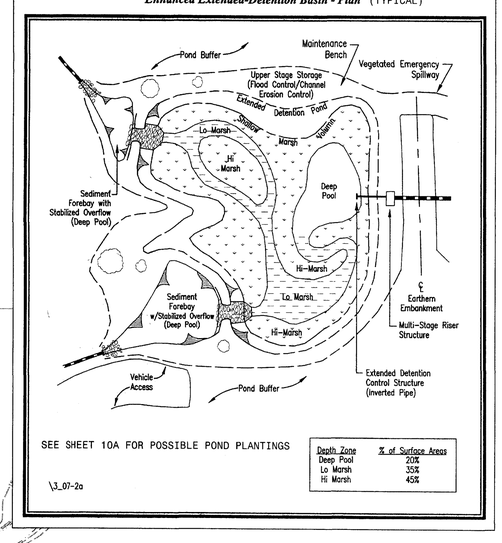
STORAGE REQUIREMENTS:
1-YEAR = AREA*RUNOFF*60% (FROM VA SWM HANDBOOK)
= (37.0 AC)*1.41"*(1'/12')*60%
= 2.61 AC-FT ±
10-YEAR = 3.08 AC-FT ±(FROM TR-55)

PRELIMINARY POND DESIGN:
MARSH - SHALLOW MARSH - 1.0 AC. @ 0.75' AVG. DEPTH
DEEP POOL - 0.1 AC. @ 3' AVG. DEPTH
TOTAL MARSH VOLUME = ±1.05 AC-FT > 0.75 AC-FT = 1xVwq

1-YEAR EXTENDED DETENTION RELEASE RATE -
= (2.61 AC-FT*43,560)/(86,400 SEC)
= 1.31 CFS
1-YEAR EXTENDED DETENTION POND DEPTH = 2.8'±
1-YEAR EXTENDED DETENTION ORIFICE SIZE = 0.64'±

FIGURE 3.07 - 2b
Enhanced Extended-Detention Basin - Section (TYPICAL)

FIGURE 3.07 - 2a
Enhanced Extended-Detention Basin - Plan (TYPICAL)



Depth Zone	% of Surface Areas
Deep Pool	20%
Lo Marsh	35%
Hi Marsh	45%

SEE

200 100

Application No SEA-2005-SU-007 Staff T. Strunk

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Sheet 10 of 13

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FAIRFAX COUNTY, VIRGINIA

PRELIMINARY STORM WATER MANAGEMENT PLAN AND NARRATIVE

NO.	DATE	REVISION
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COMMONWEALTH OF VIRGINIA
THOMAS C. PICKERING
Lic. No. 034739
PROFESSIONAL ENGINEER
8/17/07

SCALE: 1"=200'
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PLANTING GUIDE

FIGURE 3.05 - 4a
Native Plant Guide for Stormwater Management Areas in the Mid-Atlantic, USA
Trees and Shrubs

Tree/Shrub	*Zone	Form	Available	Inundation Tolerance	Wildlife Value	Notes
American Beech *(Fagus grandifolia)*	5,6	Dec. Tree	no	no	High, mammals and birds.	Prefers shade and rich, well-drained soils.
American Holly *(Ilex opaca)*	5,6	Dec. Tree	yes	some	High,songbirds, food, cover, nesting.	Coastal plain only. Prefers shade and rich soils.
American Hornbeam *(Carpinus caroliniana)*	4,5	Dec. Tree	yes	yes	Moderate, food, browsing.	Most common in flood plains and bottom land of Piedmont and mountains.
Arrowwood Viburnum *(Viburnum dentatum)*	2,3,4	Dec. Shrub	yes	no	High, songbirds and mammals.	Grows best in sun to partial shade.
Bald Cypress *(Taxodium distichum)*	3,4	Dec. Tree	yes	yes	Little food value but good perching site for waterfowl.	Forested Coastal Plain wetlands. North of normal range. Tolerates drought.
Bayberry *(Myricia pensylvanica)*	4,5,6	Dec. Shrub	yes	no	High, nesting, food cover. Berries last into winter.	Coastal Plain only. Roots fix N. Tolerates slightly acidic soil.
Bitternut Hickory *(Carya cordiformis)*	3,4,5	Dec. Tree	no	yes	High, food.	Moist soils or wet bottom land areas.
Black Cherry *(Prunus serotina)*	5,6	Dec. Tree	yes	yes	High, fruit is eaten by many birds.	Temporarily flooded/ forested areas. Possible fungus infestation.
Black Walnut *(Juglans nigra)*	5,6	Dec. Tree	yes	yes	High, food.	Temporarily flooded/ wetlands along flood plains. Well drained,, rich soils.
Blackgum or Sourgum *(Nyssa sylvatica)*	4,5,6	Dec. Tree	yes	yes	High, songbirds, egrets, herons, raccoons, owls.	Can be difficult to transplant. Prefers sun to partial shade.
Black Willow *(Salix nigra)*	3,4,5	Dec. Tree	yes	yes	High, browsing and cavity nesters.	Rapid growth, stabilizes stream banks. Full sun.
Buttonbush *(Cephalanthus occidentalis)*	2,3,4,5	Dec. Shrub	yes	yes	High, ducks and shorebirds. Seeds, nectar and nesting.	Full sun to partial shade. Will grow in dry areas.
Chestnut Oak *(Quercus prinus)*	5,6	Dec. Tree	no	no	High. Cover, browse and food.	Gypsy moth target. Dry soils.

