APPLICATION ACCEPTED: February 3, 2016
PLANNING COMMISSION: September 14, 2016
BOARD OF SUPERVISORS: September 20, 2016 @ 3:30 p.m.

County of Fairfax, Virginia

August 31, 2016

STAFF REPORT

PCA 86-C-054-02, CDPA 86-C-054, AND FDPA 86-C-054-02-01

HUNTER MILL DISTRICT

APPLICANT:	General Dynamics Corporation
ZONING:	PDC, Planned Development Commercial District
PARCEL:	18-3 ((1)) 11B1
SITE AREA:	21.69 acres
FAR:	0.20
OPEN SPACE:	18.06 acres (84 percent)
PLAN MAP:	Office
PROPOSAL:	To amend proffered conditions, a conceptual development plan, and a final development plan to permit a redesign of an office development.

STAFF RECOMMENDATIONS:

Staff recommends approval of PCA 86-C-054-02 and CDPA 86-C-054, subject to the execution of proffered conditions consistent with those contained in Appendix 1.

Staff recommends approval of FDPA 86-C-054-02-01, subject to the development condition contained in Appendix 2.

Staff recommends that the Board of Supervisors' approve and concur with the Director of the Department of Public Works and Environmental Services' determination that pursuant to Par. 1 of Sect. 11-101 of the Zoning Ordinance 250 parking spaces for both Phases 1 and 2 of the development are adequate, subject to the execution of proffers contained in Appendix 1.

Mary Ann Tsai, AICP

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/

Staff recommends approval of a modification of Par. 3 of Sect. 10-104 of the Zoning Ordinance to permit an increase in fence height up to 10 feet.

Staff recommends approval of a modification of Par. 15 of Sect. 11-202 of the Zoning Ordinance to permit a reduction in the number of required loading spaces from five to two spaces.

Staff recommends approval of a modification to Sect. 13-304 of the Zoning Ordinance to permit a security fence in lieu of the barrier requirement.

It should be noted that it is not the intent of staff to recommend that the Board of Supervisors, in adopting any conditions, 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 easement, 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.

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).

Proffered Condition Amendment

PCA 86-C -054-02

Applicant: GENERAL DYNAMICS CORPORATION
Accepted: 02/03/2016
Proposed: AMEND PROFFERS AND CONDITIONS ASSOCIATED WITH RZ 86-C-054
Area: 21.69 AC OF LAND; DISTRICT - HUNTER MILL

Zoning Dist Sect:
Located: SOUTH SIDE OF SUNSET HILLS ROAD, NORTH OF DULLES AIRPORT ACCESS ROAD AND WEST OF HUNTER MILL ROAD

Zoning: PDC
Overlay Dist:
Map Ref Num: 018-3- /01/ /0011B1

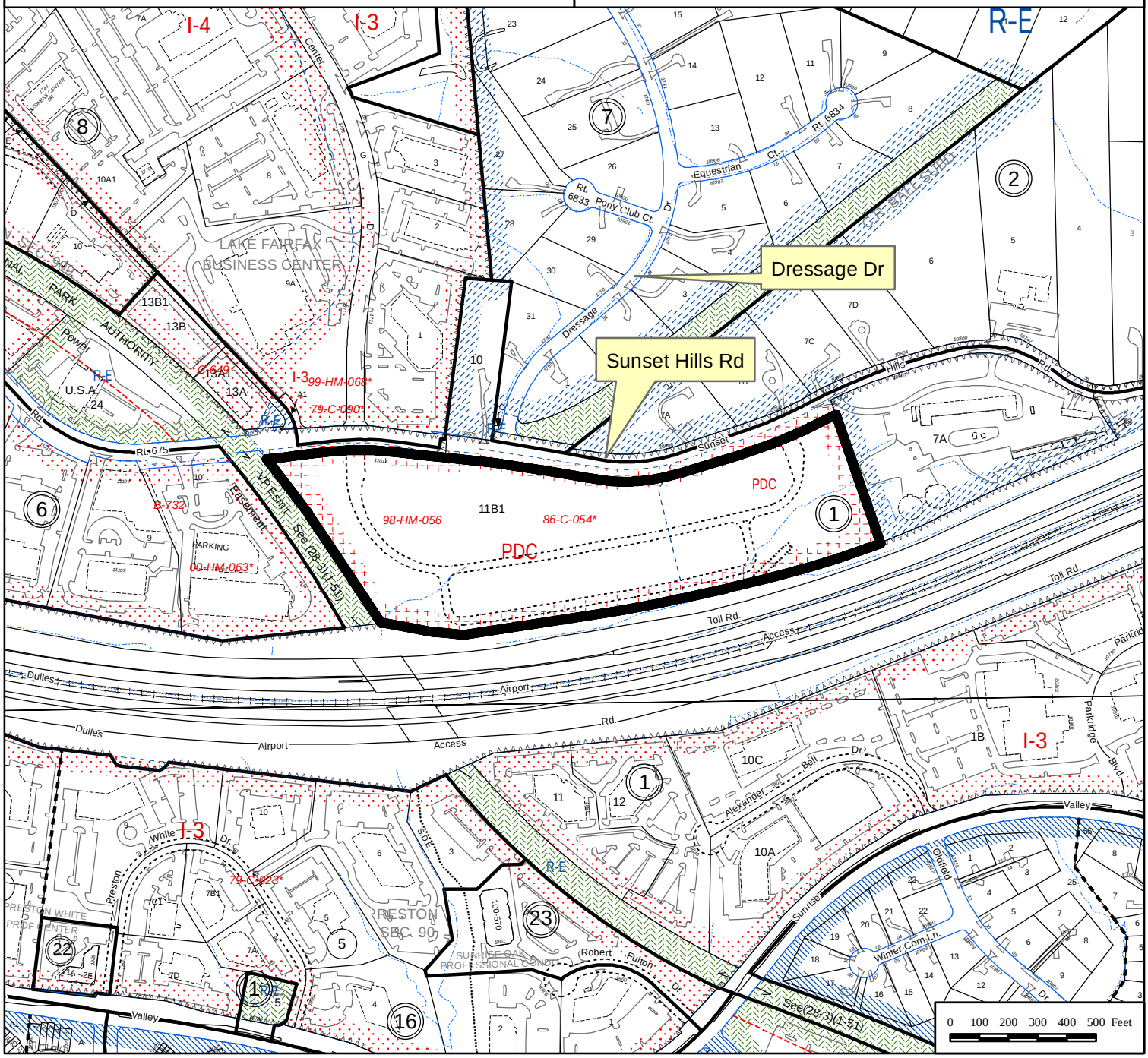
Conceptual Development Plan Amendment

CDPA 86-C -054

Applicant: GENERAL DYNAMICS CORPORATION
Accepted: 02/03/2016
Proposed: OFFICE
Area: 21.69 AC OF LAND; DISTRICT - HUNTER MILL

Zoning Dist Sect:
Located: SOUTH SIDE OF SUNSET HILLS ROAD, NORTH OF DULLES AIRPORT ACCESS ROAD AND WEST OF HUNTER MILL ROAD

Zoning: PDC
Overlay Dist:
Map Ref Num: 018-3- /01/ /0011B1



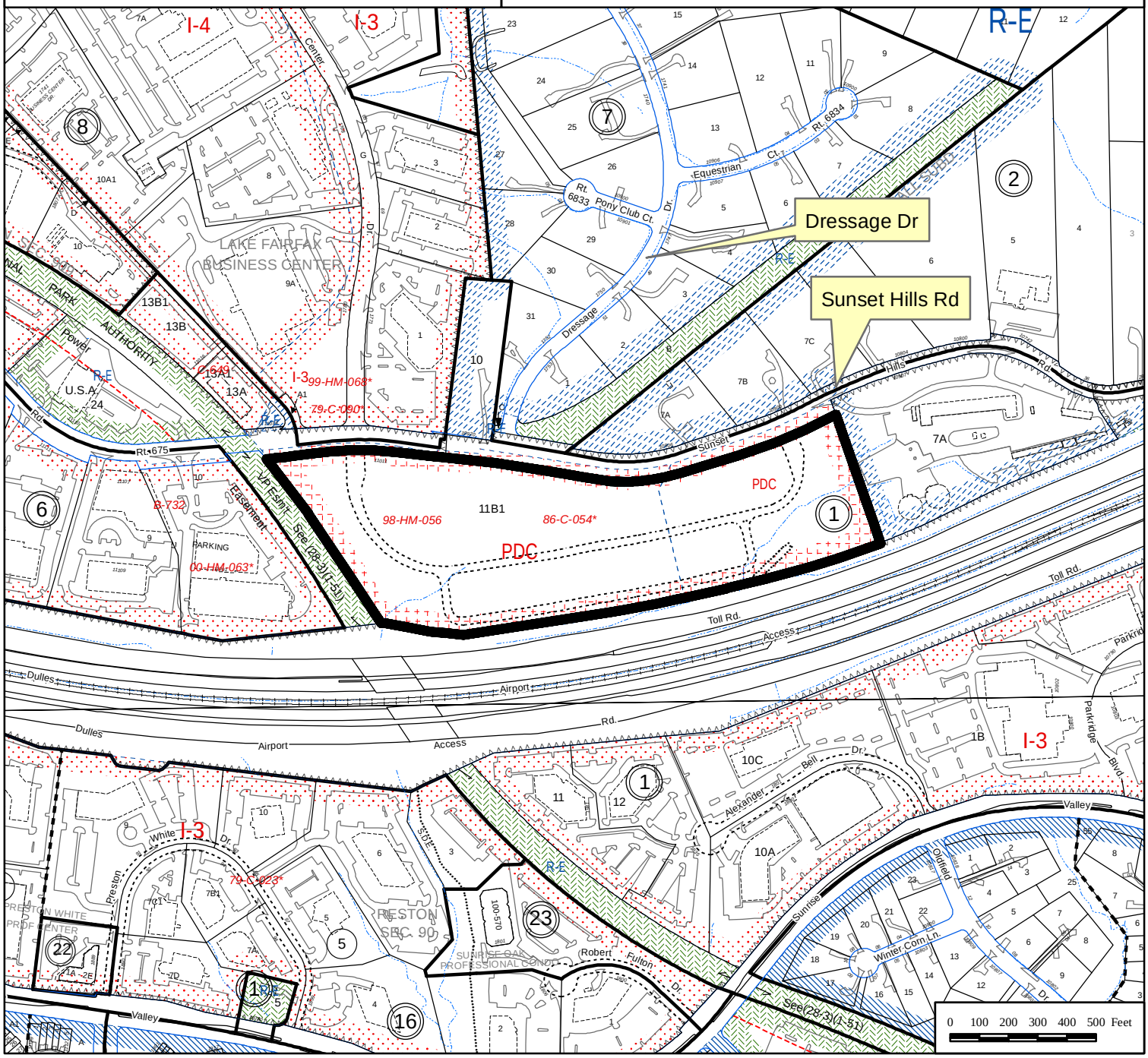
Final Development Plan Amendment

FDPA 86-C -054-02-01

Applicant: GENERAL DYNAMICS CORPORATION
Accepted: 02/03/2016
Proposed: OFFICE
Area: 21.69 AC OF LAND; DISTRICT - HUNTER MILL

Zoning Dist Sect:
Located: SOUTH SIDE OF SUNSET HILLS ROAD, NORTH OF DULLES AIRPORT ACCESS ROAD AND WEST OF HUNTER MILL ROAD

Zoning: PDC
Overlay Dist:
Map Ref Num: 018-3- /01/ /0011B1



CONCEPTUAL DEVELOPMENT PLAN ADMENDMENT / FINAL DEVELOPMENT PLAN AMENDMENT
FOR
RESTON EASTGATE
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

JANUARY 4, 2016
JANUARY 28TH, 2016 – REVISED
APRIL 1ST, 2016 – REVISED
MAY 6TH, 2016 – REVISED
JUNE 27TH, 2016 – REVISED
AUGUST 1ST, 2016 – REVISED
AUGUST 22ND, 2016 – REVISED

APPLICANT

GENERAL DYNAMICS
2941 FAIRVIEW PARK DRIVE
FALLS CHURCH, VA 22042

OWNER/DEVELOPER

BOSTON PROPERTIES
2200 PENNSYLVANIA AVENUE NW
SUITE 200W
WASHINGTON, DC 20037

ATTORNEY

COOLEY, LLP
ONE FREEDOM SQUARE
11951 FREEDOM DRIVE
RESTON, VA 20190

ARCHITECT

LSM
1212 BANK STREET NW
WASHINGTON, DC 20007

CIVIL ENGINEER

URBAN, LTD.
4200 D TECHNOLOGY COURT
CHANTILLY, VA 20131

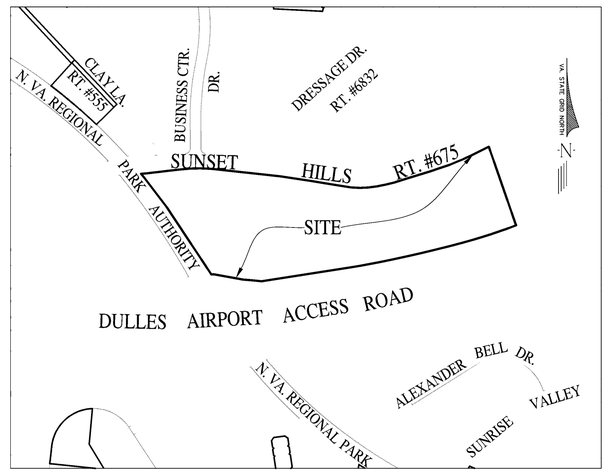
TRAFFIC

WELLS AND ASSOCIATES
11441 ROBERTSON DRIVE
MANASSAS, VA 20109

LANDSCAPE

PWP LANDSCAPE ARCHITECTURE
739 ALLSTON WAY
BERKELEY, CALIFORNIA 94710
&
URBAN, LTD.
7700 LITTLE RIVER TURNPIKE SUITE 604
ANNANDALE, VA 22003

VICINITY MAP
SCALE: 1"= 1,000'



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REVISIONS

No.	DATE	DESCRIPTION
–	–	–

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

urban
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CHANTILLY, VA. 20151
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FAX 703.378.7888
www.urban-ltd.com

COMMONWEALTH OF VIRGINIA
CLAYTON C. TOOK
Lic. No. 036706
08/22/2016
PROFESSIONAL ENGINEER

COVER SHEET
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: N/A
C.I.= N/A
DATE: JAN. 2016

SHEET 01 OF 36

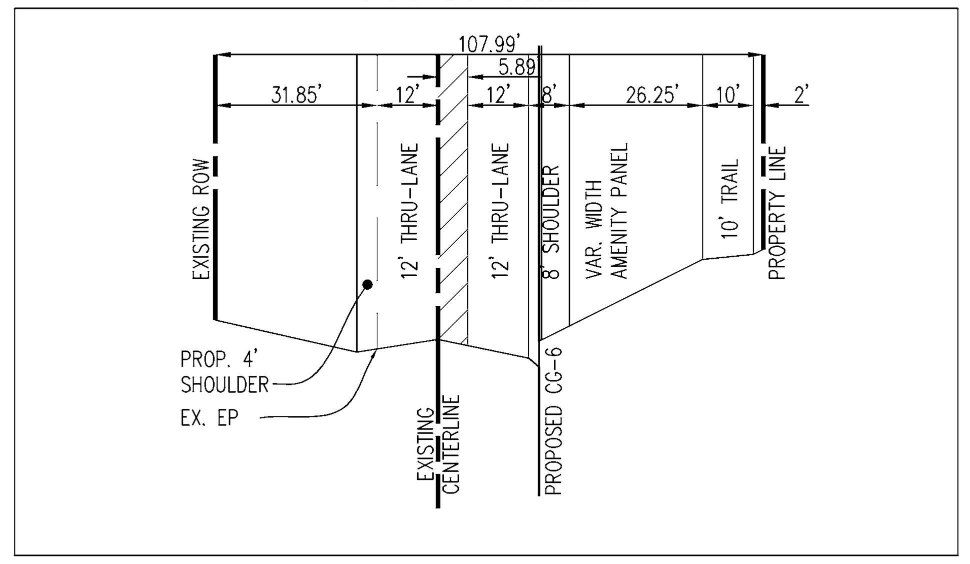
FILE No.
RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\01-COVER.dwg [COVER] August 22, 2016 – 2:21pm fsyoung

