



APPLICATION ACCEPTED: September 13, 2013
APPLICATION AMENDED: December 12, 2014
PLANNING COMMISSION: April 16, 2015
BOARD OF SUPERVISORS: TBD

County of Fairfax, Virginia

March 31, 2015

STAFF REPORT ADDENDUM

APPLICATION RZ 2013-PR-014

PROVIDENCE DISTRICT

APPLICANT:	Ausable, LLC
PRESENT ZONING:	R-1
REQUESTED ZONING:	R-5
PARCEL:	48-4 ((1)) 44
SITE AREA:	3.72 acres
PLAN MAP:	Residential, 3 – 4 du/ac and Private Open Space
PROPOSAL:	To rezone from the R-1 District to the R-5 District to permit the development of 14 single-family detached dwellings at a density of 3.76 du/ac.

STAFF RECOMMENDATIONS:

Staff recommends approval of RZ 2013-PR-014 subject to the execution of proffers consistent with the proffers contained in Attachment 1.

Staff recommends approval of the following requested waivers and modifications:

- Modification of the minimum district size pursuant to Sect. 9-610 of the Zoning Ordinance to permit a district size of 3.72 acres;

Mike D. Van Atta

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

- Modification of Sect. 17-201 (3A) of the Zoning Ordinance to construct a service drive across the site and Detail TS-3 of the Public Facilities Manual (PFM) to construct a sidewalk along the service drive to permit the service drive and sidewalk as shown on the GDP;
- Modification of Sect. 17-201(2) of the Zoning Ordinance to construct a trail along Arlington Boulevard to permit the sidewalk as shown on the GDP;
- Waiver of Sect. 17-201(4) of the Zoning Ordinance to construct a third lane along Arlington Boulevard;
- Waiver of Sect. 7-0101.1 of the PFM to provide interparcel access; and
- Waiver of Sect. 9-610 of the Zoning Ordinance for the minimum lot width for a corner lot for Lots 3 and 11.

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

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

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

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

O:\mvanat\Applications\IRZ 2013-PR-014 Ausuable LLC\Staff Report



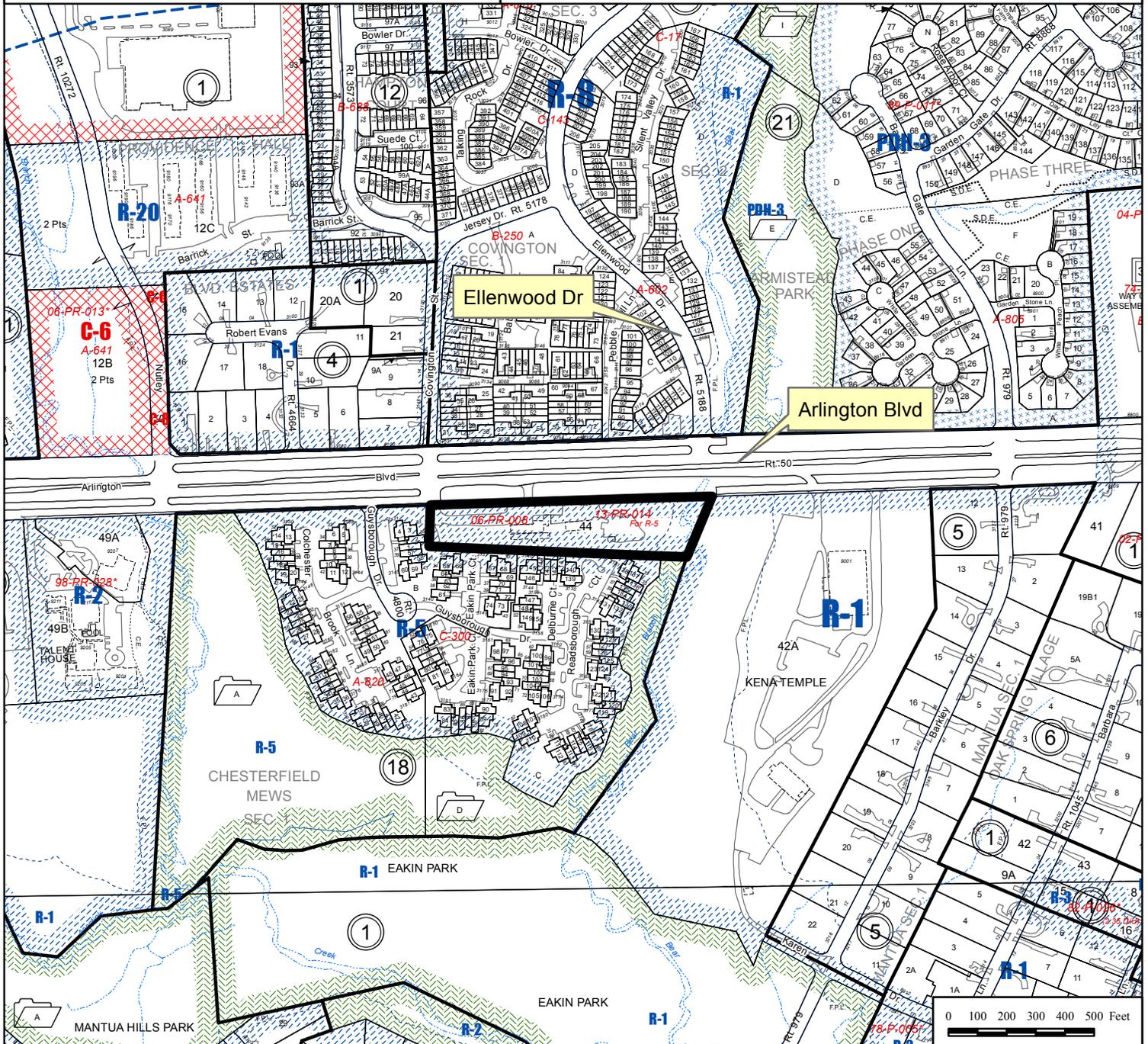
Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 48 hours advance notice. For additional information on ADA call (703) 324-1334 or TTY 711 (Virginia Relay Center).

Rezoning Application

RZ 2013-PR-014



Applicant: Ausable, LLC
Accepted: 12/12/2014
Proposed: RESIDENTIAL
Area: 3.72 AC OF LAND; DISTRICT - PROVIDENCE
Zoning Dist Sect: SOUTH SIDE OF ARLINGTON BOULEVARD
Located: APPROXIMATELY 1000 FEET WEST OF ITS
INTERSECTION WITH BARKLEY DRIVE
Zoning: FROM R- 1 TO R- 5
Overlay Dist:
Map Ref Num: 048-4- /01/ /0044



NOTES

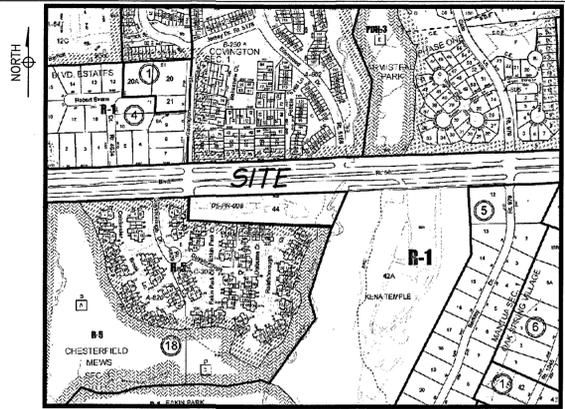
1. THE PROPERTY DELINEATED ON THIS PLAT IS LOCATED ON FAIRFAX COUNTY CADASTRAL MAP No. 48-4 ((1)) PARCEL 44 AND CURRENTLY ZONED R-1.
2. THE PROPERTY SHOWN HEREON IS CURRENTLY IN THE NAME OF PAUL AND NANCY CRAVEN BY DEED RECORDED IN DEED BOOK 3844, PAGE 150 AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA. THE APPLICANT IS AUSABLE, LLC.
3. THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD SURVEY BY LAND DESIGN CONSULTANTS, INC.
4. THE TOPOGRAPHY SHOWN HEREON IS BASED ON A FIELD SURVEY BY LAND DESIGN CONSULTANTS, INC. THE CONTOUR INTERVAL IS TWO (2) FEET.
5. THE PROPERTY SHOWN HEREON LIES WITHIN A ZONE "X", AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AND "AE", AN AREA DETERMINED TO BE SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT, AS DELINEATED ON FLOOD INSURANCE RATE MAP, COMMUNITY PANEL No. 51059C0260E, DATED SEPTEMBER 17, 2010.
6. ALL CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF ALL APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED STANDARDS OF FAIRFAX COUNTY AND VDOT EXCEPT AS REQUESTED HEREIN. THE APPLICANT RESERVES THE RIGHT TO APPLY FOR ANY FUTURE MODIFICATIONS OF PFM DESIGN CRITERIA AT THE TIME OF SITE PREPARATION PROVIDED THE MODIFICATIONS ARE IN SUBSTANTIAL CONFORMANCE WITH THE G.D.P.
7. EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION AS PER REQUIREMENTS OF THE STATE OF VIRGINIA AND THE CODE OF FAIRFAX COUNTY.
8. LAND DESIGN CONSULTANTS, INC. IS NOT AWARE OF ANY UTILITY EASEMENTS WHICH, EXIST ON THE SUBJECT PROPERTY WITH A WIDTH OF 25 FEET OR MORE.
9. ALL UTILITIES INSTALLED AS PART OF THIS PROJECT SHALL BE PLACED UNDERGROUND. THE UTILITY LOCATIONS SHOWN HEREON ARE FOR ILLUSTRATIVE PURPOSES ONLY AND ARE SUBJECT TO CHANGE WITH FINAL ENGINEERING. LIMITS OF CLEARING AND GRADING SHALL BE IN GENERAL CONFORMANCE WITH THOSE SHOWN HEREON. THE APPLICATION CONTEMPLATES AN OPTIONAL EXPANDED LIMIT OF CLEARING AND GRADING WITHIN THE LIMITS OF THE FLOOD PLAIN, RPA AND EGC. THIS OPTIONAL LIMIT WILL PERMIT THE APPLICANT THE ABILITY TO REMOVE PORTIONS OF THE EXISTING MATERIAL AS DIRECTED BY S.D.I.D. IF THEY DETERMINE THAT ITS REMOVAL IS REQUIRED DURING THE REVIEW OF THE ASSOCIATED MAJOR PLAN.
10. AIR QUALITY PERMITS SHALL BE OBTAINED, IF REQUIRED, AND PROVIDED PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION.
11. THE SITE WILL BE SERVED BY PUBLIC WATER AND SANITARY SEWER. SANITARY SEWER SERVICE SHALL BE PROVIDED BY INDIVIDUAL LATERAL CONNECTIONS.
12. A RESOURCE PROTECTION AREA (RPA) IS LOCATED ON THE SUBJECT PROPERTY AND IS BASED UPON AN APPROVED RPA DELINEATION (1406-RPA-001-2) PREPARED BY WETLAND STUDIES AND SOLUTIONS, INC. A RESOURCE MANAGEMENT AREA (RMA) IS LOCATED ON THE SUBJECT PROPERTY. AN ENVIRONMENTAL QUALITY CORRIDOR EXISTS ON SITE PER A DELINEATION BY WETLAND STUDIES AND SOLUTIONS, INC.
13. THE COMPREHENSIVE PLAN RECOMMENDS DEVELOPMENT OF THE PROPERTY AS RESIDENTIAL AT A DENSITY OF 3-4 DWELLING UNITS PER ACRE. THE PROPOSED DENSITY OF 3.7% DU/ACRE MEETS THE INTENT OF THE COMPREHENSIVE PLAN. THE SITE DESIGN, DENSITY, ADJOINING USES AND PROPOSED PRESERVATION AND PLANTINGS WILL ENHANCE THIS PROPERTY AND WILL MEET THE APPLICABLE CRITERIA.
14. IN ACCORDANCE WITH THE FAIRFAX COUNTY TRAILS PLAN, A MINOR PAVED TRAIL IS REQUIRED ALONG THE SOUTHERN PORTION OF ARLINGTON BOULEVARD. THE APPLICANT RESPECTFULLY REQUESTS A WAIVER OF THIS REQUIREMENT.
15. LDC IS NOT AWARE OF ANY BURIAL SITES LOCATED ON THE SUBJECT PROPERTY.
16. ARLINGTON BOULEVARD IS SHOWN ON THE VDOT 6 YEAR PLAN TO BE WIDENED OR IMPROVED. ARLINGTON BOULEVARD IS SHOWN ON THE COUNTY'S COMPREHENSIVE PLAN AND COUNTYWIDE TRANSPORTATION MAP TO BE WIDENED TO SIX LANES. THE APPLICANT RESPECTFULLY REQUESTS A WAIVER OF THE COMPREHENSIVE PLAN REQUIRED CONSTRUCTION OF IMPROVEMENTS.
17. LDC DOES NOT BELIEVE ANY HAZARDOUS OR TOXIC SUBSTANCES HAVE BEEN GENERATED, UTILIZED, STORED, TREATED, AND/OR DISPOSED OF OR HAVE BEEN OBSERVED ON THE SUBJECT PROPERTY.
18. DEVELOPMENT OF THIS PROJECT SHALL COMMENCE AT SUCH TIME AS APPROPRIATE COUNTY APPROVALS HAVE BEEN OBTAINED AND SUBJECT TO THE DISCRETION OF OWNER/DEVELOPER.
19. A GEOTECHNICAL REPORT SHALL BE SUBMITTED FOR REVIEW BY FAIRFAX COUNTY WITH THE FINAL SITE PLAN, IF REQUIRED.
20. THE SUBJECT PROPERTY WILL MEET SWM/BMP REQUIREMENTS THROUGH USE OF AN INFILTRATION TRENCH WITH STORMTECH CHAMBERS OR SIMILAR. PLEASE SEE SHEETS 10 AND 11 FOR ADDITIONAL INFORMATION.
21. ALL DIMENSIONS ARE APPROXIMATE AND TYPICAL HOUSE FOOTPRINTS AND ELEVATIONS SHOWN ON THESE LOTS MAY BE MODIFIED PROVIDED THAT MODIFICATIONS ARE IN SUBSTANTIAL CONFORMANCE WITH THE GDP AND THE MINIMUM YARDS ARE PROVIDED.
22. THE APPLICATION HAS BEEN DESIGNED WITH THE PRIMARY FOCUS OF CREATING A DEVELOPMENT THAT IS SIMILAR TO ADJACENT DEVELOPMENTS AND WILL MINIMIZE ADVERSE EFFECTS TO ADJACENT PROPERTY OWNERS. THE APPLICANT WILL BE PRESERVING NATURAL FEATURES ON SITE AS SHOWN ON THE G.D.P.
23. ADDITIONAL TREE PLANTINGS AND PRESERVATION, AS SHOWN ON THE G.D.P., WILL PROVIDE ADEQUATE MEASURES OF SCREENING AND PRESERVATION OF NATURAL FEATURES.
24. MINOR ADJUSTMENTS TO THE LOT LINES AND UTILITY LOCATIONS SHALL BE PERMITTED IN ACCORDANCE WITH THE FINAL GRADING AND UTILITY LAYOUT AND SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THAT PROVIDED HEREIN.
25. EXISTING STRUCTURE CONSTRUCTED IN 1943. THE APPROXIMATE HEIGHT OF THE EXISTING STRUCTURE IS 25 FEET. ALL EXISTING STRUCTURES WILL BE REMOVED.
26. THE PRIVATE STREETS SHOWN ON THE PROPERTY SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE PUBLIC FACILITIES MANUAL AND WILL BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION AND IS SUBJECT TO FIRE LANE REQUIREMENTS.
27. THE EXISTING VEGETATION MAP AND TREE COVER CALCULATIONS WERE PREPARED BY ZIMAR AND ASSOCIATES, DATED NOVEMBER, 2013.
28. THE APPLICANT WILL COMPLETE IMPROVEMENTS AT THE INTERSECTION OF ARLINGTON BOULEVARD, COVINGTON STREET AND THE SERVICE DRIVE AS SHOWN ON THE EXHIBIT PREPARED BY GOROVE/SLADE ON SHEET 2.
29. THE APPLICANT WILL CONVEY PARCEL B TO THE FAIRFAX COUNTY PARK AUTHORITY IN CONJUNCTION WITH THE SITE PLAN AND WILL RESERVE DENSITY AND OPEN SPACE CREDIT FOR THIS DEDICATION. THE APPLICANT WILL NOT CONSTRUCT ANY TRAILS ON THIS PARCEL.
30. PRIVATE STREETS ARE PERMITTED FOR THE R-5 DISTRICT PER 101-2-2(3)(C).

WAIVERS/MODIFICATIONS REQUESTED:

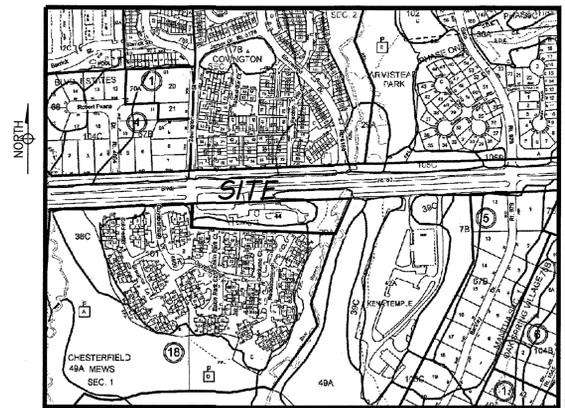
IN ACCORDANCE WITH THE FAIRFAX COUNTY ZONING ORDINANCE AND PUBLIC FACILITIES MANUAL, THE APPLICANT HEREBY RESPECTFULLY REQUESTS THE FOLLOWING WAIVERS AND/OR MODIFICATIONS:

1. A WAIVER OF THE MINIMUM DISTRICT SIZE CONTAINED IN SECTION 3-506 OF THE FAIRFAX COUNTY ZONING ORDINANCE DUE TO A CURRENT SITE AREA OF 3.7 ACRES. THE MINIMUM DISTRICT SIZE IN THE R-5 DISTRICT IS 4 ACRES.
2. A MODIFICATION OF THE SERVICE DRIVE REQUIREMENT ALONG ARLINGTON BOULEVARD (RTE. 50), AS STATED IN SECTION 17-201 (3.5) OF THE ZONING ORDINANCE AND SECTION 7-0104.1 OF THE PUBLIC FACILITIES MANUAL. THE APPLICANT WILL BE CONSTRUCTING A PORTION OF THIS SERVICE DRIVE AS SHOWN.
3. A MODIFICATION OF THE SIDEWALK REQUIREMENT ALONG THE SERVICE DRIVE, AS STATED IN SECTION 17-201 (2) OF THE ZONING ORDINANCE AND DETAIL TS-3 OF THE PUBLIC FACILITIES MANUAL. THE APPLICANT WILL CONSTRUCT A PORTION OF THIS SIDEWALK ADJACENT TO THE SERVICE DRIVE AS SHOWN ON SHEET 2.
4. A WAIVER OF THE TRAIL REQUIREMENT ALONG ARLINGTON BOULEVARD, IN ACCORDANCE WITH SECTION 17-201 (2) OF THE ZONING ORDINANCE, SECTION 8-0201.3 OF THE PUBLIC FACILITIES MANUAL AND THE COUNTYWIDE TRAILS PLAN IN LIEU OF THE SIDEWALK PROPOSED ON SITE. THE APPLICANT RESPECTFULLY REQUESTS THIS WAIVER DUE TO EXISTING SITE CONSTRAINTS AND ADJACENT DEVELOPMENT PATTERNS. SPECIFICALLY, THE ADJACENT PROPERTIES ARE CURRENTLY DEVELOPED AND FUTURE REDEVELOPMENT MAY BE UNLIKELY. ALSO, AN ADJACENT TRAIL CONNECTION DOES NOT CURRENTLY EXIST. THEREFORE THIS PROPOSED TRAIL WILL HAVE LIMITED USEFULNESS AND WILL BE UNNECESSARY IN LIGHT OF THE PROPOSED 5' SIDEWALK. ADDITIONALLY, DUE TO THE EXISTING STEEP TOPOGRAPHY, FLOODPLAIN, RPA, AND EXISTING NATURE TREE STAND, A CONNECTION WILL BE DIFFICULT TO MAKE TO THE PROPOSED TRAIL IF THE ADJACENT KENA TEMPLE SITE IS REDEVELOPED. IN ORDER TO MAKE THIS CONNECTION A NUMBER OF TREES WILL NEED TO BE REMOVED IN ORDER TO CONSTRUCT SAID TRAIL IN ACCORDANCE WITH FAIRFAX COUNTY REQUIREMENTS.

5. A WAIVER OF THE CONSTRUCTION ALONG ARLINGTON BOULEVARD (ROUTE 50) (SECTION 17-201(4) OF THE ZONING ORDINANCE) AS SET FORTH BY THE COMPREHENSIVE PLAN. THE APPLICANT RESPECTFULLY REQUESTS THE WAIVER DUE TO THE FOLLOWING: THE AREA DESIGNATED AS A THIRD LANE CURRENTLY OPERATES AS A RIGHT TURN LANE AND PROVIDES NO ADDITIONAL CAPACITY AT THIS TIME. SECOND, LDC CONTACTED THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) WHO INDICATED THAT DESIGN PLANS TO CONSTRUCT A THIRD LANE ALONG THIS PORTION OF ARLINGTON BLVD. DO NOT CURRENTLY EXIST. THIRD, THE FRONTAGE OF THE SUBJECT PROPERTY IS NOT COINCIDENT WITH THE PROPERTY TO THE EAST AND THIS AND ANY IMPROVEMENTS ALONG THE FRONTAGE WILL NOT CONNECT TO THE EXISTING TURN LANE IN FRONT OF KENA TEMPLE.
6. THE APPLICANT RESPECTFULLY REQUESTS PERMISSION TO ENCROACH INTO THE RESOURCE PROTECTION AREA AS SHOWN ON SHEETS 2, 5, & 6. A SEPARATE RPA EXEMPTION PER CHAPTER 118-5-2(B) OF THE COUNTY CODE AND WATER QUALITY IMPACT ANALYSIS PER CHAPTER 118-4-1 OF THE COUNTY CODE WILL BE PROVIDED IN CONJUNCTION WITH THIS REZONING WHICH WILL PROVIDE JUSTIFICATION FOR THIS REQUEST.
7. THE APPLICANT RESPECTFULLY REQUESTS PERMISSION TO ENCROACH INTO THE MAJOR FLOODPLAIN AS SHOWN ON SHEETS 2, 5 & 6 PER SECTION 2-903(7) OF THE ZONING ORDINANCE. A SEPARATE LETTER OF PERMISSION WILL BE SUBMITTED IN CONJUNCTION WITH THE SITE PLAN.
8. THE APPLICANT RESPECTFULLY REQUESTS A WAIVER OF SECTION 9-610 OF THE ZONING ORDINANCE FOR THE MINIMUM LOT WIDTH FOR A CORNER LOT FOR LOTS 3 AND 11 FROM A MINIMUM OF 70' TO 64'.



VICINITY MAP
SCALE: 1" = 500'



SOILS MAP
SCALE: 1" = 500'

SOIL INFORMATION

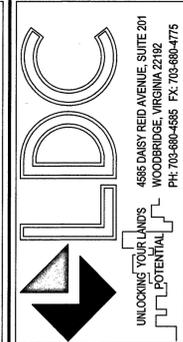
SOIL #	SOIL NAME	PROBLEM CLASS	FOUNDATION SUPPORT	DRAINAGE	EROSION POTENTIAL
29	CODORUS SILT LOAM	III	POOR	POOR	LOW
95	URBAN LAND	IVB	N/A	N/A	N/A
101	URBAN LAND-WHEATON COMPLEX	IVB	GOOD	FAIR	HIGH

TABULATIONS

SITE AREA = 161,944 SF OR 3.71772 ACRES
 EXISTING ZONING = R-1
 PROPOSED ZONING = R-5
 PROPOSED USE = SINGLE FAMILY DETACHED
 MINIMUM DISTRICT SIZE = 4 ACRES (SEE WAIVER NO. 1 THIS SHEET)
 MAXIMUM BUILDING HEIGHT REGD. = 35 FEET
 MAXIMUM BUILDING HEIGHT PROVIDED = 35 FEET
 MINIMUM LOT SIZE REQUIRED = 15,000 SF
 MINIMUM LOT SIZE PROVIDED = 15,000 SF
 MINIMUM YARDS:
 REQUIRED:
 CONTROLLED BY A 15% ANGLE OF BULK PLANE, BUT NOT LESS THAN 5 FEET
 CONTROLLED BY A 15% ANGLE OF BULK PLANE, BUT NOT LESS THAN 10 FEET
 CONTROLLED BY A 30% ANGLE OF BULK PLANE, BUT NOT LESS THAN 20 FEET
 PROVIDED:
 FRONT = 20 FEET
 SIDE = 8 FEET
 REAR = 25 FEET
 MIN. LOT WIDTH = 50' INT./46' CORNER (SEE WAIVER REQUEST NO. 8 THIS SHEET)
 OPEN SPACE REQUIRED: 40,486 SF (25%)
 PARKING:
 REQUIRED (2.7 SPACES/UNIT) = 38 SPACES
 PROVIDED (4 SPACES/UNIT) = 56 SPACES
 OFFSTREET PARKING = 18 SPACES
 TOTAL = 74 SPACES
 DENSITY:
 PERMITTED (18 UNITS) = 5.00 DU/AC
 PROPOSED (14 UNITS) = 3.76 DU/AC

SHEET INDEX

1. COVER SHEET
2. GENERALIZED DEVELOPMENT PLAN
3. TRANSPORTATION PLAN
4. LANDSCAPE PLAN/TREE PRESERVATION PLAN
5. TREE INVENTORY
6. INVASIVE SPECIES MANAGEMENT PLAN
- 7-8. R.P.A./E.G.C RESTORATION PLAN
9. EXISTING VEGETATION MAP
- 10-11. STORMWATER MANAGEMENT INFORMATION
12. ELEVATIONS



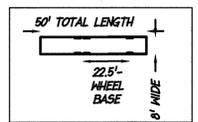
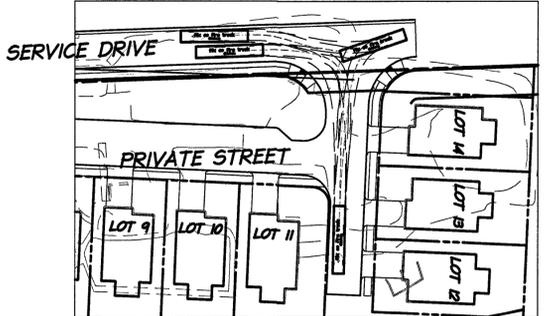
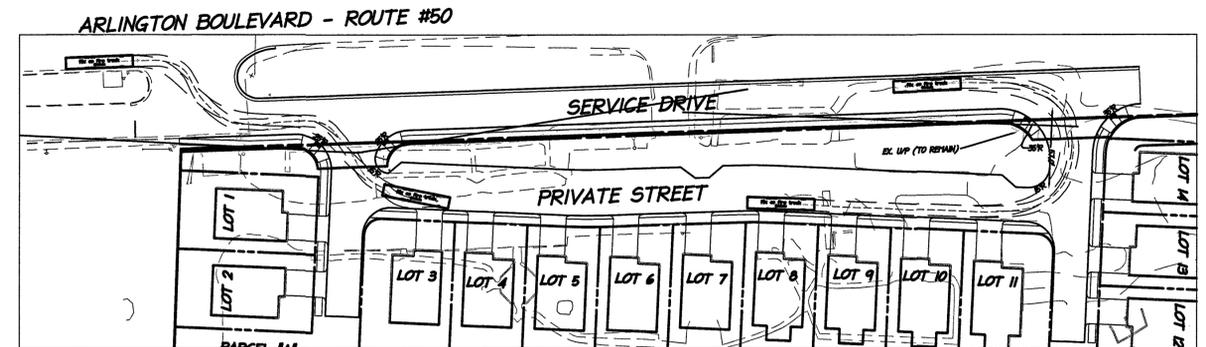
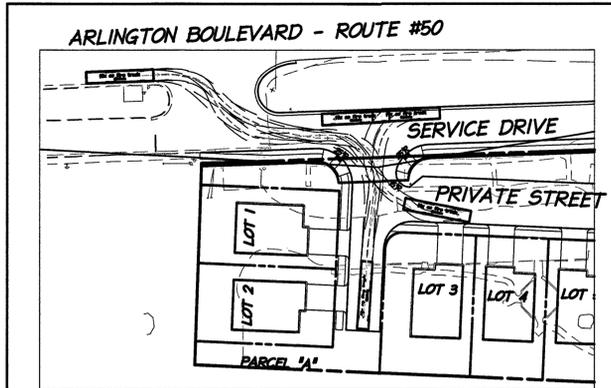
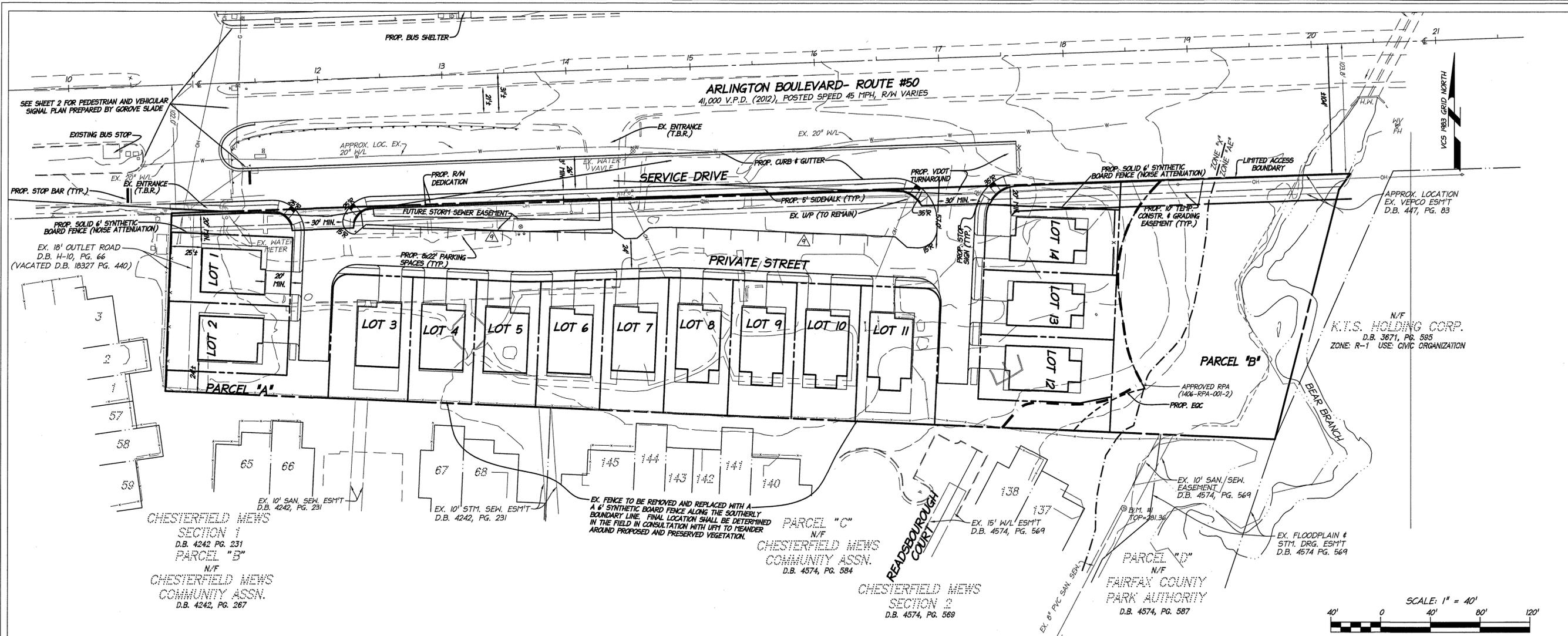
COVER SHEET
CRAVEN PROPERTY
 PROVIDENCE DISTRICT
 FAIRFAX COUNTY, VIRGINIA

DATE	REVISION	APPROVED BY
11/13	KTA	1
12/13	KTA	2
1/14	KTA	3
2/14	KTA	4
3/14	KTA	5
4/14	KTA	6
5/14	KTA	7
6/14	KTA	8
7/14	KTA	9
8/14	KTA	10
9/14	KTA	11
10/14	KTA	12

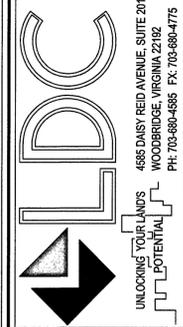
I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.