FIGURE 3.05 - 4a (cont.)

Tree/Shrub	*Zone	Form	Available	Inundation Tolerance	Wildlife Value	Notes
Common Choke Cherry *(Prunus virginiana)*	5,6	Dec. Tree	no	some	High, birds, mammals. Fruit and cover.	Prefers drier conditions.
Common Spicebush *(Lindera benzoin)*	4,5	Dec. Shrub	yes	no	Very high, songbirds.	Shade and rich soils. Tolerates acidic soils. Good understory species.
Eastern Cottonwood *(Populus deltoides)*	4,5	Dec. Tree	yes	yes	Moderate, cover, food.	Shallow rooted, subject to windthrow. Invasive roots. Rapid growth.
Eastern Hemlock *(Tsuga canadensis)*	5,6	Conif. Tree	yes	yes	Moderate. Mostly cover and some food.	Tolerates all sun/shade conditions. Tolerates acidic soil.
Eastern Red Cedar *(Juniperus virginiana)*	4,5,6	Conif. Tree	yes	no	High. Fruit for birds. Some cover.	Full sun to partial shade. Common in wetlands, shrub bogs and edge of streams.
Elderberry *(Sambucus canadensis)*	4,5,6	Dec. Shrub	yes	yes	Extremely high for food and cover, for birds and mammals.	Full sun to partial shade.
Flowering Dogwood *(Cornus florida)*	4,5,6	Dec. Tree	no	yes	High, birds, food.	Prefers rich, moist soils. Dogwood anthracnose possible problem.
Fringe Tree *(Chionanthus virginicus)*	3,4,5	Dec. Shrub or small tree	yes	some	Moderate. Food and cover.	Full sun to partial shade. Tolerates acidic soil.
Green Ash, Red Ash *(Fraxinus pennsylvanica)*	4,5	Dec. Tree	yes	yes	Moderate, songbirds.	Rapid growing stream bank stabilizer. Full sun to partial shade.
Hackberry *(Celtis occidentalis)*	5,6	Dec. Tree	yes	yes	High, food and cover.	Full sun to partial shade.
Ironwood/ Hophornbeam *(Ostrya virginiana)*	5,6	Dec. Tree	yes	yes	Moderate, food and browse.	Tolerant of all sunlight conditions.
Larch, Tamarack *(Larix laricina)*	3,4	Conif. Tree	no	yes	Low, nest tree and seeds.	Rapid initial growth. Full sun, acidic boggy soils.
Loblolly Pine *(Pinus taeda)*	5,6	Conif. Tree	yes	yes	Moderate, food, nesting, squirrels.	Coastal Plain only. Tolerant of extreme soil conditions.

FIGURE 3.05 - 4a (cont.)

Tree/Shrub	*Zone	Form	Available	Inundation Tolerance	Wildlife Value	Notes
Mountain Laurel *(Kalmia latifolia)*	6	Evergreen	no	some	Low, cover, and nectar. Foliage is toxic to cattle and deer.	Partial shade, acidic soils.
Persimmon *(Diospyros virginiana)*	4,5,6	Dec. Tree	yes	no	Extremely high, birds, mammals.	Not shade tolerant. Well-drained soils.
Pin Oak *(Quercus palustris)*	4,5,6	Dec. Tree	yes	yes	High, mast. Tolerates acidic soil.	Gypsy moth target. Prefers sun to partial shade.
Red Chokeberry *(Pyrus arbutifolia)*	3,4,5	Dec. Shrub	no	yes	Moderate, songbirds.	Bank stabilizer. Partial sun.
Red Maple *(Acer rubrum)*	4,5,6	Dec. Tree	yes	yes	High, seeds and browse. Tolerates acidic soil.	Rapid growth.
Red Oak *(Quercus rubra)*	5,6	Dec. Tree	yes	no	High, food and cover.	Gypsy moth target. Prefers well drained, sandy soils.
River Birch *(Betula nigra)*	3,4	Dec. Tree	yes	yes	Low, but good for cavity nesters.	Bank erosion control. Full sun.
Scarlet Oak *(Quercus coccinea)*	3,4	Dec. Tree	no	no	High, food and cover.	Gypsy moth target. Difficult to transplant.
Shadbush, Serviceberry *(Amelanchier canadensis)*	5,6	Dec. Tree	yes	yes	High, nesting, cover and food. Birds and mammals.	Prefers partial shade. Common in forested wetlands and upland woods.
Silky Dogwood *(Cornus amomum)*	5,6	Dec. Shrub	yes	yes	High, songbirds, mammals.	Shade and drought tolerant. Good bank stabilizer.