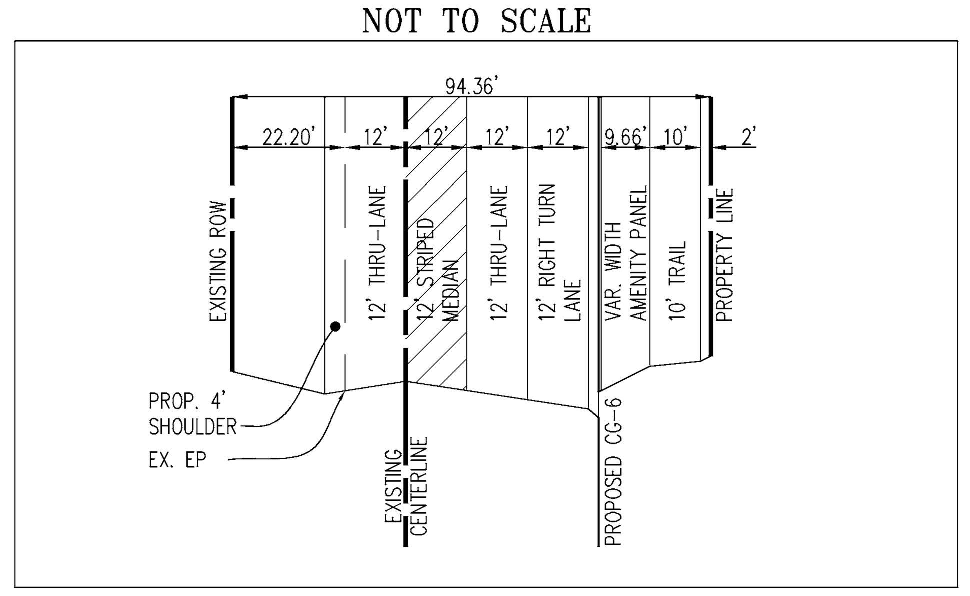
GENERAL NOTES

1. THE PROPERTY IS IDENTIFIED AS FAIRFAX COUNTY TAX MAP NUMBER: 0183-01-0011B1.
2. PARCEL 0183-01-0011B1 IS CURRENTLY ZONED PDC.
3. BOUNDARY AND TOPOGRAPHY INFORMATION HEREON IS BASED ON FIELD RUN SURVEY PREPARED BY URBAN LTD. AND IS REFERENCED HORIZONTALLY TO NAD 1983 AND VERTICALLY TO NAVD 1929.
4. THE TOPOGRAPHY SHOWN HEREON IS AT A TWO-FOOT CONTOUR INTERVAL, COMPILED BY URBAN LTD.
5. THE PROPERTY SHOWN ON THIS CDPA/FDPA IS LOCATED IN THE HUNTER MILL DISTRICT.
6. THIS PROPOSED DEVELOPMENT IS IN CONFORMANCE WITH THE COMPREHENSIVE PLAN AND ALL APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED CONDITIONS, EXCEPT AS NOTED HEREIN.
7. THE SUBJECT PROPERTY HAS NO EXISTING FLOOD PLAINS OR RESOURCE PROTECTION AREAS BASED ON AVAILABLE COUNTY DATA.
8. THIS SITE IS SERVED BY PUBLIC SEWER AND WATER.
9. THIS PROPERTY LIES WITHIN ZONE "X", AN AREA DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAIN AS DELINEATED ON FLOOD INSURANCE RATE MAP 51059C0130-E, DATED SEPTEMBER 17, 2010.
10. UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE PROPOSED LOCATION IS SUBJECT TO CHANGE BASED ON FINAL DESIGN AND COORDINATION WITH PUBLIC WORKS.
11. INDIVIDUAL UTILITY PLANS AND PROFILES WILL BE SUBMITTED DURING THE SITE PLAN STAGE FOR CONSTRUCTION PURPOSES.
12. THERE ARE NO KNOWN HAZARDOUS OR TOXIC SUBSTANCES ON THIS SITE PER THE GEOTECHNICAL STUDY.
13. THERE ARE NO KNOWN BURIAL SITES OR EXISTING GRAVES FOUND ON THIS SITE.
14. ALL NATURAL FEATURES IDENTIFIED AS WORTH PROTECTING ARE OUTSIDE THE LIMITS OF CLEARING.
15. THE SPECIAL AMENITIES PROPOSED ON THE FDPA SITE INCLUDE:
    * INDOOR FITNESS CENTER
    * 5' WALKING TRAIL
    * OUTDOOR TERRACE
16. PUBLIC IMPROVEMENTS PROPOSED WITH THIS FDPA INCLUDE TURN LANES INTO SUBJECT SITE AND AN ASPHALT TRAIL.
17. ALL PUBLIC STREETS SHALL CONFORM TO FAIRFAX COUNTY AND/OR VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) STANDARDS AND SPECIFICATIONS UNLESS MODIFIED AS DESCRIBED IN GENERAL NOTE 6 ABOVE.
18. IN ACCORDANCE WITH PARAGRAPH 4 OF SECTION 16-403 OF THE ZONING ORDINANCE, MINOR MODIFICATIONS TO THE SIZES, DIMENSIONS, FOOTPRINTS, AND LOCATIONS OF BUILDINGS, SIDEWALKS, DRIVEWAYS, TRAILS, AND UTILITIES MAY OCCUR WITH FINAL ENGINEERING AND DESIGN WITHOUT REQUIRING AN AMENDMENT TO THE CDPA/FDPA.
19. IN ACCORDANCE WITH PARAGRAPH 5 OF SECTION 18-204 OF THE ZONING ORDINANCE, MINOR MODIFICATIONS TO THE SIZE, DIMENSIONS, FOOTPRINTS, AND LOCATION OF BUILDINGS, PARKING SPACES, GARAGES AND SIDEWALKS MAY OCCUR WITH FINAL ENGINEERING AND DESIGN. NOTWITHSTANDING THAT WHICH IS SHOWN OR DESCRIBED ON THIS CDPA/FDPA, THE APPLICANT RESERVES THE RIGHT TO MAKE MINOR MODIFICATIONS TO THE LOCATION AND CONFIGURATION OF THE APPROVED DEVELOPMENT AND ALL COMPONENT PARTS OF THE SAME BASED ON FINAL ENGINEERING AND/OR REQUIREMENT IMPOSED IN CONNECTION WITH ANY POST ZONING APPROVALS, PROVIDED THE SAME ARE IN SUBSTANTIAL CONFORMANCE WITH THIS CDPA/FDPA.
20. THERE ARE NO DESIGNATED ENVIRONMENTAL QUALITY CORRIDORS (EQC) ON THE SUBJECT SITE PER THE COUNTY OF FAIRFAX MAPS.
21. THE DEVELOPMENT SCHEDULE AND PROPOSED SITE PLAN SUBMISSIONS SHALL BE DETERMINED BY THE APPLICANT BASED UPON MARKET CONDITIONS.
22. WHERE REQUIRED, LOADING PLANES WILL BE PROVIDED AT THE TIME OF SITE PLANNING FOR UTILITIES PROPOSED IN CLOSE PROXIMITY TO THE BUILDING AND/OR RETAINING WALLS.
23. NO ATTEMPT HAS BEEN MADE AS A PART OF THIS SURVEY TO OBTAIN OR SHOW DATA CONCERNING EXISTENCE, SIZE, DEPTH, CONDITION, CAPACITY OR LOCATION OF UTILITIES OR MUNICIPAL/PUBLIC SERVICE FACILITY. FOR INFORMATION REGARDING THESE UTILITIES OR FACILITIES CONTACT "MISS UTILITY" 1 (800) 257 -7777.
24. STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES ARE TO BE PROVIDED ONSITE BY PROPOSED FACILITIES WITH THE SITE PLANS FOR THIS PROPERTY AND, AT A MINIMUM, WILL MEET PFM REQUIREMENTS FOR WATER QUALITY AND QUANTITY CONTROLS.
25. ALL AREAS IDENTIFIED AS FIRE LANES, FIRE DEPARTMENT TURNAROUNDS, FIRE DEPARTMENT ACCESS AREAS OR OTHER RESTRICTED ARES WILL HAVE BOLLARDS, PAINT, SIGNAGE AND OTHER REQUIRED IDENTIFICATION INSTALLED AS REQUIRED PRIOR TO STRUCTURE OCCUPANCY.
26. VEHICLE ACCESSIBLE AREAS OVER THE PARKING STRUCTURE WILL SUPPORT THE WEIGHT OF FIRE DEPARTMENT VEHICLES.
27. THE FOLLOWING ARE THE OWNERS OF THE PARCELS INCLUDED IN THIS ZONING APPLICATION:
    MAP # 0183-01-0011B1
    BP RESTON EASTGATE LLC
    2200 PENNSYLVANIA AVE. NW
    SUITE 200
    WASHINGTON, DC. 20037

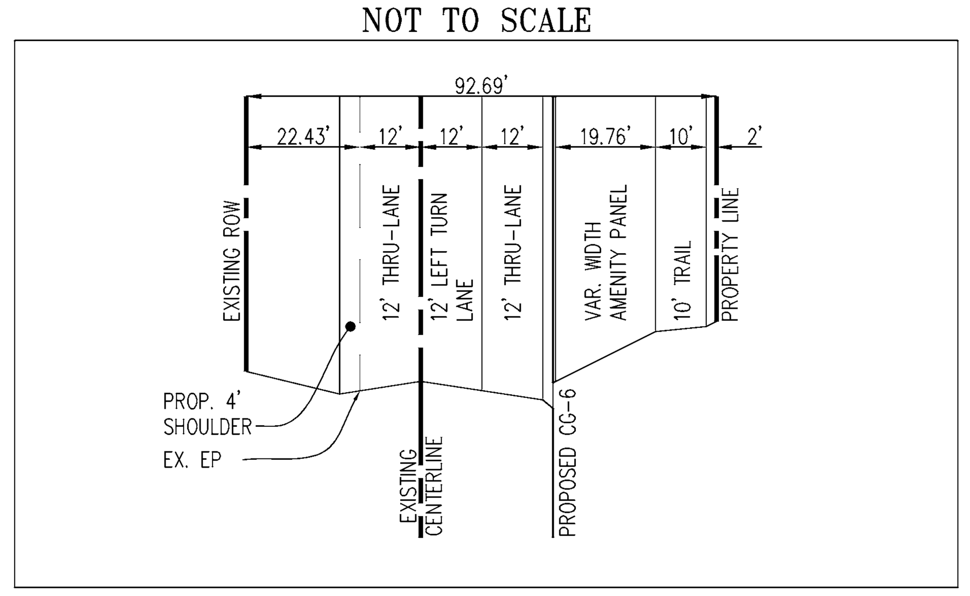
SUNSET HILLS ROAD SECTION A-A'
NOT TO SCALE



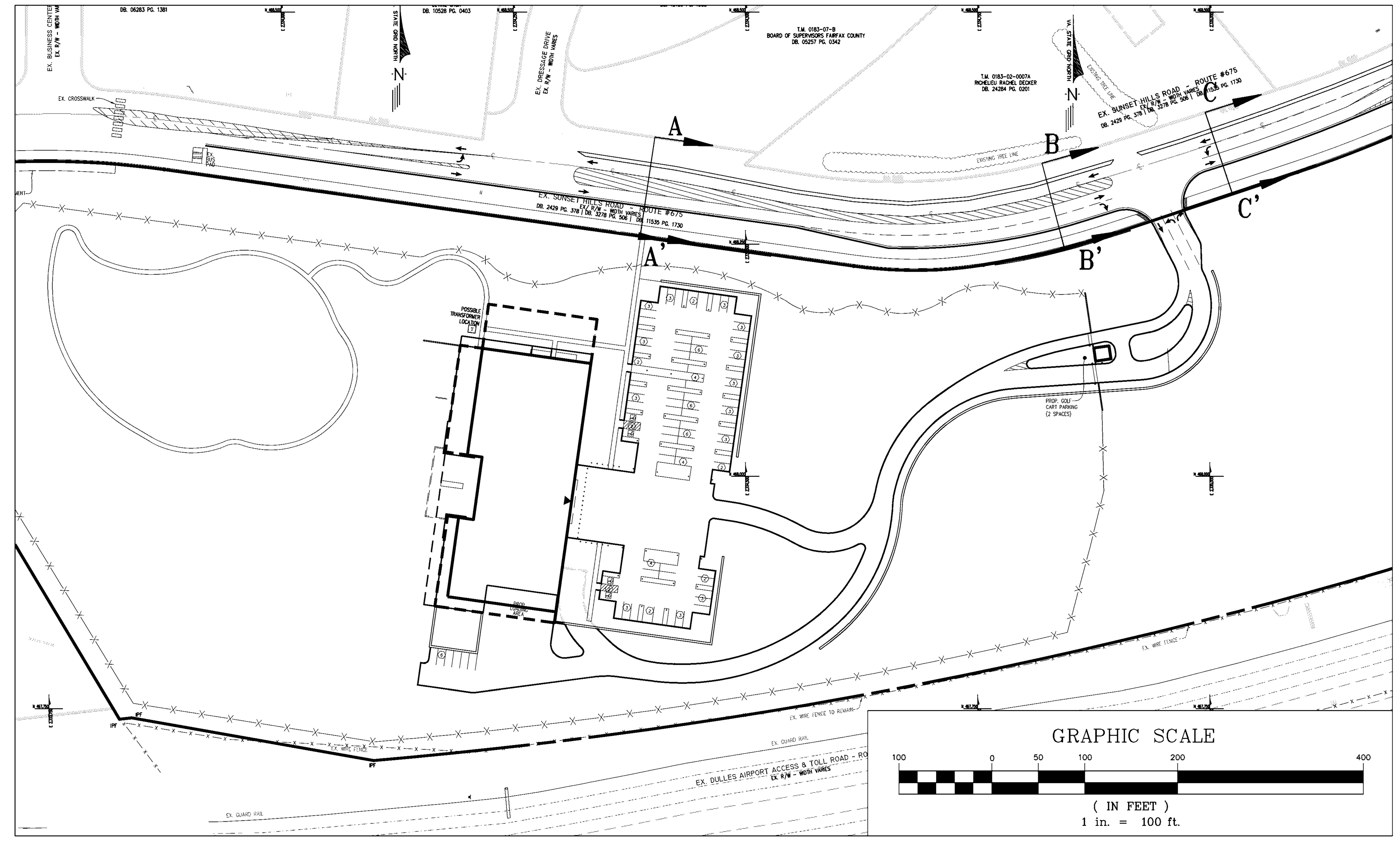
SUNSET HILLS ROAD SECTION B-B'
NOT TO SCALE



SUNSET HILLS ROAD SECTION C-C'
NOT TO SCALE



SUNSET HILLS ROAD CROSS SECTIONS:



ZONING TABULATIONS:

	ALLOWABLE/REQUIRED	APPROVED CDPA/FDP 86-C-054	PROPOSED OFFICE – PHASE I	PROPOSED OFFICE – PHASE II (ULTIMATE)
EXISTING SITE AREA	1,021,982 SF (23.46 AC.)	1,021,982 SF (23.46 AC.)	945,062 SF (21.70 AC.)	945,062 SF (21.70 AC.)
AREA OF STREET DEDICATION	N/A	76,920 SF (1.76 AC.)*	N/A*	N/A*
AREA OF PARK DEDICATION	N/A	N/A	9,242 SF (0.21 AC.)	9,242 SF (0.21 AC.)
ADJUSTED SITE AREA	N/A	945,062 SF (21.70 AC.)	935,631 SF (21.48 AC.)	935,631 SF (21.48 AC.)
EXISTING USE	VACANT LOT	N/A	N/A	N/A
PROPOSED USE	N/A	OFFICE BUILDINGS (3)	OFFICE BUILDING (1)	OFFICE BUILDING (1)
PROPOSED BUILDING SQUARE FOOTAGE	N/A	357,694 SQ FT	UP TO 160,000 SQ FT	UP TO 190,000 SQ FT
MINIMUM LOT AREA	N/A	N/A	N/A	N/A
MINIMUM LOT WIDTH	N/A	N/A	N/A	N/A
BUILDING HEIGHT	75'	75'	95' (5 STORIES – MAX)	110' (6 STORIES – MAX)
FLOOR AREA RATIO (FAR)	1.5	0.35	0.17	0.20
DENSITY (DU/AC.)	N/A	N/A	N/A	N/A
YARD REQUIREMENTS				
FRONT YARD	N/A	N/A	N/A	N/A
SIDE YARD	N/A	N/A	N/A	N/A
REAR YARD	N/A	N/A	N/A	N/A
LANDSCAPE OPEN SPACE	15% (141,759.30 S.F.)	40.00% (408,792 S.F.)	84.12% (787,052 S.F.)**	84.12% (787,052 S.F.)**
RECREATIONAL OPEN SPACE	N/A	N/A	N/A	N/A