SCALE: N/A
 SHEET 1 of 12
 DATE: JULY, 2013
 DRAFT: MEP
 CHECK: MTM
 FILE NUMBER: 05125-6-0 3B



EMERGENCY ACCESS DETAILS
SCALE: 1" = 60'



TRANSPORTATION PLAN

CRAVEN PROPERTY

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

NO.	DATE	DESCRIPTION	REVISION APPROVED BY:	APPROVED DATE
1	7/1/13	MEP		
2	7/1/13	NO CHANGES		
3	7/1/13	REVISED LAYOUT		
4	7/1/13	REVISED LAYOUT		
5	7/1/13	ADDRESS LAYOUT		
6	7/1/13	ADDRESS LAYOUT		
7	7/1/13	ADDRESS STAFF COMMENTS		
8	7/1/13	ADDRESS STAFF COMMENTS		

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.



SCALE: AS NOTED

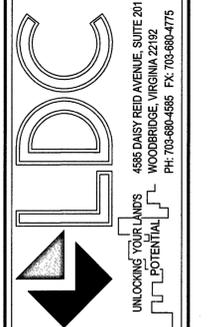
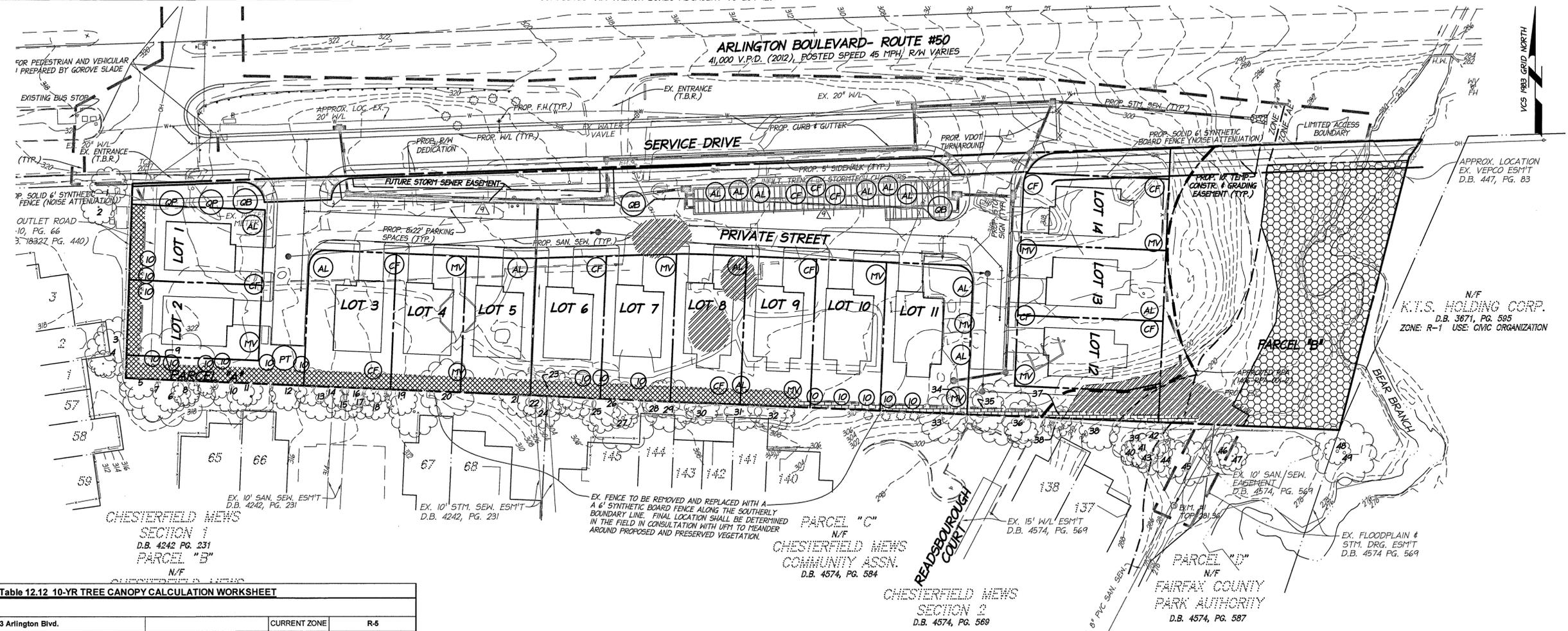
SHEET 3 OF 12

DATE: JULY, 2013
DRAFT: MEP CHECK: MTM
FILE NUMBER: 05125-6-0 3B

10 Year Canopy Exhibit Key		
	Tree Canopy to be preserved	15,760 sq. ft.
	Tree Canopy to be removed	1,054 sq. ft.
	Total	16,814 sq. ft.

AREA A - LIMITS OF CLEARING & GRADING ±10' FROM PROPERTY LINE
AREA B - LIMITS OF CLEARING & GRADING ±5' FROM PROPERTY LINE
 THE PROPOSED ROOT PRUNING IN AREA B SHALL BE CONDUCTED 7' OFF THE PROPERTY LINE AND THE SEWER CONSTRUCTION COMPLETED VIA TRENCH BOXES ADJACENT TO LOT 12.

NOTE: A ROOT BARRIER WILL BE PROVIDED BETWEEN TREE PLANTING AREA AND STORMTECH CHAMBERS WHERE SOIL COVER IS LESS THAN 4" OR AS DIRECTED BY URBAN FORESTER.



LANDSCAPE AND TREE PRESERVATION PLAN
CRAVEN PROPERTY
 PROVIDENCE DISTRICT
 FAIRFAX COUNTY, VIRGINIA

Table 12.12 10-YR TREE CANOPY CALCULATION WORKSHEET

Project:	9023 Arlington Blvd.	CURRENT ZONE:	R-5
TAX MAP #:	91-3-(17)-23	SITE AREA (SF):	161944
STEP			
A. Tree Preservation Target and Statement			
A	Pre-development area of existing tree canopy (from Existing Vegetation Map)	=	25328
B	Percentage of gross site area covered by existing tree canopy	=	16%
C	Percentage of 10-year canopy required for site (see Table 12.4)	=	20%
D	Percentage of the 10-year canopy requirement that should be met through tree preservation	=	16%
E	Proposed percentage of canopy requirement that will be met through tree preservation	=	48%
F	Has the Tree Preservation Target minimum been met?	(YES/NO)	YES
G	If NO for line F, then a request to deviate from the Tree Preservation Target shall be provided on the plan that states one or more of the justifications listed in §12-0507.3 along with a narrative that provides a site-specific explanation of why the Tree Preservation target cannot be met. Provide sheet number where deviation request is located.		N/A
H	If step G requires a narrative, it shall be prepared in accordance with §12-0507.4		N/A

STEP	TOTALS
B. Tree Canopy Requirement	
B1	Identify gross site area = 161944 § 12-0510.1A
B2	Subtract area dedicated to parks, road frontage and = 0 § 12-0510.1B
B3	Subtract area of exemptions = 0 § 12-0510.1C(1) through § 12-0510.1C(6)
B4	Adjusted gross site area (B1-B2) = 161944
B5	Identify site's zoning and/or use = R-5
B6	Percentage of 10-year tree canopy required = 20% § 12-0509.1 and Table 12.4
B7	Area of 10-year canopy required (B4 x B6) = 32389
B8	Modification of 10-year Tree Canopy Requirements requested? = NO Yes or No
B9	If B8 is YES, then list plan sheet where modification request is located = N/A Sheet Number

C. Tree Preservation	
C1	Tree Preservation Target area = 5182.2
C2	Total existing canopy area meeting standards of § 12-0200 = 0
C3	C2 x 1.25 = 0 § 12-0509.3B
C4	Total canopy area provided by unique or valuable forest or woodland communities = 0
C5	C4 x 1.5 = 0 § 12-0509.3B(1)
C6	Total canopy area provided by "Heritage," "Memorial," "Specimen," or "Street" trees = 0
C7	C6 x 1.5 to 3.0 = 0 § 12-0509.3B(2)
C8	Canopy area of trees within Resource Protection Areas (RPA) and 100-year floodplains = 0
C9	C8 x 1.0 = 15760 § 12-0509.3C(1)
C10	Total of C3, C5, C7 and C9 = 15760 If area of C10 is less than B7 remainder of requirement must be met through tree planting - go to D

D. Tree Planting			
D1	Area of canopy to be met through tree planting (B7-C10)	=	27000.0
D2	Area of canopy planted for air quality benefits	=	0
D3	D2 x 1.25	=	0 § 12-0509.4B(1)
D4	Area of canopy planted for energy conservation	=	0
D5	D4 x 1.5	=	0 § 12-0509.4B(2)
D6	Area of canopy planted for water quality benefits	=	0
D7	D6 x 1.25	=	0 § 12-0509.4B(3)
D8	Area of canopy planted for wildlife benefits	=	7900
D9	D8 x 1.5	=	11850 § 12-0509.4B(4)
D10	Area of canopy provided by native trees	=	0
D11	D10 x 1.5	=	0 § 12-0509.4B(5)
D12	Area of canopy provided by improved cultivars and varieties	=	0
D13	D12 x 1.25	=	0 § 12-0509.4B(6)
D14	Area of canopy provided through tree seedlings	=	0 § 12-0509.4D(1)
D15	D14 x 1.0	=	0
D16	Area of canopy provided through native shrubs or woody seed mix	=	0 § 12-0509.4D(1)a
D16	D16 x 1.0	=	0
D17	Total tree canopy area provided through tree planting	=	11850 SF + 15150 SF (INSIDE RPA)
D18	Is an offsite planting relief requested?	No	Yes or No
D19	Tree Bank or Tree Fund?	No	§ 12-0511
D20	Canopy area requested to be provided through offsite banking or tree fund	=	0
D21	Amount to be deposited into the Tree Preservation and Planting Fund	=	0

E. Total of 10-year Tree Canopy Provided			
E1	Total of canopy area provided through tree preservation (C10)	=	15760
E2	Total of canopy area provided through tree planting (D17)	=	27000
E3	Total of canopy area provided through offsite mechanism (D19)	=	No
E4	Total of 10-year Tree Canopy Provided	=	42760
		Total of E1 through E3:	Area should meet or exceed area in B7

PFM 12-0516.4 Replanting for 10 Year Canopy Table (Includes Only Trees Planted Outside the RPA)										
Planting Schedule										
Symbol	Species (Common name)	Quantity	Planting Size	Type	Spacing	10 Year Canopy Coverage (sq. ft.)	10 Year Credit total	Multiplier	Total Replanting Credit	Comments
IO	Ilex opaca (American holly)	17	7-8" Ht.	B&B	As Shown	100	1700	1.5	2550	Full to ground, single stem
QP	Quercus phellos (willow oak)	2	3" Cal.	B&B	As Shown	250	500	1.5	750	Full, single stem
AR	Acer rubrum (red maple)	0	3" Cal.	B&B	As Shown	250	0	1.5	0	Full, single stem
BN	Betula Nigra (River Birch)	0	3" Cal.	B&B	As Shown	175	0	1.5	0	Full, single stem
QB	Quercus bicolor (S white oak)	3	3" Cal.	B&B	As Shown	250	750	1.5	1125	Full, single stem
PT	Pinus taeda (loblolly pine)	1	7-8" Ht.	B&B	As Shown	200	200	1.5	300	Full to ground, single stem
AL	Amelanchier laevis (Allegheny serviceberry)	14	3" Cal.	B&B	As Shown	125	1750	1.5	2625	
CF	Cornus florida (flowering dogwood)	13	3" Cal.	B&B	As Shown	125	1625	1.5	2437.5	
MV	Magnolia virginiana (sweetbay magnolia)	11	3" Cal.	B&B	As Shown	125	1375	1.5	2062.5	
Totals									7900	11850

County Code 118-3-3(f) CBAY Planting in RPA (12,450 sq.ft.) Used to replant in RPA										
Planting Schedule										
Symbol	Species (Common name)	Quantity	Planting Size	Type	Spacing	10 Year Canopy Coverage (sq. ft.)	10 Year Credit total	Multiplier	Total Replanting Credit	Comments
QP	Quercus phellos (willow oak)	7	3" Cal.	B&B	As Shown	250	1750	1	1750	Full, single stem
AR	Acer rubrum (Red maple)	13	3" Cal.	B&B	As Shown	250	3250	1	3250	Full, single stem
BN	Betula Nigra (River Birch)	5	3" Cal.	B&B	As Shown	175	875	1	875	Full, single stem
PT	Pinus taeda (loblolly pine)	1	7-8" Ht.	B&B	As Shown	200	1400	1	1400	Full to ground, single stem
Overstory Trees		32							1	0
AL	Amelanchier laevis (Allegheny serviceberry)	21	3" Cal.	B&B	As Shown	125	2625	1	2625	
CF	Cornus florida (Flowering dogwood)	8	3" Cal.	B&B	As Shown	125	1000	1	1000	
MV	Magnolia virginiana (Sweetbay magnolia)	18	3" Cal.	B&B	As Shown	125	2250	1	2250	
AT	Asimina triloba (Paw paw)	16	3" Cal.	B&B	As Shown	125	2000	1	2000	
Understory Trees		63								
IV	Itea virginica (Virginia sweetspire)	92	3 gal.	cont	4' O.C.	n/a				Full to ground
LB	Lindera benzoin (Spicebush)	75	3 gal.	cont	4' O.C.	n/a				Full to ground
RV	Rhododendron vicosum (Swamp azalea)	70	3 gal.	cont	4' O.C.	n/a				Full to ground
VD	Viburnum dentatum (Arrowwood viburnum)	45	3 gal.	cont	6' O.C.	n/a				Full to ground
SC	Sambucus canadensis (Elderberry)	60	3 gal.	cont	6' O.C.	n/a				Full to ground
Shrubs		345								
Totals									15150	15150

DATE	DESCRIPTION	REVISION APPROVED BY:	ENGINEER
1/14/14	ISSUE SHEET		
2/14/14	REVISED CHARTS		
3/14/14	CLARIFIED LOC. LOCATION ON SOUTH & WEST		
3/14/14	REVISED LANDSCAPING		
4/14/14	REVISED LANDSCAPING		
5/14/14	REVISED LANDSCAPING		
6/14/14	REVISED LANDSCAPING		
7/14/14	REVISED LANDSCAPING		
8/14/14	REVISED LANDSCAPING		
9/14/14	REVISED LANDSCAPING		
10/14/14	REVISED LANDSCAPING		
11/14/14	REVISED LANDSCAPING		
12/14/14	REVISED LANDSCAPING		

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.

SCALE: 1" = 40'

SHEET 4 OF 12

DATE: JULY, 2013

DRAFT: MTP CHECK: MTM

FILE NUMBER: 05125-6-0 3B

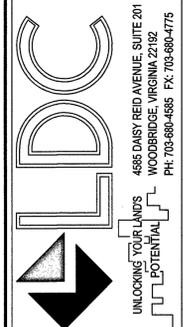
Tag #	Species	Size	**TRZ	***Condition	Canopy Position	Problems	Status	Activities							
								Hand Remove	Root Prune	Mulch	Fertilize	Prune	Treat Pests	Cable	
		*DBH (in.)	R (ft.)	%											
1	scarlet oak	14	14	70	edge	topped by power line trimming	preserve	X	X	X	C				
2	white oak	10	10	60	edge	tree is covered in vines and very poor candidate for preservation	preserve	X		X	C				
3	red maple	18	12	60	edge	broken top, poor form	preserve	X		X	C				
4	apple	18	10	50	edge	This tree is likely the result of graft failure of a previously planted crabapple	preserve	X		X	C				
5	red maple	18	18	70	edge		preserve			X	C				
6	red maple	14	14	70	dominant		preserve			X	C				
7	white ash	26	26	60	dominant	Large deadwood, broken tops	preserve			X	C				
8	red maple	12	12	65	dominant	heavy vines	preserve			X	C				
9	redcedar	12	12	60	dominant	heavy vines	preserve			X	C				
10	red maple	18	18	75	dominant	heavy vines	preserve			X	C				
11	red maple	12	12	70	dominant	leans into site	preserve			X	C				
12	red maple	18	18	50	n/a	broken top or cut tops	preserve			X	C				
13	red maple	14	14	55	intermediate	broken top or cut tops	preserve			X	C				
14	red maple	14	14	60	intermediate	broken top or cut tops	preserve			X	C				
15	red maple	16	16	80	dominant		preserve			X	C				
16	red maple	12	12	70	edge	Toped	preserve			X	C				
17	red maple	14	14	70	dominant		preserve			X	C				
18	red maple	14	14	75	dominant	broken top	preserve			X	C				
19	red maple	14	14	60	intermediate		preserve			X	C				
20	pin oak	12	12	75	isolated	trunk decay and trunk deformity	preserve			X	C				
21	red maple	16	16	50	isolated	storm damage	preserve			X	C				
22	red maple	12	12	50	intermediate	stubs from large limb removal	preserve			X	C				
23	red maple	18	18	65	dominant	topped	preserve			X	C				
24	red maple	18,12	14	50	edge		preserve			X	C				
25	red maple	12	12	70	codominant		preserve			X	C				
26	red maple	16	16	70	edge		preserve			X	C				
27	tulip poplar	24	24	80	dominant		preserve			X	C				
28	red maple	14	14	70	dominant		preserve			X	C				
29	red maple	14	14	70	dominant		preserve			X	C				
30	red maple	12,12,12	16	70	dominant	heavy vines, decay, storm damage	preserve			X	C				
31	red maple	14	14	70	dominant		preserve			X	C				
32	red maple	18,18,18,4	20	70	dominant		preserve			X	C				

33	white pine	14	14	60	codominant	thin, stressed	preserve		X	X	C				
34	red maple	12	12	80	dominant		preserve		X	X	C				
35	tulip poplar	14	14	70	dominant		preserve		X	X	C				
36	red maple	20	20	75	dominant		preserve		X	X	C				
37	red maple	10	10	60	edge		preserve		X	X	C				
38	red maple	16	16	65	isolated		preserve		X	X	C				
39	black cherry	22	22	70	dominant		preserve		X	X	C				
40	red maple	10	10	65	intermediate		preserve		X	X	C				
41	red maple	14	14	70	intermediate		preserve		X	X	C				
42	red maple	16	16	65	intermediate		preserve		X	X	C				
43	tulip poplar	16,16	16	75	dominant		preserve		X	X	C				
44	tulip poplar	16	16	75	codominant		preserve		X	X	C				
45	red maple	18	18	80	codominant		preserve		X	X	C				
46	red maple	14	14	65	codominant		remove								
47	red maple	12.0	12.0	70	codominant		remove								
48	red maple	24.0	24.0	0	dead	DEAD	preserve								
49	red maple	24.0	24.0	60	dominant	stressed	preserve								

**DBH = Diameter at Breast Height (measured 4.5 feet above ground)
 **TRZ = Typical Root Zone (1 foot of radius per inch of tree diameter)
 ***Condition ratings provided as percentages based on methods outlined in the latest edition of the Guide for Plant Appraisal, published by the International Society of Arboriculture
 TRZ for trees with multiple stems were calculated based on the diameter of a tree with the basal area equivalent to sum of the basal areas for all stems measured

NOTES:

- THE FOLLOWING ITEMS WILL BE ADDRESSED REGARDING ALL OFF-SITE TREES. THESE NOTES WILL BE IN ADDITION TO OTHER ITEMS REQUIRED BY THE GENERAL NARRATIVE.
- NO WORK WILL BE PERFORMED ON ADJACENT PROPERTIES WITHOUT WRITTEN CONSENT FROM THE OWNERS.
- ADDITIONAL ITEMS RECOMMENDED IN THE INVENTORY OF OFF-SITE TREES SHOULD BE ADDRESSED IN ORDER TO IMPROVE AND MAXIMIZE THE POTENTIAL FOR THE SURVIVAL OF OFF-SITE TREES.
- EROSION AND SEDIMENT CONTROL, ROOT PRUNING, AND TREE PRESERVATION DEVICES WILL BE CONDUCTED OR INSTALLED TEN FEET FROM THE PROPERTY LINE TO PREVENT ROOT DAMAGE TO OFF-SITE TREES.
- COORDINATE WORK WITH THE NEIGHBORS. SOME OF THE TREES ARE IN VERY POOR CONDITION AND ARE CANDIDATES FOR REMOVAL REGARDLESS OF THIS PLAN.
- IMPLEMENT THE TREE PRESERVATION PLAN PREPARED FOR THESE TREES. THEY ARE MOSTLY SPECIES VERY TOLERANT OF THIS TYPE OF ACTIVITY WITHOUT EXPECTING MUCH LOSS. PRUNING SHOULD BE PERFORMED TO REMOVE DEADWOOD, REMOVE STUBS, AND CORRECT STORM DAMAGE. VINES SHOULD ALSO BE REMOVED AT THIS TIME. FERTILIZATION WITH A BIO-STIMULANT WILL HELP IMPROVE GROWTH AND VIGOR.
- FINAL GRADING SHOULD BE ACCOMPLISHED IN A MANNER THAT PRESERVES THE BLUE STONE PAD WITHIN THE AREA. FINE GRADING SHOULD BE ACCOMPLISHED IN A MANNER THAT PROTECTS ROOTS WITHIN THE TEN FOOT AREA ADJACENT TO THE PROPERTY LINE.



TREE INVENTORY

CRAVEN PROPERTY

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

NO.	DATE	DESCRIPTION	REVISION	APPROVED BY:
1				
2				
3				
4				
5				
6				

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.



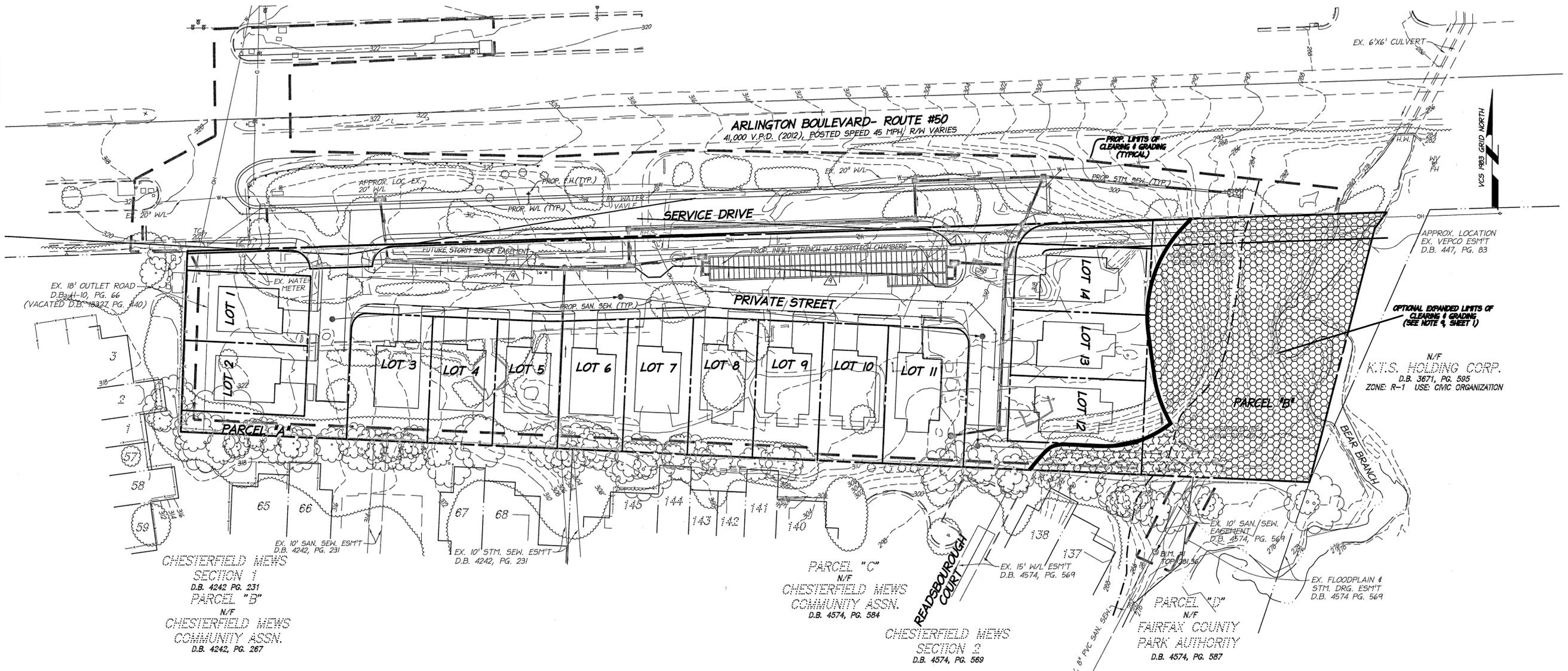
SCALE: N/A

SHEET 5 of 12
 DATE: JULY, 2013
 DRAFT: MEF CHECK: MTTM
 FILE NUMBER: 05125-6-0 3B

INVASIVE SPECIES MANAGEMENT PLAN

CRAVEN PROPERTY

PROVIDENCE DISTRICT
 FAIRFAX COUNTY, VIRGINIA



INVASIVE SPECIES MANAGEMENT NOTES

- a. The methods of control will be finalized in coordination with the UFMID at the time of site plan submission. The methods will vary throughout the site, in the western area of the RPA on the steep fill slope currently containing few trees to be preserved, mechanical means may be used to remove the existing vegetation and prepare the site for replanting. From the toe of the slope to the stream, only hand tools and herbicides will be used to manage the undesirable vegetation. This necessary because the soils within the fill slope area are very poor and might not support replanting without significant treatment and because the density of undesirable vegetation is greater than can be economically completed with had methods.
 - i. Where mechanical means are allowed, a small dozer or bobcat may be used to push, pull, cut, chop, or otherwise remove the vegetation within the area.
 - ii. Where only hand methods are allowed, hand tools such as chain saws, weed eaters, axes, machetes and other similar tools will be used to hand cut vegetation to be removed.
 - iii. The use of hand tools in the indicated area will prevent damage to the trees and desirable vegetation to be preserved.
 - iv. There are no trees noted within the fill slope area to be preserved. The quality in this area is extremely poor due to the heavy vine growth. This area will be reforested using landscape stock. A plan for the reforestation of this area will be submitted to the UFMID for review during the site plan approval process.
 - v. All undesirable vegetation removed from the area will be disposed of offsite according to local jurisdictional requirements in an approved land fill or other recycling facility.
- b. Chemical controls will be utilized as necessary to treat sprouting vegetation within the entire area. The first treatment will be made based on inspection by the qualified specialist. Monitoring for re-growth of undesirable vegetation will occur at least four times within each growing seasons associated with the development. Treatments will be made as necessary subsequent to each visit.
- c. In general, treatment of the undesirable vegetation will begin during Phase I EKS control and initial clearing and grading and in conjunction with other tree preservation activities. Mechanical clearing will occur only during phase I EKS controls and will require the use of additional EKS measures to protect the flood plain and stream from siltation and runoff. Hand methods will be used during initial Phase I EKS activities and continue as necessary for the duration of the project until accepted by UFMID.
- d. The cleared area along the fill slope will be planted using B&B nursery stock. The remaining areas will be supplemented with nursery stock to restore the RPA to a suitable condition. A planting plan for the areas will be submitted to UFMID during the site plan approval process.
- e. Monitoring for re-growth of exotics and invasives will be made specifically four times during each growing seasons over which the project continues or for a period of two years from the date of the first treatment whichever is less. In addition, the monthly monitoring provided for with the Tree Preservation Plan will address undesirable vegetation as necessary for its management and control.
- f. The undesirable vegetation management will continue from initial clearing and grading until Bond Release or release of the Conservation Deposit or prior to release if the undesirable vegetation appears to have been eliminated based on documentation provided by the Project Arborist and an inspection by UFMID Staff.
- g. The plan to be prepared shall include a map of treatment areas and this map shall be prepared by a Virginia certified pesticide applicator as part of the site/subdivision plan submission for approval by the County and F.C.P.A.
- h. All herbicides shall be applied by a Virginia certified pesticide applicator and all applications shall be done in accordance with all applicable regulations.
- i. The plan shall be prepared utilizing the following Miller, James H; Manning, Steven T; 2010, A Management Guide for Invasive plants in Souther Forests, Gen. Tech. Rep. SRS-131, Asheville, NC: U.S. Dept. of Agriculture Forest Service, Souther Research Station.