Source: Native Plant Pondscaping Guide - Watershed Restoration Sourcebook, Natalie Karouna, MWCOG

****Zone 1: Submergent Aquatic Vegetation***
****Zone 2: Shallow Water Bench - 6-12 inches Deep***
****Zone 3: Shoreline Fringe - Regularly Inundated Area***
****Zone 4: Riparian Fringe - Periodically Inundated Area, Wet Soils***
****Zone 5: Floodplain Terrace - Infrequently Inundated, Moist Soils***
****Zone 6: Upland Slopes - Seldom or Never Inundated, Moist To Dry Soils***

FIGURE 3.05 - 4b
Native Plant Guide for .Stormwater Management Areas in the Mid-Atlantic, USA
Wetland Plants

Wetland Plants	*Zone	Form	Available	Inundation Tolerance	Wildlife Value	Notes
Arrow arum *(Peltandra virginica)*	2	Emergent	yes	up to 1 ft.	High, berries are eaten by wood ducks.	Full sun to partial shade.
Arrowhead/Duck potato *(Sagittaria latifolia)*	2	Emergent	yes	up to 1 ft.	Moderate, tubers and seeds eaten by ducks.	Aggressive colonizer.
Broomsedge *(Andropogon virginianus)*	2,3	Perimeter	yes	up to 3 in.	High, songbirds and browsers. Winter food and cover.	Tolerant of fluctuating water levels and partial shade.
Cattail *(Typha spp.)*	2,3	Emergent	yes	up to 1 ft.	Low, except as cover.	Aggressive. May eliminate other species. Volunteer. High pollutant treatment.
Coontail *(Ceratophyllum demersum)*	1	Submergent	no	yes	Low, food, good habitat and shelter for fish and invertebrates.	Free floating SAV. Shade tolerant. Rapid growth.
Common Three Square *(Scirpus pungens)*	2	Emergent	yes	up to 6 in.	High, seeds, cover, waterfowl, songbirds.	Fast colonizer. Can tolerate periods of dryness. Full sun. High metal removal.
Duckweed *(Lemna sp.)*	1,2	Submergent /Emergent	yes	yes	High, food for waterfowl and fish.	May biomagnify metals beyond concentrations found in water.
Lizard's Tail *(Saururus cernuus)*	2	Emergent	yes	up to 1 ft.	Low, except wood ducks.	Rapid growth. Shade tolerant.
Marsh Hibiscus *(Hibiscus moscheutos)*	2,3	Emergent	yes	up to 3 in.	Low, nectar.	Full sun. Can tolerate periodic dryness.
Pickerelweed *(Pontederia cordata)*	2,3	Emergent	yes	up to 1 ft.	Moderate, ducks, nectar for butterflies.	Full sun to partial shade.
Pond Weed *(Potamogeton pectinatus)*	1	Submergent	yes	yes	Extremely high, waterfowl, marsh and shore-birds.	Removes heavy metals.
Rice Cutgrass *(Leersia oryzoides)*	2,3	Emergent	yes	up to 3 in.	High, food and cover.	Full sun, although tolerant of shade. Shoreline stabilization.

FIGURE 3.05 - 4b (cont.)