* 76,920 SQ FT DEDICATED WITH PREVIOUSLY APPROVED PLAN #206-SP-01 (D.B. 11535 PG. 1730)
** POSSIBLE PARKING EXPANSION CONTEMPLATED IN PHASE I OPEN SPACE

PARKING TABULATIONS:

REQUIRED PARKING:	OFFICE USE (PER SECT. 11-104.14): 2.6 SPACES PER 1,000 S.F. PHASE 1 2.6 SPACES PER 1,000 S.F. X 160,000 S.F. = 416 SPACES* PHASE 2 2.6 SPACES PER 1,000 S.F. X 190,000 S.F. = 494 SPACES**
TOTAL REQUIRED PARKING:	= PHASE 1: 416 SPACES* = PHASE 2: 494 SPACES**
TOTAL PROVIDED PARKING:	
OFFICE PARKING PROVIDED:	= PHASE 1: 250 SPACES* (1.56 SPACES PER 1,000 GSF) = PHASE 2: 250 SPACES** (1.31 SPACES PER 1,000 GSF)
REQUIRED LOADING:	OFFICE USE (PER 11-203 AND 11-202.15): 1 SPACE FOR FIRST 10,000 S.F. + 1 SPACE/20,000 S.F. FOR AREA PAST FIRST 10,000 S.F. 1 SPACE + 150,000 SF X 1 SPACE/20,000 S.F. = 9 SPACES (PHASE 1) OFFICE USE (PER 11-203 AND 11-202.15): 1 SPACE FOR FIRST 10,000 S.F. + 1 SPACE/20,000 S.F. FOR AREA PAST FIRST 10,000 S.F. 1 SPACE + 180,000 SF X 1 SPACE/20,000 S.F. = 10 SPACES (PHASE 2)
TOTAL REQUIRED LOADING:	= 5 SPACES (MAX 5 PER BUILDING PER 11-202.15)***
PROVIDED LOADING:	= 2

* PARKING SPACE MODIFICATION IS REQUESTED FOR REDUCTION IN PARKING SPACES REQUIRED IN SECTION 11-104.14C OF THE ZONING ORDINANCE. THE SITE PROPOSES A PARKING REDUCTION FROM 416 TO 250 IN PHASE I IN ACCORDANCE WITH THE DETAILS DESCRIBED IN THE PROFFERS.

** PARKING SPACE MODIFICATION IS REQUESTED FOR REDUCTION IN PARKING SPACES REQUIRED IN SECTION 11-104.14C OF THE ZONING ORDINANCE. THE SITE PROPOSES A PARKING REDUCTION FROM 494 TO 250 IN PHASE II IN ACCORDANCE WITH THE DETAILS DESCRIBED IN THE PROFFERS.

*** LOADING SPACE MODIFICATION IS REQUESTED FOR REDUCTION IN LOADING SPACES REQUIRED IN SECTION 11-202.3 OF THE ZONING ORDINANCE. THE LOADING SPACE MODIFICATION IS IN CONFORMANCE WITH THE PREVIOUSLY APPROVED.

LIMITS OF CLEARING AND GRADING NOTE

THIS APPLICATION PROPOSES TWO DISTINCT LIMITS OF CLEARING AND GRADING. THE PRIMARY LIMITS WILL ENCOMPASS ALL CONSTRUCTION ACTIVITIES THAT WILL REQUIRE MAJOR CLEARING AND GRADING. THE SECONDARY LIMITS ENCOMPASSES THE BALANCE OF THE SITE WHERE NO MAJOR LAND DISTURBING ACTIVITIES WILL OCCUR BUT THE APPLICANT RESERVES THE RIGHT TO MAKE IMPROVEMENTS TO THE NATURAL CONDITIONS ON THE SITE. THESE IMPROVEMENTS MAY INCLUDE BUT ARE NOT LIMITED TO REMOVING UNWANTED TREES (ALREADY FALLEN OR CLEARLY DEAD AND ROTTING), PLANTING NEW TREES, RELOCATING EXISTING TREES, AND LAYING A TRAIL (NO MAJOR GRADING). ANY WORK PERFORMED IN THE SECONDARY LIMITS OF CLEARING WILL BE COORDINATED WITH FAIRFAX COUNTY URBAN FORESTRY AND THE SITE INSPECTOR PRIOR TO THE WORK BEING PERFORMED.

WAIVERS & MODIFICATIONS

MODIFICATIONS	DESCRIPTION
ZO 11-104.1.C	REQUEST THAT PARKING REQUIREMENT OF 494 BE REDUCED TO 250.
ZO 11-203	REQUEST THAT LOADING REQUIREMENT OF 5 BE REDUCED TO 2.
ZO 13-304	REQUEST THAT A SECURITY FENCE BE PERMITTED IN LIEU OF BARRIER REQUIREMENT A, B, C, D, E, F, OR H.
ZO 10-104	REQUEST THAT MAXIMUM FENCE HEIGHT REQUIREMENT BE INCREASED TO 10' TO ALLOW FOR ADEQUATE SECURITY FENCE.

LEGEND:

EXISTING WATER LINE	ROAD SIGN
PROPOSED WATER LINE	EX. POWER POLE
EX. FIRE HYDRANT	× 363.2 EXISTING SPOT ELEVATION
PROP. FIRE HYDRANT	+25 60 PROP. SPOT ELEVATION
EXISTING WATER METER	CG-6 CG-6R SPILL AND TRANSITION CURB AND GUTTER
PROPOSED WATER METER	PROPOSED CURB
EXISTING WATER VALVE	MAIN BUILDING ENTERANCE
PROPOSED WATER VALVE	EX. STREET LIGHTS
EXISTING STORM DRAIN	PROP. STREET LIGHTS
PROPOSED STORM DRAIN	PROPOSED CG-12
EXISTING SANITARY SEWER	EXISTING TREE
PROPOSED SANITARY SEWER	PROPOSED TREE
EXISTING GAS LINE	WATER FITTING IDENTIFIER
PROPOSED GAS LINE	LOADING AREA
EXISTING GAS VALVE	BENCHMARK
PROPOSED GAS VALVE	TEST PIT REQUIRED
EXISTING OVERHEAD WIRE	???? VPD PROJECTED TRAFFIC COUNT
EXISTING LIGHTING	O.R. OVERLAND RELIEF
PROPOSED LIGHTING	PROP. PROPOSED
EXISTING FENCE	EX. EXISTING
PROPOSED FENCE	SF SQUARE FEET
EXISTING TREE LINE	GSF GROSS SQUARE FEET
EXISTING CONTOURS	NSF NET SQUARE FEET
PROPOSED CONTOURS	T.B.R. TO BE REMOVED
PROPOSED PHASE LINE	FF FINISHED FLOOR
LOC PROPOSED LIMITS OF CLEARING & GRADING	V VISITOR PARKING SPACE
EXISTING WETLANDS	S, C, HC STANDARD, COMPACT, AND HANDICAP PARKING SPACE DESIGNATOR
PROP. RET. WALL	LOADING SPACE

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

REVISIONS

No.	DATE	DESCRIPTION

urban
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FAX 703.378.7888
www.urban-ltd.com

COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
08/22/2016
PROFESSIONAL ENGINEER

GENERAL NOTES & DETAILS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

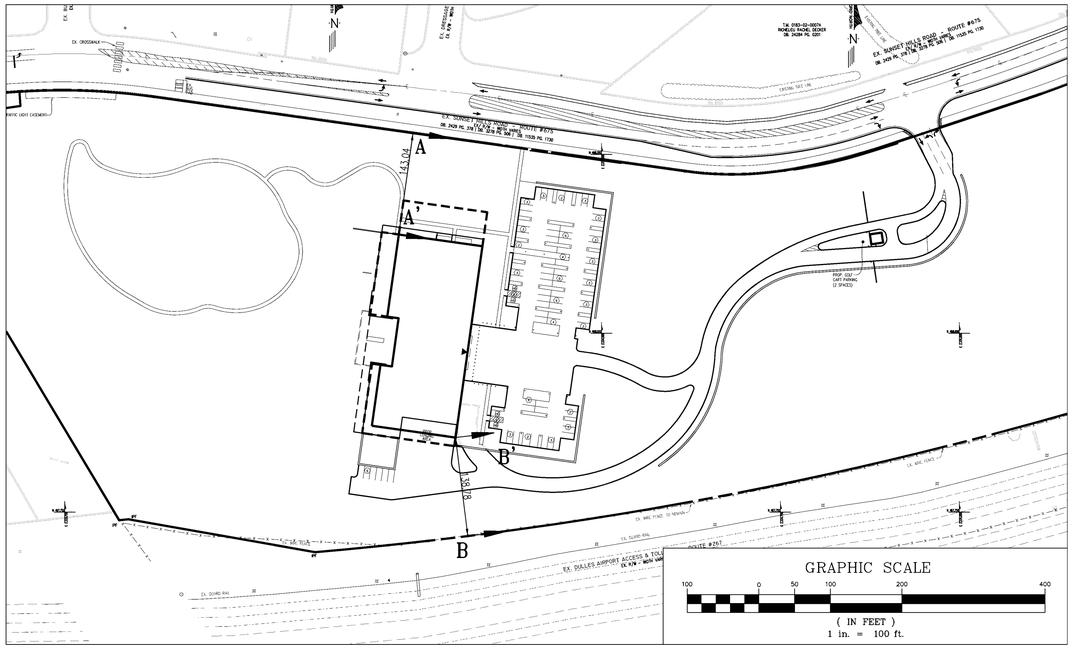
SCALE: N/A C.I.= N/A DATE: JAN. 2016

SHEET 02 OF 36

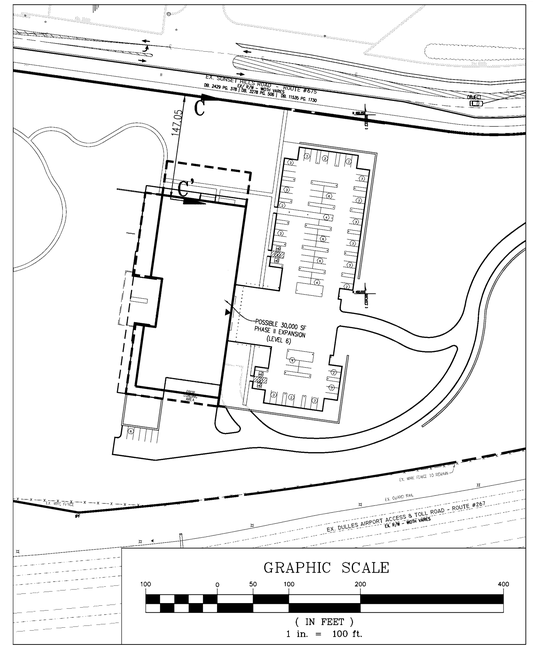
FILE No. RZ-12794

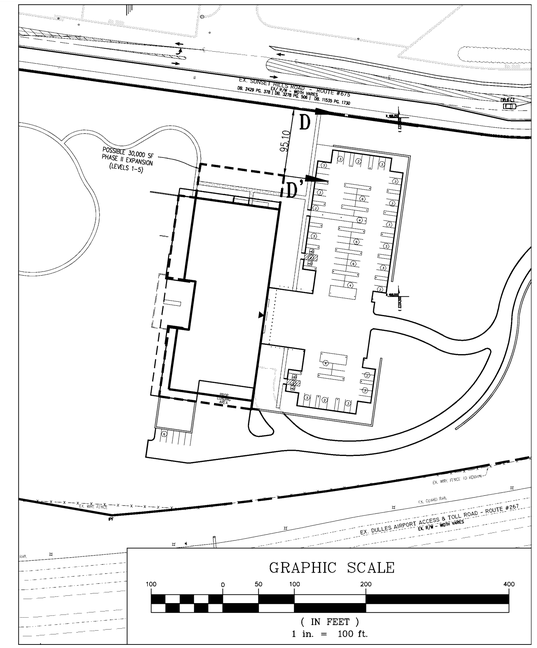
Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\02-GNOTES.dwg [GNOTES] August 22, 2016 – 2:22pm jreynolds

PHASE I BULK PLANES

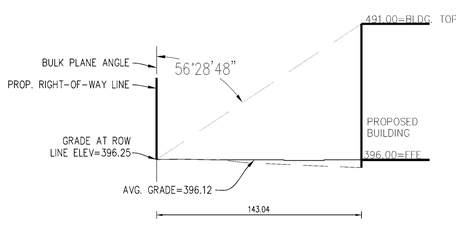


PHASE II BULK PLANE

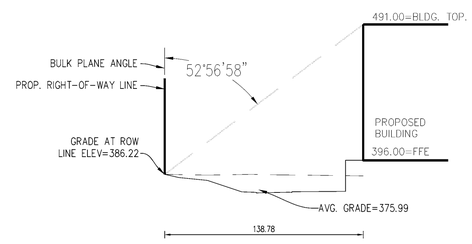




SUNSET HILLS (SECTION A-A')



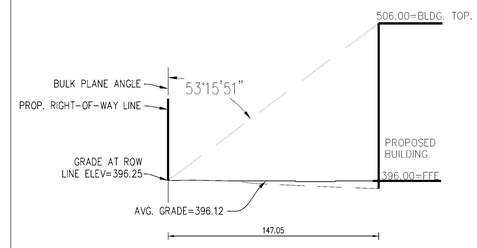
DULLES TOLL ROAD (SECTION B-B')



GRAPHIC SCALE
(IN FEET)
1 in. = 50 ft.

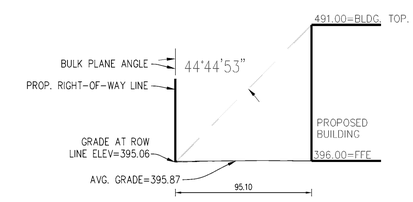
SUNSET HILLS (SECTION C-C')

(OPTION 1 - VERTICAL EXPANSION)



SUNSET HILLS (SECTION D-D')

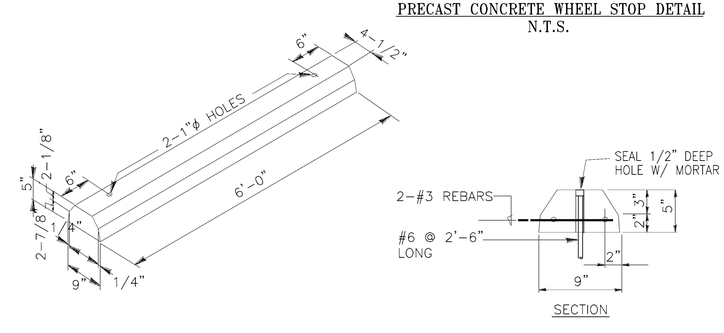
(OPTION 2 - HORIZONTAL EXPANSION)



GRAPHIC SCALE
(IN FEET)
1 in. = 50 ft.

PRECAST CONCRETE WHEEL STOP DETAIL

N.T.S.