LEGEND

- AREA OF RPA WHERE MECHANICAL MEANS FOR CONTROLLING UNDESIRABLE VEGETATION IS ACCEPTABLE.
- AREA OF RPA THAT WILL USE HAND TOOLS AND HAND METHODS FOR CONTROL OF UNDESIRABLE VEGETATION.

NO.	DATE	DESIGN	NO.	DESCRIPTION	REVISION APPROVED BY:	APPROVED DATE
1/14	1/14/14	3	NEW SHEET			
2/14	2/14/14	4	REVISE HATCHING			
3/14	3/14/14	5	REVISED LAYOUT			
4/14	4/14/14	6	REVISED LAYOUT			
5/14	5/14/14	7	ADDRESS STATE COMMENTS			
6/14	6/14/14	8	ADDRESS STATE COMMENTS			

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.



SCALE:
1" = 40'

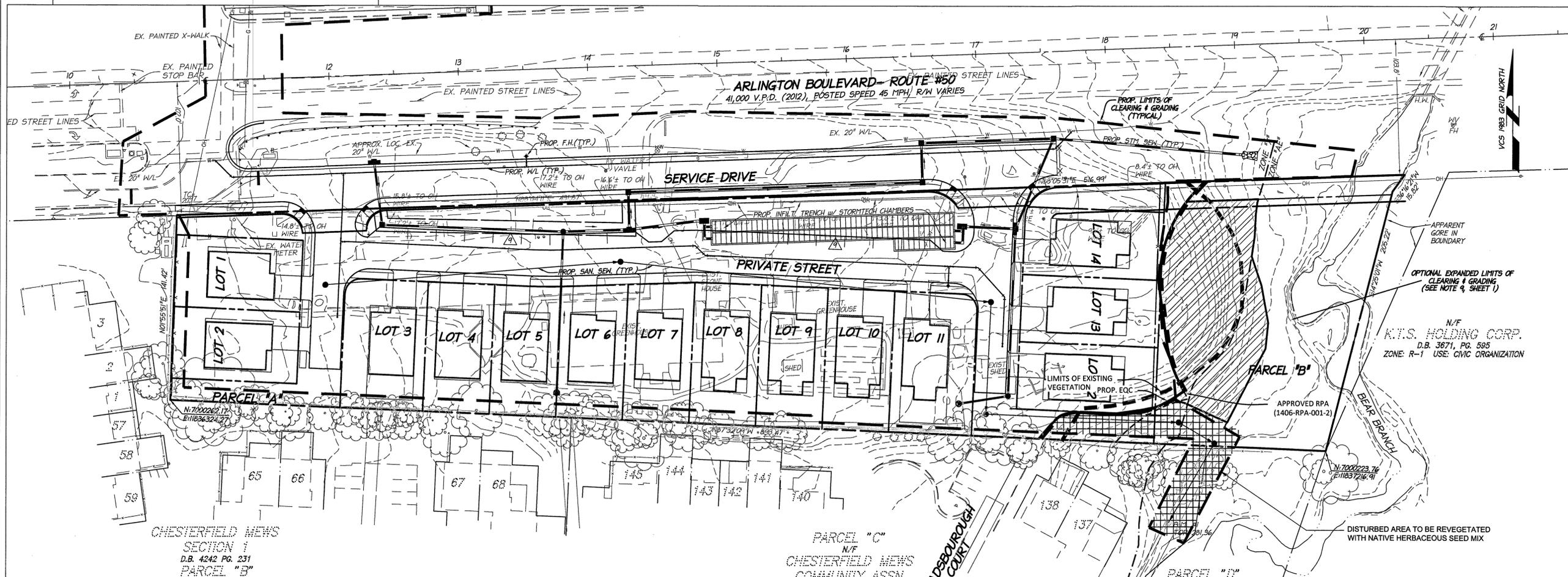
SHEET 6 OF 12

DATE: JULY 2013
 DRAFT: CHECK: MEP MTM
 FILE NUMBER: 05125-6-0-3B



LEGEND

- LIMITS OF CLEARING AND GRADING
- EQC BOUNDARY
- PROPOSED RE-SEEDING AREA (NOTE 1)
- PROPOSED PLANTING AREA (NOTE 2)



County Code 118-3-3(f) CBA Planting in RPA (12,450 sq.ft.) Used to replant in RPA

Planting Schedule

Symbol	Species (Common name)	Quantity	Planting Size	Type	Spacing	10 Year Canopy Coverage (sq. ft.)	10 Year Credit total	Multiplier	Total Replanting Credit	Comments
QP	Quercus phellos (willow oak)	72	2-2.5" Cal.	B&B	As Shown	200	1400	1	1400	Full, single stem
AR	Acer rubrum (Red maple)	13	2-2.5" Cal.	B&B	As Shown	200	2600	1	2600	Full, single stem
BN	Betula Nigra (River Birch)	5	2-2.5" Cal.	B&B	As Shown	150	750	1	750	Full, single stem
PT	Pinus taeda (Loblolly pine)	7	7-8" Ht.	B&B	As Shown	200	1400	1	1400	Full to ground, single stem
Overstory Trees										
AL	Amelanchier laevis (Allegheny serviceberry)	21	2-2.5" Cal.	B&B	As Shown	100	2100	1	2100	
CF	Cornus florida (Flowering dogwood)	8	2-2.5" Cal.	B&B	As Shown	100	800	1	800	
MV	Magnolia virginiana (Sweetbay magnolia)	18	2-2.5" Cal.	B&B	As Shown	100	1800	1	1800	
AT	Asimina triloba (Paw paw)	16	2-2.5" Cal.	B&B	As Shown	100	1600	1	1600	
Understory Trees										
IV	Ilex virginica (Virginia sweetspire)	93	3 gal.	cont.	4" O.C.	n/a				Full to ground
LB	Lindera benzoin (Spicebush)	75	3 gal.	cont.	4" O.C.	n/a				Full to ground
RV	Rhododendron vaseorum (Swamp azalea)	70	3 gal.	cont.	4" O.C.	n/a				Full to ground
VD	Viburnum dentatum (Arrowwood viburnum)	45	3 gal.	cont.	6" O.C.	n/a				Full to ground
SC	Sambucus canadensis (Elderberry)	60	3 gal.	cont.	6" O.C.	n/a				Full to ground
Shrubs										
Totals		345					12450		12450	

RIPARIAN SEED MIX (ERNMX-178)

- 20% Virginia Wildrye, PA Ecotype (Elymus virginicus, PA Ecotype)
- 16% Indiangrass, PA Ecotype (Sorghastrum nutans, PA Ecotype)
- 15% Deertongue, 'Tioga' (Panicum clandestinum (Dichanthelium c.), 'Tioga')
- 12.5% Big Bluestem, 'Niagara' (Andropogon gerardii, 'Niagara')
- 8% Switchgrass, 'Carthage', NC Ecotype (Panicum virgatum, 'Carthage', NC Ecotype)
- 5% Partridge Pea, PA Ecotype (Chamaecrista fasciculata (Cassia f.), PA Ecotype)
- 4% Autumn Bentgrass, PA Ecotype (Agrostis perennans, PA Ecotype)
- 4% Blue Vervain, PA Ecotype (Verbena hastata, PA Ecotype)
- 3% Blackeyed Susan, Coastal Plain NC Ecotype (Rudbeckia hirta, Coastal Plain NC Ecotype)
- 3% Oxeye Sunflower, PA Ecotype (Helianthus annuus, PA Ecotype)
- 2.3% New England Aster, PA Ecotype (Aster novae-angliae (Symphyotrichum n.), PA Ecotype)
- 2% Soft Rush (Juncus effusus)
- 1% Boneset, PA Ecotype (Eupatorium perfoliatum, PA Ecotype)
- 1% Joe Pye Weed, PA Ecotype (Eupatorium fistulosum, PA Ecotype)
- 1% Blue False Indigo, Southern WV Ecotype (Baptisia australis, Southern WV Ecotype)
- 1% New York Ironweed, PA Ecotype (Vernonia noveboracensis, PA Ecotype)
- 0.5% Great Blue Lobelia, PA Ecotype (Lobelia siphilitica, PA Ecotype)
- 0.5% Wild Bergamot, PA Ecotype (Monarda fistulosa, PA Ecotype)
- 0.2% Grassleaf Goldenrod, PA Ecotype (Euthamia graminifolia (Solidago g.), PA Ecotype)
- Total: 100%

RPA Restoration Calculations (Per PFM 12-0516.4)

Proposed Disturbance of EQC Area (sq. ft.)	13,800
Trees 2" caliper or greater required (25% of disturbed area)	3450
Shrubs (25 per 1000 sq. ft.)	345
Seedlings (10 per 100 square feet)	1380

Planting Provided

Trees 2" Caliper or greater (sq. ft.) = (90% of area) This is in excess and is also used to meet the overall canopy cover requirements for this area than seedlings given the size and scale of the site.	12450
Shrubs	345
Seedlings - Seedlings are not being proposed as the entire area is being proposed to be planted with 2" caliper nursery stock. Given the nature of this site, seedlings are not recommended.	0

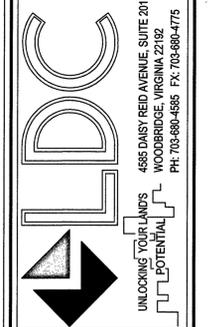
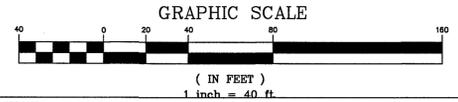
RPA Restoration Calculations (Per CBPO, Ch. 118-3(f))

Proposed Disturbance of EQC Area (sq. ft.)	13,800
Overstory Trees 2" caliper or greater required (100 trees per acre)	32
Understory trees (200 per acre)	63
Shrubs (1,089 shrubs per acre)	345
Planting Provided	
Overstory Trees 2" Caliper or greater	32
Understory Trees	63
Shrubs	345

- NOTES:**
- All areas of the EQC that will be disturbed by this project will be restored and stabilized using a seed mix of native grasses and wildflowers.
 - This area to be planted per the Planting Schedule on this Sheet.
 - The areas to be mechanically cleared within the RPA and EQC Slope area shall be cleared entirely of all plant material, brush, debris, and trash and grubbed to a depth of six to twelve inches in order to leave a surface entirely free of any protruding stumps, roots, rhizomes, trash or debris. The area shall be compacted to the least extent necessary to stabilize the site. In order to accomplish this, only tracked equipment shall be used for working the area. The surface layer shall be made to meet the following standards to a minimum depth of six inches either by amending the existing soils or by the additional of top soil meeting the following specifications:
 - A. Imported Topsoil
 - Loamy, friable soil, containing a minimum of 2.0 percent by dry weight organic matter; free from subsoil, refuse, roots, heavy or stiff clay, stones larger than 25 mm (1 in.), noxious seeds, sticks, brush, litter, and other deleterious substances; suitable for the germination of seeds and the support of vegetative growth. The pH value shall be between 5.5 and 6.5.
 - Soil Texture: loam soil with the following particle size distribution.

Approximate Particle Distribution Imported Topsoil	
Gravel	Less than 10%
Coarse to medium sand	30-65%
Fine sand	5-20%
Very fine sand	0-20%
Silt	15-25%
Clay	15-25%

- B. Existing Topsoil**
- Existing topsoil from the site may be used if it meets the requirements for imported topsoil or if approved by a landscape architect certified arborist with concurrence from the UFMD. Provide a minimum of one soil sample with accompanying soil test report for each topsoil type found at the site.
 - Monitoring of Reforestation Plantings should occur weekly during installation of material and at least monthly during the growing season (April - September) for the first two years following installation. Monitoring should note the condition of the material, whether adequate watering is being maintained, and whether there are any pests or diseases present that threaten the health and vigor of the materials planted. If any deficiencies are noted, a recommendation for corrective action should also be made.
 - Encroachments are proposed within the RPA for a storm sewer and outfall, a sanitary sewer and for restoration of the RPA/EQC buffer, including the removal of invasive species and noxious weeds as defined by Section 118-1-6(r) of the Fairfax County Chesapeake Bay Preservation Ordinance. The proposed storm sewer and outfall is an allowed use per Section 118-2-1 of the Fairfax County Chesapeake Bay Preservation Ordinance, because it is considered a water dependent use. The proposed sanitary sewer line is an exempt use per Section 118-5-2 of the Fairfax County Chesapeake Bay Preservation Ordinance. A water quality impact assessment will be prepared for these uses and provided at the time of site plan submission.



RPA AND EQC RESTORATION PLAN

CRAVEN PROPERTY

NO.	REVISION PER UPLIFT COMMENTS	DATE	REVISION BY	APPROVED BY

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.

SCALE: 1" = 40'

SHEET 7 of 12

DATE: JULY, 2013

DRAFT: MEP CHECK: MTM

FILE NUMBER: 05125-6-0 3B

LEGEND

- LIMITS OF CLEARING AND GRADING
- EQC BOUNDARY
- PROPOSED RE-SEEDING AREA (NOTE 1)
- PROPOSED PLANTING AREA (NOTE 2)

EQC Planting: Overstory Trees

- Quercus phellos
- Acer rubrum
- Betula nigra
- Pinus taeda

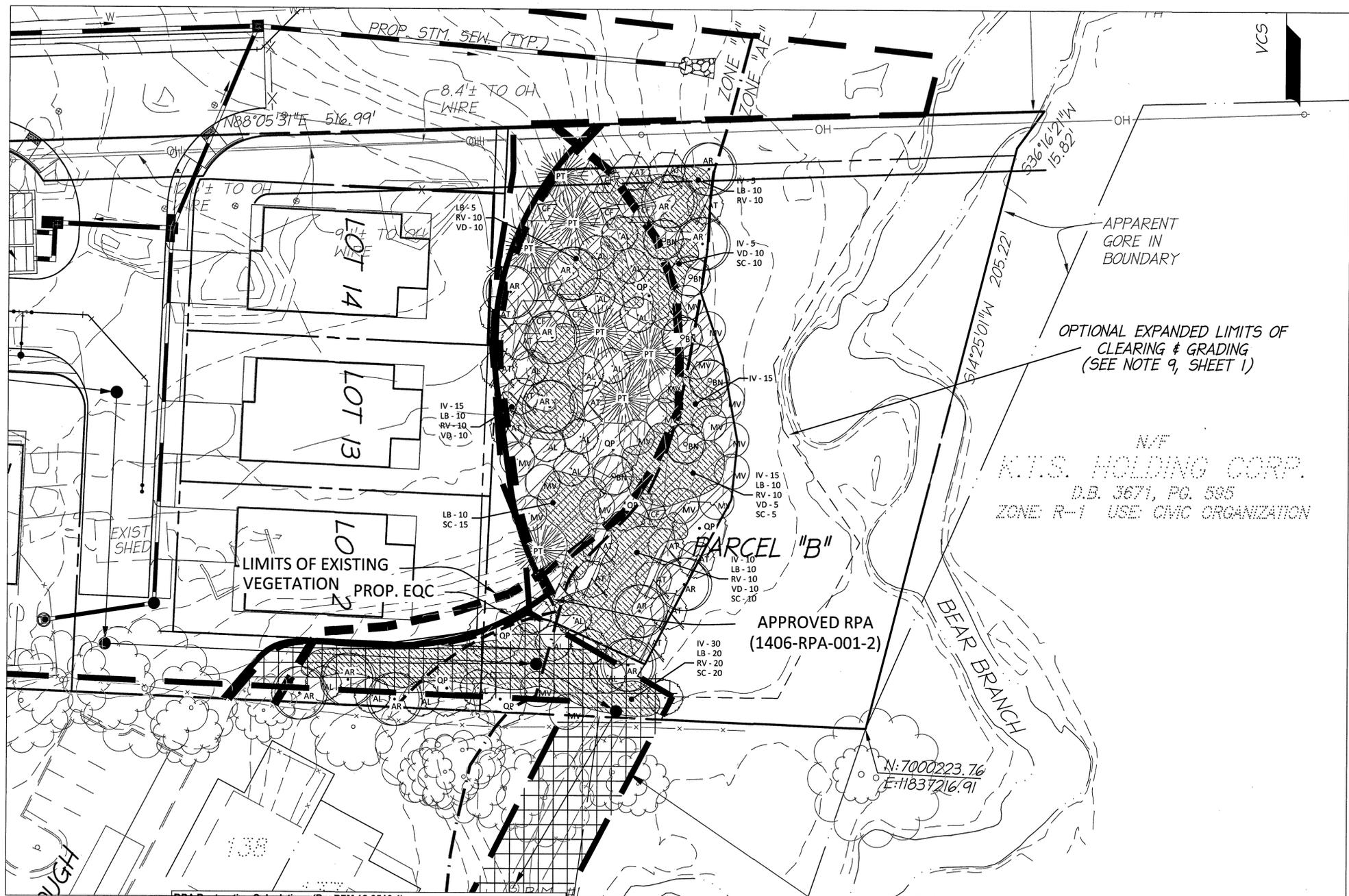
Understory Trees

- Amelanchier laevis
- Cornus florida
- Magnolia virginiana
- Asimina triloba

Shrubs

- Itea virginica
- Linder benzoin
- Rhododendron vicosum
- Viburnum dentatum
- Sambucus canadensis

NOTE:
TREE SYMBOLS ARE DRAWN TO SCALE TO REPRESENT THE PROJECTED 10-YEAR TREE CANOPY AREA FOR EACH SPECIES PER THE FAIRFAX COUNTY TREE SELECTION AND CANOPY COVER GUIDE (FAIRFAX COUNTY PFM).
SHRUBS ARE NOT INDICATED TO SCALE FOR LEGIBILITY.



APPARENT GORE IN BOUNDARY
OPTIONAL EXPANDED LIMITS OF CLEARING & GRADING (SEE NOTE 9, SHEET 1)
N/F
K.T.S. HOLDING CORP.
D.B. 3671, PG. 595
ZONE: R-1 USE: CIVIC ORGANIZATION

RPA Restoration Calculations (Per PFM 12-0516.4)									
Proposed Disturbance of EQC Area (sq.ft.)									13,800
Trees 2" caliper or greater required (25% of disturbed area)									3450
Shrubs (25 per 1000 sq. ft.)									345
Seedlings (10 per 100 square feet)									1380
Planting Provided					Provided				
Trees 2" Caliper or greater (sq.ft.) = (90% of area) This is in excess and is also used to meet the overall canopy cover requirements for the site. This type of planting is more appropriate for this area than seedlings given the size and scale of the site.									12450
Shrubs									345
Seedlings - Seedlings are not being proposed as the entire area is being proposed to be planted with 2" caliper nursery stock. Given the nature of this site, seedlings are not recommended.									0
RPA Restoration Calculations (Per CBPO, Ch. 118-3(f))									
Proposed Disturbance of EQC Area (sq.ft.)									13,800
Overstory Trees 2" caliper or greater required (100 trees per acre)									32
Understory trees (200 per acre)									63
Shrubs (1,089 shrubs per acre)									345
Planting Provided					Provided				
Overstory Trees 2" Caliper or greater									32
Understory Trees									63
Shrubs									345

NOTES:

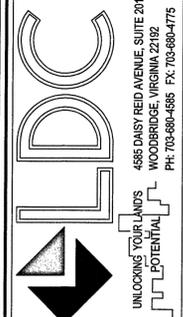
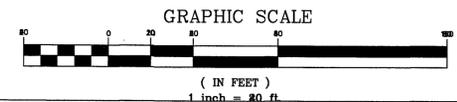
- All areas of the EQC that will be disturbed by this project will be restored and stabilized using a seed mix of native grasses and wildflowers.
- This area to be planted per the Planting Schedule on this Sheet.
- The areas to be mechanically cleared within the RPA and EQC Slope area shall be cleared entirely of all plant material, brush, debris, and trash and grubbed to a depth of six to twelve inches in order to leave a surface entirely free of any protruding stumps, roots, rhizomes, trash or debris. The area shall be compacted to the least extent necessary to stabilize the site. In order to accomplish this, only tracked equipment shall be used for working the area. The surface layer shall be made to meet the following standards to a minimum depth of six inches either by amending the existing soils or by the additional of top soil meeting the following specifications:
 - A. Imported Topsoil
 - Loamy, friable soil, containing a minimum of 2.0 percent by dry weight organic matter; free from subsoil, refuse, roots, heavy or stiff clay, stones larger than 25 mm (1 in.), noxious seeds, sticks, brush, litter, and other deleterious substances; suitable for the germination of seeds and the support of vegetative growth. The pH value shall be between 5.5 and 6.5.
 - Soil Texture: loam soil with the following particle size distribution.

B. Existing Topsoil

- Existing topsoil from the site may be used if it meets the requirements for imported topsoil or if approved by a landscape architect certified arborist with concurrence from the UFMD. Provide a minimum of one soil sample with accompanying soil test report for each topsoil type found at the site.
- Monitoring of Reforestation Plantings should occur weekly during installation of material and at least monthly during the growing season (April - September) for the first two years following installation. Monitoring should note the condition of the material, whether adequate watering is being maintained, and whether there are any pests or diseases present that threaten the health and vigor of the materials planted. If any deficiencies are noted, a recommendation for corrective action should also be made.
- Encroachments are proposed within the RPA for a storm sewer and outfall, a sanitary sewer and for restoration of the RPA/EQC buffer, including the removal of invasive species and noxious weeds as defined by Section 118-1-6(r) of the Fairfax County Chesapeake Bay Preservation Ordinance. The proposed storm sewer and outfall is an allowed use per Section 118-2-1 of the Fairfax County Chesapeake Bay Preservation Ordinance, because it is considered a water dependent use. The proposed sanitary sewer line is an exempt use per Section 118-5-2 of the Fairfax County Chesapeake Bay Preservation Ordinance. A water quality impact assessment will be prepared for these uses and provided at the time of site plan submission.

Approximate Particle Distribution Imported Topsoil	
Gravel	Less than 10%
Coarse to medium sand	30-65%
Fine sand	5-20%
Very fine sand	0-20%
Silt	15-25%
Clay	15-25%

County Code 118-3-3(f) CBAY Planting in RPA (12,450 sq.ft.) Used to replant in RPA										
Symbol	Species (Common name)	Quantity	Planting Size	Type	Spacing	10 Year Canopy Coverage (sq. ft.)	10 Year Credit total	Multiplier	Total Replanting Credit	Comments
QP	Quercus phellos (willow oak)	32	7-2.2' 5" Cal.	B&B	As Shown	200	1400	1	1400	Full, single stem
AR	Acer rubrum (Red maple)	32	13-2.2' 5" Cal.	B&B	As Shown	200	2600	1	2600	Full, single stem
BN	Betula Nigra (River Birch)	32	6-2.2' 5" Cal.	B&B	As Shown	150	750	1	750	Full, single stem
PT	Pinus taeda (Loblolly pine)	32	7-7' 8" Ht.	B&B	As Shown	200	1400	1	1400	Full to ground, single stem
Overstory Trees										
AL	Amelanchier laevis (Allegheny serviceberry)	63	21-2.2' 5" Cal.	B&B	As Shown	100	2100	1	2100	
CF	Cornus florida (Flowering dogwood)	63	8-2.2' 5" Cal.	B&B	As Shown	100	800	1	800	
MV	Magnolia virginiana (Sweetbay magnolia)	63	18-2.2' 5" Cal.	B&B	As Shown	100	1800	1	1800	
AT	Asimina triloba (Paw paw)	63	16-2.2' 5" Cal.	B&B	As Shown	100	1600	1	1600	
Understory Trees										
IV	Itea virginica (Virginia sweetspire)	345	95 3 gal.	cont	4' O.C.	n/a				Full to ground
LB	Lindera benzoin (Spicebush)	345	75 3 gal.	cont	4' O.C.	n/a				Full to ground
RV	Rhododendron vicosum (Swamp azalea)	345	70 3 gal.	cont	4' O.C.	n/a				Full to ground
VD	Viburnum dentatum (Arrowwood viburnum)	345	45 3 gal.	cont	6' O.C.	n/a				Full to ground
SC	Sambucus canadensis (Elderberry)	345	60 3 gal.	cont	6' O.C.	n/a				Full to ground
Shrubs										
							12450		12450	
Totals										



RPA AND EQC PLANTING PLAN

CRAVEN PROPERTY

NO. CHANGES	DATE	DESCRIPTION	REVIEW BY	APPROVED DATE
1	12/13/19	NO CHANGES		
2	12/13/19	NO CHANGES		
3	12/13/19	NO CHANGES		
4	12/13/19	NO CHANGES		
5	12/13/19	NO CHANGES		
6	12/13/19	NO CHANGES		
7	12/13/19	NO CHANGES		

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.

MADEWELL T. MARSHALL
Landscape Architect
37919
LAND SURVEYOR

SCALE:
1" = 40'

SHEET 8 OF 12

DATE: JULY, 2013
DRAFT: MEP CHECK: MTT
FILE NUMBER: 05125-6-0 3B

OUTFALL NARRATIVE

THE SUBJECT PROPERTY IS LOCATED WITHIN THE ACCOTINK CREEK WATERSHED AND IS LOCATED ADJACENT TO BEAR BRANCH, A TRIBUTARY TO SAID WATERSHED. THE SUBJECT PROPERTY MAINTAINS TWO STORM DRAINAGE OUTFALLS. THERE ARE EXISTING FLOODPLAIN AND RPA AREAS ON THE SUBJECT PROPERTY. THE FLOODPLAIN IS SHOWN PER INFORMATION OF RECORD AND IS A BOARD APPROVED FLOODPLAIN BASED ON THE FEMA FIRM AND USGS ELEVATIONS. AN RPA DELINEATION HAS BEEN APPROVED FOR THE SUBJECT PROPERTY (1406-RPA-001).

THE SUBJECT PROPERTY SHALL PROVIDE AN INFILTRATION TRENCH TO ADDRESS THE INCREASE IN RUNOFF WHICH WILL OCCUR AS A RESULT OF THE DEVELOPMENT OF THE SUBJECT PROPERTY (SEE VRRM SPREADSHEET # SWM COMPUTATIONS, SHEETS 10-11). THE POST-DEVELOPMENT RUNOFF FROM THE SUBJECT PROPERTY IS CONVEYED OVERLAND AND THROUGH A CLOSED STORM SEWER SYSTEM. THIS RUNOFF IS DISCHARGED NEAR THE BANKS OF BEAR BRANCH INTO A PROPOSED STILLING BASIN. THE STILLING BASIN SHALL MITIGATE ANY EROSION VELOCITIES FROM THIS CLOSED SYSTEM PRIOR TO ENTERING THE THREAD OF THE CREEK. THE LAYOUT OF THE SITE HAS BEEN DESIGNED TO MINIMIZE THE IMPACTS TO DOWNSTREAM PROPERTIES. THE INTENT SHALL BE TO MAINTAIN THE EXISTING DRAINAGE PATTERNS AND TO NOT HAVE A NEGATIVE IMPACT ON ADJACENT PROPERTIES.

OUTFALL #1:
 OUTFALL #1 DISCHARGES FROM THE SUBJECT PROPERTY AS CONCENTRATED FLOW VIA AN EXISTING NATURAL CHANNEL AND DISCHARGES INTO AN EXISTING FLOODPLAIN AND STORM DRAINAGE EASEMENT WITH A TOTAL AREA OF 1.396 ACRES KNOWN AS "BEAR BRANCH". BEAR BRANCH IS DESCRIBED AS A MAJOR FLOOD PLAIN AND THE ONE HUNDRED YEAR WATER SURFACE ELEVATION SHALL BE ENCUMBERED BY A FLOOD PLAIN AND STORM DRAINAGE EASEMENT. THE EXISTING CHANNEL HAS EXPERIENCED MODERATE EROSION ALONG THE OUTSIDE OF THE MEANDERS AND MAINTAINS ADEQUATE CAPACITY TO CONVEY THE TWO YEAR STORM IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS. THE OUTFALL IS ADEQUATE DUE TO THE PRESENCE OF THE BOARD ADOPTED MAJOR FLOODPLAIN STUDY AND MORE THAN 100 TIMES THE SITE AREA DRAINING THROUGH THE POINT WHERE THE SITE OUTFALL CONVERGES WITH BEAR BRANCH, IN ACCORDANCE WITH FAIRFAX COUNTY CODE SECTIONS 124-4-4(b)(5)a & 124-4-4(c)(5)a. THE DEVELOPMENT OF THE SUBJECT PROPERTY WILL NOT ADVERSELY IMPACT DOWNSTREAM PROPERTIES.

OUTFALL #1 CONVEYS 2.70 ACRES OF DEVELOPMENT AREA DRAINAGE FROM THE SUBJECT PROPERTY IN THE POST DEVELOPED CONDITION (0.75 ACRES OF RPA/EGC/FLOODPLAIN AREA ARE EXCLUDED FROM THE DEVELOPMENT AREA). AS A RESULT OF THE PROPOSED INFILTRATION TRENCH, DETENTION OF THE ONE, TWO AND TEN YEAR STORM EVENT WILL BE PROVIDED. REQUIREMENTS FOR CHANNEL & FLOOD PROTECTION HAVE BEEN MET AS OUTLINED IN FAIRFAX COUNTY CODE SECTION 124-4-4(b)(3)c & (c)(1) FOR THE OUTFALL. STORAGE OF THE APPROPRIATE 1-YEAR, 2-YEAR, & 10-YEAR 24 HOUR STORM VOLUMES WILL BE PROVIDED IN THE PROPOSED INFILTRATION TRENCH AND THE DISCHARGE FROM THE SITE DURING THE 1-YR STORM SHALL BE REDUCED BY THE REQUIRED PROPORTIONAL IMPROVEMENT AMOUNT OUTLINED IN CODE SECTIONS 124-4-4(b)(3)a. ADEQUATE OUTFALL REQUIREMENTS FOR THIS OUTFALL HAVE BEEN DEMONSTRATED BY THE EXISTENCE OF A MAJOR FLOODPLAIN WHICH IS A POINT WHERE THE TOTAL DRAINAGE AREA EXCEEDS 100 TIMES THE SITE AREA PER CODE SECTIONS 124-4-4(b)(5)a AND 124-4-4(c)(5)a. THE EXISTING FLOODPLAIN CHANNEL WAS INVESTIGATED AND FOUND TO HAVE A DEFINED BED AND BANKS CHANNEL. THIS OUTFALL IS ADEQUATE IN ACCORDANCE WITH FAIRFAX COUNTY CODE AS DESCRIBED ABOVE.