Wetland Plants	*Zone	Form	Available	Inundation Tolerance	Wildlife Value	Notes
Sedges *(Carex spp.)*	2,3	Emergent	yes	up to 3 in.	High, waterfowl, songbirds.	Many wetland and several upland species.
Soft-stem Bulrush *(Scirpus validus)*	2,3	Emergent	yes	up to 1 ft.	Moderate, good cover and food.	Full sun. Aggressive colonizer. High pollutant removal.
Smartweed (Polygonum spp.)	2	Emergent	yes	up to 1 ft.	High, waterfowl, songbirds, seeds and cover.	Fast colonizer. Avoid weedy alims such as P. Perfoliatum.
Spatterdock (Nuphar lutream)	2	Emergent	yes	up to 1.5 ft.	Moderate, for food but high for cover.	Fast colonizer. Tolerant of fluctuating water levels.
Switchgrass *(Panicum virgatum)*	2,3,4, 5,6	Perimeter	yes	up to 3 in.	High, seeds, cover. Waterfowl, songbirds.	Tolerates wet/dry conditions.
Sweet Flag *(Acorus calamus)*	2,3	Perimeter	yes	up to 3 in.	Low, tolerant of dry periods.	Tolerates acidic conditions. Not a rapid colonizer.
Waterweed *(Elodea canadensis)*	1	Submergent	yes	yes	Low.	Good water oxygenator. High nutrient, copper, manganese and chromium removal.
Wild Celery *(Valisneria americana)*	1	Submergent	yes	yes	High, food for waterfowl. Habitat for fish and invertebrates.	Tolerant of murkey water and high nutrient loads.
Wild Rice *(Zizania aquatica)*	2	Emergent	yes	up to 1 ft.	High, food. Birds.	Prefers full sun.

Source: Native Plant Pondscaping Guide - Watershed Restoration Sourcebook, Natalie Karouna, MWCOG

****Zone 1:Submergent Aquatic Vegetation***
****Zone 2:Shallow Water Bench - 6-12 inches Deep***
****Zone 3:Shoreline Fringe - Regularly Inundated Area***
****Zone 4:Riparian Fringe - Periodically Inundated Area, Wet Soils***
****Zone 5:Floodplain Terrace - Infrequently Inundated, Moist Soils***
****Zone 6:Upland Slopes - Seldom or Never Inundated, Moist To Dry Soils***

POSSIBLE PLANTINGS FOR STORMWATER MANAGEMENT POND PER THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK.

Application No SEA-2005-SU-007 Staff T. Strunk

APPROVED (SE) (SP) PLAN

See Development Conditions Dated 9-21-2007
Date of (BOS) (BZA) Approval 9-24-2007

Sheet 11 of 13

Bury+Partners
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KOREAN CENTRAL PRESBYTERIAN CHURCH

SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

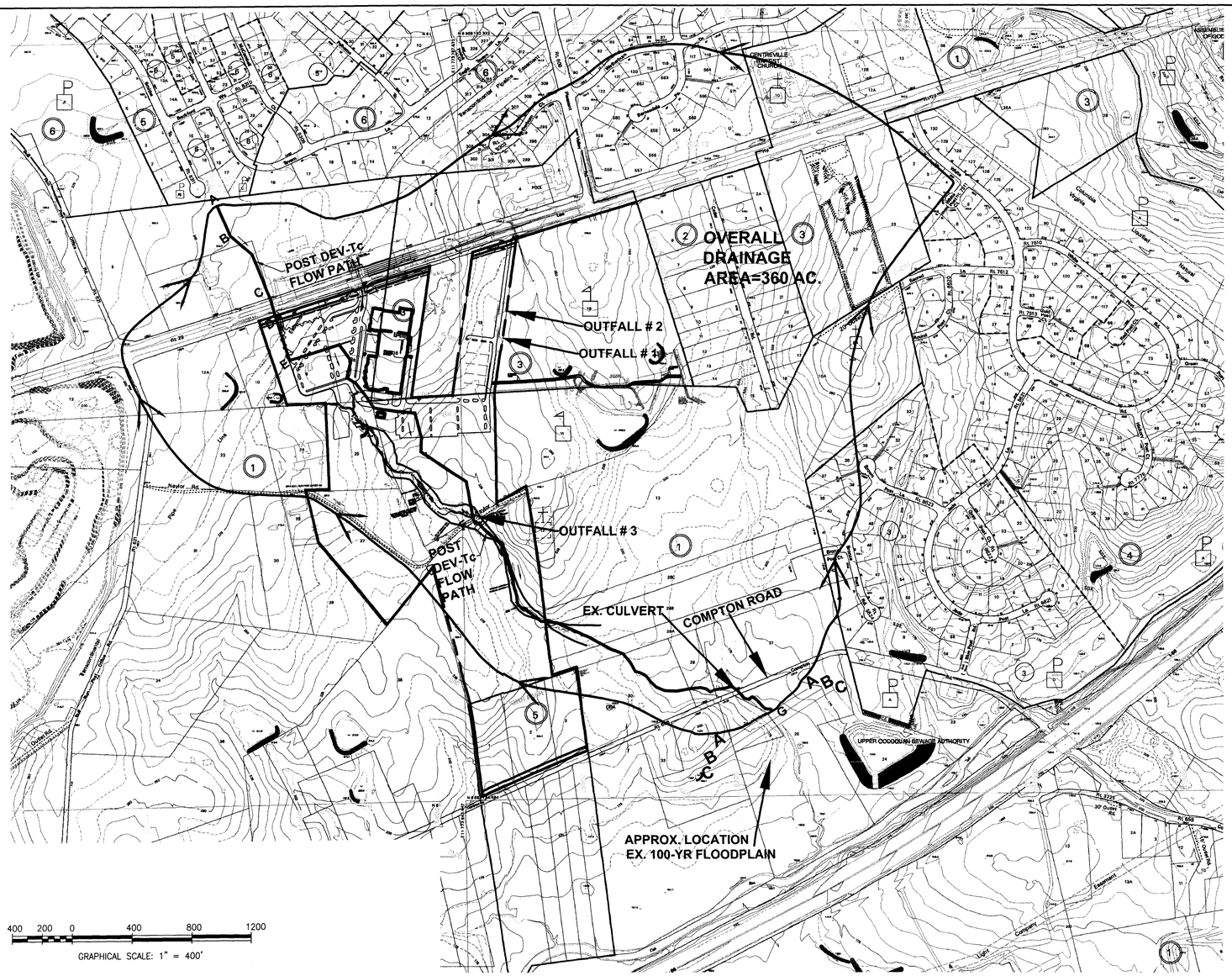
STORMWATER MANAGEMENT AREA PLANT GUIDE

DATE	NO.	REVISION
08/17/07	1	REVISED PER STAFF COMMENTS

COMMONWEALTH OF VIRGINIA
THOMAS C. PICKERING
Lic. No. 034739
8/17/07
PROFESSIONAL ENGINEER

SCALE: NTS
DATE: JUNE 2007
DRAWN BY: STG/VM
DESIGNED BY: GNC/MB
REVIEWED BY: TCP
PROJ. NO.: 20193-02

SHEET 10A OF 12



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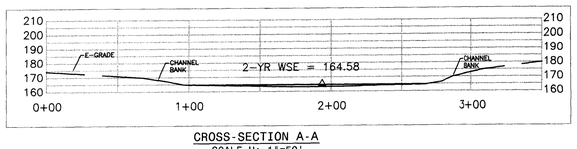
GRAPHICAL SCALE: 1" = 400'



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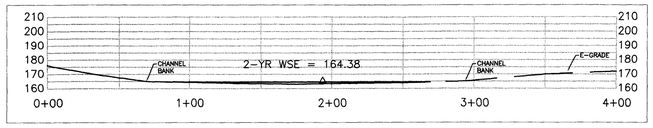
V: 1"=50'



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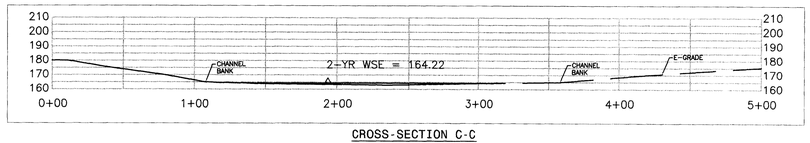

CROSS-SECTION C-C
SCALE H: 1"=50'
V: 1"=50'

CROSS-SECTION A-A

Input Data

Channel Slope	0.0100 ft/ft
Discharge	470.02 cfs

Results

Mannings Coefficient	0.030
Water Surface Elevation	164.58 ft
Elevation Range	163.18 to 185.00
Flow Area	129.11 ft²
Wetted Perimeter	162.49 ft
Top Width	162.46 ft
Normal Depth	1.40 ft
Critical Depth	1.21 ft
Critical Slope	0.02015 ft/ft
Velocity	3.64 ft/s
Velocity Head	0.21 ft
Specific Energy	1.61 ft
Froude Number	0.72
Flow Type	Supercritical

CROSS-SECTION B-B

Input Data

Channel Slope	0.0100 ft/ft
Discharge	470.13 cfs

Results

Mannings Coefficient	0.030
Water Surface Elevation	164.38 ft
Elevation Range	163.00 to 185.00
Flow Area	132.61 ft²
Wetted Perimeter	173.73 ft
Top Width	173.70 ft
Normal Depth	1.37 ft
Critical Depth	1.19 ft
Critical Slope	0.02059 ft/ft
Velocity	3.55 ft/s
Velocity Head	0.20 ft
Specific Energy	1.57 ft
Froude Number	0.72
Flow Type	Supercritical

CROSS-SECTION C-C

Input Data

Channel Slope	0.0100 ft/ft
Discharge	470.62 cfs

Results

Mannings Coefficient	0.030
Water Surface Elevation	164.22 ft
Elevation Range	162.83 to 185.00
Flow Area	135.42 ft²
Wetted Perimeter	182.87 ft
Top Width	182.84 ft
Normal Depth	1.39 ft
Critical Depth	1.21 ft
Critical Slope	0.02080 ft/ft
Velocity	3.48 ft/s
Velocity Head	0.19 ft
Specific Energy	1.58 ft
Froude Number	0.71
Flow Type	Supercritical

EXISTING CULVERT ANALYSIS AT COMPTON ROAD

HERE IS AN EXISTING CULVERT WITHIN THE ADEQUATE OUTFALL STUDY AREA THAT RUNS BENEATH COMPTON ROAD. IT IS 36" CMP CULVERT WITH APPROXIMATELY 2 FEET COVER AT COMPTON ROAD.