No.	DATE	DESCRIPTION
-	-	-

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/09/2016
06/21/2016
08/01/2016
08/22/2016

Urban, Ltd.
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COMMONWEALTH OF VIRGINIA
CLAYTON C. BYRUM
LIC. No. 028706
08/22/2016
PROFESSIONAL ENGINEER

GENERAL NOTES & DETAILS

RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016

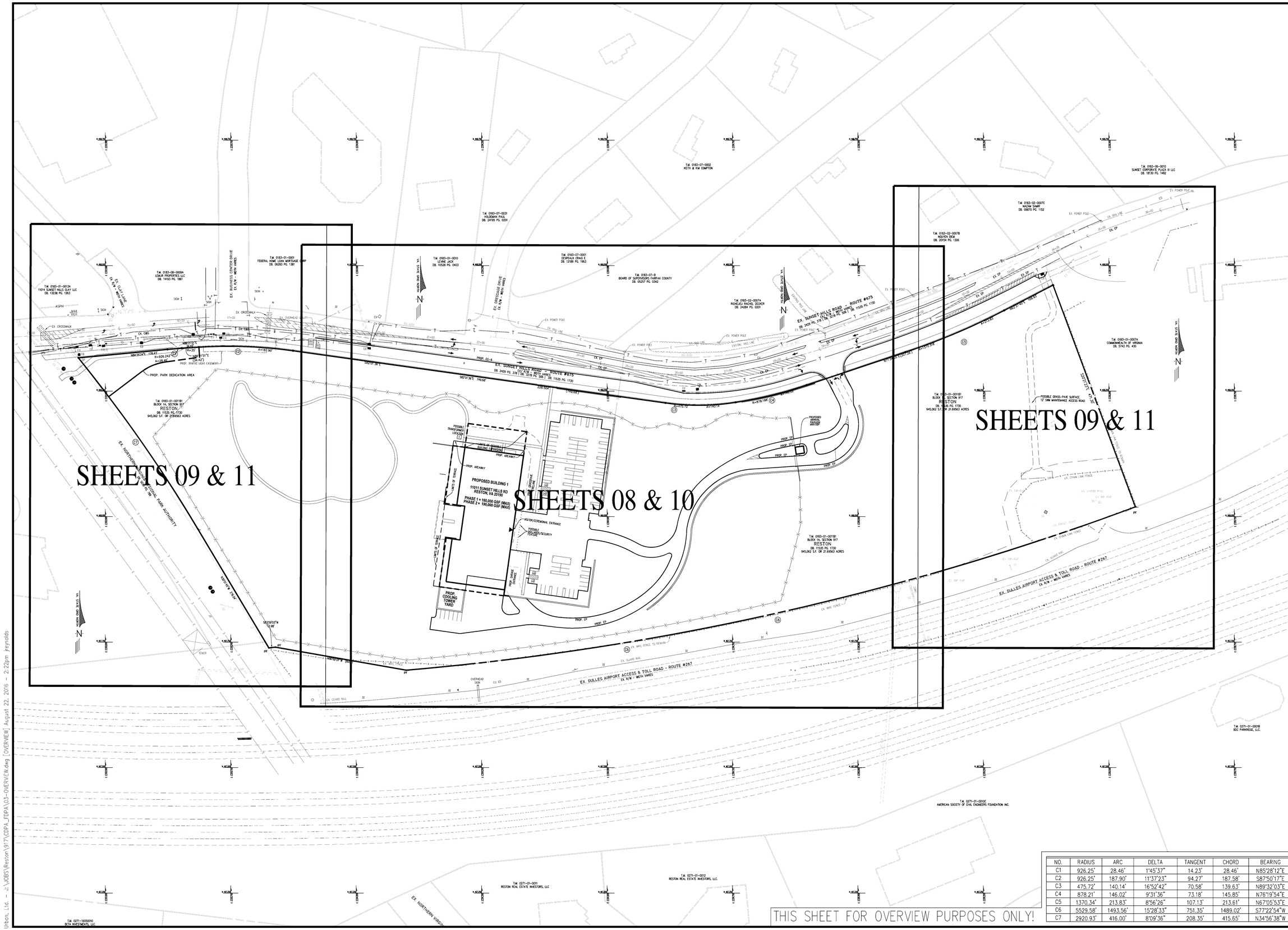
SCALE: AS NOTED

C.I.= N/A

SHEET 03 OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\02-GNOTES.dwg [GNOTES (2)] August 22, 2016 - 2:22pm Reynolds



THIS SHEET FOR OVERVIEW PURPOSES ONLY!

NO.	RADIUS	ARC	DELTA	TANGENT	CHORD	BEARING
C1	926.25'	28.46'	1°45'37"	14.23'	28.46'	N85°28'12"E
C2	926.25'	187.90'	11°37'23"	94.27'	187.58'	S87°50'17"E
C3	475.72'	140.14'	16°52'42"	70.58'	139.63'	N89°32'03"E
C4	878.21'	146.02'	9°31'36"	73.18'	145.85'	N76°19'54"E
C5	1370.34'	213.83'	8°56'26"	107.13'	213.61'	N67°05'53"E
C6	5529.58'	1493.56'	15°28'33"	751.35'	1489.02'	S77°22'54"W
C7	2920.93'	416.00'	8°09'36"	208.35'	415.65'	N34°56'38"W

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/04/2016
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08/22/2016

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOOKE
LAN No. 0.08870
08/22/2016
PROFESSIONAL ENGINEER

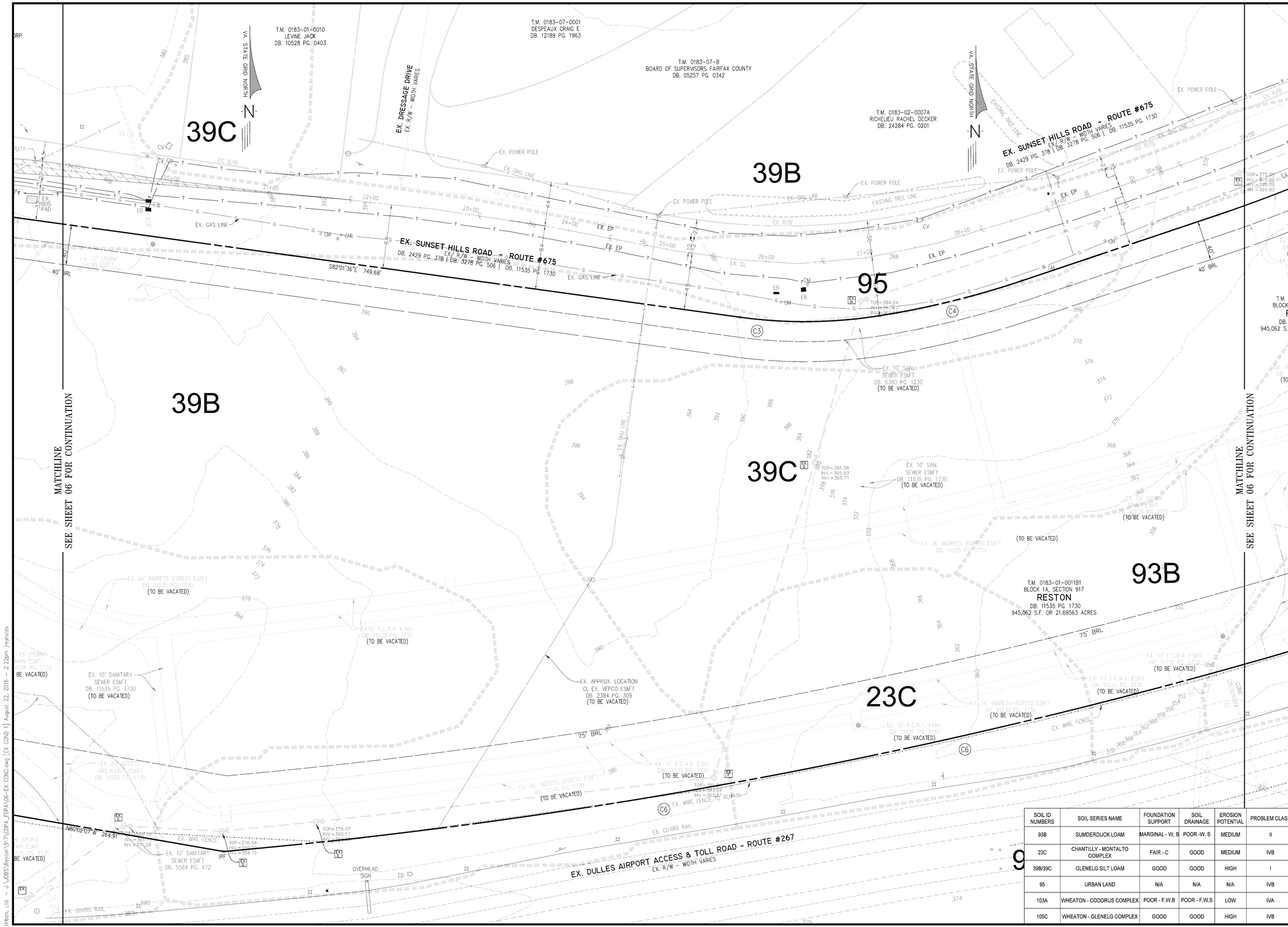
OVERVIEW PLAN
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016
SCALE: 1"=80'
C.I.= 2'

SHEET
04
OF
36

FILE No.
RZ-12794

Urban, Ltd. - z:\JOBS\Reston\917\CDPA_FDPA\03-OVERVIEW\dwg [OVERVIEW] August 22, 2016 - 2:22pm jreynolds



SOIL ID NUMBERS	SOIL SERIES NAME	FOUNDATION SUPPORT	SOIL DRAINAGE	EROSION POTENTIAL	PROBLEM CLASS
93B	SUMDERDUCK LOAM	MARGINAL - W, B	POOR -W, S	MEDIUM	II
23C	CHANTILLY - MONTALTO COMPLEX	FAIR - C	GOOD	MEDIUM	IVB
39B/39C	GLENELG SILT LOAM	GOOD	GOOD	HIGH	I
95	URBAN LAND	N/A	N/A	N/A	IVB
103A	WHEATON - CODORUS COMPLEX	POOR - F,W,B	POOR - F,W,S	LOW	IVA
105C	WHEATON - GLENELG COMPLEX	GOOD	GOOD	HIGH	IVB

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
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06/27/2016
08/01/2016
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COMMONWEALTH OF VIRGINIA
CLAYTON K. COOK
LIC. No. 038790
06/22/2016
PROFESSIONAL ENGINEER

EXISTING CONDITIONS PLAN

RESTON EASTGATE
CDPA-FDPA

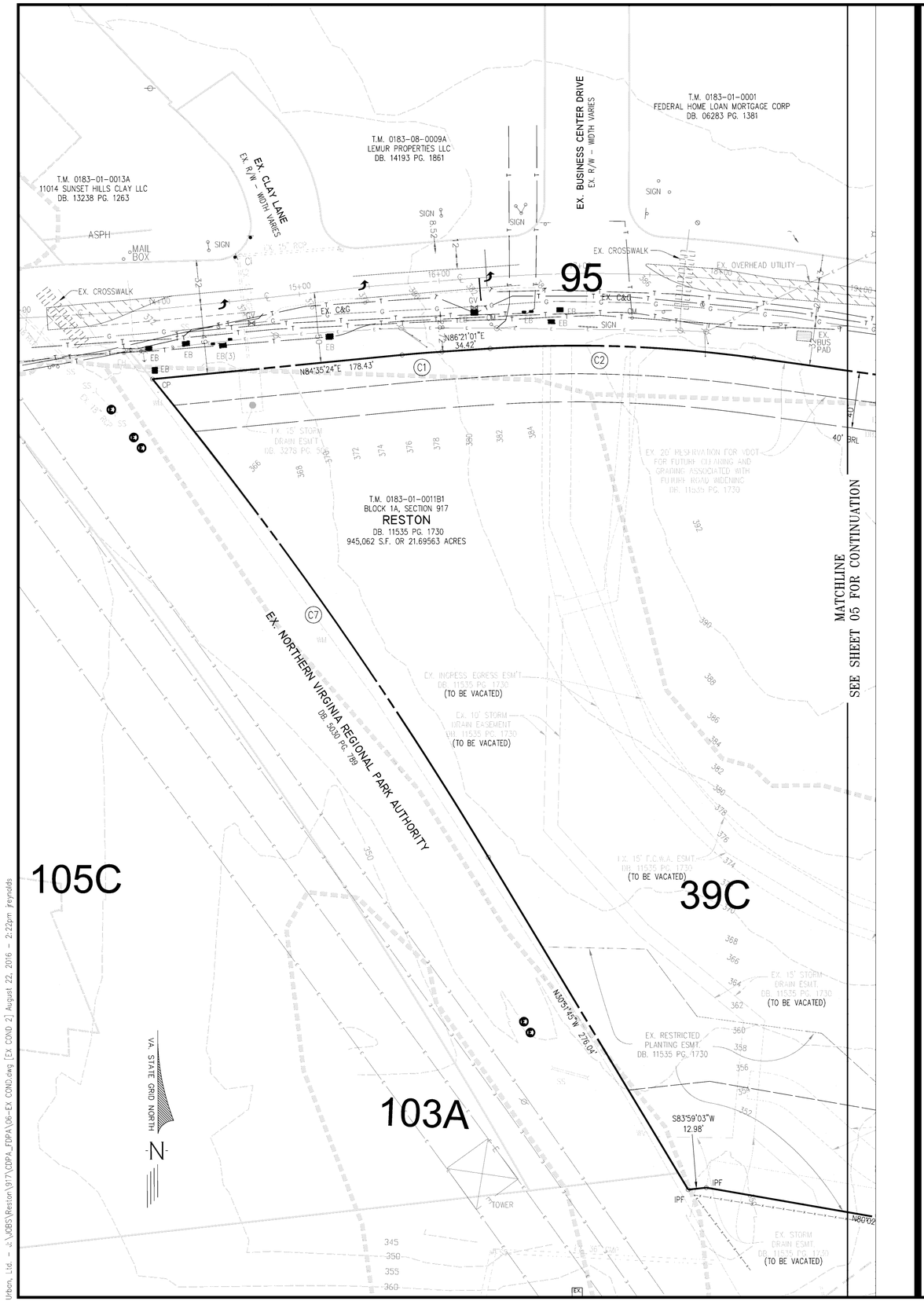
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

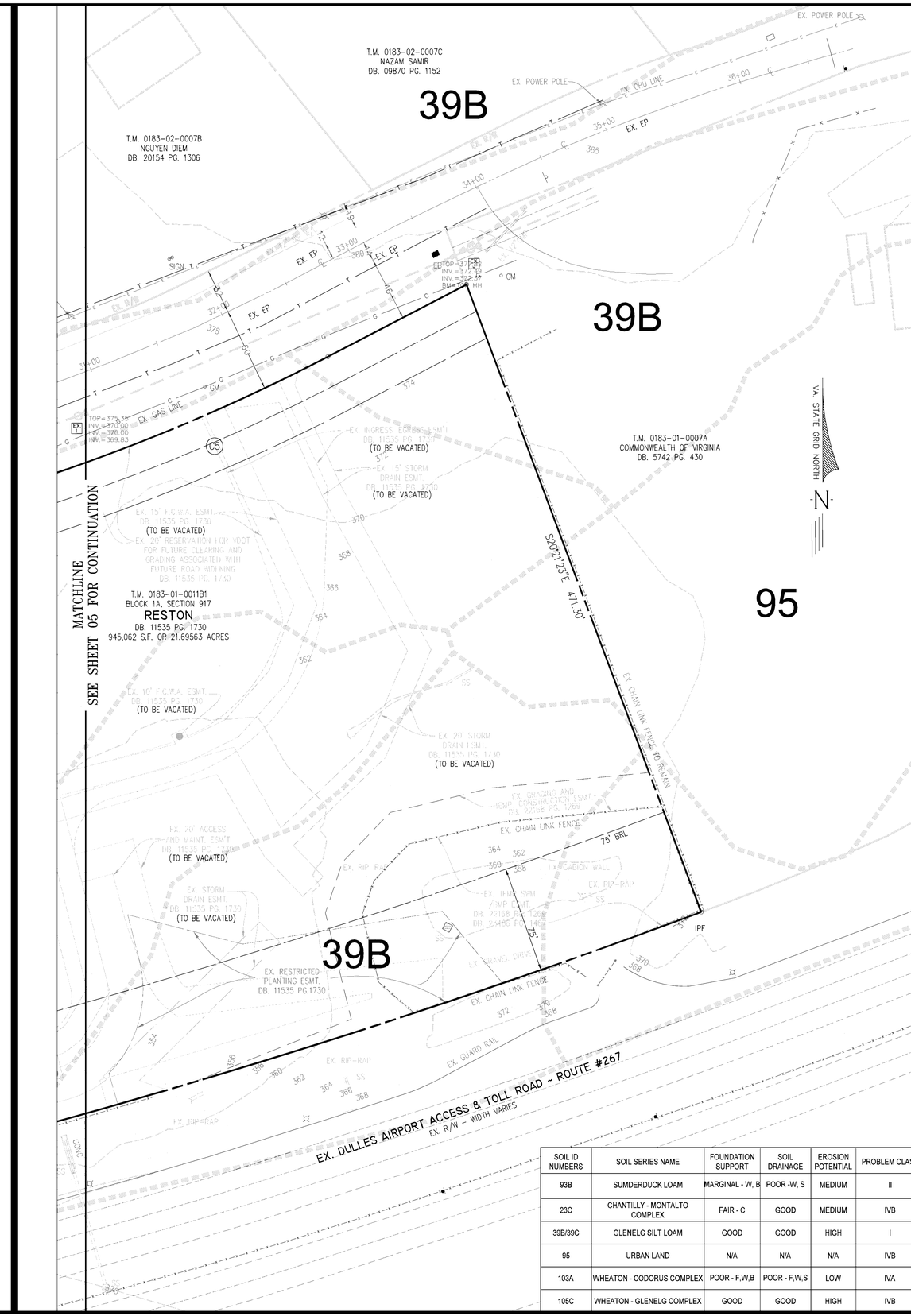
SCALE: 1"= 40'
C.I.= 2'
DATE: JAN. 2016

SHEET 05 OF 36

FILE No. RZ-12794

Urban, Ltd. - s:\VDBS\Reston\917\CDPA_FDPA\06-EX COND.dwg [EX COND 1] August 22, 2016 - 2:22pm jreynolds