OUTFALL #2:
 OUTFALL #2 WILL CONTINUE TO DISCHARGE WATER IN A NON-CONCENTRATED/SHEET FLOW MANNER TOWARD THE SOUTH ONTO DOWNSTREAM PROPERTIES AS ALLOWED IN PFM SECTION 6-0202.6A. THE POST DEVELOPED DISCHARGE TO THE OUTFALL IS LESS THAN THE PRE-DEVELOPED DISCHARGE AS REQUIRED PER PFM SECTION 6-0202.6A. THE EXTENT OF REVIEW FOR OUTFALL #2 IS THE LIMITS OF CLEARING FOR THE PROJECT DUE TO THE OUTFALL BEING A NON-CONCENTRATED/SHEET FLOW OUTFALL. THE OUTFALL IS ADEQUATE PER PFM SECTION 6-0202.6A.

OUTFALL #2 CONTINUES DOWNSTREAM TO AN EXISTING CLOSED STORM SEWER SYSTEM WITHIN CHESTERFIELD MEWS AND THEN INTO THE BEAR BRANCH FLOODPLAIN AT WHICH POINT THE TOTAL DRAINAGE AREA IS IN EXCESS OF 100 TIMES THE SITE AREA.

IT IS THE ENGINEER'S OPINION BASED ON THE INFORMATION PROVIDED HEREON AND ON THE REQUIREMENTS SET FORTH IN THE PUBLIC FACILITIES MANUAL, ALL OUTFALLS ARE ADEQUATE.

DRAINAGE DIVIDE DIVERSION STATEMENT:

THE PROJECT IS LOCATED WITHIN THE ACCOTINK CREEK WATERSHED. MINOR CHANGES IN THE NATURAL DRAINAGE DIVIDES ARE PROPOSED AS A PART OF THIS PROJECT. THE CHANGES ARE INTENDED TO ASSIST IN COLLECTING STORMWATER DISCHARGE IN ORDER TO MEET DETENTION, BMP & ADEQUATE OUTFALL REQUIREMENTS AS OUTLINED IN THE PFM. DETENTION RELEASE RATE COMPUTATIONS SHALL BE PROVIDED ON THE SUBDIVISION PLAN THAT DEMONSTRATE THAT THE POST DEVELOPED FLOW FROM THE PROPERTY IS LESS THAN THE PREDEVELOPED AND NO ADVERSE IMPACTS WILL BE EXPERIENCED BY ANY DOWNSTREAM PROPERTIES. NO CHANGES ARE PROPOSED TO ANY MAJOR DRAINAGE SHED DIVIDES. THESE MINOR DIVERSIONS WITHIN AN INDIVIDUAL MAJOR WATERSHED AREA ARE ALLOWED PER PFM SECTION 6-0202.2A (SEE THE OUTFALL ANALYSIS ON THIS SHEET).

STORMWATER MANAGEMENT NARRATIVE

THE STORMWATER MANAGEMENT REQUIREMENTS FOR THE SUBJECT PROPERTY SHALL BE SATISFIED VIA THE CONSTRUCTION OF AN INFILTRATION TRENCH. THIS FACILITY SHALL BE DESIGNED IN ACCORDANCE WITH THE PUBLIC FACILITIES MANUAL, DCR SPECIFICATION #8 AND THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK AND WILL PROVIDE STORAGE WITH A STONE AND CHAMBER SYSTEM.

FOR SWM DETENTION AND WATER QUALITY PURPOSES THE RPA/EGC/FLOODPLAIN AREA OF THE SITE HAS BEEN SUBTRACTED TO PROVIDE A "DEVELOPMENT AREA" OF 2.97 ACRES. ALL SWM DETENTION AND WATER QUALITY COMPUTATIONS HAVE BEEN MADE USING THE DEVELOPMENT AREA OF 2.97 AC.

THE INFILTRATION TRENCH HAS BEEN DESIGNED TO PROVIDE WATER QUALITY/BMP TREATMENT AND TO PROVIDE DETENTION FOR THE 1, 2 & 10 YEAR STORM EVENTS. CHANNEL AND FLOOD PROTECTION REQUIREMENTS WILL BE MET BY THE APPLICATION OF FAIRFAX COUNTY CODE SECTIONS 124-4-4(b)(3)c & 124-4-4(c)(1) WHICH WILL INCLUDE REDUCTIONS IN RUNOFF FROM THE DEVELOPMENT AREA DURING THE 1-YR STORM (SEE OUTFALL ANALYSIS, THIS SHEET). THE FINAL DESIGN OF THE INFILTRATION TRENCH IS SUBJECT TO FINAL ENGINEERING AND SOILS TESTING. ALL MAINTENANCE SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS FOR THE FACILITY AND AS OUTLINED IN THE PFM, DCR SPECIFICATION #8 AND THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK.

THE SITE CURRENTLY HAS TWO EXISTING BUILDINGS, PAVED SURFACES AND AND SOME TREES.

THE FACILITY SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION AND THE MAINTENANCE SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS.

STORMWATER MANAGEMENT CHECKLIST

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

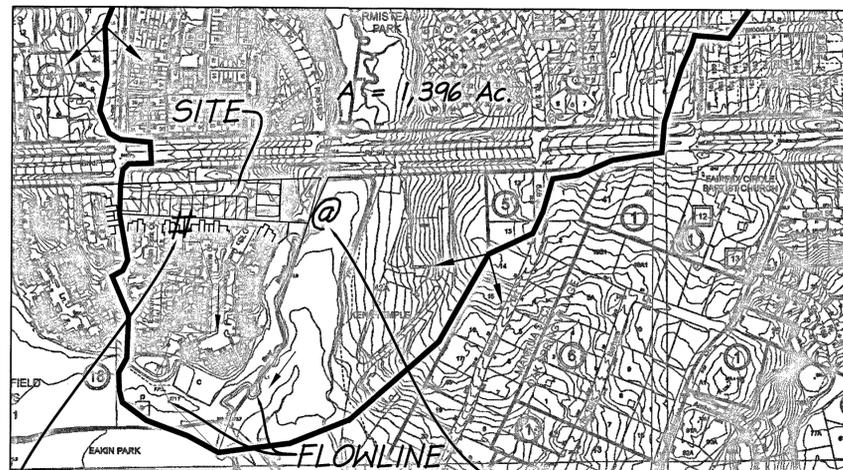
The following information is required to be shown or provided in all zoning applications, or a waiver request of the submission requirement with justification shall be attached. Note: Waivers will be acted upon separately. Failure to adequately address the required submission information may result in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

This information is required under the following Zoning Ordinance paragraphs:
 Special Permits (9-011 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 & 1C)
 FDP P Districts (except PRC) (16-502 1F & 1Q) Amendments (16-202 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 2.
- 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)
INFILTRATION TRENCH #1, 99 AC	1.99 AC	0.00 AC	42.45 AC	34,085 SF	216,523 CF	N/A
Totals						

- 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 2 & 10. Pond inlet and outlet pipe systems are shown on Sheet 10A.
- 5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet 2. Type of maintenance access road surfaces noted on the plat is ASPHALT. (sephalt, geoblock, gravel, etc.).
- 6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet 4.
- 7. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet 10.
- 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 (840 acres) is provided on Sheet 10.
- 9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet 10-11.
- 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 & 2.
- 11. A submission waiver is requested for N/A.
- 12. Stormwater management is not required because N/A.



- EXTENT OF REVIEW FOR SHEET FLOW OUTFALL #2 SEE THIS SHEET FOR "OUTFALL NARRATIVE"

1 YR. RUNOFF VOLUME COMP. (EX. PRE-DEV. CONDITION)

PER CHAPTER 5 - VIRGINIA SWM HANDBOOK VOLUME II
 1. RAINFALL DEPTH (P) FOR FAIRFAX COUNTY = 2.7 IN (1 YR)
 2. SOILS DRAINING TO OUTFALL ARE HYDROLOGIC SOIL GROUP "C" & "D" (SEE THIS SHEET FOR SOILS MAP)
 3. WEIGHTED RCN FOR EXISTING CONDITION FOR SOIL GROUPS "C" & "D" = 86
 (0.04 AC LAWN SOIL GROUP "C" RCN=74, 0.95 AC LAWN SOIL GROUP "D" RCN=80
 0.51 AC IMPERVIOUS AREA RCN=98)
 4. TOTAL DEVELOPMENT AREA OF SITE TO OUTFALL #1 = 1.55 ACRES
 5. $S = (1000/RCN) - 10 = (1000/86) - 10 = 1.69$

1 YEAR:
 6. $RUNOFF Q = ((P-.25)^2)/(P + .85) = ((2.7 - .2(1.69))^2)/(2.7 + .8(1.69)) = 1.38 IN$
 7. $RUNOFF VOLUME = Vp = AREA \times RUNOFF Q = 1.55 AC \times (1.38 IN(1 FT/12 IN)) = 0.178 AC-FT$

1 YR. RUNOFF VOLUME COMP. (DEVELOPED)

PER CHAPTER 5 - VIRGINIA SWM HANDBOOK VOLUME II
 1. RAINFALL DEPTH (P) FOR FAIRFAX COUNTY = 2.7 IN (1 YR)
 2. SOILS DRAINING TO OUTFALL ARE HYDROLOGIC SOIL GROUP "C" & "D" (SEE THIS SHEET FOR SOILS MAP)

1 YEAR:
 3. ADJUSTED RCN FOR SITE FOR SOIL GROUPS "C" & "D" = 82 (SEE VRRM SPREADSHEET)
 4. TOTAL DEVELOPMENT AREA OF SITE TO OUTFALL #1 = 2.70 ACRES
 5. $S = (1000/RCN) - 10 = (1000/82) - 10 = 2.20$
 6. $RUNOFF Q = ((P-.25)^2)/(P + .85) = ((2.7 - .2(2.20))^2)/(2.7 + .8(2.20)) = 1.15 IN$
 7. $RUNOFF VOLUME = Vd = AREA \times RUNOFF Q = 2.70 AC \times (1.15 IN(1 FT/12 IN)) = 0.258 AC-FT$

REDUCTION REQUIRED FOR CHANNEL PROTECTION PER CODE SECTION 124-4-4(b)(3)a:
 $Ri = (1 - 0.80(Vp/Vd)) \times 100$
 $Ri = (1 - 0.80(0.178/0.258)) \times 100 = 45\%$

1 YEAR:
 $Ri = (1 - 0.80(0.178/0.258)) \times 100 = 45\%$
 SEE DETENTION RELEASE RATES COMPUTATIONS ON SHEET II FOR REDUCTION.

STORMWATER MANAGEMENT INFORMATION

TYPE OF FACILITY = INFILTRATION TRENCH (STONE & CHAMBER STORMWATER MANAGEMENT SYSTEM)
 FACILITY MAINTENANCE = PRIVATE/HOMEOWNERS ASSOCIATION

INFILTRATION TRENCH #1
 APPROXIMATE REQUIRED 10-YEAR VOLUME = 15,797 C.F.
 APPROXIMATE PROPOSED VOLUME = 16,529 C.F.
 APPROXIMATE SURFACE AREA = 4,085 S.F.
 APPROXIMATE FINISHED GRADE = 306.0
 APPROXIMATE GRADE INFILTRATION TRENCH BOTTOM = 293.5

PRE-DEVELOPMENT SUBJECT PROPERTY

$Q_2 = 7.64 CFS$ (SEE SWM SHEETS 10-11)
 $Q_0 = 14.72 CFS$ (SEE SWM SHEETS 10-11)

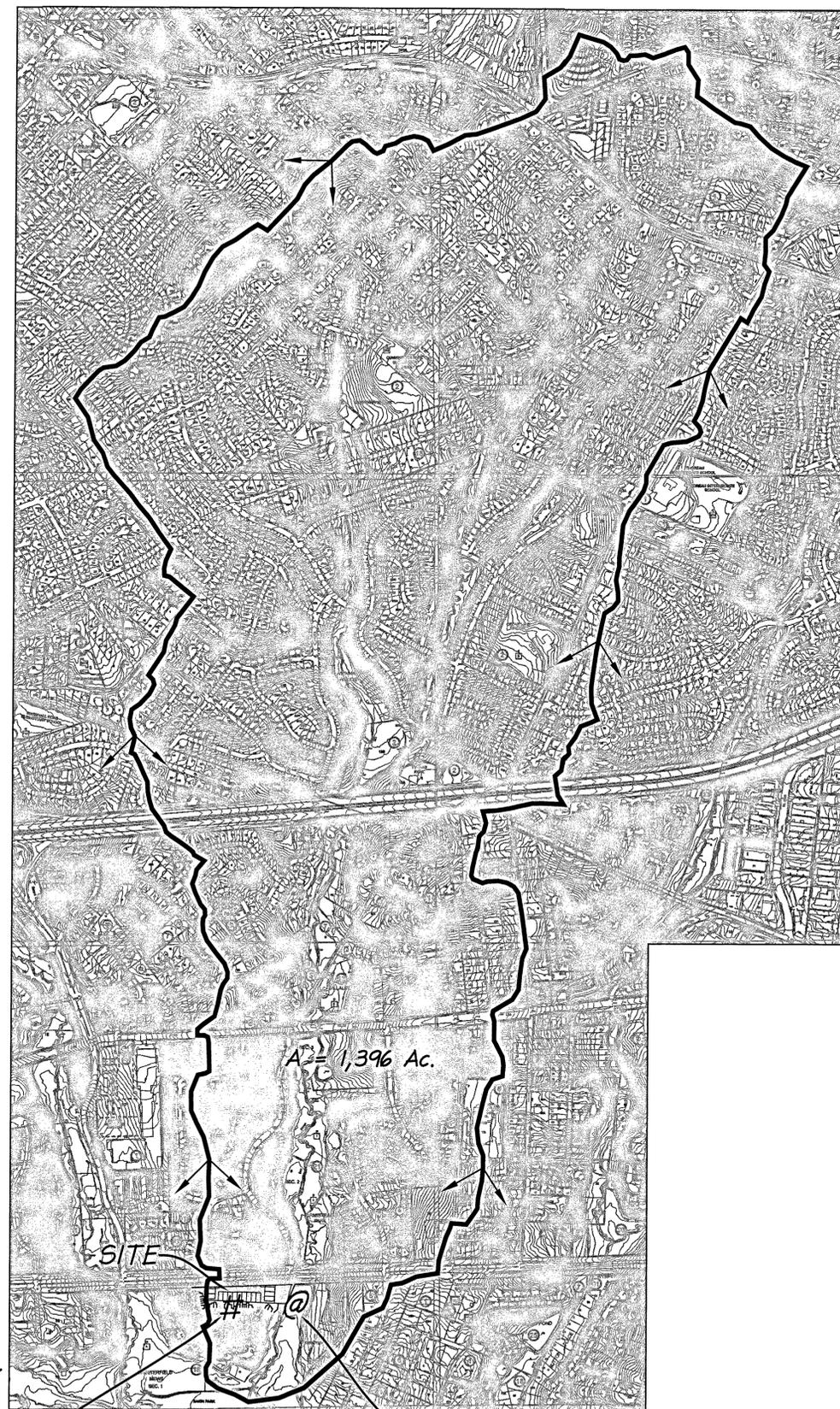
POST-DEVELOPMENT SUBJECT PROPERTY

$Q_2 = 4.13 CFS$ AFTER ATTENUATION (SEE SWM SHEETS 10-11)
 $Q_0 = 8.48 CFS$ AFTER ATTENUATION (SEE SWM SHEETS 10-11)

10 YEAR RUNOFF VOLUME COMPUTATION FOR IT#1

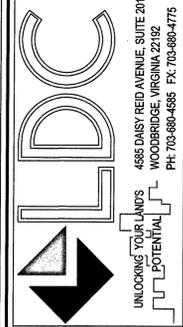
PER CHAPTER 5 - VIRGINIA SWM HANDBOOK VOLUME II
 1. 10 YEAR RAINFALL DEPTH (P) FOR FAIRFAX COUNTY = 5.2 IN
 2. SOILS DRAINING TO IT#1 ARE HYDROLOGIC SOIL GROUPS "C" & "D" (CODORUS SILT LOAM - "C", URBAN LAND-WHEATON - "D", SEE THIS SHEET FOR SOILS MAP)
 3. ADJUSTED RCN FOR DRAINAGE AREA TO IT#1 = 84 PER VRRM SPREADSHEET
 4. TOTAL CONTROLLED DRAINAGE AREA TO IT#1 = 1.26 ACRES
 5. $S = (1000/RCN) - 10 = (1000/84) - 10 = 1.90$
 6. $RUNOFF Q = ((P-.25)^2)/(P + .85) = ((5.2 - .2(1.90))^2)/(5.2 + .8(1.90)) = 3.45 IN$
 7. $RUNOFF VOLUME = AREA \times RUNOFF Q = 1.26 AC \times (3.45 IN(1 FT/12 IN)) = 0.363 AC-FT = 15,797 CF$

VOLUME IS MORE THAN VOLUME (4,681 CF) REQUIRED FOR INFILTRATION TRENCH WATER QUALITY TREATMENT (SEE VRRM SPREADSHEET); THEREFORE, STORAGE WILL BE PROVIDED FOR THE WATER QUALITY TREATMENT VOLUME.



- EXTENT OF REVIEW FOR SHEET FLOW OUTFALL #2 SEE THIS SHEET FOR "OUTFALL NARRATIVE"

- EXTENT OF REVIEW FOR SHEET FLOW OUTFALL #2 SEE THIS SHEET FOR "OUTFALL NARRATIVE"



STORMWATER MANAGEMENT INFORMATION

CRAVEN PROPERTY

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

NO. CHANGES	DATE	DESCRIPTION	REVISION APPROVED BY:
1	NO CHANGES		
2	NO CHANGES		
3	NO CHANGES		
4	NO CHANGES		
5	NO CHANGES		
6	NO CHANGES		

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.

SCALE: N/A
 SHEET 10 OF 12
 DATE: JULY, 2013
 DRAFT: MEP CHECK: MTTM
 FILE NUMBER: 05125-6-0 3B

SEE SHEETS 10-11 FOR DRAINAGE AREA MAPS & SWM COMPUTATIONS

Virginia Runoff Reduction Method New Development Worksheet - v2.8 - June 2014
To be used w/ DRAFT 2013 BMP Standards and Specifications

Site Data

Project Name: Craven Property
 Date: November 24, 2014

data input cells
 calculation cells
 constant values

1. Post-Development Project & Land Cover Information

Annual Rainfall (inches)	43	
Target Rainfall Event (inches)	1.00	
Phosphorus EMC (mg/L)	0.26	Nitrogen EMC (mg/L) 1.86
Target Phosphorus Load (lb/acre/yr)	0.41	
Pj	0.90	

Land Cover (acres)	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) - undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) - disturbed, graded for yards or other turf to be mowed/managed	0.00	0.00	0.09	1.57	1.66
Impervious Cover (acres)	0.00	0.00	0.00	1.31	1.31
	Total				2.97

Rv Coefficients	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

Land Cover Summary	Area (acres)
Forest/Open Space Cover	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover	1.66
Weighted Rv(turf)	0.25
% Managed Turf	56%
Impervious Cover	1.31
Rv(impervious)	0.95
% Impervious	44%
Total Site Area (acres)	2.97
Site Rv	0.56

Post-Development Treatment Volume (acre-ft)	0.14	
Post-Development Treatment Volume (cubic feet)	6,014	Post-Development Load (TN) (lb/yr) 27.03
Post-Development Load (TP) (lb/yr)	3.78	
Total Load (TP) Reduction Required (lb/yr)	2.56	

Target Rainfall Event (in)	1-year storm	2-year storm	10-year storm
	2.70	3.20	5.20

Drainage Area A	Area (acres)	Runoff Reduction Volume (cf)
Drainage Area (acres)	2.05	
Runoff Reduction Volume (cf)	4,213	
Drainage Area B	Area (acres)	Runoff Reduction Volume (cf)
Drainage Area (acres)	0.65	
Runoff Reduction Volume (cf)	0	
Drainage Area C	Area (acres)	Runoff Reduction Volume (cf)
Drainage Area (acres)	0.27	
Runoff Reduction Volume (cf)	0	
Drainage Area D	Area (acres)	Runoff Reduction Volume (cf)
Drainage Area (acres)	0.00	
Runoff Reduction Volume (cf)	0	
Drainage Area E	Area (acres)	Runoff Reduction Volume (cf)
Drainage Area (acres)	0.00	
Runoff Reduction Volume (cf)	0	

Based on the use of Runoff Reduction practices in the selected drainage areas, the spreadsheet calculates an adjusted Rv_{Developed} and adjusted Curve Number.

Drainage Area A	A Soils	B Soils	C Soils	D Soils	Weighted CN
Forest/Open Space - undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed	30	55	70	77	
Impervious Cover	98	98	98	98	
	Total				80
	Adjusted CN				83

Drainage Area B	A Soils	B Soils	C Soils	D Soils	Weighted CN
Forest/Open Space - undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed	30	55	70	77	
Impervious Cover	98	98	98	98	
	Total				83
	Adjusted CN				83

Drainage Area C	A Soils	B Soils	C Soils	D Soils	Weighted CN
Forest/Open Space - undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed	30	55	70	77	
Impervious Cover	98	98	98	98	
	Total				83
	Adjusted CN				83

Drainage Area A

Drainage Area A Land Cover (acres)	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres)	0.00	0.00	0.00	0.94	0.94	0.25
Impervious Cover (acres)	0.00	0.00	0.00	1.11	1.11	0.95
	Total				2.05	

Post Development Treatment Volume (cf) 4681

Apply Runoff Reduction Practices to Reduce Treatment Volume & Post-Development Load in Drainage Area A

Practice	Unit	Description of Credit	Credit	Credit Area (acres)	Volume from Upstream RR Practice (cf)	Runoff Reduction (cf)	Remaining Runoff Volume (cf)	Phosphorus Efficiency (%)	Phosphorus Load from Upstream RR Practices (lbs)	Untreated Phosphorus Load to Practice (lbs)	Phosphorus Removed by Practice (lbs)	Remaining Phosphorus Load (lbs)
7. Infiltration												
7.a. Infiltration #1 (Spec #8)	impervious acres draining to infiltration	50% runoff volume reduction	0.50	0.00	0	0	0	25	0.00	0.00	0.00	0.00
	turf acres draining to infiltration	50% runoff volume reduction	0.50	0.00	0	0	0	25	0.00	0.00	0.00	0.00
7.b. Infiltration #2 (Spec #8)	impervious acres draining to infiltration	90% runoff volume reduction	0.90	1.11	0	3445	383	25	0.00	2.40	2.22	0.18
	turf acres draining to infiltration	90% runoff volume reduction	0.90	0.94	0	768	85	25	0.00	0.54	0.50	0.04
				TOTAL IMPERVIOUS COVER TREATED (ac)	1.11							
				TOTAL TURF AREA TREATED (ac)	0.94							

AREA CHECK OK

TOTAL PHOSPHORUS REMOVAL REQUIRED ON SITE (lb/yr)	2.56
TOTAL RUNOFF REDUCTION IN D.A. A (cf)	4,213
PHOSPHORUS REMOVAL FROM RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr)	2.72

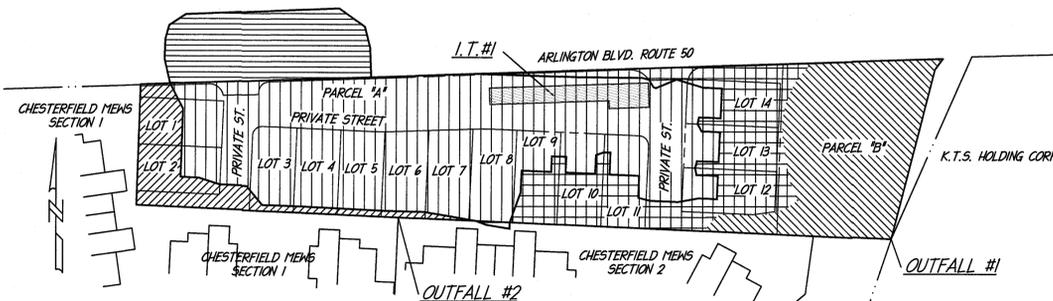
SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

Site Results

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
IMPERVIOUS COVER	1.11	0.15	0.05	0.00	0.00	OK
IMPERVIOUS COVER TREATED	1.11	0.00	0.00	0.00	0.00	OK
TURF AREA	0.94	0.50	0.22	0.00	0.00	OK
TURF AREA TREATED	0.94	0.00	0.00	0.00	0.00	OK
AREA CHECK	OK	OK	OK	OK	OK	

Phosphorus

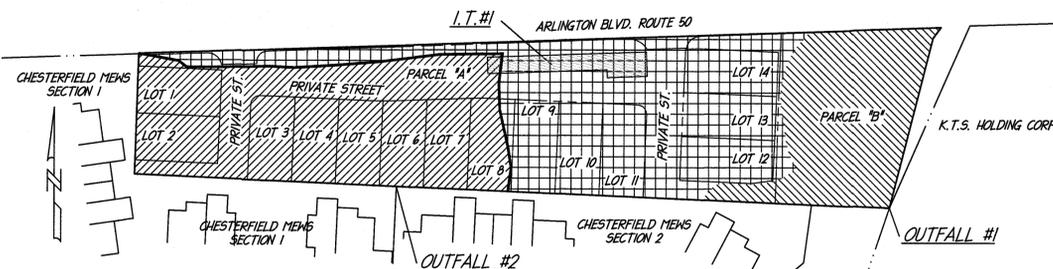
TOTAL TREATMENT VOLUME (cf)	6,014
TOTAL PHOSPHORUS LOAD REDUCTION REQUIRED (LB/YEAR)	2.56
RUNOFF REDUCTION (cf)	4,213
PHOSPHORUS LOAD REDUCTION ACHIEVED (LB/YR)	2.72
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (lb/yr)	1.08
REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED	CONGRATULATIONS!!! YOU EXCEEDED THE TARGET REDUCTION BY 0.2 LB/YEAR!!!



WATER QUALITY/BMP & POST DEVELOPED AREAS

WATERSHED INFORMATION:

SUBAREA DESIGNATION AND DESCRIPTION	RCN	ACRES	BMP MAP HATCH
D.A. 'A' - DEVELOPED W/ CONTROLS (I.T.#1 TO OUTFALL #1)	80	1.99	[Hatch]
D.A. 'B' - DEVELOPED W/OUT CONTROLS (OUTFALL #1)	93	0.71	[Hatch]
D.A. 'C' - DEVELOPED W/OUT CONTROLS (OUTFALL #2)	83	0.27	[Hatch]
OFFSITE AREA TO I.T.#1 - UNCONTROLLED (OUTFALL #1)	90	0.44	[Hatch]
RPAVE/CFP AREA EXCLUDED FROM DEVELOPMENT AREA	-	0.75	[Hatch]



AREA DESCRIPTION	ACRES	RCN	MAP HATCH
PREDEVELOPED SITE AREA TO OUTFALL #1	1.55	86	[Hatch]
PREDEVELOPED SITE AREA TO OUTFALL #2	1.42	90	[Hatch]
FRONTAGE DEDICATION EXCLUDED FROM DEVELOPMENT AREA	0.75	-	[Hatch]

FOR INFORMATIONAL PURPOSES ONLY!

THE INFORMATION PROVIDED ON THIS SHEET IS FOR INFORMATION PURPOSES ONLY. THE FINAL DESIGN OF THE STORMWATER MANAGEMENT/BEST MANAGEMENT PRACTICES FACILITY WILL OCCUR AT TIME OF FINAL SUBDIVISION PLAN. THE INFORMATION SHOWN HEREON IS APPROXIMATE. THE APPLICANT RESERVES THE RIGHT TO MAKE ADJUSTMENTS TO THIS INFORMATION AND THE DESIGN WITHOUT THE NEED FOR A PROFFER CONDITION AMENDMENT OR PROFFER INTERPRETATION, PROVIDED IT IS IN ACCORDANCE WITH THE PUBLIC FACILITIES MANUAL.

DETENTION RELEASE RATES - OUTFALL #1:

PREDEVELOPMENT SITE CONDITIONS - OUTFALL #1:

EXISTING ONSITE AREA DRAINING TO OUTFALL #1
 #SEE PREDEVELOPMENT DRAINAGE AREA MAP (THIS SHEET) #
 AREA= 1.55 AC., Tc = 0.18 HR, RCN= 86

1 YEAR STORM (45% REDUCTION REQUIRED, SEE COMP. THIS SHEET)
 RCN= 86, Tc= 0.18 HR, A= 1.55 AC (FROM TR-55 RESULTS)
 Q= 2.81 CFS ± 0.55 = 1.55 CFS

2 YEAR STORM
 RCN= 86, Tc= 0.18 HR, A= 1.55 AC (FROM TR-55 RESULTS)
 Q= 3.71 CFS

10 YEAR STORM
 RCN= 86, Tc= 0.18 HR, A= 1.55 AC (FROM TR-55 RESULTS)
 Q= 7.35 CFS

POST DEVELOPMENT SITE CONDITIONS - OUTFALL #1:

ONSITE AREA DRAINING OFF UNCONTROLLED TO OUTFALL #1
 INFILTRATION TRENCH #1 PROVIDES DETENTION FOR
 THE 1, 2 & 10 YEAR STORM EVENTS FOR THE CONTROLLED AREA
 1-YR CONTROLLED AREA = 1.99 AC, 2 & 10-YR CONT. AREA = 1.26 AC
 TOTAL POST DRAINAGE ON-SITE AREA = 2.70 AC
 #SEE POST DEVELOPMENT DRAINAGE AREA MAP (THIS SHEET) #
 1-YR UNCONTROLLED AREA = 0.71 AC, RCN= 83, Tc = 0.18 MIN.
 2 & 10-YR UNCONTROLLED AREA = 1.44 AC, RCN= 86, Tc = 0.18 MIN.