PRE-DEVELOPED CONDITIONS

2-YEAR FLOW = 277 CFS OVERTOPPING DEPTH = 0.18'±
10-YEAR FLOW = 375 CFS OVERTOPPING DEPTH = 0.43'±

POST-DEVELOPED CONDITIONS

2-YEAR FLOW = 470 CFS OVERTOPPING DEPTH = 0.23'±
10-YEAR FLOW = 637 CFS OVERTOPPING DEPTH = 0.67'±

THE DEVELOPMENTS ON THIS SITE WILL REDUCE THE FLOWRATE TO THIS CULVERT AND WILL NOT WORSEN THE OVERTOPPING CONDITIONS AT COMPTON ROAD.

EXISTING CONDITIONS:

THE SUBJECT SITE IS MAINLY GRASSY, INTERSPACED WITH A FEW SHRUBS.THERE ARE NO BUILT STRUCTURES WITHIN THE SITE. THE SITE IS INCISED BY A NATURAL STREAM THAT FLOWS SOUTH-EASTERLY THROUGH THE SITE.

EXISTING TOPOGRAPHY:

THE GENERAL TOPOGRAPHY SLOPES SOUTH FROM AN ELEVATION OF 290' ALONG US ROUTE 29 (LEE HWY) TO AN ELEVATION OF 230' AT THE SOUTHERN BOUNDARY.

EXISTING SOILS:

SEE COVER SHEET FOR SOIL TYPES.

EXISTING VEGETATION:

THE EXISTING VEGETATION CONSISTS MOSTLY OF GRASSY AREAS AND A FEW SHRUBS.

ABUTTING PROPERTIES:

US RTE 29 (LEE HWY) IS TO THE NORTH OF THE SITE.
THERE ARE 3 RESIDENTIAL PROPERTIES TO THE WEST OF THE PROPERTY AS WELL AS THE HANNA T. & MYONG S. YI PROPERTY THAT IS SANDWICHED BY THE PROPOSED DEVELOPMENT TOWARDS THE EAST. THE REST OF THE PROPERTIES ARE UNDEVELOPED.

ADEQUATE OUTFALL NARRATIVE

THERE ARE 3 OUTFALLS ASSOCIATED WITH THIS PROJECT.
OUTFALL 1 AND 2 ARE 15" RCP CULVERTS LOCATED TO THE EAST OF THE PROJECT. THESE TWO THEN SHEET FLOW TO AN EXISTING SWM POND LOCATED WITHIN THE ADJACENT SCHOOL BOARD PROPERTY. OUTFALL 1 AND 2 CONVEY WATER FROM AN UNDEVELOPED PORTION OF THE PROJECT AND HENCE PRE AND POST FLOWS REMAIN THE SAME. OUTFALL VELOCITY FOR OUTFALL # 1 IS 4 F.P.S WHILE THAT OF # 2 IS 4.4 F.P.S.

OUTFALL # 3,THE PRINCIPAL OUTFALL,IS A 48" PIPE THAT FLOWS FROM THE PROPOSED BMP/SWM POND. THIS OUTFALL AT STRUCTURE # SW2 THEN FLOWS INTO AN EXISTING INCISED CHANNEL THAT FLOWS SOUTH-EASTERN OF THE PROPERTY.

THE EXISTING CHANNEL COMBINES FLOW FROM ALL THREE OUTFALLS WITHIN THE SITE AND FLOW FROM THE OVERALL DRAINAGE AREA AT A POINT TO THE NORTH OF THE CULVERT JUST BEFORE COMPTON ROAD. AT THIS POINT OF CONFLUENCE,THE TOTAL DRAINAGE AREA BEING SERVED IS 360 ACRES AS SHOWN IN THE EXHIBIT ON THIS SHEET.

AS PER FAIRFAX COUNTY PFM 6-0203.2C, TO DEMONSTRATE THE ADEQUACY OF THE SYSTEM, THE EXTENT OF THE REVIEW IS PERFORMED UP TO 150' FROM THE OVERALL DRAINAGE AREA 360 ACRES OF THE DOWNSTREAM DRAINAGE SYSTEM.