SOIL ID NUMBERS	SOIL SERIES NAME	FOUNDATION SUPPORT	SOIL DRAINAGE	EROSION POTENTIAL	PROBLEM CLASS
93B	SUMDERDUCK LOAM	MARGINAL - W, B	POOR -W, S	MEDIUM	II
23C	CHANTILLY - MONTALTO COMPLEX	FAIR - C	GOOD	MEDIUM	IVB
39B/39C	GLENELG SILT LOAM	GOOD	GOOD	HIGH	I
95	URBAN LAND	N/A	N/A	N/A	IVB
103A	WHEATON - CODORUS COMPLEX	POOR - F,W,B	POOR - F,W,S	LOW	IVA
105C	WHEATON - GLENELG COMPLEX	GOOD	GOOD	HIGH	IVB

No.	DATE	DESCRIPTION

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COMMONWEALTH OF VIRGINIA
CLAYTON COSTICK
LICENSE NO. 0401
08/22/2016
PROFESSIONAL ENGINEER

EXISTING CONDITIONS PLAN
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"= 40'
C.I.= 2'
DATE: JAN. 2016

SHEET 06 OF 36

FILE No.
RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\06-EX COND.dwg [EX COND 2] August 22, 2016 - 2:22pm Reynolds

LEGEND:

AREA OF R/W DEDICATED WITH #206-SP-01: 76,920 SF D.B. 11535 PG. 1730

AREA OF PARK DEDICATION PROPOSED WITH THIS APPLICATION: 9,431 SF

SITE TABULATIONS:

ORIGINAL SITE AREA:	1,021,982 SF	=	23.46 AC.
AREA OF PRIOR RIGHT-OF-WAY DEDICATION:	76,920 SF	=	1.76 AC.
AREA OF PARK DEDICATION:	9,431 SF	=	0.22 AC.
ADJUSTED SITE AREA:	935,631 SF	=	21.48 AC.

No.	DATE	DESCRIPTION

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04/01/2016
05/02/2016
06/27/2016
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08/22/2016

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LIC. No. 038700
08/22/2016
PROFESSIONAL ENGINEER

PROPERTY EXHIBIT

RESTON EASTGATE CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=80'
C.I.= N/A
DATE: JAN. 2016

SHEET 07 OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\11-Property Exhibit new.dwg [PROPERTY EXHIBIT] August 22, 2016 - 2:22pm Reynolds

T.M. 0183-01-0010
LEVINE JACK
DB. 10528 PG. 0403

T.M. 0183-07-0001
DESPEAUX CRAIG E
DB. 12189 PG. 1963

T.M. 0183-07-B
BOARD OF SUPERVISORS FAIRFAX COUNTY
DB. 05257 PG. 0342

T.M. 0183-02-0007A
RICHELIEU RACHEL DECKER
DB. 24284 PG. 0201

VA. STATE GRID NORTH

EX. DRESSAGE DRIVE
EX. R/W - WIDTH VARIES

EX. SUNSET HILLS ROAD - ROUTE #675
EX. R/W - WIDTH VARIES
DB. 2429 PG. 378 | DB. 3278 PG. 506 | DB. 11535 PG. 1730

PRIMARY LIMITS OF CLEARING

SECONDARY LIMITS OF CLEARING

MATCHLINE SEE SHEET 09 FOR CONTINUATION

THE EXACT LOCATION OF THE PROPOSED WALKING TRAIL AND RESULTING LIMITS OF DISTURBANCE TO BE FIELD LOCATED IN COORDINATION WITH FAIRFAX COUNTY URBAN FOREST MANAGEMENT PRIOR TO SITE PLAN APPROVAL. THE FINAL LOCATION OF THE TRAIL SHALL BE SHOWN ON THE SITE PLAN

PROPOSED BUILDING 1
11011 SUNSET HILLS RD
RESTON, VA 20190
PHASE 1 = 160,000 GSF (MAX)
PHASE 2 = 190,000 GSF (MAX)

PROP. COOLING TOWER YARD

POSSIBLE SWM / INFILTRATION VAULT #1 (SEE SHEET #19)

POSSIBLE SWM VAULT #2 (SEE SHEET #19)

PROPOSED ARRIVAL PAVILION ±500 GSF

POSSIBLE JELLYFISH

POSSIBLE LEVEL SPREADER

POSSIBLE RAINWATER CISTERN/ POSSIBLE IRRIGATION TANKS

POSSIBLE STORM FILTER (OPTIONAL)

POTENTIAL FREE-STANDING SIAMESE CONNECTION

VISITOR/CEREMONIAL ENTRANCE

POSSIBLE BOLLARDS/SECURITY FEATURE

POSSIBLE SECURED PEDESTRIAN ACCESS GATE

POSSIBLE TRANSFORMER LOCATION

POSSIBLE RETAINING WALL (TYP.)

POSSIBLE 5' WALKING TRAIL

PROP. SECURITY FENCE EXACT LIMITS/DETAIL TO BE DETERMINED WITH FINAL SITE PLAN.

PROP. GOLF CART PARKING (2 SPACES)

POSSIBLE RETAINING WALL TO SPAN PROP. STORM. DETAIL TO BE PROVIDED AT SITE PLAN

T.M. 0183-01-0011B1
BLOCK 1A, SECTION 917
RESTON
DB. 11535 PG. 1730
945,062 S.F. OR 21.69563 ACRES

EX. DULLES AIRPORT ACCESS & TOLL ROAD - ROUTE #267
EX. R/W - WIDTH VARIES

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOOK
No. 0080706
06/22/2016
PROFESSIONAL ENGINEER

FINAL CONCEPTUAL DEVELOPMENT PLAN

RESTON EASTGATE
CDPA-FDPA

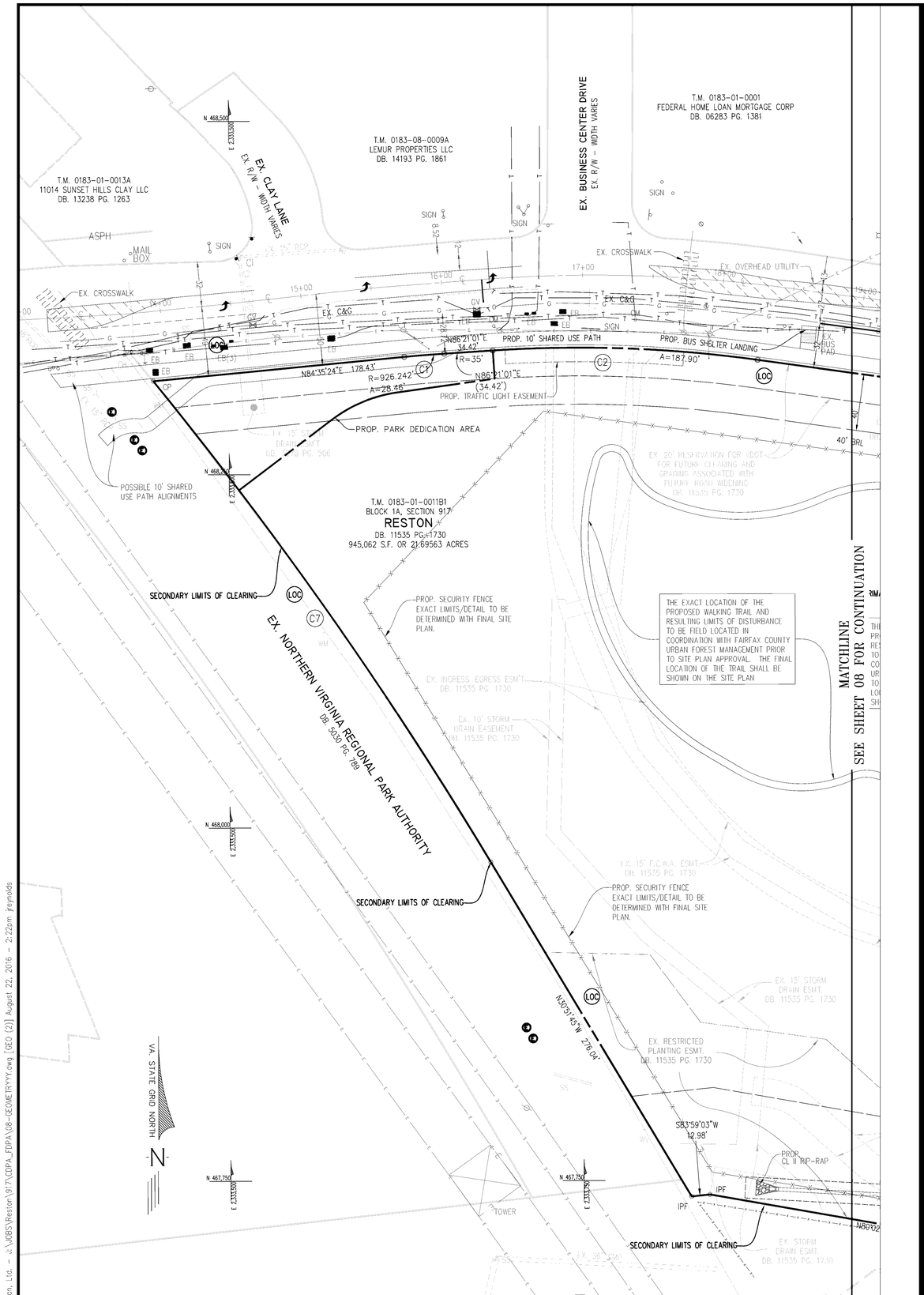
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

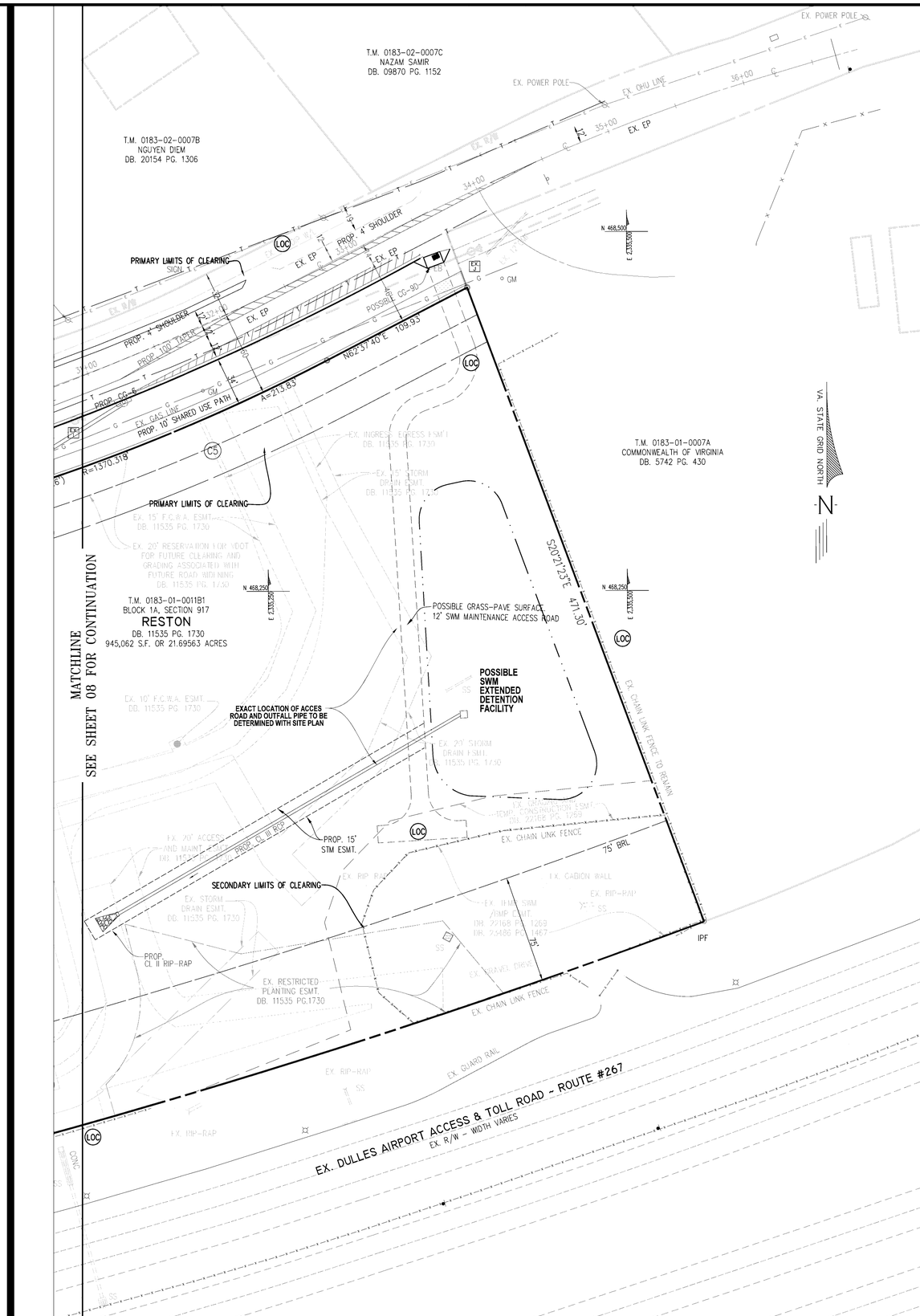
SCALE: 1"= 40'
C.I.= N/A
DATE: JAN. 2016

SHEET 08 OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\08-GEOMETRY\Y.dwg [GEO (1)] August 22, 2016 - 2:22pm jreynolds





No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
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01/28/2016
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COMMONWEALTH OF VIRGINIA
CLAYTON C. FOCK
LICENSE No. 038790
08/22/2016
PROFESSIONAL ENGINEER