1 YEAR STORM
 RCN= 83, Tc= 0.18 HR, A= 0.71 AC (FROM TR-55 RESULTS)
 Q= 1.03 CFS ± REDUCED PREDEVELOPED = 1.55 CFS

#CHANNEL & FLOOD PROTECTION REDUCTION PROVIDED PER CODE SECTION 124-4-4(b)(3)c & (c)(1) #

2 YEAR STORM
 RCN= 86, Tc= 0.18 HR, A= 1.44 AC (FROM TR-55 RESULTS)
 Q= 3.71 CFS ± PREDEVELOPED = 3.71 CFS

#CHANNEL & FLOOD PROTECTION REDUCTION PROVIDED PER CODE SECTION 124-4-4(b)(3)c & (c)(1) #

10 YEAR STORM
 RCN= 83, Tc= 0.18 HR, A= 1.44 AC (FROM TR-55 RESULTS)
 Q= 7.32 CFS ± PREDEVELOPED = 7.35 CFS

#CHANNEL & FLOOD PROTECTION REDUCTION PROVIDED PER CODE SECTION 124-4-4(b)(3)c & (c)(1) #

DETENTION RELEASE RATES - OUTFALL #2:

PREDEVELOPMENT SITE CONDITIONS - OUTFALL #2:

EXISTING ONSITE AREA DRAINING TO OUTFALL #2
 #SEE PREDEVELOPMENT MAP (THIS SHEET) #
 AREA= 1.42 ACRES, Tc = 0.19 HR, RCN= 90

2 YEAR STORM
 RCN= 90, Tc= 0.19 HR, A= 1.42 AC (FROM TR-55 RESULTS)
 Q= 3.93 CFS

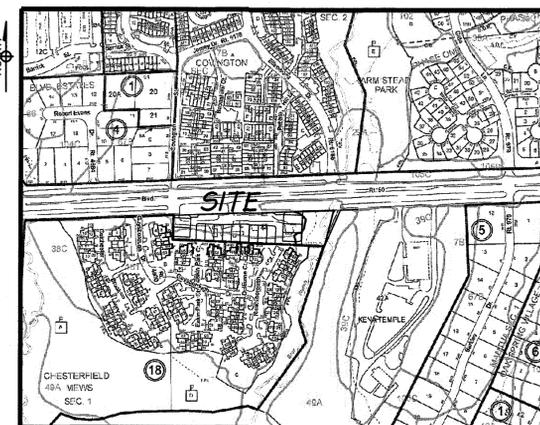
10 YEAR STORM
 RCN= 90, Tc= 0.19 HR, A= 1.42 AC (FROM TR-55 RESULTS)
 Q= 7.37 CFS

POST DEVELOPMENT SITE CONDITIONS - OUTFALL #2:

ONSITE AREA DRAINING OFF UNCONTROLLED TO OUTFALL #2
 RUNOFF DISCHARGES IN A NON-CONCENTRATED SHEET FLOW MANNER
 #SEE BMP & POST DEVELOPMENT MAP, THIS SHEET #
 UNCONTROLLED AREA = 0.27 AC, RCN= 83, Tc = 0.19

2 YEAR STORM
 RCN= 83, Tc= 0.19 HR, A= 0.27 AC (FROM TR-55 RESULTS)
 Q= 0.54 CFS ± PREDEVELOPED = 3.93 CFS

10 YEAR STORM
 RCN= 83, Tc= 0.19 HR, A= 0.27 AC (FROM TR-55 RESULTS)
 Q= 1.16 CFS ± PREDEVELOPED = 7.37 CFS

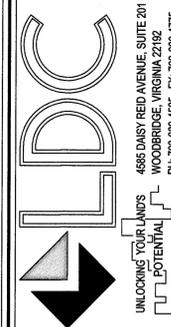


SOILS MAP

SCALE: 1" = 500'

SOIL INFORMATION

SOIL #	SOIL NAME	PROBLEM CLASS	FOUNDATION SUPPORT	DRAINAGE	EROSION POTENTIAL	HYDROLOGIC SOIL GROUP
29	CODORUS SILT LOAM	III	POOR	POOR	LOW	C
95	URBAN LAND	IVB	N/A	N/A	N/A	D
101	URBAN LAND-WHEATON COMPLEX	IVB	GOOD	FAIR	HIGH	D



VRM SPREADSHEET

CRAVEN PROPERTY

PROVIDENCE DISTRICT
 FAIRFAX COUNTY, VIRGINIA

DATE	DESCRIPTION	REVISION	APPROVED BY	DATE

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.



SCALE: AS NOTED

SHEET 11 OF 12

DATE: JULY 2013
 DRAFT: MTP CHECK: MTT
 FILE NUMBER: 05125-6-0 3B

SEE SHEETS 10-11 FOR DRAINAGE AREA MAPS & SWM COMPUTATIONS

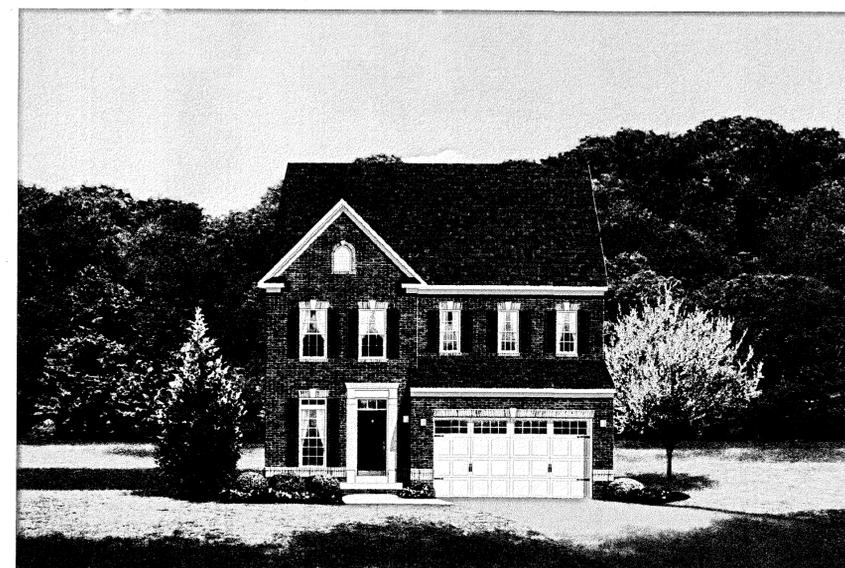
MCKINLEY ELEVATIONS



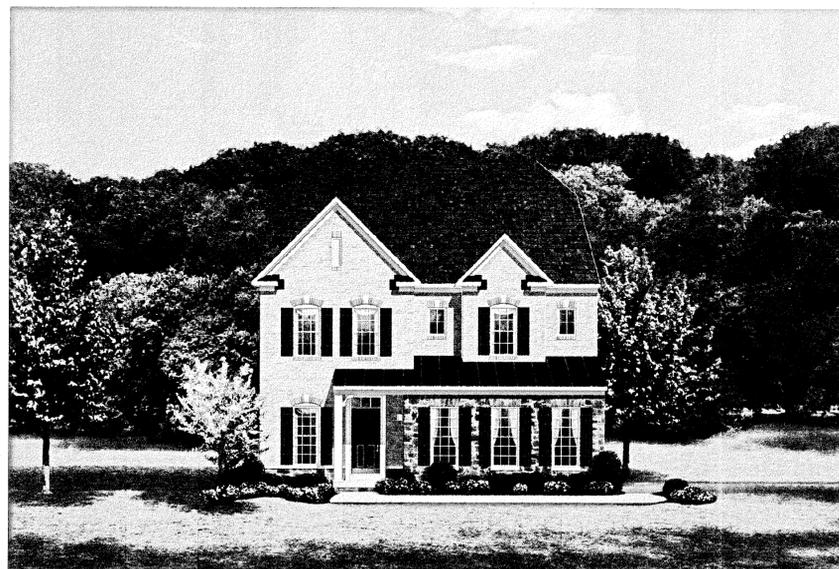
BRICK ELEVATION #1



BRICK ELEVATION #2



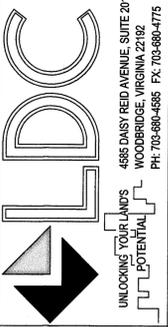
BRICK ELEVATION #3



STONE ELEVATION



CEMENTATIOUS SIDING ELEVATION



4685 DAISY REID AVENUE, SUITE 201
WOODBRIDGE, VIRGINIA 22192
PH: 703-680-4885 FX: 703-680-4775

ELEVATIONS

CRAVEN PROPERTY

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE	DESCRIPTION	REVISION APPROVED BY:
12/14	6 REVISE HOUSE TYPE TO MCKINLEY	
12/14	4 NO CHANGES	
12/14	3 UPDATE ELEVATIONS, SHEET INDEX	

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.



SCALE: N/A

SHEET 12 OF 12

DATE: JULY, 2013
DRAFT: MEP CHECK: MTT
FILE NUMBER: 05125-6-0 3B

BACKGROUND AND DISCUSSION

The applicant, Ausable LLC, requests approval of a rezoning of approximately 3.72 acres from the R-1 District to the R-5 District to permit the development of 14 single-family detached dwellings at a density of 3.76 dwelling units per acre (du/ac). A staff report for this application was published on April 3, 2014. Staff recommended approval of the originally filed application (RZ 2013-PR-014) for 14 single-family attached dwellings, subject to the proffers included in the report. Prior to the scheduled public hearing, the application was indefinitely deferred. Since then, the application was reactivated and was amended to include a new applicant, who has submitted a revised GDP and associated proffers.

The applicant has revised the GDP, titled "Craven Property," submitted by LDC consisting of 12 sheets dated July 2013 as revised through March 23, 2015. This new GDP proposes 14 single-family detached dwellings and carries forward all of the same positive elements that were worked out during the previous review of the application. In addition, the applicant has improved stormwater management, increased guest parking, and proposed a longer service drive. Figures 1 and 2 below show the previously proposed layout and the revised layout for comparison. A list of the modifications to the existing GDP in order to accommodate the revised layout is also provided below:

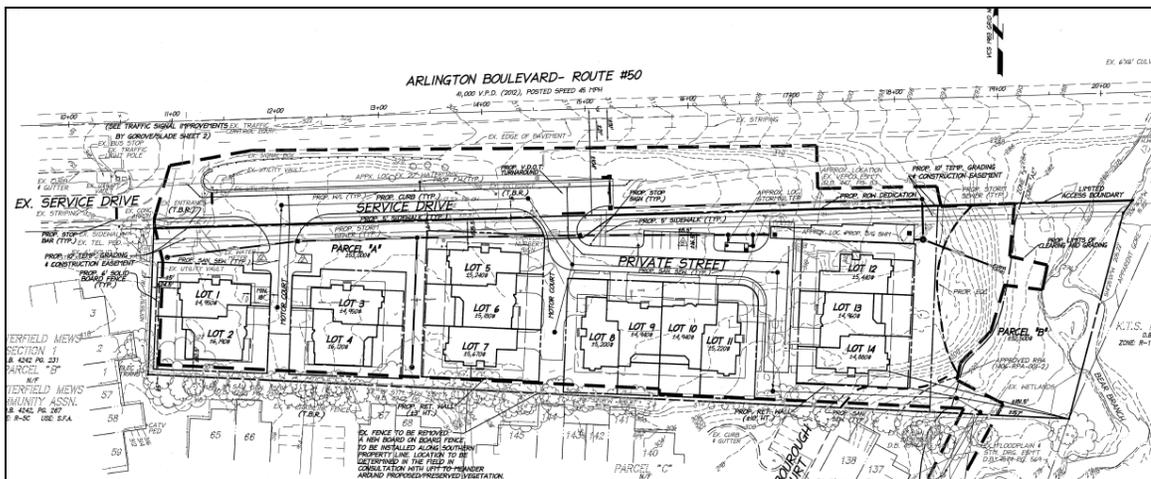


Figure 1: Previously Proposed Layout

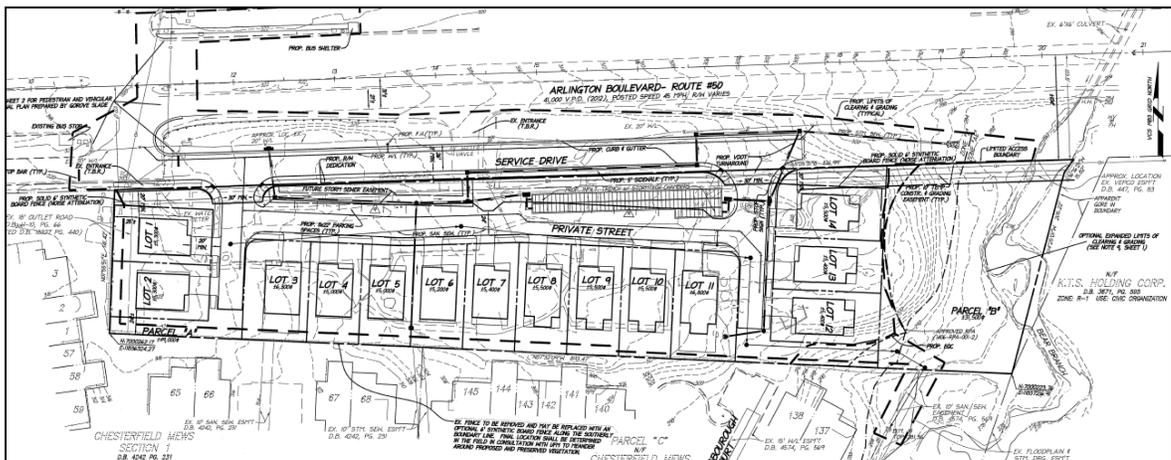


Figure 2: Revised Layout

- **Layout and Circulation** (Sheets 2 and 3 of the GDP): This revised GDP extends the Arlington Boulevard (Rt. 50) service drive further to the east, with two access points to the proposed development located off of the extended service drive. Three new private streets are proposed within the development. The western private street will extend approximately 120 feet to the south, and the eastern private street will extend approximately 160 feet to the south. The third private street will be approximately 480 feet long and run east-west parallel to the service drive, connecting the two shorter private streets. The combination of the service drive and the three private streets will create a loop for the development. Staff views this layout as a more logical circulation pattern than that of the previous single-family attached proposal, which proposed two non-connected private streets located off of a shorter service drive. Two lots will be located on the western side of the western private street, three lots will be located on the eastern side of the eastern private street, and nine lots will be located on the southern side of the longer east-west private street.
- **Unit Type** (Sheets 1, 2 and 12 of the GDP): This revision proposes single-family detached dwellings as opposed to the previously proposed single-family attached dwellings. The proposed lots average approximately 5,507 square feet in area. All dwellings will have a minimum 20-foot front yard setback, an 8-foot side yard setback, and a 25-foot rear yard setback, which meet the regulations of the R-5 District. The applicant is requesting a modification for the minimum lot width for Lots 3 and 11 from a minimum of 70 feet to 64 feet. Staff has no objection to this modification. Architectural elevations are included in the revised GDP.
- **Stormwater** (Sheets 10 and 11 of the GDP): With this redesign, a waiver from the Board of Supervisors for underground stormwater management facilities within a residential development is no longer required. Instead, stormwater management will be accommodated via an infiltration trench and stormtech chambers located under mostly open space grass area located between the service drive and the internal roadway. In addition, a portion of this stormwater management facility will be located under the guest parking in the northern portion of the site. The infiltration trench has been designed to provide water quality and to provide detention for the 1, 2 and 10 year storm events.
- **Traffic Improvements** (Sheets 2 and 3 of the GDP): The revised GDP shows modified traffic improvements at the intersection of Arlington Boulevard and Covington Street, including the relocation of the mast arm traffic signal pole, guardrail relocation, traffic control boxes, traffic signal loops, median adjustment for pedestrian crosswalk, and stop signs and stop bars on the service drive. In addition, the GDP shows a proposed bus shelter on the north side of Arlington Boulevard. These improvements are proposed instead of installing a third eastbound lane of Arlington Boulevard along the application site. No funds for future construction of

this lane are proposed for escrow.

- **Parking** (Sheet 3 of the GDP): A total of 18 guest parking spaces are shown along the northern side of the east-west private street. In addition, the applicant has proffered to install no parking signs along the service drive.
- **Open Space** (Sheet 2 of the GDP): In order to accommodate the revised layout, the open space has decreased from 40 percent to 28 percent of the gross area of the site. This still exceeds the 25 percent open space requirement in the R-5 District.

The major changes to the proffers from those in the staff report are listed below. All changes to the previously proposed proffers are reflected in the blacklined set of proffers in Appendix 2.

- **Proffer #2:** Proffer #2 now commits to a maximum lot yield of 14 single-family detached units instead to 14 single-family attached units.
- **Proffer #7:** Proffer # 7 has been revised to reflect architectural design that is consistent with the revised GDP.
- **Proffer #8:** Proffer #8 has been revised to ensure that the Arlington Boulevard service drive contains a 3-foot wide buffer from back of curb to sidewalk and a 1-foot wide buffer between the sidewalk and the revised property line. A sentence has also been added stating that the applicant will install “No Parking” signs along the service drive.
- **Proffer #11:** A proffer has been added stating that the applicant will install a bus shelter on the north side of Arlington Boulevard in the westbound direction.
- **Proffer #18:** The proffer has been refined to specify that rear yards of Lots 1 and 14 will be shielded by an acoustic barrier to address exterior noise levels.
- **Proffer #35:** The recreation contribution for off-site recreation facilities has been increased from \$33,000 to \$38,399 to reflect the change in dwelling unit type.
- **Proffer #38:** The public schools contribution has been increased from \$43,300 to \$54,125 to reflect the change in dwelling unit type.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The applicant seeks approval of a revised GDP that permits development of 14 single-family detached dwellings located off of three new private streets. The revised GDP provides a more logical layout, improved stormwater, and increased parking than that of the previous GDP. Therefore, staff finds that with the changes shown on the GDP and the proposed proffers, the application continues to be in conformance with the Comprehensive Plan and the applicable Zoning Ordinance provisions.

Staff Recommendations

Staff recommends approval of RZ 2013-PR-014 subject to the execution of proffers consistent with the proffers contained in Attachment 1.

Staff recommends approval of the following waivers and modifications:

- Modification of the minimum district size pursuant to Sect. 9-610 of the Zoning Ordinance to permit a district size of 3.72 acres;
- Modification of Sect. 17-201 (3A) of the Zoning Ordinance to construct a service drive across the site and Detail TS-3 of the Public Facilities Manual (PFM) to construct a sidewalk along the service drive to permit the service drive and sidewalk as shown on the GDP;
- Modification of Sect. 17-201(2) of the Zoning Ordinance to construct a trail along Arlington Boulevard to permit the sidewalk as shown on the GDP;
- Waiver of Sect. 17-201(4) of the Zoning Ordinance to construct a third lane along Arlington Boulevard;
- Waiver of Sect. 7-0101.1 of the PFM to provide interparcel access; and
- Waiver of Sect. 9-610 of the Zoning Ordinance for the minimum lot width for a corner lot for Lots 3 and 11.

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

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

ATTACHMENTS

1. Draft Proffers
2. Blacklined Proffers
3. Updated Environmental and Development Review Analysis
4. Updated Fairfax County Park Authority Analysis
5. Updated Forest Management Division Analysis
6. Updated Fairfax Transportation Analysis
7. Updated Fairfax County Public Schools – Office of Facilities Planning Analysis

Proffers**Ausable, LLC****RZ 2013-PR-014****December 10, 2014****February 18, 2015****March 23, 2015**

Pursuant to Section 15.2-2303(A), Code of Virginia, 1950 as amended, the undersigned Owners and Applicant, in this rezoning proffer that the development of the parcel under consideration and shown on the Fairfax County Tax Map as Tax Map Reference 48-4((1))44 (hereinafter referred to as the "Property") will be in accordance with the following conditions (the "Proffered Conditions"), if and only if, said rezoning request for the R-5 Zoning District is granted. In the event said rezoning request is denied, these Proffered Conditions shall be null and void. The Owners and the Applicant, for themselves, their successors and assigns hereby agree that these Proffered Conditions shall be binding on the future development of the Property unless modified, waived or rescinded in the future by the Board of Supervisors of Fairfax County, Virginia, in accordance with applicable County and State statutory procedures. The Proffered Conditions are:

I. GENERAL

1. Substantial Conformance. Subject to the provisions of Section 18-204 of the Fairfax County Zoning Ordinance (hereinafter referred to as the "Zoning Ordinance"), development of the Property shall be in substantial conformance with the Generalized Development Plan (GDP), prepared by Land Design Consultants consisting of eleven sheets, dated July 2013, some revised through March 23, 2014.
2. Maximum Lot Yield. The development shall consist of a maximum of 14 single family detached units.
3. Minor Modifications. Pursuant to Paragraph 5 of Section 18-204 of the Zoning Ordinance, minor modifications to the GDP may be permitted as determined by the Zoning Administrator. The Applicant reserves the right to make minor adjustments to the internal lots or house locations at the time of site plan submission provided that the amount of open space, tree save, limits of clearing and grading, or distances to peripheral lot lines as shown on the GDP are maintained, and provided that the adjustments are deemed in substantial conformance with the GDP by Fairfax County.
4. Establishment of HOA. Prior to record plat approval, the Applicant shall provide the Department of Public Works and Environmental Services (DPWES) with documentation that the Applicant has established a Homeowners Association (HOA) in accordance with Sect. 2-700 of the Zoning Ordinance. The purpose of the HOA shall be, among other

things, establishing the necessary residential covenants governing the use and operation of common open space and other facilities of the approved development, maintenance of the SWM/BMP facilities and noise barriers, and to provide a mechanism for ensuring the ability to complete the maintenance obligations and other provisions noted in these proffer conditions, including an estimated budget for such common maintenance items.

5. Disclosure. Prior to entering into a contract of sale, prospective purchasers shall be notified in writing by the Applicant of the maintenance responsibility for the private roadways, walkways, stormwater management facilities, noise barriers, common area landscaping and any other open space amenities and shall acknowledge receipt of this information in writing. The initial deeds of conveyance and HOA governing documents shall expressly contain these disclosures.
6. Signs. No temporary signs (including “popsicle” style paper or cardboard signs), which are prohibited by Article 12 of the Zoning Ordinance and Chapter 7 of Title 33.1, and Chapter 8 of Title 46.2 of the Code of Virginia, shall be placed on or offsite by the Applicant or at the Applicant’s direction. The Applicant shall direct its agents and employees involved with the Property to adhere to this proffer.
7. Architectural Design. The exterior architectural design of the units shall be in substantial conformance with the quality of the elevations shown on the GDP. Specifically, the exterior facades shall include the use of varied roof lines, paneled or board and batten shutters, window headers, and windowed garage doors, consistent with that shown on the GDP. The primary material of the exterior facades, exclusive of trim, gutters, downspouts, and windows, shall be brick, stone, Hardie Plank, Hardie Panel, Hardie Board or other cementitious material. No vinyl or wood siding shall be used on the building facades. Units shall vary in color in muted tones of blue, green, brown, beige or other muted earthtones. The facades of the dwellings on Lots 1, 3, 11, and 14 facing Arlington Boulevard shall be constructed of materials that are of a proportional quality to those used on the front façade, including similar decorative elements and window treatments. The architectural elevations may be refined as a result of final design and engineering provided the quality of the buildings remains in substantial conformance with those shown on the GDP and the materials as stated in this proffer.

II. TRANSPORTATION

8. Service Drive. The Applicant shall construct a service drive across a portion of the frontage as shown on the GDP. The service drive includes curb and gutter on the south side and curb on the north side, a 5-foot wide sidewalk along the south side with a 3-foot buffer from back of curb to sidewalk and a 1-foot buffer between the sidewalk and the revised property line as well as a branch-type turnaround, as shown on the GDP, subject to approval by the Virginia Department of Transportation (VDOT). The 5-foot wide sidewalk shall connect with the service drive sidewalk to the west and to internal sidewalks. Until the service drive is accepted by VDOT into the state maintenance system, the Applicant shall maintain the service drive and sidewalk. Once accepted into

the system for state maintenance, a sign shall be erected at the connection of the service drive to the development's private street delineating where the state maintenance ends. If approved by VDOT, the Applicant shall also install no parking signs along the service drive.

9. Improvements at Arlington Boulevard (Rt. 50) and Service Drive. The Applicant shall construct improvements as shown on the GDP, including the relocation of the mast arm traffic signal pole, guardrail relocation, stop signs and stop bars on the service drive, traffic control boxes, traffic signal loops and median adjustment for the pedestrian crosswalk.. The final design and location of these improvements shall, to the extent possible, accommodate the future third lane construction on Arlington Boulevard (Rt. 50) and are subject to approval by VDOT.
10. Pedestrian Signal. With relocation of the signal pole, the Applicant shall install a pedestrian signal for crossing Arlington Boulevard (Rt. 50). The Applicant shall also install VDOT standard high visibility markings, ADA compliant ramps, and refuge areas for this crossing, as shown on the GDP, subject to VDOT approval.
11. Bus Shelter. The Applicant shall install a bus shelter on the north side of Route 50, in the westbound direction, with a 5 foot wide sidewalk as shown on the GDP, subject to approval by VDOT. The design of the bus pad and shelter shall meet Fairfax County's Bus Stop Guidelines.
12. VDOT Approval. All proffered public roadway improvements shall be subject to VDOT approval.
13. Right-of-Way Dedication along Arlington Boulevard. At the time of site plan approval, or upon demand by Fairfax County or VDOT, whichever occurs first, the Applicant shall dedicate, at no cost to Fairfax County and in fee simple, without encumbrances except for that certain easement to Virginia Electric Power Company recorded in the Fairfax County Land Records at Deed Book 447, Page 83 and any overhead utility lines or utility poles located in this easement (herein referred to as "the VEPCO easement") to the Board of Supervisors, right-of-way along the site frontage of Arlington Boulevard 104 feet from the centerline and any associated ancillary easements, as shown on the GDP. Density credit is reserved consistent with the provisions of the Fairfax County Zoning Ordinance for all eligible dedications described herein or as may be required by Fairfax County or VDOT.
14. Public Access Easement. At the time of plat recordation, the Applicant shall cause to be recorded among the land records a public access easement running to the benefit of Fairfax County, in a form acceptable to the County Attorney, over the private road and sidewalks as generally shown on the GDP, subject to approval by DPWES.
15. Private Streets. The on-site private street shall be constructed in conformance with the Public Facilities Manual (PFM) and shall be constructed of materials and depth of pavement consistent with the PFM, subject to any design modifications as to pavement

and easement width and use of curb, that are approved by the Director of DPWES. The Homeowners' Association shall be responsible for the maintenance of the on-site private street. All prospective purchasers shall be advised of this maintenance obligation prior to entering into a contract of sale and said obligation will be disclosed in the HOA documents.

16. Use of Garages, Driveways and Common Area Parking Spaces

- A. Any conversion of garages or use of garages that precludes the parking of vehicles within the garage is prohibited. A covenant setting forth this restriction shall be recorded among the land records of Fairfax County in a form approved by the County Attorney prior to the sale of any lots and shall run to the benefit of the HOA and the Board of Supervisors. This restriction shall also be disclosed in the HOA documents. Prospective purchasers shall be advised of this use restriction, in writing, prior to entering into a contract of sale.
- B. No parking of recreational vehicles (RVs), boats or trailers shall be permitted on the private streets or shared driveways. This restriction shall be included in the homeowner's association documents prepared for the Application Property.
- C. In order to encourage the efficient use of garage space, an exhibit depicting the most efficient use of the garage space shall be included in the sales documents and as part of the homeowners association documents. The exhibit shall delineate, with dimensions, the parking of two SUV/mini-van size vehicles along with how storage areas can be accommodated within the garage.
- D. Owners shall be advised of the above use restrictions which shall be included in the initial lease/sales documents.
- E. All driveways shall be a minimum of twenty feet (20') in length as measured outward from the face of the garage door to the face of curb.

III. ENVIRONMENTAL

17. Noise. Noise attenuation measures shall be incorporated into the development so as to achieve an interior noise level of no greater than DNL 45 dBA and an exterior noise level for outdoor areas, including decks, within lots at or below DNL 65 dBA. The applicant shall provide a refined acoustical analysis at the time of site plan submission which includes final grading and design and which incorporates the potential impact of a third eastbound lane on Arlington Boulevard (Rt. 50). Any acoustical analysis and noise attenuation measures shall be subject to the review and approval of the Environmental and Development Review Branch of the Department of Planning and Zoning (DPZ) and DPWES at the time of site plan. For dwelling units anticipated by the study to be affected by highway noise levels projected to be between 65 and 70 dBA Ldn, those dwellings shall be constructed to meet the following building material standards:

- Exterior walls should have a laboratory sound transmission class (STC) rating of at least 39. Doors and glazing shall have a laboratory STC rating of at least 28 unless glazing constitutes more than 20% of any façade exposed to noise levels of 65 to 70 dBA Ldn.
- If glazing constitutes more than 20% of an exposed façade, then the glazing shall have a STC rating of up to 39 as dictated by the percent of glass.
- All surfaces should be sealed and caulked in accordance with methods approved by the American Society for Testing and Materials (ASTM) to minimize sound transmission.
- In order to achieve a maximum exterior noise level of 65 dBA, a six foot high acoustic barrier, solid with no gaps and flush to the ground (to be constructed of low maintenance, durable materials such as brick, masonry or synthetic board material) shall be provided in the location shown on the GDP for the rear yards of Lots 1 and 14. The HOA shall be responsible for the maintenance of the acoustic barrier.

The Applicant reserves the right to pursue methods other than those above for mitigating highway noise impacts that can be demonstrated prior to the filing of a building permit, through an independent noise study as reviewed and approved by DPWES and the DPZ, provided that these methods will be effective in reducing interior noise levels to approximately 45 dBA Ldn, and exterior noise within outdoor recreation areas to approximately 65 dBA Ldn.

18. Resource Protection Area and Environmental Quality Corridor Restoration Plan. All areas of the EQC shall be restored in accordance with notes on sheets 6 and 7 of the GDP. This restoration plan shall be reviewed and approved by Urban Forestry Management Division (UFMD) and Fairfax County Park Authority (FCPA). A component of the restoration plan shall be an Invasive Species Management Plan which shall also be reviewed and approved by UFMD, Natural Resource Management and Protection (NRMP) and FCPA. The invasive species management plan, developed by a VA certified pesticide applicator, shall include but not be limited to the following information:

- Identify targeted undesirable and invasive plant species to be suppressed and managed.
- Targeted area of undesirable and invasive plant management plan shall be clearly identified on the landscape or tree preservation plan.
- Removal of undesirable and invasive plant species shall be conducted in accordance with the notes on Sheet 8 of the GDP which differentiates two different areas: one where mechanical means may be utilized and the other where hand tools or other hand methods shall be utilized. The specific type of removal method shall be specified on the invasive species management plan.
- Identify potential impacts of recommended method(s) on surrounding trees and vegetation not targeted for suppression/management and identify how these trees and vegetation will be protected (for example, if mechanical equipment is proposed in

save area, what will be the impacts to trees identified for preservation and how will these impacts be reduced).