AS PER FAIRFAX COUNTY PFM 6-0203.2D, MINIMUM OF THREE CROSS-SECTIONS ARE PROVIDED EACH 50' APART IN THE 150' REACH. BASED UPON THE TIME OF CONCENTRATION FLOW PATH FOR EACH SECTION, THE POST DEVELOPMENT FLOWS ARE COMPUTED, AS SHOWN IN THE COMPUTATIONS ON THIS SHEET.

THE TWO) YEAR WATER SURFACE ELEVATIONS ARE SHOWN IN THE CROSS-SECTIONS AND ARE WITHIN THE BED AND BANKS OF THE EXISTING CHANNEL.THERE ARE NO EROSIVE VELOCITIES EXPERIENCED AS A RESULT OF THE DEVELOPMENT AND THERE WILL BE NO ADVERSE EFFECTS TO DOWNSTREAM PROPERTIES.

IT IS THEREFORE THE ENGINEERS OPINION THAT ADEQUATE OUTFALL CRITERIA HAS BEEN MET.

POST DEVELOPED PARAMETERS:

ADEQUATE OUTFALL

CONDITIONS: POST-DEVELOPMENT

SUB-AREA ID:	DESCRIPTION	AREA (AC)	FRACTION (f)	"C"	f x "C"
DEV. AREAS	GRASS & IMPERVIOUS	75.79	0.21	0.70	0.15
US RTE 29	ASPHALT	18.61	0.05	0.50	0.03
REST OF SITE	GRASS/VEGETATION	265.60	0.74	0.45	0.33
TOTAL AREA		360	1		0.51

TC FROM THE IDF CURVE (PLATE 3-6 OF FFX CO.PFM)
Q = CIA (PFM 6-0803)

AREA TO SECTION A-A = 360.00 AC, Tc = 35.96 MIN, I-2yr = 2.56 In/Hr, Q = 470.02 CFS

AREA TO SECTION B-B = 361.50 AC, Tc = 36.06 MIN, I-2yr = 2.55 In/Hr, Q = 470.13 CFS

AREA TO SECTION C-C = 363.30 AC, Tc = 36.16 MIN, I-2yr = 2.54 In/Hr, Q = 470.62 CFS

Application No SEA-2005-SU-007 Staff T. Strunk

APPROVED (SE) (SP) PLAN

See Development Conditions Dated 9-21-2007
Date of (BOS) (BZA) Approval 9-24-2007

Sheet 12 of 13

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North
VCS 83

KOREAN CENTRAL PRESBYTERIAN CHURCH

SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

ADEQUATE OUTFALL ANALYSIS

DATE	NO.	REVISION
08/17/07	1	REVISED PER STAFF COMMENTS

COMMONWEALTH OF VIRGINIA
THOMAS C. PICKERING
Lic. No. 034739
8/17/07
PROFESSIONAL ENGINEER

SCALE: AS SHOWN
DATE: JUNE 2007
DRAWN BY: STG/VM
DESIGNED BY: GNC/MB
REVIEWED BY: TCP
PROJ. NO.: 20193-02

SHEET 11 OF 12

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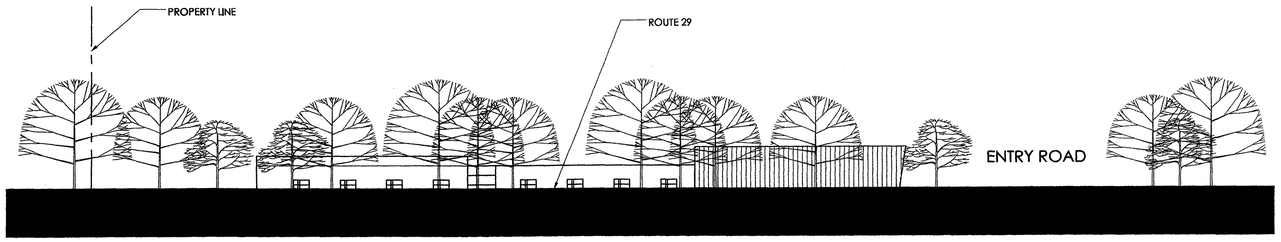
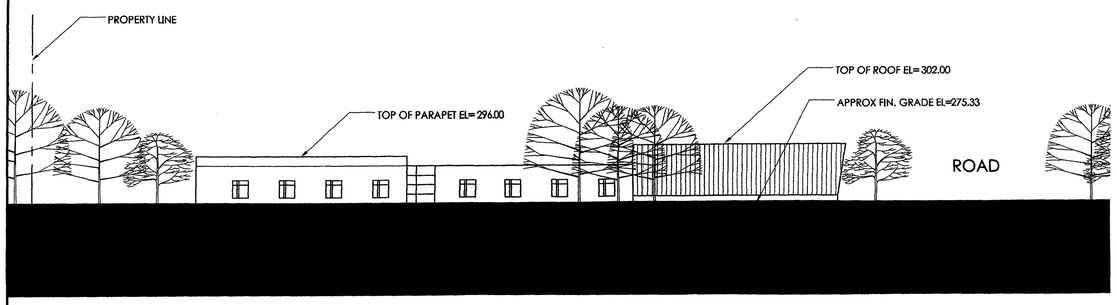