FINAL CONCEPTUAL DEVELOPMENT PLAN

RESTON EASTGATE
CDPA-FDPA

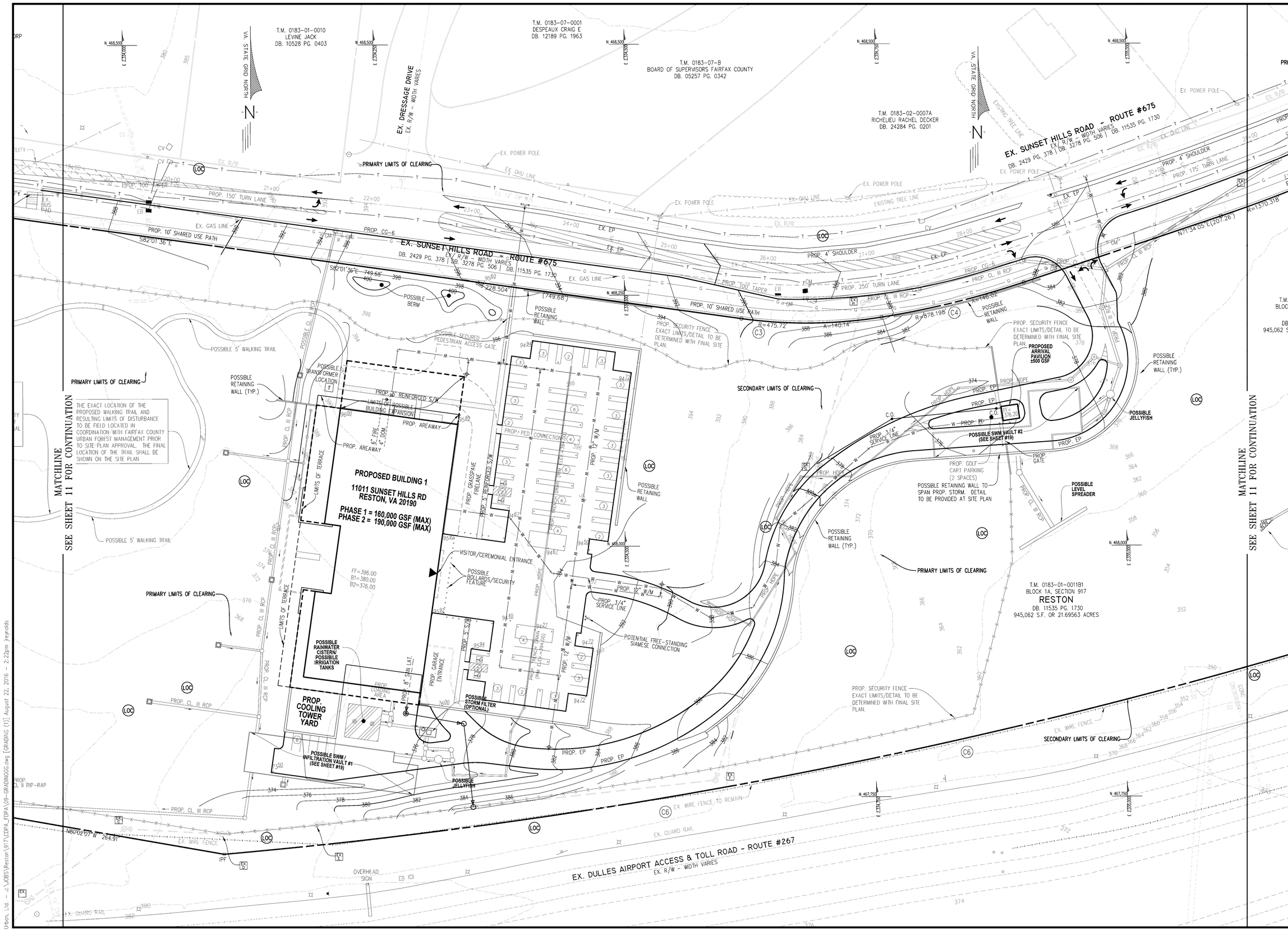
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"= 40'
C.I.= N/A
DATE: JAN. 2016

SHEET 09 OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\08-GEOMETRYYY.dwg [GEO (2)] August 22, 2016 - 2:22pm freynolds



No.	DATE	DESCRIPTION

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COMMONWEALTH OF VIRGINIA
CLAYTON C. PARK
LIC. No. 028706
08/22/2016
PROFESSIONAL ENGINEER

CONCEPTUAL GRADING PLAN

RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016

SCALE: 1"= 40'

CI.= 2'

SHEET 10 OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\09-GRADING\GG.dwg [GRADING (1)] August 22, 2016 - 2:22pm Jreynolds

T.M. 0183-01-0013A
11014 SUNSET HILLS CLAY LLC
DB. 13238 PG. 1263

T.M. 0183-08-0009A
LEMUR PROPERTIES LLC
DB. 14193 PG. 1861

T.M. 0183-01-0001
FEDERAL HOME LOAN MORTGAGE CORP
DB. 06283 PG. 1381

EX. CLAY LANE
EX. R/W - WIDTH VARIES

EX. BUSINESS CENTER DRIVE
EX. R/W - WIDTH VARIES

EX. CROSSWALK
EX. OVERHEAD UTILITY
EX. C&G
PROP. 10' SHARED USE PATH
PROP. BUS SHELTER LANDING
EX. BUS PAD
N86°21'01"E 34.42'
R=35'
N86°21'01"E (34.42')
N84°35'24"E 178.43'
R=926.242'
A=28.46'
A=187.90'
PROP. PARK DEDICATION AREA
POSSIBLE 10' SHARED USE PATH ALIGNMENTS

T.M. 0183-01-0011B1
BLOCK 1A, SECTION 917
RESTON
DB. 11535 PG. 1730
945,062 S.F. OR 21.69563 ACRES

SECONDARY LIMITS OF CLEARING

EX. NORTHERN VIRGINIA REGIONAL PARK AUTHORITY
DB. 3530 PG. 789

PROP. SECURITY FENCE EXACT LIMITS/DETAIL TO BE DETERMINED WITH FINAL SITE PLAN.

THE EXACT LOCATION OF THE PROPOSED WALKING TRAIL AND RESULTING LIMITS OF DISTURBANCE TO BE FIELD LOCATED IN COORDINATION WITH FAIRFAX COUNTY URBAN FOREST MANAGEMENT PRIOR TO SITE PLAN APPROVAL. THE FINAL LOCATION OF THE TRAIL SHALL BE SHOWN ON THE SITE PLAN.

MATCHLINE
SEE SHEET 10 FOR CONTINUATION

N30°51'45"W 276.04'
S83°59'03"W 12.98'
PROP. CL II RIP-RAP
IPF
TOWER
VA. STATE GRID NORTH

T.M. 0183-02-0007C
NAZAM SAMIR
DB. 09870 PG. 1152

T.M. 0183-02-0007B
NGUYEN DIEM
DB. 20154 PG. 1306

EX. POWER POLE
EX. OHU LINE
EX. EP
PROP. 4' SHOULDER
PROP. 100' TAPER
PRIMARY LIMITS OF CLEARING
POSSIBLE CG-9D
N62°37'40"E 109.93'
A=213.83'
R=1370.318'
EX. GAS LINE
PROP. 10' SHARED USE PATH

T.M. 0183-01-0007A
COMMONWEALTH OF VIRGINIA
DB. 5742 PG. 430

S20°21'23"E 471.50'
POSSIBLE GRASS-PAVE SURFACE 12' SWM MAINTENANCE ACCESS ROAD
POSSIBLE SWM EXTENDED DETENTION FACILITY
EXACT LOCATION OF ACCES ROAD AND OUTFALL PIPE TO BE DETERMINED WITH SITE PLAN
EX. CHAIN LINK FENCE
EX. CHAIN LINK FENCE TO REMAIN
PROP. CL III RIP
PROP. CL II RIP-RAP
EX. RIP RAP
EX. GABION WALL
EX. RIP-RAP
EX. GRAVEL DRIVE
EX. GUARD RAIL
EX. DULLES AIRPORT ACCESS & TOLL ROAD - ROUTE #267
EX. R/W - WIDTH VARIES

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
04/20/2016
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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOOK
LICENSE No. 036790
08/22/2016
PROFESSIONAL ENGINEER

CONCEPTUAL GRADING PLAN
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

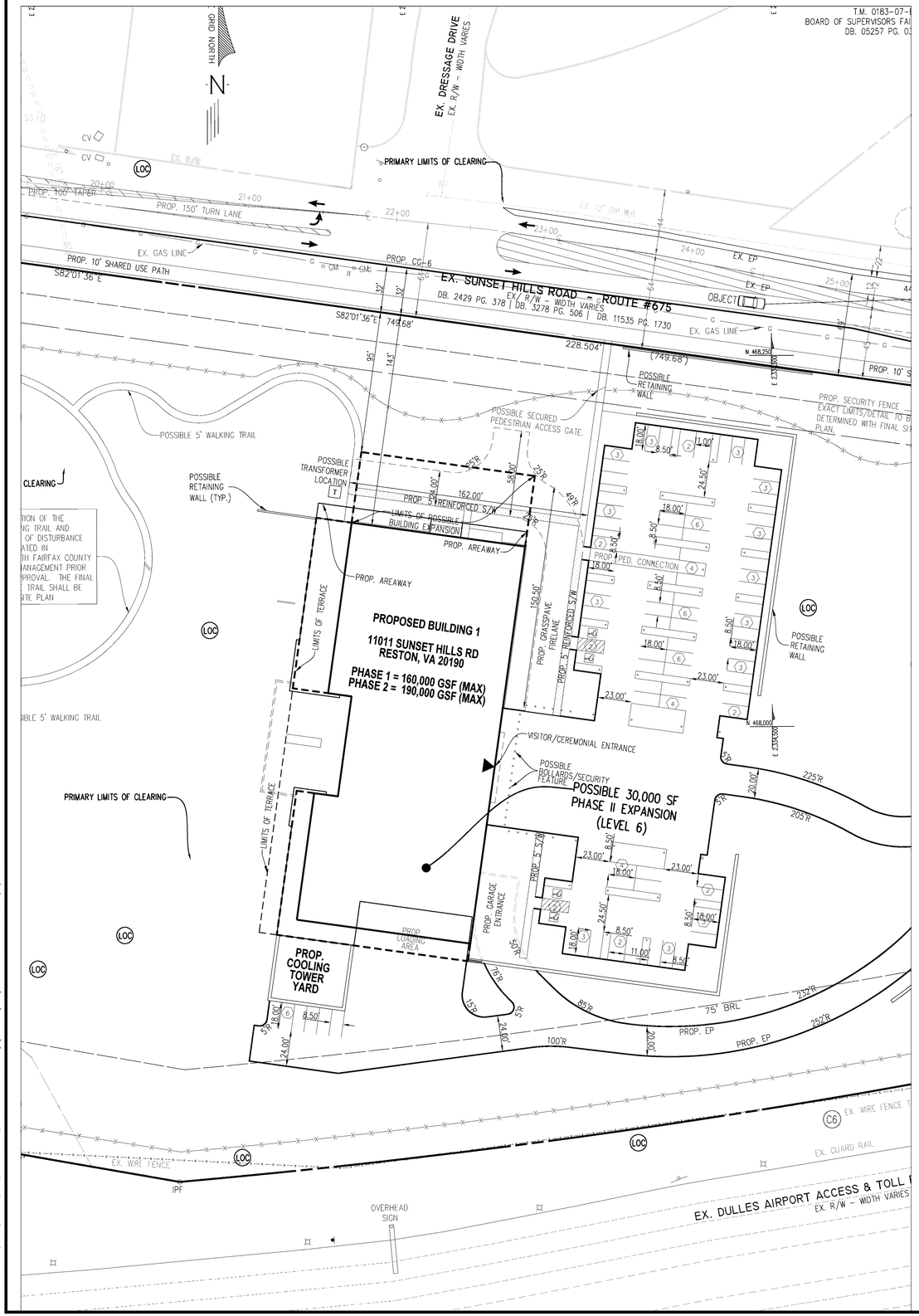
SCALE: 1"= 40'
C.I.= 2'
DATE: JAN. 2016

SHEET 11 OF 36

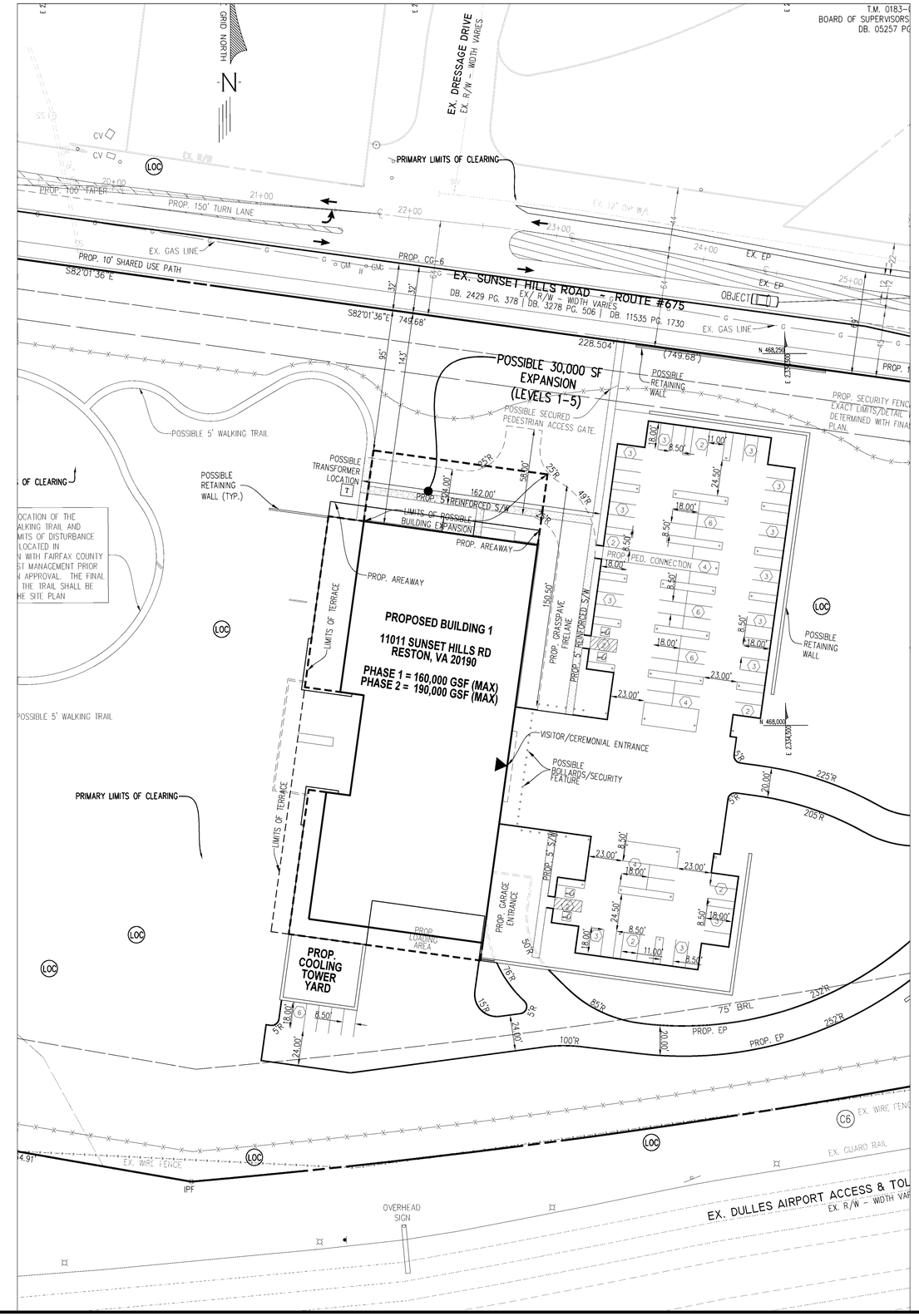
FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\09-GRADINGGG.dwg [GRADING (2)] August 22, 2016 - 2:23pm reynolds

POSSIBLE EXPANSION PLAN – OPTION 1



POSSIBLE EXPANSION PLAN – OPTION 2



No.	DATE	DESCRIPTION
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COMMONWEALTH OF VIRGINIA
CLAYTON T. FOX
LICENSE NO. 038706
08/22/2016
PROFESSIONAL ENGINEER