- Identify how targeted species will be disposed.
 - If chemical control is recommended, treatments shall be performed by or under direct supervision of a Virginia Certified Pesticide Applicator or Registered Technician and under the general supervision of Project Arborist). Monitoring and treatment visits shall extend two years from the first treatment.
 - Provide information regarding timing of treatments, (hand removal, mechanical equipment or chemical treatments) when will treatments begin and end during a season and proposed frequency of treatments per season. All invasive species should be removed following the guidelines of: Miller, James H.; Manning, Steven T.; Enloe, Stephen F. 2010. A management guide for invasive plants in southern forests. Gen. Tech. Rep. SRS-131. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 120 p.
 - Provide monthly monitoring reports during removal time period to UFMD staff.
 - The duration of management program shall be until the earlier to occur of (i) Bond release or (ii) release of Conservation Deposit, provided however that program may end sooner if targeted plant(s) appear to be eliminated based on documentation provided by Project Arborist and an inspection by UFMD and FCPA staff.
19. Park Authority Dedication. Prior to bond release, the Applicant shall dedicate Parcel B, as shown on the GDP, to the Fairfax County Park Authority in fee simple with no monetary encumbrances. Prior to dedication of Parcel B, the Applicant shall remove waste and debris, perform the restoration work as shown on the GDP and described in Proffer 19 above, install any improvements or landscaping enhancements in accordance with the GDP, and cause to be dedicated any additional right-of-way from Parcel B necessary for improvements along the Rt. 50 frontage as requested by VDOT. The Applicant shall reserve any density credit associated with this dedication. If FCPA declines to accept Parcel B as described in this proffer, then Parcel B shall be conveyed to HOA and maintained by the same.
20. Energy Conservation. In support of energy conservation and green building techniques; the Applicant, in consultation with the Environment and Development Review Branch (EDRB) of Department of Planning and Zoning (DPZ), shall seek certification for this development from one of the following programs that offers third party review of “green building” or energy efficient measures. The Applicant shall have sole discretion to choose the program that will be utilized.
- A. Certification in accordance with the Earth Craft House Program as demonstrated through documentation provided to DPWES and EDRB prior to the issuance of a RUP; or
 - B. Certification in accordance with the National Green Building Standard (NGBS) using the ENERGY STAR® Qualified Homes path for energy performance, as demonstrated through documentation submitted to DPWES and EDRB from a home energy rater certified through Home Innovation Research Labs that

demonstrates that the dwelling unit has attained the certification prior to the issuance of the RUP for each dwelling; or

- C. Certification in accordance with the National Association of Home Builders (NAHB) National Green Building Program, Bronze level, as demonstrated through submission of a copy of the “Green Certificate” issued by NAHB in accordance with its “Green Certificate Program” prior to the issuance of the RUP for each dwelling.
21. Landscaping. At the time of subdivision plan or site plan review, as required, the Applicant shall submit to DPWES a landscape plan showing landscaping consistent with the quality, quantity and general location shown on the Landscape Plan on the GDP. This plan shall be subject to review and approval of Urban Forestry Management (UFMD), DPWES. At the time of planting, the minimum caliper for deciduous trees shall be three (3) inches and the minimum height for evergreen trees shall be six (6) feet. Actual types and species of vegetation shall be determined pursuant to more detailed landscape plans submitted at the time of submission of the subdivision plans for review and approval by the UFMD at the time of subdivision plan approval. However, all plant material installed on the Property shall be non-invasive. Such landscape plans shall provide tree coverage and species diversity consistent with the PFM criteria, as determined by the Urban Forester. The Applicant reserves the right to make minor modifications to such landscaping to reasonably accommodate utilities and other design considerations, provided such relocated landscaping shall retain a generally equivalent number of plantings as shown on the approved GDP.
22. Limits of Clearing and Grading. The Applicant shall conform strictly to the limits of clearing and grading as shown on the GDP, subject to allowances specified in Proffer 26 and for the installation of utilities, trails or excavation of existing material required to restore the topography to the condition reflected in the Board adopted floodplain study as determined necessary by the Director of DPWES, as described herein. If it is determined by the Director that such an excavation is required, the optional expanded limits of clearing and grading shall be utilized. In addition, if it is determined necessary to install utilities and/or trails in areas protected by the limits of clearing and grading as shown on the GDP, they shall be located in the least disruptive manner necessary as determined by the UFMD, DPWES. A replanting plan shall be developed and implemented, subject to approval by the UFMD and FCPA for all disturbances in accordance with all applicable requirements. Any trees impacted within the limits of clearing and grading as specified above shall be replaced on the site as determined by UFMD and the Chesapeake Bay Preservation Ordinance. Notwithstanding the Tree Preservation Target Statement and Calculation shown on Sheet 4 of the GDP, the Applicant reserves the right to request a deviation of the tree preservation target to be reviewed and approved by UFMD at the time of site plan review. Such deviation shall be the minimum necessary to accommodate the excavation of material as described above.
23. Tree Preservation. The applicant shall submit a Tree Preservation Plan and Narrative as part of the first and all subsequent site plan submissions. The preservation plan and

narrative shall be prepared by a Certified Arborist or a Registered Consulting Arborist, and shall be subject to the review and approval of the Urban Forest Management Division, DPWES.

The tree preservation plan shall include a tree inventory that identifies the location, species, critical root zone, size, crown spread and condition analysis percentage rating for all individual trees to be preserved, as well as all on and off-site trees, living or dead with trunks 10 inches in diameter and greater (measured at 4 ½ -feet from the base of the trunk or as otherwise allowed in the latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture) located within 25 feet to either side of the proposed limits of clearing and grading. The tree preservation plan shall provide for the preservation of those areas shown for tree preservation, those areas outside of the limits of clearing and grading shown on the GDP and those additional areas in which trees can be preserved as a result of final engineering. The tree preservation plan and narrative shall include all items specified in PFM 12-0507 and 12-0509. Specific tree preservation activities that will maximize the survivability of any tree identified to be preserved, such as: crown pruning, root pruning, mulching, fertilization, and others as necessary, determined by the certified arborist shall be included in the plan.

24. Tree Preservation Walk-Through. The Applicant shall retain the services of a certified arborist or Registered Consulting Arborist, and shall have the limits of clearing and grading marked with a continuous line of flagging prior to the walk-through meeting. During the tree-preservation walk-through meeting, the Applicant's certified arborist or landscape architect or designated representative shall walk the limits of clearing and grading with an UFMD, DPWES, representative to determine where adjustments to the clearing limits can be made to increase the area of tree preservation, increasing the survivability of trees at the edge of the limits of clearing and grading, and such adjustment shall be implemented. Trees that are identified as dead or dying may be removed as part of the clearing operation. Any tree that is so designated shall be removed using a chain saw and such removal shall be accomplished in a manner that avoids damage to surrounding trees and associated understory vegetation. If a stump must be removed, this shall be done using a stump-grinding machine in a manner causing as little disturbance as possible to adjacent trees and associated understory vegetation and soil conditions. The Applicant shall notify the Providence District Supervisor no less than ten (10) days in advance of the Tree Preservation Walk-Through meeting. At the discretion and the direction of the Providence District Supervisor, the Chesterfield Mews Homeowners Association shall be notified by United States Mail no later than five (5) days in advance of the Tree Preservation Walk-Through meeting inviting them to the meeting to discuss the limits of clearing and grading. The Providence District Supervisor shall be notified of the name and contact information of the Applicant's representatives responsible for the site monitoring at the Tree Preservation Walk-Through.
25. Tree Preservation Fencing. All trees shown to be preserved on the tree preservation plan shall be protected by tree protection fence. Tree protection fencing in the form of four (4) foot high, fourteen (14) gauge welded wire attached to six (6) foot steel posts driven eighteen (18) inches into the ground and placed no further than ten (10) feet apart or,

super silt fence to the extent that required trenching for super silt fence is done per the root pruning guidelines contained in these proffers. Fencing shall be erected at the limits of clearing and grading as shown on the demolition, and phase I & II erosion and sediment control sheets.

The Applicant shall install tree preservation fencing on the limits of clearing and grading line as depicted on the GDP. It is noted that the Applicant may conduct work between the tree preservation fencing and the western and southern lot lines in order to remove any existing nursery stock and gravel currently in that area resulting from the operation of the nursery on the Application Property. Any work conducted in this area shall be coordinated with UFMD. Methods of removal that are the least disruptive as possible shall be utilized for this work in order to protect offsite trees and may include limited use of a Bobcat. This work, the removal of the existing fence and the installation of a new board on board fence along the western and southern lot lines, as shown on the GDP, shall be the only disturbance permitted within this area. Once the proposed houses are constructed, all grading is complete, and the site is stabilized, the Applicant may remove the tree preservation fencing and re-sod this area.

All tree protection fencing shall be installed after the tree preservation walk-through meeting but prior to any clearing and grading activities, including the demolition of any existing structures. The installation of all tree protection fencing shall be performed under the supervision of a certified arborist, and accomplished in a manner that does not harm existing vegetation that is to be preserved. Ten (10) days prior to the commencement of any clearing, grading or demolition activities, but subsequent to the installation of the tree protection devices, the UFMD, DPWES, and the Providence District Supervisor shall be notified and given the opportunity to inspect the site to ensure that all tree protection devices have been correctly installed. If it is determined that the fencing has not been installed correctly, no grading or construction activities shall occur until the fencing is installed correctly, as determined by the UFMD, DPWES. At the discretion and the direction of the Providence District Supervisor, a representative of the Chesterfield Mews Homeowners Association shall be notified by United States Mail no later than five (5) days in advance of any clearing, grading or demolition activities. In this letter, any member of the Association shall be invited to be in attendance when the UFMD, DPWES and the Providence District Supervisor inspect the site to ensure that all tree protection devices have been correctly installed.

26. Tree Appraisal. The Applicant shall retain a professional arborist with experience in plant appraisal, to determine the replacement value of all trees 10 inches in diameter or greater located on the Application Property that are shown to be saved on the Tree Preservation Plan. These trees and their value shall be identified on the Tree Preservation Plan at the time of the first submission of the respective site plan(s). The replacement value shall take into consideration the age, size and condition of these trees and shall be determined by the so-called "Trunk Formula Method" contained in the latest edition of the Guide for Plan Appraisal published by the International Society of Arboriculture, subject to review and approval by UFMD.

At the time of the respective site plan approvals, the Applicant shall post a cash bond or a letter of credit payable to the County of Fairfax to ensure preservation and/or

replacement of the trees for which a tree value has been determined in accordance with the paragraph above (the "Bonded Trees") that die or are dying due to unauthorized construction activities. The letter of credit or cash deposit shall be equal to 50% of the replacement value of the Bonded Trees. At any time prior to final bond release for the improvements on the Application Property constructed adjacent to the respective tree save areas, should any Bonded Trees die, be removed, or are determined to be dying by the project arborist and/or UFMD due to unauthorized construction activities, the Applicant shall replace such trees at its expense. The replacement of the trees shall be determined by the Fairfax County Public Facilities Manual and by UFMD. In addition to this replacement obligation, the Applicant shall also make a payment equal to the value of any Bonded Tree that is dead or dying or improperly removed due to unauthorized construction activity. This payment shall be determined based on the Trunk Formula Method and paid to a fund established by the County for furtherance of tree preservation objectives. Upon release of the bond for the improvements on the Application Property constructed adjacent to the respective tree save areas, any amount remaining in the tree bonds required by this proffer shall be returned/released to the Applicant.

27. Root Pruning. The Applicant shall root prune, as needed to comply with the tree preservation requirements of these development conditions. Root pruning shall be clearly identified, labeled, and detailed on the erosion and sediment control sheets of the site plan submission. Root pruning shall be accomplished in a manner that protects affected and adjacent vegetation to be preserved, and may include, but not be limited to the following:
- Root pruning shall be done with a trencher or vibratory plow to a minimum depth of 18 inches.
 - Root pruning shall take place prior to any clearing and grading, or demolition of structures and in conjunction with the installation of all super silt fence being used as tree protection fence.
 - Root pruning shall be conducted with the supervision of a certified arborist.
 - An UFMD, DPWES, representative shall be informed when all root pruning and tree protection fence installation is complete.
 - Along the southern lot line, where the limits of clearing and grading are 5 feet from the southern lot line, root pruning shall occur 7 feet from the southern lot line. Along the southern and western lot lines where the limits of clearing and grading are 10 feet from the respective lot lines, root pruning shall occur 12 feet from the respective lot lines.
28. Site Monitoring. During any clearing or tree/vegetation/structure removal on the Applicant Property, a representative of the Applicant shall be present to monitor the process and ensure that the activities are conducted as conditioned and as approved by the UFMD. The Applicant shall retain the services of a certified arborist or Registered Consulting Arborist to monitor all construction and demolition work and tree preservation efforts in order to ensure conformance with all tree preservation development conditions, and UFMD approvals. The monitoring schedule shall be

described and detailed in the Landscaping and Tree Preservation Plan, and reviewed and approved by the UFMD, DPWES and FCPA.

29. Stormwater Management Facilities and Best Management Practices. Unless waived or modified, stormwater management shall be provided as generally depicted on the GDP and as approved by DPWES. The requirements for maintaining non-County maintained SWM improvements shall be in a standard maintenance agreement between the County and the Applicant who is the land owner, its successor and assigns. This agreement shall be recorded in the County land records and run with the land. Should any deficiencies in the existing SWM or BMP facilities/improvements be identified by the Stormwater Management Maintenance Division during regular inspections, or when investigating a drainage complaint, then maintenance shall be performed in reasonable fashion and time in accordance with the recorded maintenance agreement. Should future County policy permit all or part of the SWM facilities on the Property to be eligible for County Maintenance, then the Applicant or the successor homeowner's association may request County maintenance for eligible facilities. After establishing the HOA pursuant to these proffers, the Applicant shall provide the HOA with written materials describing proper maintenance of the approved SWM and BMPs in accordance with the PFM and County guidelines.
30. Wells/Septic. Prior to land disturbance on the subject property, the Applicant shall coordinate with the Health Department regarding the closure and abandonment of the existing wells and septic tanks on the subject property. The Applicant shall obtain a letter from the Health Department stating the aforementioned wells and septic tanks were closed and abandoned in accordance with local and State regulations.
31. Phase I Environmental Site Assessment. The applicant shall complete a Phase I environmental site assessment of the Property if deemed necessary by DPWES. If deemed necessary by the Phase I environmental site assessment, the Applicant shall complete a Phase II environmental investigation. The Applicant shall provide copies of the Phase I environmental site assessment and Phase II environmental investigation to DPWES prior to final site plan approval. If contamination is found in ground water, surface water or soil on the Property, the Applicant shall take such corrective action as required by and in accordance with all applicable Federal, State and County requirements and as otherwise reasonably necessary for protection of human health in the redevelopment of the Property.
32. Geotechnical Study. Prior to site plan approval and in accordance with the provisions of the Public Facilities Manual, the Applicant shall submit a geotechnical study of the Property to DPWES for the review and approval. If needed to alleviate potential structural, grading and construction problems to the Property and the adjacent properties, the Applicant shall incorporate into its site plan and/or building design appropriate engineering practices as recommended by DPWES.

IV. CONTRIBUTIONS

33. Housing Trust Fund. At the time of the first building permit issuance, the Applicant shall contribute a sum equal to one-half of one percent (0.5%) of the projected sales price for each dwelling unit on the Property to the Fairfax County Housing Trust Fund, as determined by the Department of Housing and Community Development in consultation with the Applicant to assist the County in its goal to provide affordable dwellings. The projected sales price shall be based upon the aggregate sales price of all of the units, as if those units were sold at the time of the issuance of the first building permit and is estimated through comparable sales of similar type units.
34. Recreation Contribution. At the issuance of the first RUP, the Applicant shall contribute the sum of \$38,399 to the Board of Supervisors for use at off-site recreational facilities intended to serve the future residents, as determined by the Providence District Supervisor in coordination with FCPA.
35. Providence District Tree Fund. At the issuance of the first RUP, the Applicant shall contribute \$2,000 to the Providence District Tree Fund.
36. Nottoway Nights. At the issuance of the first RUP, the Applicant shall contribute \$1,000 to the Nottoway Nights Concert Series.
37. Public Schools. A contribution of \$54,125 (5 students X \$10,825) shall be made to the Board of Supervisors for transfer to Fairfax County Public Schools (FCPS) and designated for capital improvements at the public schools serving the development. The contribution shall be made at the time of, or prior to, issuance of the first RUP. Following approval of this Application and prior to the Applicant's payment of the amount set forth in this Proffer, if Fairfax County should increase or decrease the ratio of students per unit or the amount of the contribution per student, the Applicant shall increase or decrease the amount of the contribution for that phase of development to reflect the then-current contribution. In addition, notification shall be given to FCPS when construction is anticipated to commence to assist FCPS by allowing for the timely projection of future students as a part of the Capital Improvement Program.
38. Escalation. All monetary contributions required by these proffers, with the exception of Proffer 34 relating to the Housing Trust Fund and Proffer 38 relating to the public school contribution, shall escalate on a yearly basis from the base year of 2015, and change effective each January 1 thereafter, based on the Consumer Price Index as published by the Bureau of Labor Statistics, the U.S. Department of Labor for the Washington-Baltimore, MD-VA-DC-WV Consolidated Metropolitan Statistical Area (the "CPI"), as permitted by Virginia State Code Section 15.2-2303.3.

Successors and Assigns

These proffers shall bind and inure to the benefit of the Applicant and his/her successors and assigns.

Counterparts

These proffers may be executed in one or more counterparts, each of which when so executed and delivered shall be deemed an original document and all of which taken together shall constitute but one and the same instrument.

TITLE OWNERS AND APPLICANTS SIGNATURES TO FOLLOW ON THE NEXT PAGE:

Paul Craven, a/k/a C. Paul Craven, a/k/a Clifton Paul Craven, a/k/a
Paul C. Craven,

By: _____

Name _____
Paul Craven, a/k/a C. Paul Craven, a/k/a Clifton
Paul Craven, a/k/a Paul C. Craven, co-owner of 48-
4((1))44 together with Nancy Craven, a/k/a Nancy
C. Craven

Nancy Craven, a/k/a/ Nancy C. Craven

By: _____

Name _____
Nancy Craven, a/k/a/ Nancy C. Craven, co-owner
of 48-4((1))44 together with Paul Craven, a/k/a C.
Paul Craven, a/k/a Clifton Paul Craven, a/k/a Paul
C. Craven

Ausable, LLC
BY: Michael B. Hummel, Manager
Contract Purchaser of 48-4((1))44

Name: _____
Michael B. Hummel

Proffers

~~MHI—Arlington Boulevard, LLC~~ Ausable, LLC

RZ 2013-PR-014

~~November 22, 2013~~

~~Revised January 14,~~ December 10, 2014

~~Revised January 31, 2014~~

~~Revised February 24, 2014~~ 18, 2015

~~March 6, 2014~~ 23, 2015

~~March 26, 2014~~

Pursuant to Section 15.2-2303(A), Code of Virginia, 1950 as amended, the undersigned Owners and Applicant, in this rezoning proffer that the development of the parcel under consideration and shown on the Fairfax County Tax Map as Tax Map Reference 48-4((1))44 (hereinafter referred to as the “Property”) will be in accordance with the following conditions (the “Proffered Conditions”), if and only if, said rezoning request for the R-5 Zoning District is granted. In the event said rezoning request is denied, these Proffered Conditions shall be null and void. The Owners and the Applicant, for themselves, their successors and assigns hereby agree that these Proffered Conditions shall be binding on the future development of the Property unless modified, waived or rescinded in the future by the Board of Supervisors of Fairfax County, Virginia, in accordance with applicable County and State statutory procedures. The Proffered Conditions are:

I. GENERAL

1. Substantial Conformance. Subject to the provisions of Section 18-204 of the Fairfax County Zoning Ordinance (hereinafter referred to as the “Zoning Ordinance”), development of the Property shall be in substantial conformance with the Generalized Development Plan (GDP), prepared by Land Design Consultants consisting of eleven sheets, dated July 2013, some revised through March 6, 2014. 23, 2015.
2. Maximum Lot Yield. The development shall consist of a maximum of 14 single family ~~attached~~ detached units.
3. Minor Modifications. Pursuant to Paragraph 5 of Section 18-204 of the Zoning Ordinance, minor modifications to the GDP may be permitted as determined by the Zoning Administrator. The Applicant reserves the right to make minor adjustments to the internal lots or house locations at the time of site plan submission provided that the amount of open space, tree save, limits of clearing and grading, or distances to peripheral lot lines as shown on the GDP are maintained, and provided that the adjustments are deemed in substantial conformance with the GDP by Fairfax County.

4. Establishment of HOA. Prior to record plat approval, the Applicant shall provide the Department of Public Works and Environmental Services (DPWES) with documentation that the Applicant has established a Homeowners Association (HOA) in accordance with Sect. 2-700 of the Zoning Ordinance. The purpose of the HOA shall be, among other things, establishing the necessary residential covenants governing the use and operation of common open space and other facilities of the approved development, **maintenance of the SWM/BMP facilities and noise barriers**, and to provide a mechanism for ensuring the ability to complete the maintenance obligations and other provisions noted in these proffer conditions, including an estimated budget for such common maintenance items.
- ~~5. Dedication to HOA. At the time of record plat recordation, the open space and common features/amenities not otherwise conveyed or dedicated to the County shall be dedicated to the HOA and maintained by the same.~~
- 6.5. Disclosure. Prior to entering into a contract of sale, prospective purchasers shall be notified in writing by the Applicant of the maintenance responsibility for the private roadways, walkways, stormwater management facilities, **noise barriers**, common area landscaping and any other open space amenities and shall acknowledge receipt of this information in writing. The initial deeds of conveyance and HOA governing documents shall expressly contain these disclosures.
- 7.6. Signs. No temporary signs (including “popsicle” style paper or cardboard signs), which are prohibited by Article 12 of the Zoning Ordinance and Chapter 7 of Title 33.1, and Chapter 8 of Title 46.2 of the Code of Virginia, shall be placed on or offsite by the Applicant or at the Applicant’s direction. The Applicant shall direct its agents and employees involved with the Property to adhere to this proffer.
- 8.7. Architectural Design. The exterior architectural design of the units shall be in substantial conformance with the quality of the elevations shown on ~~Sheet 9~~ of the GDP. Specifically, the exterior facades shall include the use of ~~dormer windows~~, varied roof lines, ~~covered stoops or porches and columns~~ **paneled or board and batten shutters, window headers, and windowed garage doors**, consistent with that shown on ~~Sheet 9~~ of the GDP. Further, the fenestration treatments, garage door details and the percentage of glass shall be in substantial conformance with that shown on ~~Sheet 9~~ of the GDP. ~~the GDP.~~ The primary material of the exterior facades, exclusive of trim, gutters, downspouts, and windows, shall be **brick, stone**, Hardie Plank, Hardie Panel, Hardie Board or other cementitious material. No vinyl or wood siding shall be used on the building facades. Units shall vary in color in muted tones of blue, green, brown, beige or other muted earthtones. ~~The side and rear facades of each building shall be in substantial conformance with the front facades of each building~~ **facades of the dwellings on Lots 1, 3, 11, and 14 facing Arlington Boulevard shall be constructed of materials that are of a proportional quality to those used on the front façade, including similar decorative elements and window treatments**. The architectural elevations may be refined as a result of final design and engineering provided the quality of the buildings remains in substantial conformance with those shown on the GDP and the materials as stated in this proffer.

II. TRANSPORTATION

- ~~9.8.~~ Service Drive. The Applicant shall construct a service drive across a portion of the frontage as shown on the GDP. The service drive includes curb and gutter on ~~both sides~~ **the south side and curb on the north side**, a 5-foot wide sidewalk along the south side and a branch-type cul-de-sac **with a 3-foot buffer from back of curb to sidewalk and a 1-foot buffer between the sidewalk and the revised property line as well as a branch-type** turnaround, as shown on the GDP, subject to approval by the Virginia Department of Transportation (VDOT). The 5-foot wide sidewalk shall connect with the service drive sidewalk to the west and to internal sidewalks. Until the service drive is accepted by VDOT into the state maintenance system, the Applicant shall maintain the service drive and sidewalk. Once accepted into the system for state maintenance, a sign shall be erected at the connection of the service drive to the development's private street delineating where the state maintenance ends. **If approved by VDOT, the Applicant shall also install no parking signs along the service drive.**
- ~~10.9.~~ Improvements at Arlington Boulevard (Rt. 50) and Service Drive. The Applicant shall construct improvements as shown on the GDP, including the relocation of the mast arm traffic signal pole, guardrail relocation, ~~and~~ stop signs and stop bars on the service drive, **traffic control boxes, traffic signal loops and median adjustment for the pedestrian crosswalk.** The final design and location of these improvements shall, to the extent possible, accommodate the future third lane construction on Arlington Boulevard (Rt. 50) and are subject to approval by VDOT.
- ~~11.10.~~ Pedestrian Signal. With relocation of the signal pole, the Applicant shall install a pedestrian signal for crossing Arlington Boulevard (Rt. 50). The Applicant shall also install VDOT standard high visibility markings, ADA compliant ramps, and refuge areas for this crossing, as shown on the GDP, subject to VDOT approval.
- 11. Bus Shelter. The Applicant shall install a bus shelter on the north side of Route 50, in the westbound direction, with a 5 foot wide sidewalk as shown on the GDP, subject to approval by VDOT. The design of the bus pad and shelter shall meet Fairfax County's Bus Stop Guidelines.**
12. VDOT Approval. All proffered public roadway improvements shall be subject to VDOT approval.
13. Grading Analysis. ~~In order to determine if the future installation of the third eastbound lane of Arlington Boulevard (Rt. 50) along the frontage of the site can be accommodated without the need for additional retaining walls, right of way, and grading easements, the Applicant shall perform and submit a grading analysis which shall be included as an exhibit with the site plan. This grading analysis shall include a profile or cross section of the future service drive, shall be submitted at site plan review and is subject to VDOT review and approval. If the analysis demonstrates that additional right of way and~~

easements will be required, ~~the Applicant shall provide the same as described in Proffers 14 and 20 below. This proffer will not require any additional work by the Applicant beyond said grading analysis.~~ 14. Right-of-Way Dedication along Arlington Boulevard. At the time of site plan approval, or upon demand by Fairfax County or VDOT, whichever occurs first, the Applicant shall dedicate, at no cost to Fairfax County and in fee simple, without encumbrances except for that certain easement to Virginia Electric Power Company recorded in the Fairfax County Land Records at Deed Book 447, Page 83 and any overhead utility lines or utility poles located in this easement (herein referred to as “the VEPCO easement”) to the Board of Supervisors, ~~an additional one (1) foot of right-of-way along the site frontage of Arlington Boulevard~~ **104 feet from the centerline** and any associated ancillary easements, as shown on the GDP. ~~In the event the grading analysis described in Proffer 13 demonstrates that additional right of way is required along the frontage of the Application Property but outside of Parcel B, the Applicant shall dedicate this additional right of way in fee simple, without encumbrances, except for the VEPCO easement, and provided further that such dedication shall not require either (i) any redesign or relocation of any improvements shown on the GDP/site plan or (ii) a proffered condition amendment as determined by the Department of Planning and Zoning. Density credit is reserved consistent with the provisions of the Fairfax County Zoning Ordinance for all eligible dedications described herein or as may be required by Fairfax County or VDOT. In the event the grading analysis described in Proffer 13 demonstrates that additional right of way is required on Parcel B, the Applicant shall dedicate this additional right of way in fee simple, without encumbrances, except for the VEPCO easement, to~~ ~~the Board of Supervisors.~~

~~15.~~ 14. Public Access Easement. At the time of plat recordation, the Applicant shall cause to be recorded among the land records a public access easement running to the benefit of Fairfax County, in a form acceptable to the County Attorney, over the private road and sidewalks as generally shown on the GDP, subject to approval by DPWES.

~~16.~~ 15. Private Streets. The on-site private street shall be constructed in conformance with the Public Facilities Manual (PFM) and shall be constructed of materials and depth of pavement consistent with the PFM, subject to any design modifications as to pavement and easement width and use of curb, that are approved by the Director of DPWES. The Homeowners' Association shall be responsible for the maintenance of the on-site private street. All prospective purchasers shall be advised of this maintenance obligation prior to entering into a contract of sale and said obligation will be disclosed in the HOA documents.

~~17.~~ 16. Use of Garages, Driveways and Common Area Parking Spaces

- A. ~~Individual garages shall only be used for a purpose that will not interfere with the intended purpose of~~ **Any conversion of garages or use of garages that precludes the parking of vehicles.** ~~There shall be 4 designated parking spaces per unit, two in the garage and two in the driveway~~ **within the garage is prohibited. A covenant setting forth this restriction shall be recorded among the land records of Fairfax County in a form approved by the County**

Attorney prior to the sale of any lots and shall run to the benefit of the HOA and the Board of Supervisors. This restriction shall ~~also be included~~**disclosed** in the ~~homeowner's association~~**HOA** documents ~~prepared for the Application Property.~~ **Prospective purchasers shall be advised of this use restriction, in writing, prior to entering into a contract of sale.**

- B. No parking of recreational vehicles (RVs), boats or trailers shall be permitted on the private streets or shared driveways. This restriction shall be included in the homeowner's association documents prepared for the Application Property.
- C. In order to encourage the efficient use of garage space, an exhibit depicting the most efficient use of the garage space shall be included in the sales documents and as part of the homeowners association documents. The exhibit shall delineate, with dimensions, the parking of two SUV/mini-van size vehicles along with how storage areas can be accommodated within the garage.
- D. Owners shall be advised of the above use restrictions which shall be included in the initial lease/sales documents.
- E. All driveways shall be a minimum of twenty feet (20') in length as measured outward from the face of the garage door to the face of curb.**

III. ENVIRONMENTAL

~~18.~~**17.** **Noise.** Noise attenuation measures shall be incorporated into the development so as to achieve an interior noise level of no greater than DNL 45 dBA and an exterior noise level for outdoor areas, including decks, within lots at or below DNL 65 dBA. The applicant shall provide a refined acoustical analysis at the time of site plan submission which includes final grading and design and which incorporates the potential impact of a third eastbound lane on Arlington Boulevard (Rt. 50). Any acoustical analysis and noise attenuation measures shall be subject to the review and approval of the Environmental and Development Review Branch of the Department of Planning and Zoning (DPZ) and DPWES at the time of site plan. For dwelling units anticipated by the study to be affected by highway noise levels projected to be between 65 and 70 dBA Ldn, those dwellings shall be constructed to meet the following building material standards:

- Exterior walls should have a laboratory sound transmission class (STC) rating of at least 39. Doors and glazing shall have a laboratory STC rating of at least 28 unless glazing constitutes more than 20% of any façade exposed to noise levels of 65 to 70 dBA Ldn.
- If glazing constitutes more than 20% of an exposed façade, then the glazing shall have a STC rating of up to 39 as dictated by the percent of glass.
- All surfaces should be sealed and caulked in accordance with methods approved by the American Society for Testing and Materials (ASTM) to minimize sound transmission.