NORTH ELEVATION (FROM ROUTE 29)



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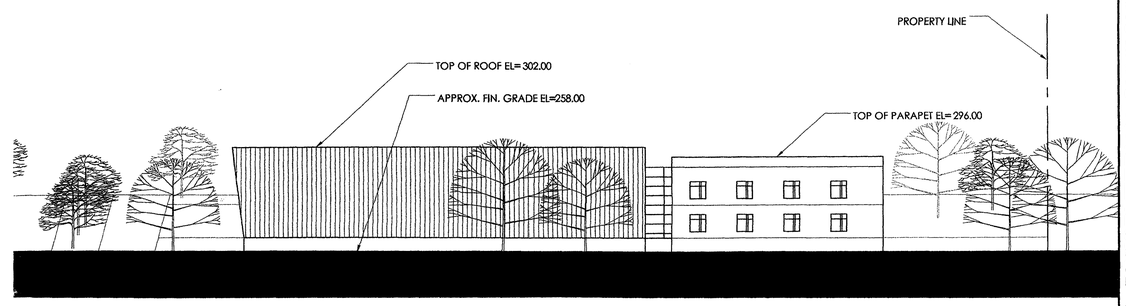

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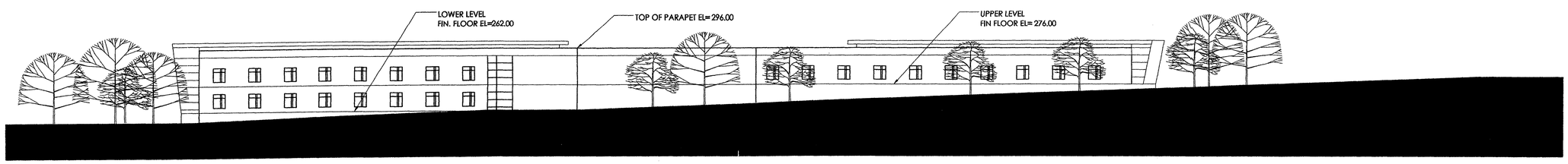

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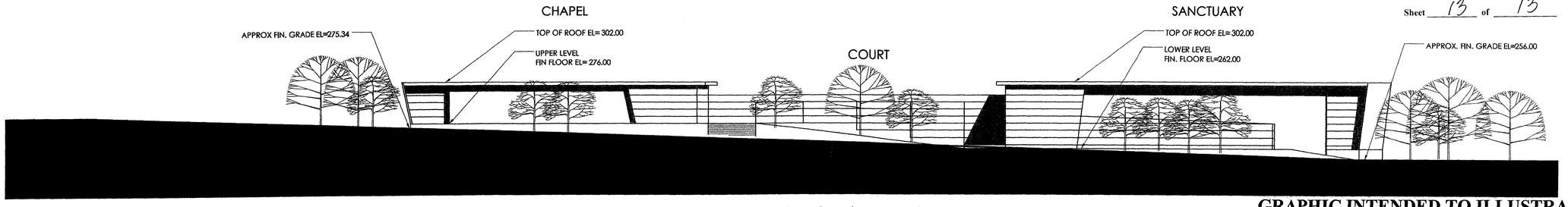

WEST ELEVATION (ENTRY)

Application No SEA-2005-SU-007 Staff T. Strunk

APPROVED (SE) (SP) PLAN

See Development Conditions Dated 9-21-2007
Date of (BOS) (BZA) Approval 9-24-2007

Sheet 13 of 13

GRAPHIC INTENDED TO ILLUSTRATE GENERAL ARCHITECTURE & DESIGN

Bury+Partners
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HughesGroup Architects

KOREAN CENTRAL PRESBYTERIAN CHURCH

SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

BUILDING ELEVATIONS

COMMONWEALTH OF VIRGINIA
THOMAS C. PICKERING
Lic. No. 034739
6/21/07
PROFESSIONAL ENGINEER

SCALE:	
DATE:	JUNE 2007
DRAWN BY:	STG
DESIGNED BY:	GNC
REVIEWED BY:	JTL
PROJ. NO.:	20193-02

SHEET 12 OF 12