CONCEPTUAL PHASING PLAN

RESTON EASTGATE
CDPA-FDPA

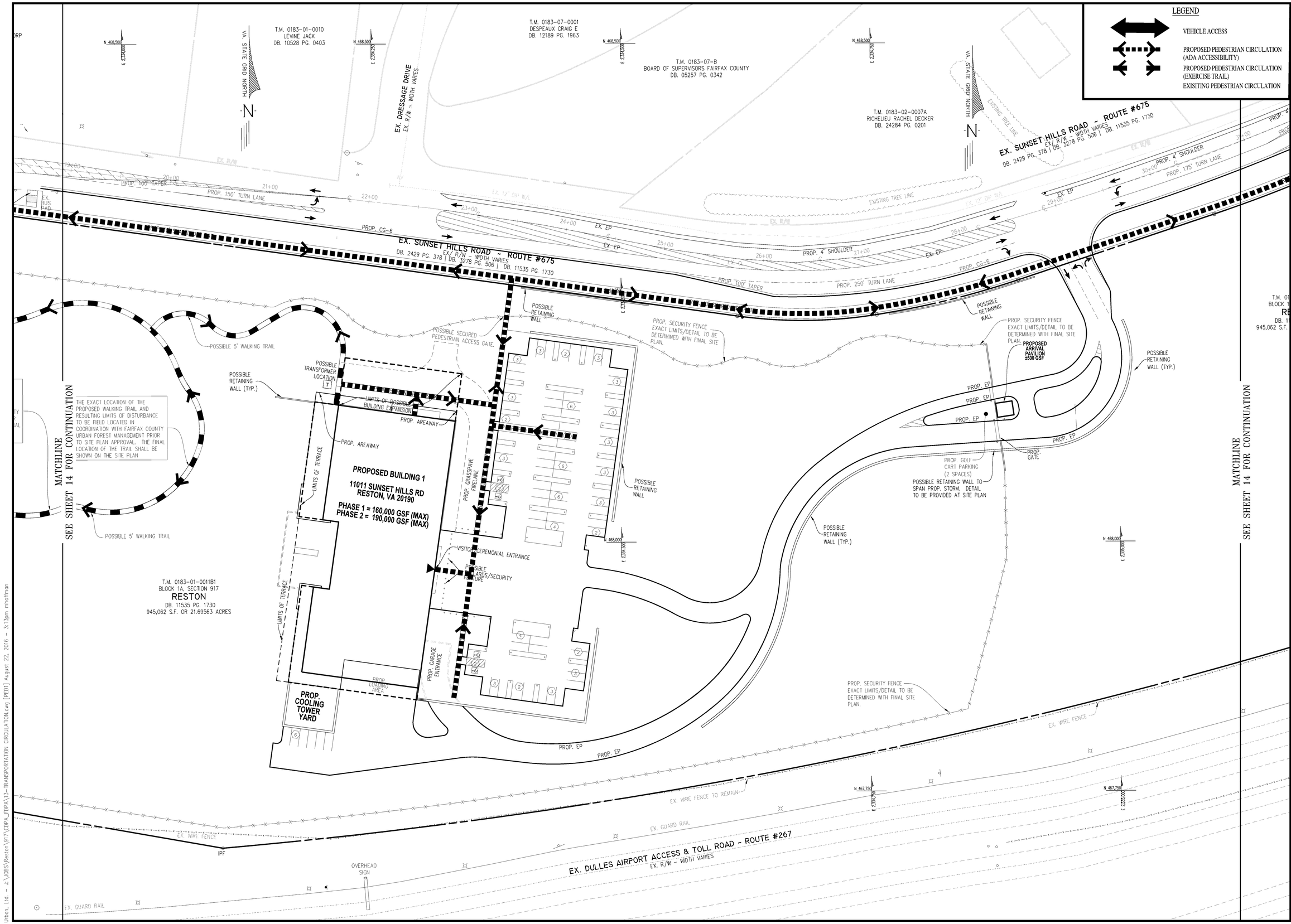
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=40'
C.I.= 2'
DATE: JAN. 2016

SHEET
12
OF
36

FILE No.
RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\15-PHASING PLAN.dwg [LAYOUT] August 22, 2016 – 2:23pm reynolds



No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/20/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
CLAYTON E. TOOK
No. 0087908
PROFESSIONAL ENGINEER
06/22/2016

PEDESTRIAN AND TRAFFIC CIRCULATION PLAN

RESTON EASTGATE
CDPA-FDPA

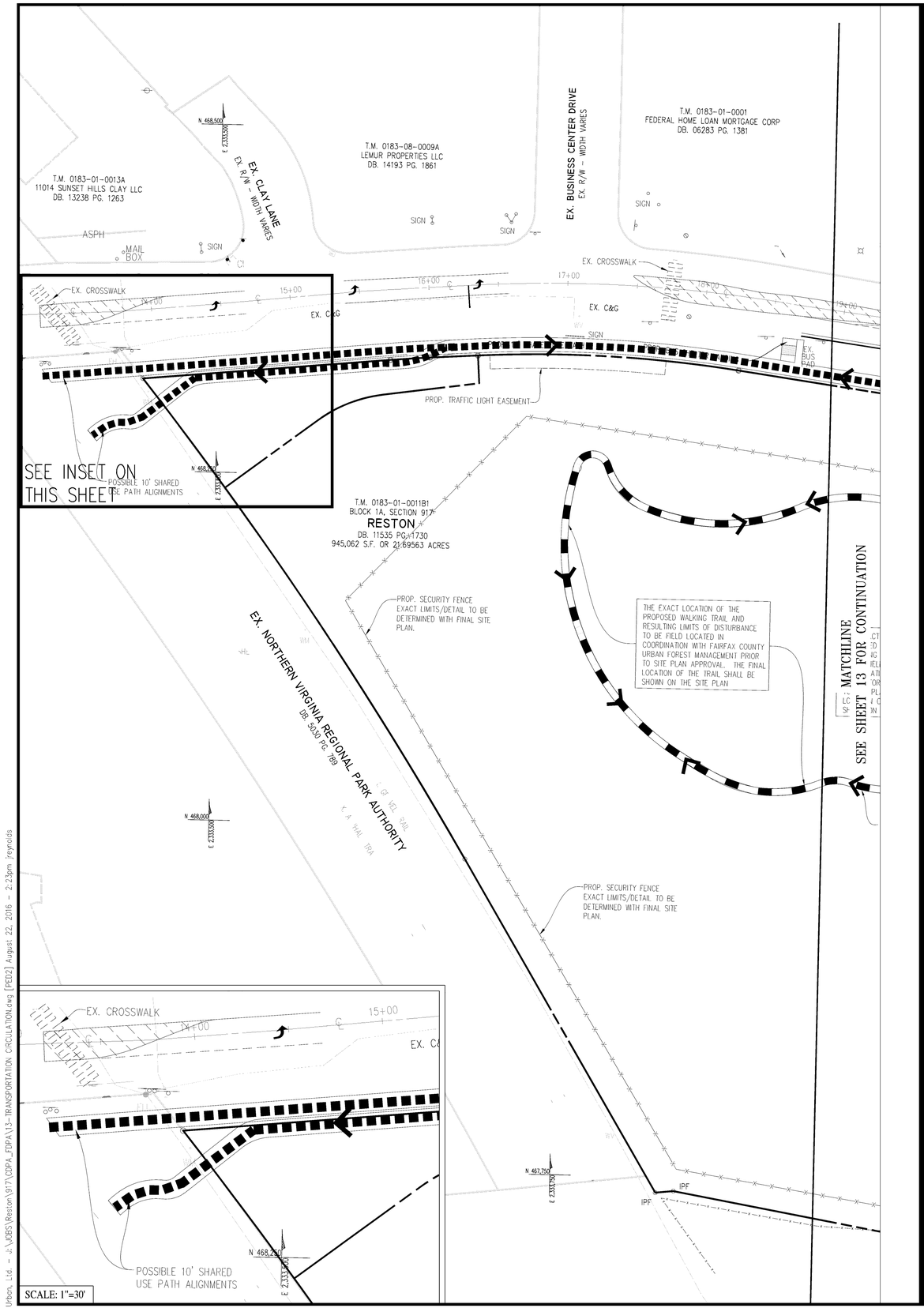
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

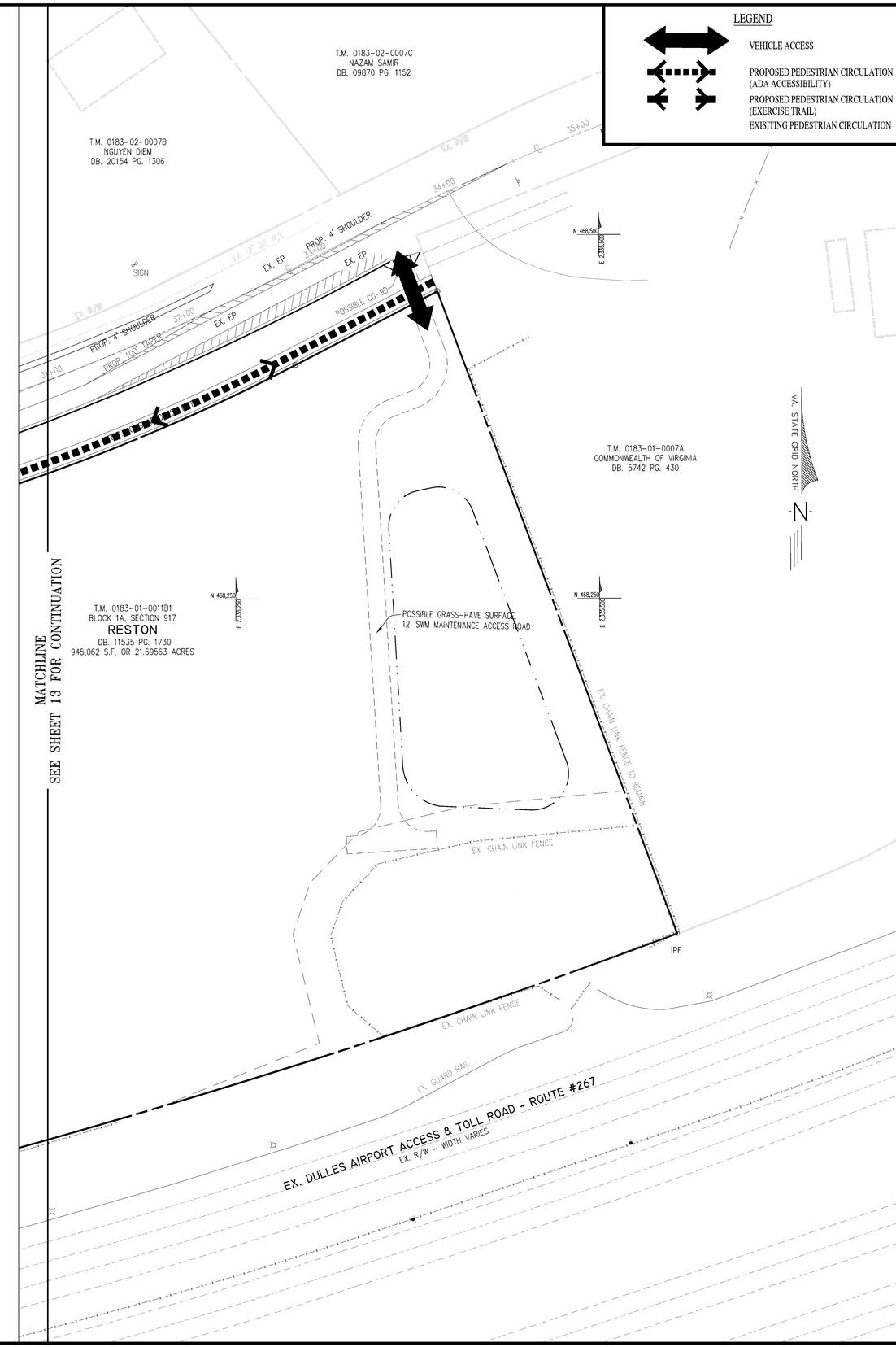
SCALE: 1"= 40'
C.I.= N/A
DATE: JAN. 2016

SHEET 13 OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\13-TRANSPORTATION CIRCULATION.dwg [PED1] August 22, 2016 - 3:13pm mhoffman





No.	DATE	DESCRIPTION

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOTTA
LIC. NO. 038700
08/22/2016
PROFESSIONAL ENGINEER

PEDESTRIAN AND TRAFFIC CIRCULATOIN PLAN

RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"= 40'
CLI.= N/A
DATE: JAN. 2016

SHEET
14
OF
36

FILE No.
RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\13-TRANSPORTATION CIRCULATION.dwg [PED2] August 22, 2016 - 2:23pm Teyenolds

OPEN SPACE CALCULATION

ADJUSTED SITE AREA = ± 21.48 AC.

- ONSITE IMPERVIOUS AREA = ± 3.27 AC. OR 15.23%
- WALKING TRAIL AREA = ± 0.14 AC. OR 0.65%
- ONSITE OPEN SPACE =± 18.07 AC. OR 84.12%

T.M. 0183-01-0010
LEVINE JACK
DB. 10528 PG. 0403

T.M. 0183-07-0001
DESPEAUX CRAIG E
DB. 12189 PG. 1963

T.M. 0183-07-B
BOARD OF SUPERVISORS FAIRFAX COUNTY
DB. 05257 PG. 0342

T.M. 0183-02-0007A
RICHELIEU RACHEL DECKER
DB. 24284 PG. 0201

VA. STATE GRID NORTH

EX. DRESSAGE DRIVE
EX. R/W - WIDTH VARIES

EX. SUNSET HILLS ROAD ~ ROUTE #675
EX. R/W - WIDTH VARIES
DB. 2429 PG. 378 | DB. 3278 PG. 506 | DB. 11535 PG. 1730

EX. SUNSET HILLS R
EX. R/W
DB. 2429 PG. 378 | DB. 327

PRIMARY LIMITS OF CLEARING

SECONDARY LIMITS OF CLEARING

THE EXACT LOCATION OF THE PROPOSED WALKING TRAIL AND RESULTING LIMITS OF DISTURBANCE TO BE FIELD LOCATED IN COORDINATION WITH FAIRFAX COUNTY URBAN FOREST MANAGEMENT PRIOR TO SITE PLAN APPROVAL. THE FINAL LOCATION OF THE TRAIL SHALL BE SHOWN ON THE SITE PLAN

POSSIBLE 5' WALKING TRAIL

POSSIBLE SECURED PEDESTRIAN ACCESS GATE.

POSSIBLE TRANSFORMER LOCATION

PROP. 5' REINFORCED S/W

LIMITS OF POSSIBLE BUILDING EXPANSION

PROP. AREAWAY

LIMITS OF TERRACE

PROPOSED BUILDING 1
11011 SUNSET HILLS RD
RESTON, VA 20190
PHASE 1 = 160,000 GSF (MAX)
PHASE 2 = 190,000 GSF (MAX)

PROP. PED. CONNECTION

PROP. GRASSPAVE FIRELANE

VISITOR/CEREMONIAL ENTRANCE

POSSIBLE BOLLARDS/SECURITY FEATURE

PROP. GARAGE ENTRANCE

PROP. LOADING AREA

PROP. COOLING TOWER YARD

PROP. SECURITY FENCE EXACT LIMITS/DETAIL TO BE DETERMINED WITH FINAL SITE PLAN.