- ~~Rear yards shall be shielded by six foot high board on board fencing to address exterior noise levels within this range.~~ **In order to achieve a maximum exterior noise level of 65 dBA, a six foot high acoustic barrier, solid with no gaps and flush to the ground (to be constructed of low maintenance, durable materials such as brick, masonry or synthetic board material) shall be provided in the location shown on the GDP for the rear yards of Lots 1 and 14. The HOA shall be responsible for the maintenance of the acoustic barrier.**

The Applicant reserves the right to pursue methods other than those above for mitigating highway noise impacts that can be demonstrated prior to the filing of a building permit, through an independent noise study as reviewed and approved by DPWES and the DPZ, provided that these methods will be effective in reducing interior noise levels to approximately 45 dBA Ldn, and exterior noise within outdoor recreation areas to approximately 65 dBA Ldn.

~~19-18.~~ **Resource Protection Area and Environmental Quality Corridor Restoration Plan.** All areas of the EQC shall be restored in accordance with notes on sheets 6 and ~~6A7~~ of the GDP. This restoration plan shall be reviewed and approved by Urban Forestry Management Division (UFMD) and Fairfax County Park Authority (FCPA). A component of the restoration plan shall be an Invasive Species Management Plan which shall also be reviewed and approved by UFMD, **Natural Resource Management and Protection (NRMP)** and FCPA. The invasive species management plan, **developed by a VA certified pesticide applicator,** shall include but not be limited to the following information:

- Identify targeted undesirable and invasive plant species to be suppressed and managed.
- Targeted area of undesirable and invasive plant management plan shall be clearly identified on the landscape or tree preservation plan.
- Removal of undesirable and invasive plant species shall be conducted in accordance with the notes on Sheet ~~58~~ of the GDP which differentiates two different areas: one where mechanical means may be utilized and the other where hand tools or other hand methods shall be utilized. The specific type of removal method shall be specified on the invasive species management plan.
- Identify potential impacts of recommended method(s) on surrounding trees and vegetation not targeted for suppression/management and identify how these trees and vegetation will be protected (for example, if mechanical equipment is proposed in save area, what will be the impacts to trees identified for preservation and how will these impacts be reduced).
- Identify how targeted species will be disposed.
- If chemical control is recommended, treatments shall be performed by or under direct supervision of a Virginia Certified Pesticide Applicator or Registered Technician and under the general supervision of Project Arborist). **Monitoring and treatment visits shall extend two years from the first treatment.**

- Provide information regarding timing of treatments, (hand removal, mechanical equipment or chemical treatments) when will treatments begin and end during a season and proposed frequency of treatments per season. **All invasive species should be removed following the guidelines of: Miller, James H.; Manning, Steven T.; Enloe, Stephen F. 2010. A management guide for invasive plants in southern forests. Gen. Tech. Rep. SRS-131. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 120 p.**
- Provide monthly monitoring reports during removal time period to UFMD staff.
- The duration of management program shall be until the earlier to occur of (i) Bond release or (ii) release of Conservation Deposit, provided however that program may end sooner if targeted plant(s) appear to be eliminated based on documentation provided by Project Arborist and an inspection by UFMD and FCPA staff.

20.19. Park Authority Dedication. Prior to bond release, the Applicant shall dedicate Parcel B, as shown on the GDP, to the Fairfax County Park Authority in fee simple with no monetary encumbrances. Prior to dedication of Parcel B, the Applicant shall remove waste and debris, perform the restoration work as shown on the GDP and described in Proffer 19 above, install any improvements or landscaping enhancements in accordance with the GDP, and cause to be dedicated any additional right-of-way from Parcel B necessary for improvements along the Rt. 50 frontage as requested by VDOT. The Applicant shall reserve any density credit associated with this dedication. ~~Any maintenance easements for such stormwater facilities with Parcel B shall include the ability for FCPA to construct a trail crossing on Parcel B at some time in the future.~~ **If FCPA declines to accept Parcel B as described in this proffer, then Parcel B shall be conveyed to HOA and maintained by the same.**

21.20. Energy Conservation. In support of energy conservation and green building techniques; the Applicant, in consultation with the Environment and Development Review Branch (EDRB) of Department of Planning and Zoning (DPZ), shall seek certification for this development from one of the following programs that offers third party review of “green building” or energy efficient measures. The Applicant shall have sole discretion to choose the program that will be utilized.

- A. Certification in accordance with the Earth Craft House Program as demonstrated through documentation provided to DPWES and ~~DPZ~~**EDRB** prior to the issuance of a RUP; or
- B. Certification in accordance with the ~~2012~~ National Green Building Standard (NGBS) using the ENERGY STAR® Qualified Homes path for energy performance, as demonstrated through documentation submitted to DPWES and ~~the Environment and Development Review Branch of DPZ~~**EDRB** from a home energy rater certified through Home Innovation Research Labs that demonstrates that the dwelling unit has attained the certification prior to the issuance of the RUP for each dwelling ~~unit/building~~; or

- C. ~~Qualification~~ **Certification** in accordance with ENERGY STAR[®] for Homes as determined by the submission of documentation to the Environment and Development Review Branch of the Department of Planning and Zoning from a home energy rater certified through the Residential Energy Services Network (RESNET) program that demonstrates that the dwelling unit has attained the ENERGY STAR[®] for Homes qualification **the National Association of Home Builders (NAHB) National Green Building Program, Bronze level, as demonstrated through submission of a copy of the “Green Certificate” issued by NAHB in accordance with its “Green Certificate Program”** prior to the issuance of the RUP for each dwelling.
- ~~22. Landscaping.~~ **21. Landscaping.** **At the time of subdivision plan or site plan review, as required, the Applicant shall submit to DPWES a landscape plan showing landscaping** consistent with the quality, quantity and the locations shown on the GDP and shall be a non-invasive species **general location shown on the Landscape Plan on the GDP. This plan shall be subject to review and approval of Urban Forestry Management (UFMD), DPWES.** At the time of planting, the minimum caliper for deciduous trees shall be three (3) inches and the minimum height for evergreen trees shall be seven ~~six~~ **six (76)** feet or as depicted on the GDP. Actual types, locations and species of vegetation shall be determined pursuant to more detailed landscape plans submitted at the time of submission of the subdivision plans for review and approval by the UFMD, ~~provided that, to the extent possible, all species are locally common native species~~ **at the time of subdivision plan approval. However, all plant material installed on the Property shall be non-invasive.** Such landscape plans shall provide tree coverage and species diversity consistent with the PFM criteria, as determined by the Urban Forester. The Applicant reserves the right to make minor modifications to such landscaping to reasonably accommodate utilities and other design considerations, provided such relocated landscaping shall retain a generally equivalent number of plantings as shown on the approved GDP.
- ~~23.~~ **22. Limits of Clearing and Grading.** The Applicant shall conform strictly to the limits of clearing and grading as shown on the GDP, subject to allowances specified in Proffer 26 and for the installation of utilities ~~and/or~~ trails **or excavation of existing material required to restore the topography to the condition reflected in the Board adopted floodplain study** as determined necessary by the Director of DPWES, as described herein. **If it is determined by the Director that such an excavation is required, the optional expanded limits of clearing and grading shall be utilized. In addition, if** it is determined necessary to install utilities and/or trails in areas protected by the limits of clearing and grading as shown on the GDP, they shall be located in the least disruptive manner necessary as determined by the UFMD, DPWES. A replanting plan shall be developed and implemented, subject to approval by the UFMD, ~~DPWES, for any areas protected by the limits of clearing and grading that must be disturbed for such utilities~~ **and FCPA for all disturbances in accordance with all applicable requirements.** Any trees impacted within the limits of clearing and grading as specified above shall be replaced on the site as determined by UFMD and the Chesapeake Bay Preservation Ordinance. **Notwithstanding the Tree Preservation Target Statement and**

Calculation shown on Sheet 4 of the GDP, the Applicant reserves the right to request a deviation of the tree preservation target to be reviewed and approved by UFMD at the time of site plan review. Such deviation shall be the minimum necessary to accommodate the excavation of material as described above.

24.23. Tree Preservation. The applicant shall submit a Tree Preservation Plan and Narrative as part of the first and all subsequent site plan submissions. The preservation plan and narrative shall be prepared by a Certified Arborist or a Registered Consulting Arborist, and shall be subject to the review and approval of the Urban Forest Management Division, DPWES.

The tree preservation plan shall include a tree inventory that identifies the location, species, critical root zone, size, crown spread and condition analysis percentage rating for all individual trees to be preserved, as well as all on and off-site trees, living or dead with trunks 10 inches in diameter and greater (measured at 4 ½ -feet from the base of the trunk or as otherwise allowed in the latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture) located within 25 feet to either side of the proposed limits of clearing and grading. The tree preservation plan shall provide for the preservation of those areas shown for tree preservation, those areas outside of the limits of clearing and grading shown on the GDP and those additional areas in which trees can be preserved as a result of final engineering. The tree preservation plan and narrative shall include all items specified in PFM 12-0507 and 12-0509. Specific tree preservation activities that will maximize the survivability of any tree identified to be preserved, such as: crown pruning, root pruning, mulching, fertilization, and others as necessary, determined by the certified arborist shall be included in the plan.

25.24. Tree Preservation Walk-Through. The Applicant shall retain the services of a certified arborist or Registered Consulting Arborist, and shall have the limits of clearing and grading marked with a continuous line of flagging prior to the walk-through meeting. During the tree-preservation walk-through meeting, the Applicant's certified arborist or landscape architect or designated representative shall walk the limits of clearing and grading with an UFMD, DPWES, representative to determine where adjustments to the clearing limits can be made to increase the area of tree preservation, increasing the survivability of trees at the edge of the limits of clearing and grading, and such adjustment shall be implemented. Trees that are identified as dead or dying may be removed as part of the clearing operation. Any tree that is so designated shall be removed using a chain saw and such removal shall be accomplished in a manner that avoids damage to surrounding trees and associated understory vegetation. If a stump must be removed, this shall be done using a stump-grinding machine in a manner causing as little disturbance as possible to adjacent trees and associated understory vegetation and soil conditions. The Applicant shall notify the Providence District Supervisor no less than ten (10) days in advance of the Tree Preservation Walk-Through meeting. At the discretion and the direction of the Providence District Supervisor, the Chesterfield Mews Homeowners Association shall be notified by United States Mail no later than five (5) days in advance of the Tree Preservation Walk-Through meeting inviting them to the meeting to discuss the limits of clearing and grading. The Providence District Supervisor

shall be notified of the name and contact information of the Applicant's representatives responsible for the site monitoring at the Tree Preservation Walk-Through.

~~26.~~25. Tree Preservation Fencing. All trees shown to be preserved on the tree preservation plan shall be protected by tree protection fence. Tree protection fencing in the form of four (4) foot high, fourteen (14) gauge welded wire attached to six (6) foot steel posts driven eighteen (18) inches into the ground and placed no further than ten (10) feet apart or, super silt fence to the extent that required trenching for super silt fence is done per the root pruning guidelines contained in these proffers. Fencing shall be erected at the limits of clearing and grading as shown on the demolition, and phase I & II erosion and sediment control sheets.

The Applicant shall install tree preservation fencing on the limits of clearing and grading line as depicted on the GDP. It is noted that the Applicant may conduct work between the tree preservation fencing and the western and southern lot lines in order to remove any existing nursery stock and gravel currently in that area resulting from the operation of the nursery on the Application Property. Any work conducted in this area shall be coordinated with UFMD. Methods of removal that are the least disruptive as possible shall be utilized for this work in order to protect offsite trees and may include limited use of a Bobcat. This work, the removal of the existing fence and the installation of a new board on board fence along the western and southern lot lines, as shown on the GDP, shall be the only disturbance permitted within this area. Once the proposed houses are constructed, all grading is complete, and the site is stabilized, the Applicant may remove the tree preservation fencing and re-sod this area.

All tree protection fencing shall be installed after the tree preservation walk-through meeting but prior to any clearing and grading activities, including the demolition of any existing structures. The installation of all tree protection fencing shall be performed under the supervision of a certified arborist, and accomplished in a manner that does not harm existing vegetation that is to be preserved. Ten (10) days prior to the commencement of any clearing, grading or demolition activities, but subsequent to the installation of the tree protection devices, the UFMD, DPWES, and the Providence District Supervisor shall be notified and given the opportunity to inspect the site to ensure that all tree protection devices have been correctly installed. If it is determined that the fencing has not been installed correctly, no grading or construction activities shall occur until the fencing is installed correctly, as determined by the UFMD, DPWES. At the discretion and the direction of the Providence District Supervisor, a representative of the Chesterfield Mews Homeowners Association shall be notified by United States Mail no later than five (5) days in advance of any clearing, grading or demolition activities. In this letter, any member of the Association shall be invited to be in attendance when the UFMD, DPWES and the Providence District Supervisor inspect the site to ensure that all tree protection devices have been correctly installed.

~~27.~~26. Tree Appraisal. The Applicant shall retain a professional arborist with experience in ~~plan~~plant appraisal, to determine the replacement value of all trees 10 inches in diameter or greater located on the Application Property that are shown to be saved on the Tree Preservation Plan. These trees and their value shall be identified on the Tree Preservation Plan at the time of the first submission of the respective site plan(s). The replacement

value shall take into consideration the age, size and condition of these trees and shall be determined by the so-called "Trunk Formula Method" contained in the latest edition of the Guide for Plan Appraisal published by the International Society of Arboriculture, subject to review and approval by UFMD.

At the time of the respective site plan approvals, the Applicant shall post a cash bond or a letter of credit payable to the County of Fairfax to ensure preservation and/or replacement of the trees for which a tree value has been determined in accordance with the paragraph above (the "Bonded Trees") that die or are dying due to unauthorized construction activities. The letter of credit or cash deposit shall be equal to 50% of the replacement value of the Bonded Trees. At any time prior to final bond release for the improvements on the Application Property constructed adjacent to the respective tree save areas, should any Bonded Trees die, be removed, or are determined to be dying by the project arborist and/or UFMD due to unauthorized construction activities, the Applicant shall replace such trees at its expense. The replacement of the trees shall be determined by the Fairfax County Public Facilities Manual and by UFMD. In addition to this replacement obligation, the Applicant shall also make a payment equal to the value of any Bonded Tree that is dead or dying or improperly removed due to unauthorized construction activity. This payment shall be determined based on the Trunk Formula Method and paid to a fund established by the County for furtherance of tree preservation objectives. Upon release of the bond for the improvements on the Application Property constructed adjacent to the respective tree save areas, any amount remaining in the tree bonds required by this proffer shall be returned/released to the Applicant.

28.27. Root Pruning. The Applicant shall root prune, as needed to comply with the tree preservation requirements of these development conditions. Root pruning shall be clearly identified, labeled, and detailed on the erosion and sediment control sheets of the site plan submission. Root pruning shall be accomplished in a manner that protects affected and adjacent vegetation to be preserved, and may include, but not be limited to the following:

- Root pruning shall be done with a trencher or vibratory plow to a minimum depth of 18 inches.
- Root pruning shall take place prior to any clearing and grading, or demolition of structures and in conjunction with the installation of all super silt fence being used as tree protection fence.
- Root pruning shall be conducted with the supervision of a certified arborist.
- An UFMD, DPWES, representative shall be informed when all root pruning and tree protection fence installation is complete.
- Along the southern lot line, where the limits of clearing and grading are 5 feet from the southern lot line, root pruning shall occur 7 feet from the southern lot line. Along the southern and western lot lines where the limits of clearing and grading are 10 feet from the respective lot lines, root pruning shall occur 12 feet from the respective lot lines.

~~29.~~**28. Site Monitoring.** During any clearing or tree/vegetation/structure removal on the Applicant Property, a representative of the Applicant shall be present to monitor the process and ensure that the activities are conducted as conditioned and as approved by the UFMD. The Applicant shall retain the services of a certified arborist or Registered Consulting Arborist to monitor all construction and demolition work and tree preservation efforts in order to ensure conformance with all tree preservation development conditions, and UFMD approvals. The monitoring schedule shall be described and detailed in the Landscaping and Tree Preservation Plan, and reviewed and approved by the UFMD, DPWES and FCPA.

~~30.~~**29. Stormwater Management Facilities and Best Management Practices.** Unless waived or modified, stormwater management shall be provided as generally depicted on the GDP and as approved by DPWES. ~~Underground stormwater detention shall be provided in conformance with the conditions of DPWES Waiver #1406-WPFM-001-1.~~ The requirements for maintaining non-County maintained SWM improvements shall be in a standard maintenance agreement between the County and the Applicant who is the land owner, its successor and assigns. This agreement shall be recorded in the County land records and run with the land. Should any deficiencies in the existing SWM or BMP facilities/improvements be identified by the Stormwater Management Maintenance Division during regular inspections, or when investigating a drainage complaint, then maintenance shall be performed in reasonable fashion and time in accordance with the recorded maintenance agreement. Should future County policy permit all or part of the SWM facilities on the Property to be eligible for County Maintenance, then the Applicant or the successor homeowner's association may request County maintenance for eligible facilities. After establishing the HOA pursuant to these proffers, the Applicant shall provide the HOA with written materials describing proper maintenance of the approved SWM and BMPs in accordance with the PFM and County guidelines.

~~31.~~30. Wells/Septic. Prior to land disturbance on the subject property, the Applicant shall coordinate with the Health Department regarding the closure and abandonment of the existing wells and septic tanks on the subject property. The Applicant shall obtain a letter from the Health Department stating the aforementioned wells and septic tanks were closed and abandoned in accordance with local and State regulations.

~~32.~~31. Phase I Environmental Site Assessment. The applicant shall complete a Phase I environmental site assessment of the Property if deemed necessary by DPWES. If deemed necessary by the Phase I environmental site assessment, the Applicant shall complete a Phase II environmental investigation. The Applicant shall provide copies of the Phase I environmental site assessment and Phase II environmental investigation to DPWES prior to final site plan approval. If contamination is found in ground water, surface water or soil on the Property, the Applicant shall take such corrective action as required by and in accordance with all applicable Federal, State and County requirements and as otherwise reasonably necessary for protection of human health in the redevelopment of the Property.

~~33.~~32. Geotechnical Study. Prior to site plan approval ~~for the Proposed Development~~ and in accordance with the provisions of the Public Facilities Manual, the Applicant shall submit a geotechnical study of the Property to ~~the Geotechnical Review Board (GRB)~~ through DPWES for the review and approval ~~of the GRB~~. If needed to alleviate potential structural, grading and construction problems to the Property and the adjacent properties, the Applicant shall incorporate into its site plan and/or building design appropriate engineering practices as recommended by ~~the GRB and to the satisfaction of DPWES~~.

IV. CONTRIBUTIONS

~~34.~~33. Housing Trust Fund. At the time of the first building permit issuance, the Applicant shall contribute a sum equal to one-half of one percent (0.5%) of the projected sales price for each dwelling unit on the Property to the Fairfax County Housing Trust Fund, as determined by the Department of Housing and Community Development in consultation with the Applicant to assist the County in its goal to provide affordable dwellings. The projected sales price shall be based upon the aggregate sales price of all of the units, as if those units were sold at the time of the issuance of the first building permit and is estimated through comparable sales of similar type units.

~~35.~~34. Recreation Contribution. At the issuance of the first RUP, the Applicant shall contribute the sum of \$~~33,000~~38,399 to the Board of Supervisors for use at off-site recreational facilities intended to serve the future residents, as determined by the Providence District Supervisor in coordination with FCPA.

- ~~36.~~35. Providence District Tree Fund. At the issuance of the first RUP, the Applicant shall contribute \$2,000 to the Providence District Tree Fund.
- ~~37.~~36. Nottoway Nights. At the issuance of the first RUP, the Applicant shall contribute \$1,000 to the Nottoway Nights Concert Series.
- ~~38.~~37. Public Schools. A contribution of \$~~43,300~~54,125 (~~45~~ students X \$10,825) shall be made to the Board of Supervisors for transfer to Fairfax County Public Schools (FCPS) and designated for capital improvements at the public schools serving the development. The contribution shall be made at the time of, or prior to, issuance of the first RUP. Following approval of this Application and prior to the Applicant's payment of the amount set forth in this Proffer, if Fairfax County should increase or decrease the ratio of students per unit or the amount of the contribution per student, the Applicant shall increase or decrease the amount of the contribution for that phase of development to reflect the then-current contribution. In addition, notification shall be given to FCPS when construction is anticipated to commence to assist FCPS by allowing for the timely projection of future students as a part of the Capital Improvement Program.
- ~~39.~~38. Escalation. All monetary contributions required by these proffers, with the exception of Proffer 34 relating to the Housing Trust Fund and Proffer 38 relating to the public school contribution, shall escalate on a yearly basis from the base year of ~~2014~~2015, and change effective each January 1 thereafter, based on the Consumer Price Index as published by the Bureau of Labor Statistics, the U.S. Department of Labor for the Washington-Baltimore, MD-VA-DC-WV Consolidated Metropolitan Statistical Area (the "CPI"), as permitted by Virginia State Code Section 15.2-2303.3.

Successors and Assigns

These proffers shall bind and inure to the benefit of the Applicant and his/her successors and assigns.

Counterparts

These proffers may be executed in one or more counterparts, each of which when so executed and delivered shall be deemed an original document and all of which taken together shall constitute but one and the same instrument.

TITLE OWNERS AND APPLICANTS SIGNATURES TO FOLLOW ON THE NEXT PAGE:

Paul Craven, a/k/a C. Paul Craven, a/k/a Clifton Paul Craven, a/k/a
Paul C. Craven,

By: _____

Name _____
Paul Craven, a/k/a C. Paul Craven, a/k/a Clifton
Paul Craven, a/k/a Paul C. Craven, co-owner of 48-
4((1))44 together with Nancy Craven, a/k/a Nancy
C. Craven

Nancy Craven, a/k/a/ Nancy C. Craven

By: _____

Name _____
Nancy Craven, a/k/a/ Nancy C. Craven, co-owner
of 48-4((1))44 together with Paul Craven, a/k/a C.
Paul Craven, a/k/a Clifton Paul Craven, a/k/a Paul
C. Craven

~~MHI Arlington Boulevard, LLC~~ Ausable, LLC
BY: ~~Madison Homes, Inc., its~~ Michael B. Hummel,
Manager
~~BY: Russell S. Rosenberger, Jr. President~~
Contract Purchaser of 48-4((1))44

Name: _____
Russell S. Rosenberger, Jr.
Michael B. Hummel

Title: ~~President, MHI Arlington Boulevard, LLC~~

Document comparison by Workshare Compare on Tuesday, March 24, 2015
3:07:36 PM

Input:	
Document 1 ID	interwovenSite://DMSPROXY/Active/54453579/3
Description	#54453579v3<Active> - revised proffers 2/18/14
Document 2 ID	interwovenSite://DMSPROXY/Active/62795660/3
Description	#62795660v3<Active> - proffers
Rendering set	MW Standard

Legend:	
<u>Insertion</u>	
Deletion	
Moved from	
<u>Moved to</u>	
Style change	
Format change	
Moved deletion	
Inserted cell	
Deleted cell	
Moved cell	
Split/Merged cell	
Padding cell	

Statistics:	
	Count
Insertions	91
Deletions	96
Moved from	3
Moved to	3
Style change	0
Format changed	0
Total changes	193



County of Fairfax, Virginia

MEMORANDUM

DATE: March 23, 2015

TO: Barbara Berlin, Director
Zoning Evaluation Division, DPZ

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

SUBJECT: Environmental Assessment: RZ 2013-PR-014
Ausable, LLC

This memorandum, prepared by Mary Ann Welton, includes citations from the Comprehensive Plan that provide guidance for the evaluation of the subject rezoning application (RZ) and proffers, revised through February 18, 2015. The extent to which the application conforms to the applicable guidance contained in the Comprehensive Plan is noted. Possible solutions to remedy identified issues are suggested. Other solutions may be acceptable, provided that they achieve the desired degree of mitigation and are in harmony with Plan policies.

COMPREHENSIVE PLAN CITATIONS:

The Comprehensive Plan is the basis for the evaluation of this application. The assessment of the proposal for conformity with the environmental recommendations of the Comprehensive Plan is guided by the following citations from the Plan:

The Fairfax County Comprehensive Plan, Policy Plan, 2013 Edition, Environment section as amended through July 1, 2014, pages 7-9 state:

“Objective 2: Prevent and reduce pollution of surface and groundwater resources. Protect and restore the ecological integrity of streams in Fairfax County.

Policy a. Maintain a best management practices (BMP) program for Fairfax County and ensure that new development and redevelopment

complies with the County’s best management practice (BMP) requirements. . . .

Policy k. For new development and redevelopment, apply better site design and low impact development (LID) techniques such as those described below, and pursue commitments to reduce stormwater runoff volumes and peak flows, to increase groundwater recharge, and to increase preservation of undisturbed areas. In order to minimize the impacts that new development and redevelopment projects may have on the County's streams, some or all of the following practices should be considered where not in conflict with land use compatibility objectives:

- Minimize the amount of impervious surface created.
- Site buildings to minimize impervious cover associated with driveways and parking areas and to encourage tree preservation. . . .
- Encourage cluster development when designed to maximize protection of ecologically valuable land. . . .
- Encourage fulfillment of tree cover requirements through tree preservation instead of replanting where existing tree cover permits. Commit to tree preservation thresholds that exceed the minimum Zoning Ordinance requirements.
- Where appropriate, use protective easements in areas outside of private residential lots as a mechanism to protect wooded areas and steep slopes. . . .
- Encourage the use of innovative BMPs and infiltration techniques of stormwater management where site conditions are appropriate, if consistent with County requirements.
- Apply nonstructural best management practices and bioengineering practices where site conditions are appropriate, if consistent with County requirements.

Policy l. In order to augment the EQC system, encourage protection of stream channels and associated vegetated riparian buffer areas along stream channels upstream of Resource Protection Areas (as designated pursuant to the Chesapeake Bay Preservation Ordinance) and Environmental Quality Corridors. To the extent feasible in consideration of overall site design, stormwater management needs and opportunities, and other Comprehensive Plan guidance, establish boundaries of these buffer areas consistent with the guidelines for designation of the stream valley component of the EQC system as set forth in Objective 9 of this section of the

Policy Plan. Where applicable, pursue commitments to restoration of degraded stream channels and riparian buffer areas.”

The Fairfax County Comprehensive Plan, Policy Plan, 2013 Edition, Environment section as amended through July 1, 2014, page 10 states:

“Objective 3: Protect the Potomac Estuary and the Chesapeake Bay from the avoidable impacts of land use activities in Fairfax County.

Policy a. Ensure that new development and redevelopment complies with the County's Chesapeake Bay Preservation Ordinance. . . .”

The Fairfax County Comprehensive Plan Policy Plan, 2013 Edition, Environment section as amended through July 1, 2014, page 11-12 states:

“Objective 4: Minimize human exposure to unhealthy levels of transportation generated noise.

Policy a: Regulate new development to ensure that people are protected from unhealthy levels of transportation noise....

New development should not expose people in their homes, or other noise sensitive environments, to noise in excess of DNL 45 dBA, or to noise in excess of DNL 65 dBA in the outdoor recreation areas of homes. To achieve these standards new residential development in areas impacted by highway noise between DNL 65 and 75 dBA will require mitigation. New residential development should not occur in areas with projected highway noise exposures exceeding DNL 75 dBA.”

The Fairfax County Comprehensive Plan Policy Plan, 2013 Edition, Environment section as amended through July 1, 2014, page 12, states:

“Objective 6: Ensure that new development either avoids problem soil areas, or implements appropriate engineering measures to protect existing and new structures from unstable soils.

Policy a: Limit densities on slippage soils, and cluster development away from slopes and potential problem areas...

Policy b: Require new development on problem soils to provide appropriate engineering measures to ensure against geotechnical hazards.”

Fairfax County Comprehensive Plan, 2013 Edition, Policy Plan, Environment, as amended through July 1, 2014, pages 14-17 state:

“Objective 9: Identify, protect and enhance an integrated network of ecologically valuable land and surface waters for present and future residents of Fairfax County.

Policy a: Identify, protect and restore an Environmental Quality Corridor system (EQC)....”

The Fairfax County Comprehensive Plan, 2013 Edition, Policy Plan, Environment, as amended through July 1, 2014, page 18 states:

“Objective 10: Conserve and restore tree cover on developed and developing sites. Provide tree cover on sites where it is absent prior to development.

Policy a: Protect or restore the maximum amount of tree cover on developed and developing sites consistent with planned land use and good silvicultural practices. . . .”

The Fairfax County Comprehensive Plan, 2013 Edition, Policy Plan, Environment, as amended through July 1, 2014, page 19-21 states:

“Objective 13: Design and construct buildings and associated landscapes to use energy and water resources efficiently and to minimize short- and long-term negative impacts on the environment and building occupants.

Policy a. In consideration of other Policy Plan objectives, encourage the application of energy conservation, water conservation and other green building practices in the design and construction of new development and redevelopment projects. These practices may include, but are not limited to:

- Environmentally-sensitive siting and construction of development;
- Application of low impact development practices, including minimization of impervious cover (See Policy k under Objective 2 of this section of the *Policy Plan*);
- Optimization of energy performance of structures/energy-efficient design;
- Use of renewable energy resources;
- Use of energy efficient appliances, heating/cooling systems, lighting and/or other products;
- Application of best practices for water conservation, such as water efficient landscaping and innovative wastewater technologies, that can serve to reduce the use of potable water and/or reduce stormwater runoff volumes;
- Reuse of existing building materials for redevelopment projects;

- Recycling/salvage of non-hazardous construction, demolition, and land clearing debris;
- Use of recycled and rapidly renewable building materials;
- Use of building materials and products that originate from nearby sources;
- Reduction of potential indoor air quality problems through measures such as increased ventilation, indoor air testing and use of low-emitting adhesives, sealants, paints/coatings, carpeting and other building materials;
- Reuse, preservation and conservation of existing buildings, including historic structures;
- Retrofitting of other green building practices within existing structures to be preserved, conserved and reused;
- Energy and water usage data collection and performance monitoring;
- Solid waste and recycling management practices; and
- Natural lighting for occupants.

Encourage commitments to implementation of green building practices through certification under established green building rating systems for individual buildings (e.g., the U.S. Green Building Council's Leadership in Energy and Environmental Design for New Construction [LEED-NC[®]] or the U.S. Green Building Council's Leadership in Energy and Environmental Design for Core and Shell [LEED-CS[®]] program or other equivalent programs with third party certification). An equivalent program is one that is independent, third-party verified, and has regional or national recognition or one that otherwise includes multiple green building concepts and overall levels of green building performance that are at least similar in scope to the applicable LEED rating system. Encourage commitments to the attainment of the ENERGY STAR[®] rating where available. Encourage certification of new homes through an established residential green building rating system that incorporates multiple green building concepts and has a level of energy performance that is comparable to or exceeds ENERGY STAR qualification for homes. Encourage the inclusion of professionals with green building accreditation on development teams. Encourage commitments to the provision of information to owners of buildings with green building/energy efficiency measures that identifies both the benefits of these measures and their associated maintenance needs. . . .

- Policy c. Ensure that zoning proposals for residential development that are not otherwise addressed in Policy b above will incorporate green building practices sufficient to attain certification under an established residential green building rating system that incorporates multiple green building concepts and that includes an ENERGY STAR Qualified Homes designation or a comparable level of energy performance. Where such zoning proposals seek development at or above the mid-point of the Plan density range, ensure that county expectations regarding the incorporation of green building practices are exceeded in two or more of the following measurable categories: energy efficiency; water conservation; reusable and recycled building materials; pedestrian orientation and alternative transportation strategies; healthier indoor air quality; open space and habitat conservation and restoration; and greenhouse gas emission reduction. As intensity or density increases, the expectations for achievement in the area of green building practices would commensurately increase.”

ENVIRONMENTAL ANALYSIS

This section characterizes the environmental concerns raised by an evaluation of this site and the proposed development. Solutions are suggested to remedy the concerns that have been identified by staff. There may be other acceptable solutions. Particular emphasis is given to opportunities provided by this application to conserve the county’s remaining natural amenities. This application seeks approval of a rezoning from R-1 to the R-5 Zoning District in order to develop 14 single-family detached homes at a density of 3.76 dwelling units per acre.

Stormwater Quality Best Management Practices: The 3.72 acre subject property falls within the Accotink Creek Watershed immediately west of Bear Branch, a tributary of Accotink Creek. A plant nursery with associated plant and material storage currently occupies the site. The stormwater narrative indicates that the computations for this application address the development area of 2.97 acres which does not include the area of EQC/RPA. The applicant proposes to meet water quality control and water quantity control requirements for this development with the installation of an underground infiltration trench with stormtech chambers along the northern portion of the subject property adjacent to Arlington Boulevard. The narrative further indicates that the proposed stormwater facility will meet the requirement of the County’s Stormwater Management Ordinance, Chapter 124 of the County Code.

The outfall narrative describes that runoff from the subject property discharges in two locations – one discharge point is on the east side of the development into Bear Branch and the second discharge point is to the south towards Chesterfield Mews. The engineer for the applicant indicates that both outfalls adequately convey the discharge from the subject development. Stormwater management/best management practice measures and outfall adequacy are subject to review and approval by the Department of Public Works and Environmental Services (DPWES).

Soil Constraints: Because of the garden nursery use which currently occupies the subject property and the fact that stockpiles of soils and other materials have been stored on the subject property over the years, the applicant will provide a geotechnical analysis at site plan submission

Barbara Berlin
RZ 2013-PR-014
Page 7

to ensure future foundation stability for the proposed new homes. Staff encourages the applicant to provide a proffer commitment to address this issue.

Environmental Quality Corridor (EQC) Resource Protection Area (RPA) Restoration: The EQC is located on the eastern edge of the property adjacent to Bear Branch within the limits of the property boundary. The EQC and RPA are coterminous. The existing plant nursery which has occupied the subject property for more than twenty-five years has encroached within the EQC over time with the storage of plant material. This storage has resulted in the degradation of the western bank of the Bear Branch stream valley. As part of this redevelopment, the applicant plans to restore the EQC in order to create a functional healthy buffer on the bank of Bear Branch. The multi-faceted restoration includes removal of invasive plant, debris, stump root and rhizome. In addition, soil amendments will be added to the area and ultimately replanting of the EQC/RPA will occur. The entire restoration plan is found on Sheets 7&8 of the February 18, 2015 development plan. The applicant is encouraged to provide a proffered commitment which describes the details of the EQC/ RPA restoration and monitoring schedule, as well as a description of the phased implementation of the proposed restoration.

Transportation Generated Noise: The subject property is located immediately adjacent to Arlington Boulevard and it will be impacted by transportation generated noise. The applicant has provided a preliminary noise study # 15-020 performed by Miller, Beam and Paganelli, Inc., dated February 3, 2015. The assessment indicates that a twenty-four hour noise measurement was performed on December 3-4, 2013. Factoring in the widening of Arlington Boulevard to three lanes in each direction, and considering traffic volume increases to the year 2030, the acoustical consultant concluded that, in the worst case, the homes and yards closest to the roadway will be affected by noise levels between 66-67 dBA Ldn. Given these findings, the consultant indicates that the homes on lots 1, 2 and 14 may experience some direct roadway noise in the rear yards in excess 65 decibels. The consultant recommends 6 foot fencing in two locations to mitigate exterior noise as cited in the study. In addition, the consultant indicates that all the lots, 1-14 may require building material upgrades to address the Policy Plan goal of 45 decibels in the interiors of the new homes.

To ensure conformance to the Policy Plan guidance that noise in interior areas of new residential development will not exceed 45 decibels; the consultant recommends that the standard wall construction of affected homes will likely provide the necessary interior mitigation, but that the windows on affected façades should possess a sound transmission class (STC) rating between 28-30 STC. The applicant has provided a proffered commitment to address the Policy Plan noise mitigation guidance. The applicant is encouraged to provide a commitment to a refined acoustical analysis at site plan submission to take in account final grading and design.

Green Building Practices: In accordance with the Comprehensive Plan's green building policy, the applicant has made a proffered commitment to the attainment Earthcraft House or the 2012 National Green Building Standard using the Energy Star Qualified Homes path for energy performance. Certification will be demonstrated prior to the issuance of the residential use permit for each dwelling.

Barbara Berlin
RZ 2013-PR-014
Page 8

Tree Preservation/Restoration: The applicant is encouraged to work with the Urban Forestry Management Division (UFMD) of DPWES to identify ways to best protect the existing canopy and root systems of trees and to augment tree canopy wherever possible on the proposed site.

PGN/MAW



FAIRFAX COUNTY PARK AUTHORITY



M E M O R A N D U M

TO: Barbara Berlin, AICP, Director
Zoning Evaluation Division
Department of Planning and Zoning

FROM: Sandy Stallman, AICP, Manager
Park Planning Branch, PDD 

DATE: February 4, 2015

SUBJECT: RZ 2013-PR-014, Craven Property/Ausable LLC Revised
Tax Map Number: 48-4 ((1)) 44

BACKGROUND

The Park Authority staff has reviewed the revised proposed Development Plan dated December 11, 2014, for the above referenced application.

The Development Plan shows fourteen new single-family detached dwelling units on a 3.72 acre parcel to be rezoned from R-1 to R-5 with proffers. Based on an average single-family detached household size of 3.09 in the Fairfax Planning District, the development could add 43 new residents to the Providence Supervisory District. Accotink Stream Valley Park, owned and operated by the Park Authority, is directly adjacent to the applicant's property.

This memorandum replaces an earlier memorandum dated February 12, 2014.

COMPREHENSIVE PLAN GUIDANCE

The County Comprehensive Plan includes both general and specific guidance regarding parks and resources. The Policy Plan describes the need to mitigate adverse impacts to park and recreation facilities caused by growth and development; it also offers a variety of ways to offset those impacts, including contributions, land dedication, development of facilities, and others (Parks and Recreation, Objective 6, p.8). Resource protection is addressed in multiple objectives, focusing on protection, preservation, and sustainability of resources (Parks and Recreation Objectives 2 and 5, p.5-7). Comprehensive Plan guidance for the Fairfax Planning District highlights the importance of stream valleys within this district.

Text from the Fairfax District chapter of the Great Parks, Great Communities Park Comprehensive Plan echoes these elements. Specific District chapter recommendations include protecting remaining natural areas in the district and improving existing corridors, linkages and watersheds.

ANALYSIS AND RECOMMENDATIONS

Park Needs:

Using adopted service level standards, staff has identified a need for all types of parkland and recreational facilities in this area. Existing nearby parks (Armistead, Eakin, and Mantua) meet only a portion of the demand for parkland generated by residential development. In addition to parkland, the recreational facilities in greatest need in this area include trails, sports courts, and playgrounds.

Recreational Impact of Residential Development:

With the Countywide Comprehensive Policy Plan as a guide (Appendix 9, #6 of the Land Use section, as well as Objective 6, Policy a, b and c of the Parks and Recreation section), the Park Authority requests a fair share contribution of \$893 per new resident with any residential rezoning application to offset impacts to park and recreation service levels. This allows the Park Authority to build additional facilities needed as the population increases. To offset the additional impact caused by the proposed development, the applicant should contribute \$38,399 to the Park Authority for recreational facility development at one or more park sites located within the service area of the subject property.

Natural Resources Impact:

The applicant's property is within the Accotink Watershed and adjacent to and upstream of Accotink Stream Valley Park, owned and operated by the Park Authority. This development has the potential to impact Bear Branch and parkland downstream (via outfall) in an area that is already significantly impacted by stormwater runoff.

The Park Authority supports the use of LID and design that aims to protect adjacent parkland and the water quality of the Accotink watershed. In the event the applicant dedicates portions of the Chesapeake Bay Resource Protection Area (RPA) to the Park Authority (see section below), the size of the storm sewer and the treatment of Outfall #1 would be reviewed by staff in order to ensure that adverse impacts will not be sustained at the outfall, during overland flow, and at the entry of Bear Branch.

To protect the health of nearby parkland and to prevent the spread of invasive plant species to adjacent natural areas, staff recommends that no non-native species be planted and that locally common native species be used to the extent possible. In this resubmission, the applicant has responded to several prior comments. Staff provides the additional following comments:

- The planting schedule (Sheet 8) is improved based on prior comments regarding use of non-invasive and native species.
 - Deer protection is necessary for all woody plantings to ensure their growth and survival. Please provide specifications for how plants will be protected from deer browse, particularly in any natural areas to be dedicated to the Park Authority.
 - Include biodegradable bark protection for all 3" caliper trees planted.
- Please confirm that the invasive species management plan (Sheet 8) will be implemented by a certified applicator on property to be dedicated to the Park Authority.
 - A written invasive removal plan to include maps of treatment areas should be developed by a VA certified pesticide applicator with the review of Park

Authority's Natural Resource Management and Protection (NRMP) staff and Urban Forestry Management Division (UFMD).

- Herbicides should only be applied by a VA certified pesticide applicator per approved plan and follow all required procedures for chemical herbicide application in sensitive areas (RPA).
- Monitoring and treatment visits should extend two years from the first treatment.
- All invasive species should be removed following the guidelines of: Miller, James H.; Manning, Steven T.; Enloe, Stephen F. 2010. A management guide for invasive plants in southern forests. Gen. Tech. Rep. SRS-131. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 120 p. A PDF of this document can be found online at:
<http://www.srs.fs.usda.gov/pubs/36915>
- The native seed mix (Sheet 8, Note 1) applied to disturbed areas on parkland (i.e. outfall) should be fully specified for review by NRMP staff.
 - The native seed mix for this project must be obtained from Ernst Conservation Seeds of Meadville, PA or a Park Authority approved alternate vendor. Bag tags must be provided to the Park Authority.
 - Recommended species include:
 - Indian grass - *Sorghastrum nutans* – 15% of mix
 - Virginia wild rye – *Elymus virginicus* – 20%
 - Deer tongue – *Dichanthelium clandestinum* – 15%
 - Sweet Woodreed – *Cinna arundinacea* – 10%
 - Purpletop – *Tridens flavus* – 5%
 - Fox sedge – *Carex vulpinoidea* – 5%
 - Lurid sedge – *Carex lurida* – 5%
 - Frank's sedge – *Carex frankii* – 5%
 - Common milkweed – *Asclepias syriaca* – 3 %
 - Joe-pye weed – *Eupatorium fistulosum* – 3%
 - New York ironweed – *Vernonia noveboracensis* – 2%
 - Heath aster – *Symphotrichum pilosum* – 3%
 - Calico aster – *Symphotrichum lateriflorum* – 3%
 - Grass-leaved goldenrod – *Solidago graminifolia* – 3%
 - Bluestemmed goldenrod – *Solidago caesia* – 3%
- Please reconcile the proposed soil amendment plan (Sheet 8) with the Park Authority's standard recommendations for restoring ground disturbance to parkland. The following recommendations ensure germination and establishment of the native seed mix:
 - The native seed mix should be seeded at a rate of .5 pounds/1,000 square feet (about 20 lbs/acre) with a cover crop of annual rye (*Lolium multiflorum*) at 1.5 lbs/1,000 square feet. Winter wheat (*Triticum aestivum*) could be substituted for annual rye if seeding after October 1st.
 - Prior to seeding the contractor should prepare the site using disking or raking.
 - For broadcast application, the seed should be mixed with weed-free compost (Soilmate or equivalent) or clean moist sand for broadcasting over bare soil. If organic compost is used, then seed can be sown directly onto the compost and no additional mulching is required. Seed may also be drilled or shot by an operator

who knows how to apply native seed and has the proper equipment (e.g., a Truax type seed drill intended for native seed mixes).

- Following application of the native seed mix, the contractor should immediately overseed (note that hydroseeding with fiber mulch may be best on steep slopes) with cover crop at a rate of 60 pounds per acre (about 1.5 lbs/1,000 square feet) in order to get coverage and stabilization prior to germination and establishment of native warm season grasses.
- Following application of the native seed mix and the cover crop, the area should be covered with clean wheat straw to a depth of about 1 inch. If the seed is sown into a SoilMate or equivalent compost blanket or hydroseeded, then no straw needs to be applied.
- Please note that no matting containing plastic mesh should be used anywhere on parkland because it is hazardous to wildlife. Jute or coir mat should be installed over the seeded areas on stream banks or steep slopes.

Dedication of Land to the Park Authority:

The eastern edge of the subject site is stream valley, within the Chesapeake Bay Resource Protection Area (RPA) and floodplain. Approximately 0.75 acres of the RPA area is designated as Parcel "B" on the plan set (Sheet 2). The area is adjacent and contiguous to Accotink Stream Valley Park on the south and Arlington Boulevard on the north; Accotink Stream Valley Park continues on the north side of Arlington Boulevard. In accordance with County Stream Valley Policy, the applicant should dedicate the RPA area (Parcel B) to the Fairfax County Park Authority for public park purposes.

In accordance with a December 11, 2000 Board of Supervisors resolution, "park, recreation or open space should be deeded directly to the Fairfax County Park Authority without first being deeded to the Board." Proffers should indicate that land will be dedicated directly to the Park Authority to complement Note 29 on Sheet 1.

Any debris and waste currently on the parcel should be removed prior to dedication. In accordance with PFM 2-1102.4B, the landowner is required to take any necessary corrective action prior to Park Authority acceptance. Following site cleanup of debris and prior to land dedication, the Park Authority requests that the applicant arrange for an inspection by the Park Authority Land Acquisition Branch (Brian Williams, 703-324-1230), Area 2 Operations Manager (Mark Plourde, 703-321-0972) and Resource Management Division (Cindy Walsh, 703-324-8537). If the condition of the land is acceptable to the Park Authority, the applicant should dedicate the property prior to their bond release from Fairfax County.

In the event of dedication, the applicant (or designee) will continue to be fully responsible for maintenance of all stormwater features (i.e., Outfall #1); the Park Authority will not be responsible for maintenance of any stormwater features. Additionally, if the applicant (or designee) is required to place an easement on/around Outfall #1 and its associated structures to allow continued maintenance and monitoring by the applicant after dedication, staff requests that said easement either allow the possibility of a trail crossing or that an associated easement to permit a trail crossing at some future time be established. While the Park Authority has no

existing plans to build a trail in this location, staff wants to ensure that it would not be precluded from placing a trail through Parcel B at some future time, should the parcel be dedicated to the Park Authority and become public parkland.

Easements or Grading on Park Authority Land:

Sheet 2 shows the limits of clearing and grading entering adjacent parkland and notes an existing sanitary sewer easement. Staff notes that at the time of site plan, the applicant may be required to gain a construction permit or similar from the Park Authority in order to do any clearing and grading or drainage improvement within the limits of clearing and grading, depending on the type of existing easement and the rights it carries.

If additional permits and/or easements are determined necessary at the time of site plan or if land disturbance is planned beyond the boundaries of the existing easement, the applicant must submit a request for a permit and/or easement request; conditions and/or fees may be required.

Applications are available from the Easement Coordinator, Fairfax County Park Authority, Planning and Development Division, 12055 Government Center Parkway, Suite 421, Fairfax, Virginia 22035; main telephone number (703) 324-8741.

SUMMARY OF RECOMMENDATIONS

This section summarizes the recommendations included in the preceding analysis section. Many of the issues listed below can be done at time of site plan, however the applicant should make commitments now (either in the Development Plan or in proffers) to address said issues at the time of site plan.

- Contribute \$38,399 to the Park Authority for recreational facility development at one or more park sites located within the service area of the subject property
- Commit to provide specifications for how plants will be protected from deer browse, particularly in any natural areas to be dedicated to the Park Authority at time of site plan
- Include biodegradable bark protection for all 3” caliper trees planted
- Confirm that the invasive species management plan (Sheet 8) will be implemented by a certified applicator on property to be dedicated to the Park Authority
 - A written invasive removal plan to include maps of treatment areas should be developed by a VA certified pesticide applicator with the review of NRMP staff and UFMD.
 - Herbicides should only be applied by a VA certified pesticide applicator per approved plan and follow all required procedures for chemical herbicide application in sensitive areas (RPA).
 - Monitoring and treatment visits should extend two years from the first treatment.
 - All invasive species should be removed following the guidelines of: Miller, James H.; Manning, Steven T.; Enloe, Stephen F. 2010. A management guide for invasive plants in southern forests. Gen. Tech. Rep. SRS-131. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 120 p.

- Commit to specify the native seed mix, using provided references as appropriate, and provide for review by Park Authority staff at time of site plan
- Commit to reconcile the proposed soil amendment plan (Sheet 8) with the Park Authority's standard recommendations for restoring ground disturbance to parkland, using provided references, at time of site plan
- Commit to ensure any easements associated with continued maintenance/use of stormwater features in Parcel B allow the possibility of a trail crossing at some future time
- Note that at the time of site plan, the applicant may be required to gain a construction permit or similar from the Park Authority for clearing, grading, and/or drainage improvements on parkland, depending on the type of existing easements held by the applicant
- Dedicate Parcel B to the Park Authority

Please note the Park Authority would like to review and comment on proffers related to park and recreation issues. We request that draft and final proffers be submitted to the assigned reviewer noted below for review and comment prior to completion of the staff report and prior to final Board of Supervisors approval.

FCPA Reviewer: Anna Bentley
DPZ Coordinator: Michael Van Atta

Copy: Cindy Walsh, Director, Resource Management Division
Liz Crowell, Manager, Cultural Resource Management & Protection Section
John Stokely, Manager, Natural Resource Management & Protection Section
Dan Sutherland, Manager, Park Operations Division
Mark Plourde, Acting Area 2 Manager, Park Operations Division
Brian Williams, Land Acquisition & Management Branch
Elizabeth Cronauer, Trail Coordinator, Project Management Branch
Michael Van Atta, DPZ Coordinator
Chron Binder
File Copy



County of Fairfax, Virginia

MEMORANDUM

DATE: March 3, 2015

TO: Michael Van Atta, Staff Coordinator
Zoning Evaluation Division, DPZ

FROM: Hugh C. Whitehead, Urban Forester III
Forest Conservation Branch, DPWES *HUN*

SUBJECT: Craven Property (Ausable, LLC), RZ 2013-PR-014

This review is based upon the Generalized Development Plan (GDP) RZ 2013-PR-014, stamped as received by the Zoning Evaluation Division, on February 24, 2015; and draft proffers dated February 18, 2015.

- Comment:** The landscape plan shows planting on top of the proposed infiltration trench. Trees on top of the infiltration trench could interfere with the proper function of this stormwater facility.

Recommendation: Propose tree planting in areas where they will not conflict with utilities or other facilities on the site, possibly in common open space along the rear of Lots 12-14.

- Comment:** Fringetree (*Chionanthus virginicus*) is proposed for planting on the site. This species is vulnerable to attack from emerald ash borer. Tree canopy credit cannot be given for this species as its long term survivability is compromised.

Recommendation: Select an alternative species such as Eastern redbud (*Cercis canadensis*) or American hornbeam (*Carpinus caroliniana*) for planting on the site.

If there are any questions or further assistance is desired, please contact me at (703)324-1770.

HCW/
UFMDID #: 198740

cc: DPZ File

Department of Public Works and Environmental Services
Urban Forest Management Division
12055 Government Center Parkway, Suite 518
Fairfax, Virginia 22035-5503
Phone 703-324-1770, TTY: 711, Fax: 703-653-9550
www.fairfaxcounty.gov/dpwes





County of Fairfax, Virginia

MEMORANDUM

DATE: March 13, 2015

TO: Barbara Berlin, Director
Zoning Evaluation Division, Department of Planning & Zoning

CC: Michael Van Atta, Staff Coordinator
Zoning Evaluation Division, Department of Planning & Zoning

FROM: Michael A. Davis, Acting Chief 
Site Analysis Section, Department of Transportation

FILE: RZ 2013-PR-014

SUBJECT: RZ 2013-PR-014 Ausable LLC (Craven Property)
9023 Arlington Boulevard, Fairfax VA 22031
Tax Map: 48-4 ((1)) 44

This department has reviewed the subject application including the General Development Plan and Transportation Plan dated July 2013, revised through February 28, 2015, and proffers dated December 10, 2014, revised through February 18, 2015, and offer the following comments. Proffer comments were submitted under separate cover.

- The Applicant should construct improvements at Arlington Boulevard (Rt. 50) and the service drive as indicated on the GDP. These improvements should be designed to accommodate the future third lane construction on Rt. 50, and are subject to VDOT, FCDOT and DPWES review and approval. The following should be included with the proposed improvements:
 - Modifications to the stop bars and traffic signal loops in the Rt. 50 pavement;
 - Rt. 50 mainline median adjustment to accommodate the pedestrian crosswalk;
 - Guardrail relocation at the median between mainline Rt. 50 and the future service drive.
- The applicant should provide a service drive grade that is compatible with future improvements to Rt. 50 and does not hinder driver sight visibility from either proposed entrance into the subdivision. A grading analysis should be submitted with the site plan for review by VDOT and DPWES.
- The Applicant should provide, upon request, any necessary right-of-way dedications, and ancillary easements to accommodate future widening of Rt. 50, the extended construction of the service drive, roadway drainage, and the Bear Branch crossing.

MAD/RP

Fairfax County Department of Transportation
4050 Legato Road, Suite 400
Fairfax, VA 22033-2895
Phone: (703) 877-5600 TTY: 711
Fax: (703) 877-5723
www.fairfaxcounty.gov/fcdot





COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive
Fairfax, VA 22030

March 25, 2015

CHARLES A. KILPATRICK, P.E.
COMMISSIONER

To: Ms. Barbara Berlin
Director, Zoning Evaluation Division

From: Kevin Nelson
Virginia Department of Transportation – Land Development Section

Subject: RZ/FDP 2013-PR-014 Ausable, LLC
Tax Map # 48-4((01))0044

All submittals subsequent to the first submittal shall provide a response letter to the previous VDOT comments. Submittals without comment response letters are considered incomplete and will be returned without review.

I have reviewed the above plan submitted on February 25, 2015, and received March 3, 2015. I have no comments in addition to those previously provided. Please note the turnaround on the service drive at the temporary termination will need to extend about 5' beyond the entrance radius and Object Markers will be required across the end of the service drive on the site plan. You can pass these minor items on to the designer for them to incorporate into the site plan.

If you have any questions, please call me.

cc: Ms. Angela Rodeheaver
fairfaxrezoning2013-PR-014rz6AusableLLCCraven3-25-15BB



FAIRFAX COUNTY
PUBLIC SCHOOLS

Department of Facilities and Transportation Services

Office of Facilities Planning Services
8115 Gatehouse Road, Suite 3200
Falls Church, Virginia 22042

February 10, 2015

TO: Barbara Berlin, Director
Zoning Evaluation Division
Fairfax County Department of Planning & Zoning

FROM: Aimee Holleb, Assistant Director *AH*
Office of Facilities Planning Services

SUBJECT: RZ 2013-PR-014, MHI-Arlington Blvd. (Updated)

ACREAGE: 3.72 acres

TAX MAP: 48-4 ((1)) 44

PROPOSAL:

The application requests to rezone the site from R-1 to R-5 district. This project would develop the site into a subdivision with 14 single family detached homes. The site currently contains a commercial nursery, but under the current zoning it could yield up to 3 single family detached homes. A prior review memo for this application, which previously proposed 14 Townhouses, was provided on October 7, 2013.

ANALYSIS:

School Capacities

The schools serving this area are Mantua Elementary, Frost Middle and Woodson High schools. The chart below shows the existing school capacity, enrollment, and projected enrollment.

School	Capacity 2014 / 2019	Enrollment (9/30/14)	Projected Enrollment 2015-16	Capacity Balance 2015-16	Projected Enrollment 2019-20	Capacity Balance 2019-20
Mantua ES	1,015 / 1,015	959	979	36	975	40
Frost MS	1,206 / 1,206	1,099	1,223	-17	1,274	-68
Woodson HS	2,331 / 2,331	2,359	2,360	-29	2,512	-181

Capacities based on 2016-2020 Capital Improvement Program (December 2014)

Project Enrollments based on 2014-15 to 2019-20 6-Year Projections (April 2014)

The school capacity chart above shows a snapshot in time for student enrollments and school capacity balances. Student enrollment projections are done on a six year timeframe, currently through school year 2019-20 and are updated annually. At this time, if development occurs within the next five years, Frost and Woodson are projected to have capacity deficits; Mantua is projected to have sufficient capacity. Beyond the six year projection horizon, enrollment projections are not available.

Capital Improvement Program Projects

The 2016-20 Capital Improvement Program (CIP) recommends the capacity deficits at Frost could potentially be addressed with the addition of a new middle school AAP center in the Annandale HS pyramid. This would allow students from the Annandale HS pyramid to return to the new AAP center at Poe providing relief to Frost. Capacity deficits at Woodson could potentially be address with a modular addition.

Barbara Berlin
 February 10, 2015
 Page 2
 RZ/FDP 2013-PR-014, MHI-Arlington Blvd. (Updated)

Development Impact

Based on the number of residential units proposed, the chart below shows the number of anticipated students by school level based on the current countywide student yield ratio.

Existing (Potential By-right)

School level	Single Family Detached ratio	Potential By-right # of units	Existing Student yield
Elementary	.270	3	1
Middle	.085	3	0
High	.175	3	1

2 total

2013 Countywide student yield ratios (November 2014)

Proposed

School level	Single Family Detached ratio	Proposed # of units	Estimated Student yield
Elementary	.270	14	4
Middle	.085	14	1
High	.175	14	2

7 total

2013 Countywide student yield ratios (November 2014)

RECOMMENDATIONS:

Proffer Contribution

A net of 5 new students is anticipated (3 Elementary, 1 Middle and 1 High School). Based on the approved Residential Development Criteria, a proffer contribution of \$54,125 (5 x \$10,825) is recommended to offset the impact that new student growth will have on surrounding schools. It is recommended that the proffer contribution funds be directed as follows:

...to be utilized for capital improvements to Fairfax County public schools to address impacts on the school division resulting from [the applicant's development].

It is also recommended proffer payment occur at the time of site plan or first building permit approval. A proffer contribution at the time of occupancy is not recommended since this does not allow the school system adequate time to use the proffer contribution to offset the impact of new students.

In addition, an "escalation" proffer is recommended. The suggested per student proffer contribution is updated on an annual basis to reflect current market conditions. The amount has decreased over the last several years because of the down turn in the economy and lower construction costs for FCPS. As a result, an escalation proffer would allow for payment of the school proffer based on either the current suggested per student proffer contribution at the time of zoning approval or the per student proffer contribution in effect at the time of development, whichever is greater. This would better offset the impact that new student yields will have on surrounding schools at the time of development. For your reference, below is an example of an escalation proffer that was included as part of an approved proffer contribution to FCPS.

Adjustment to Contribution Amounts. Following approval of this Application and prior to the Applicant's payment of the amount(s) set forth in this Proffer, if Fairfax County should increase the ratio of students per unit or the amount of contribution per student, the Applicant shall increase the amount of the contribution for that phase of development to reflect the then-current ratio and/or contribution. If the County should decrease the ratio or contribution amount, the Applicant shall provide the greater of the two amounts.

Barbara Berlin
February 10, 2015
Page 3
RZ/FDP 2013-PR-014, MHI-Arlington Blvd. (Updated)

Proffer Notification

It is also recommended that the developer proffer notification be provided to FCPS when development is likely to occur or when a site plan has been filed with the County. This will allow the school system adequate time to plan for anticipated student growth to ensure classroom availability.

AJH/gjb

Attachment: Locator Map

cc: Patty Reed, School Board Member, Providence District
Megan McLaughlin, School Board Member, Braddock District
Sandy Evans, School Board Member, Mason District
Elizabeth Schultz, School Board Member, Springfield District
Ted Velkoff, Vice-Chairman, School Board Member, At-Large
Ilryong Moon, School Board Member, At-Large
Ryan McElveen, School Board Member, At-Large
Jeffrey Platenberg, Assistant Superintendent, Facilities and Transportation Services
Frances Ivey, Assistant Superintendent, Region 5
Kevin Sneed, Special Projects Administrator, Capital Projects and Planning
Dan Meier, Principal, Woodson High School
Eric McCann, Principal, Frost Middle School
Jan-Marie Fernandez, Principal, Mantua Elementary School