PROPOSED ARRIVAL PAVILION ±500 GSF

PROP. GOLF CART PARKING (2 SPACES)

T.M. 0183-01-0011B1
BLOCK 1A, SECTION 917
RESTON
DB. 11535 PG. 1730
945,062 S.F. OR 21.69563 ACRES

EX. DULLES AIRPORT ACCESS & TOLL ROAD ~ ROUTE #267
EX. R/W - WIDTH VARIES

EX. WIRE FENCE TO REMAIN

EX. GUARD RAIL

OVERHEAD SIGN

MATCHLINE SEE SHEET 16 FOR CONTINUATION

No.	DATE	DESCRIPTION
-	-	-

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/02/2016
06/27/2016
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COMMONWEALTH OF VIRGINIA
CLAYTON C. TYRK
LIC. No. 0380706
08/22/2016
PROFESSIONAL ENGINEER

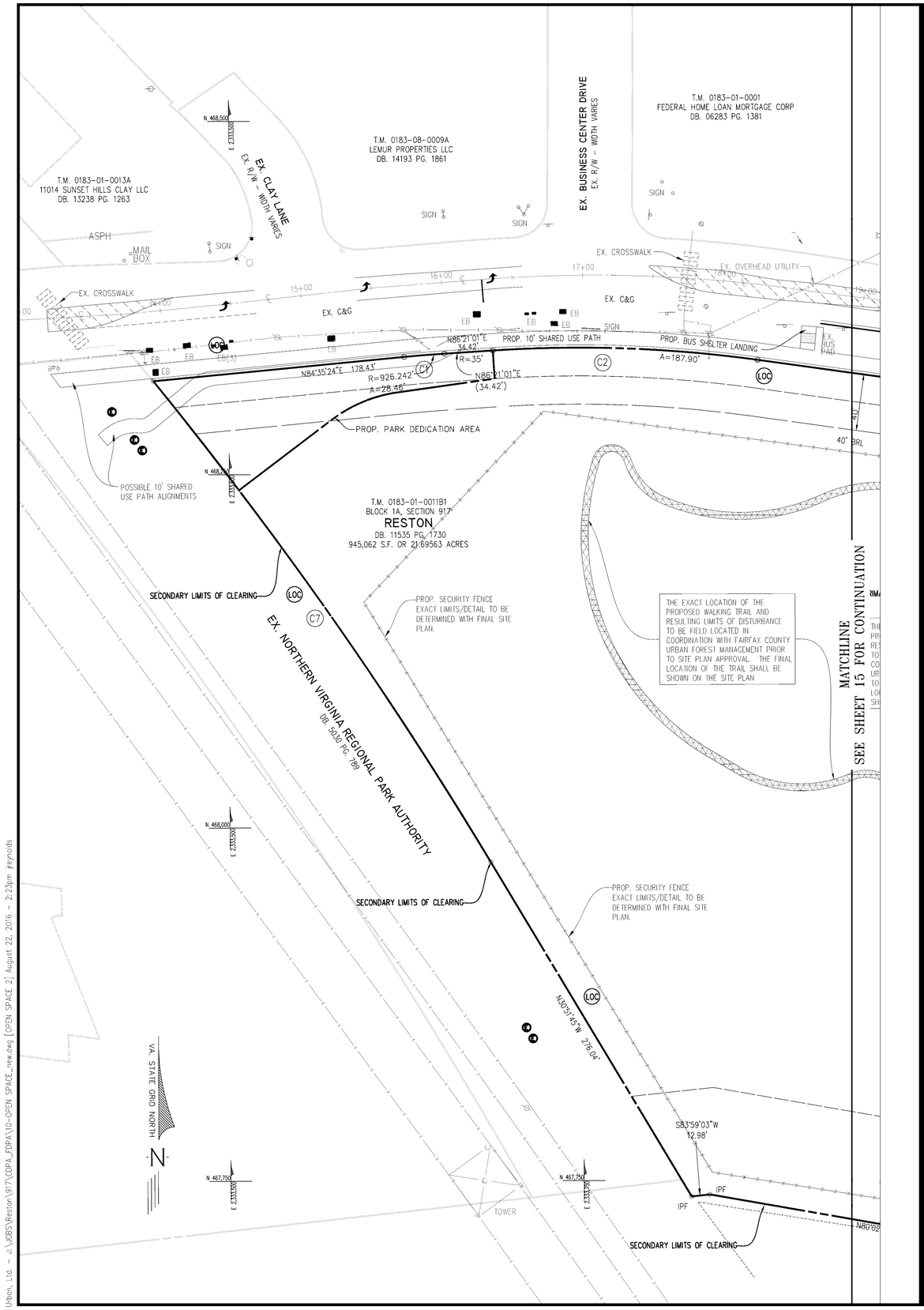
OPEN SPACE PLAN
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

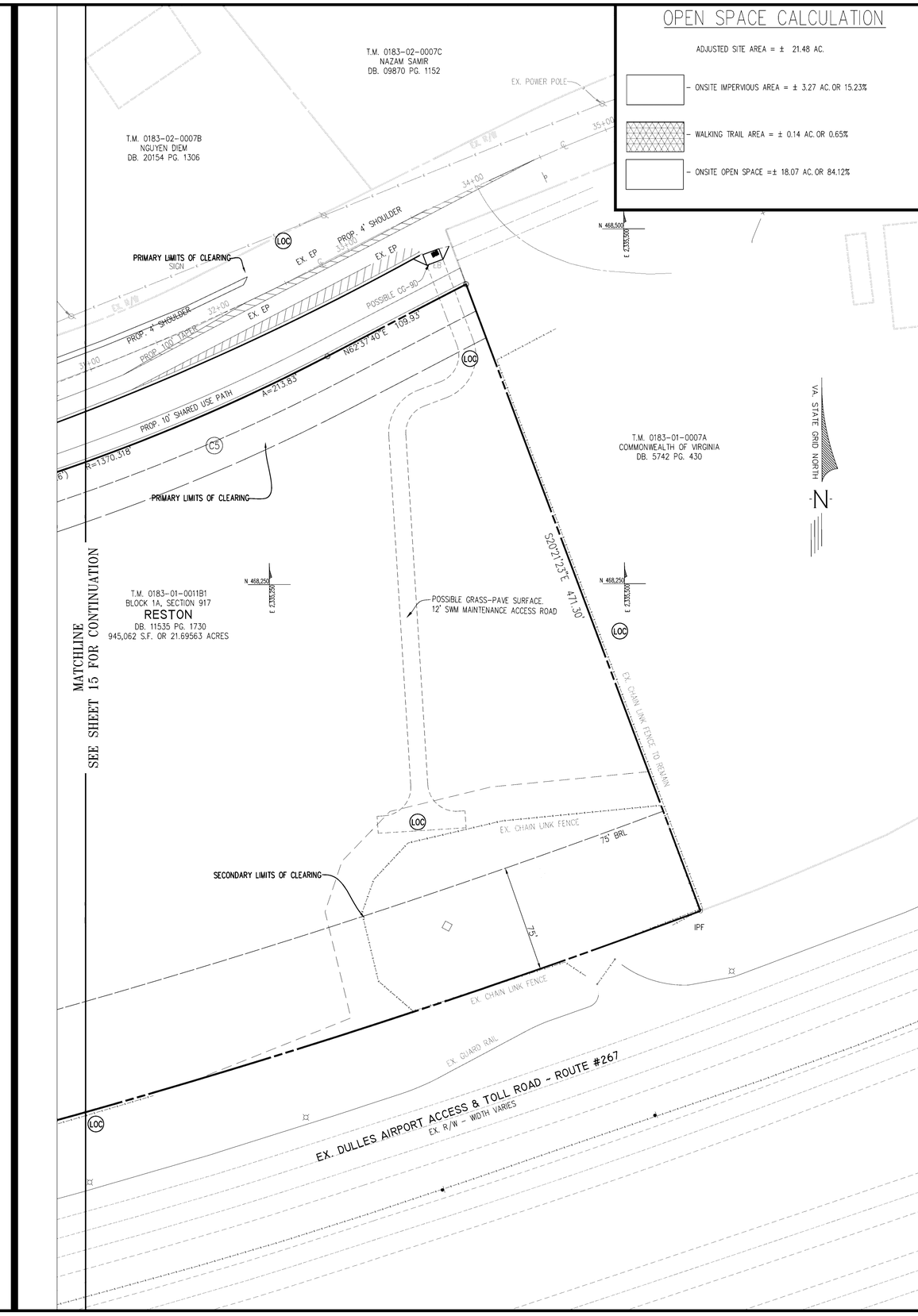
DATE: JAN. 2016
SCALE: 1"= 40'
C.I.= N/A

SHEET 15 OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\10-OPEN SPACE_new.dwg [OPEN SPACE] August 22, 2016 - 2:23pm Teyrolds





OPEN SPACE CALCULATION

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- ONSITE IMPERVIOUS AREA = ± 3.27 AC. OR 15.23%
- WALKING TRAIL AREA = ± 0.14 AC. OR 0.65%
- ONSITE OPEN SPACE =± 18.07 AC. OR 84.12%

No.	DATE	DESCRIPTION
-	-	-

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COMMONWEALTH OF VIRGINIA
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OPEN SPACE PLAN
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"= 40'
C.I.= N/A
DATE: JAN. 2016

SHEET 16 OF 36

FILE No. RZ-12794

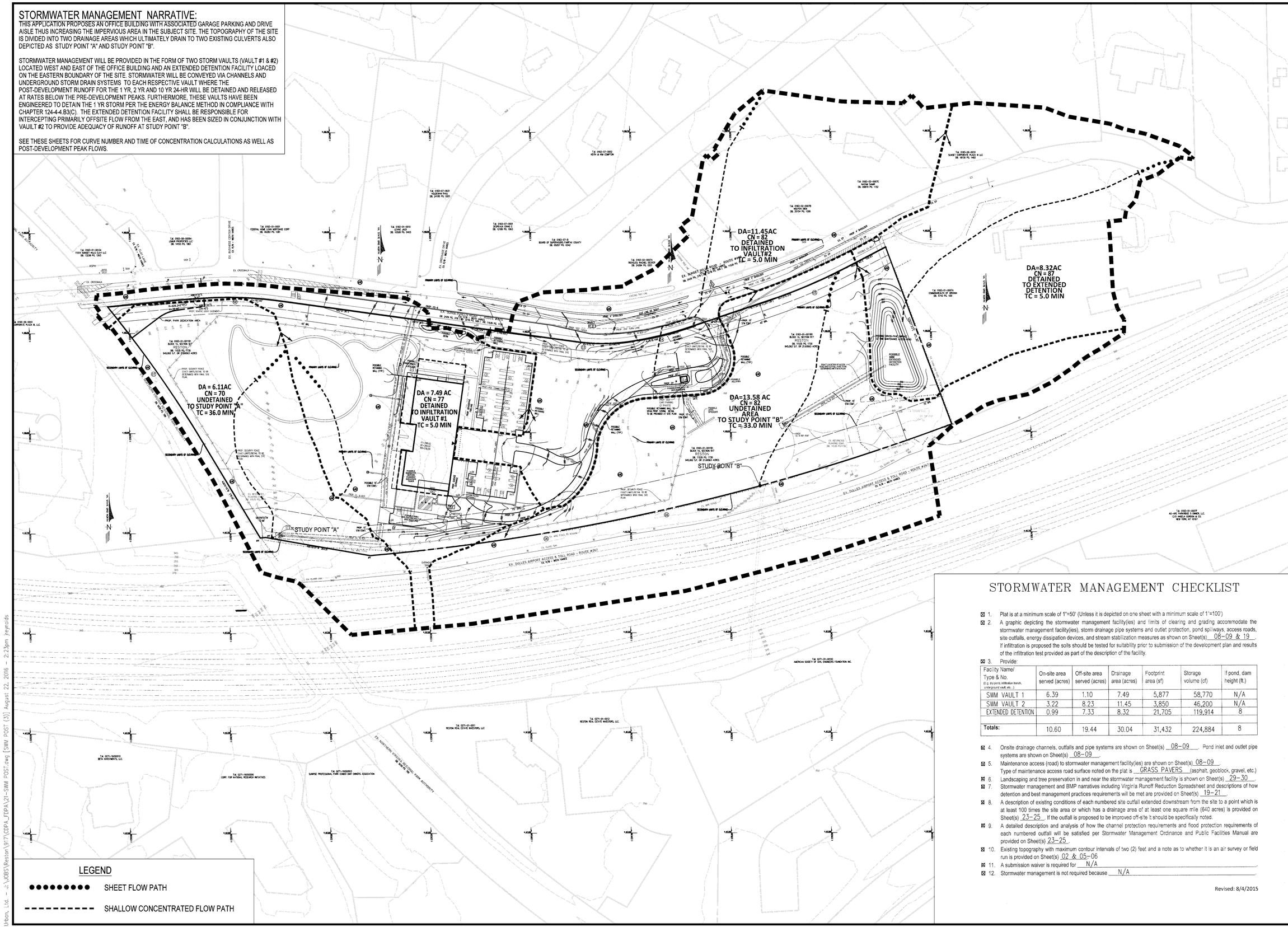
Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\10-OPEN SPACE_new.dwg [OPEN SPACE 2] August 22, 2016 - 2:23pm fzeynolds

STORMWATER MANAGEMENT NARRATIVE:

THIS APPLICATION PROPOSES AN OFFICE BUILDING WITH ASSOCIATED GARAGE PARKING AND DRIVE AISLE THUS INCREASING THE IMPERVIOUS AREA IN THE SUBJECT SITE. THE TOPOGRAPHY OF THE SITE IS DIVIDED INTO TWO DRAINAGE AREAS WHICH ULTIMATELY DRAIN TO TWO EXISTING CULVERTS ALSO DEPICTED AS STUDY POINT "A" AND STUDY POINT "B".

STORMWATER MANAGEMENT WILL BE PROVIDED IN THE FORM OF TWO STORM VAULTS (VAULT #1 & #2) LOCATED WEST AND EAST OF THE OFFICE BUILDING AND AN EXTENDED DETENTION FACILITY LOACED ON THE EASTERN BOUNDARY OF THE SITE. STORMWATER WILL BE CONVEYED VIA CHANNELS AND UNDERGROUND STORM DRAIN SYSTEMS TO EACH RESPECTIVE VAULT WHERE THE POST-DEVELOPMENT RUNOFF FOR THE 1 YR, 2 YR AND 10 YR 24-HR WILL BE DETAINED AND RELEASED AT RATES BELOW THE PRE-DEVELOPMENT PEAKS. FURTHERMORE, THESE VAULTS HAVE BEEN ENGINEERED TO DETAIN THE 1 YR STORM PER THE ENERGY BALANCE METHOD IN COMPLIANCE WITH CHAPTER 124-4-4.B3(C). THE EXTENDED DETENTION FACILITY SHALL BE RESPONSIBLE FOR INTERCEPTING PRIMARILY OFFSITE FLOW FROM THE EAST, AND HAS BEEN SIZED IN CONJUNCTION WITH VAULT #2 TO PROVIDE ADEQUACY OF RUNOFF AT STUDY POINT "B".

SEE THESE SHEETS FOR CURVE NUMBER AND TIME OF CONCENTRATION CALCULATIONS AS WELL AS POST-DEVELOPMENT PEAK FLOWS.



STORMWATER MANAGEMENT CHECKLIST

☒ 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(s) 08–09 & 19. If infiltration is proposed the soils should be tested for suitability prior to submission of the development plan and results of the infiltration test provided as part of the description of the facility.

☒ 3. Provide:

Facility Name/ Type & No. (E.g. dry pond, infiltration trench, underground vault, etc...)	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage volume (cf)	If pond, dam height (ft.)
SWM VAULT 1	6.39	1.10	7.49	5,877	58,770	N/A
SWM VAULT 2	3.22	8.23	11.45	3,850	46,200	N/A
EXTENDED DETENTION	0.99	7.33	8.32	21,705	119,914	8
Totals:	10.60	19.44	30.04	31,432	224,884	8

☒ 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet(s) 08–09. Pond inlet and outlet pipe systems are shown on Sheet(s) 08–09.

☒ 5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet(s) 08–09. Type of maintenance access road surface noted on the plat is GRASS PAVERS (asphalt, geoblock, gravel, etc.)

☒ 6. Landscaping and tree preservation in and near the stormwater management facility is shown on Sheet(s) 29–30.

☒ 7. Stormwater management and BMP narratives including Virginia Runoff Reduction Spreadsheet and descriptions of how detention and best management practices requirements will be met are provided on Sheet(s) 19–21.

☒ 8. A description of existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet(s) 23–25. If the outfall is proposed to be imorved off-site it should be specifically noted.

☒ 9. A detailed description and analysis of how the channel protection requirements and flood protection requirements of each numbered outfall will be satisfied per Stormwater Management Ordinance and Public Facilities Manual are provided on Sheet(s) 23–25.

☒ 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 Sheet(s) 02 & 05–06.

☒ 11. A submission waiver is required for N/A.

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

Revised: 8/4/2015

LEGEND

●●●●●●●●● SHEET FLOW PATH

– – – – – – – – – – SHALLOW CONCENTRATED FLOW PATH

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOOK
LICENSE No. 038790
06/22/2016
PROFESSIONAL ENGINEER

PRELIMINARY SWM PLAN

RESTON EASTGATE
CDPA-FDPA

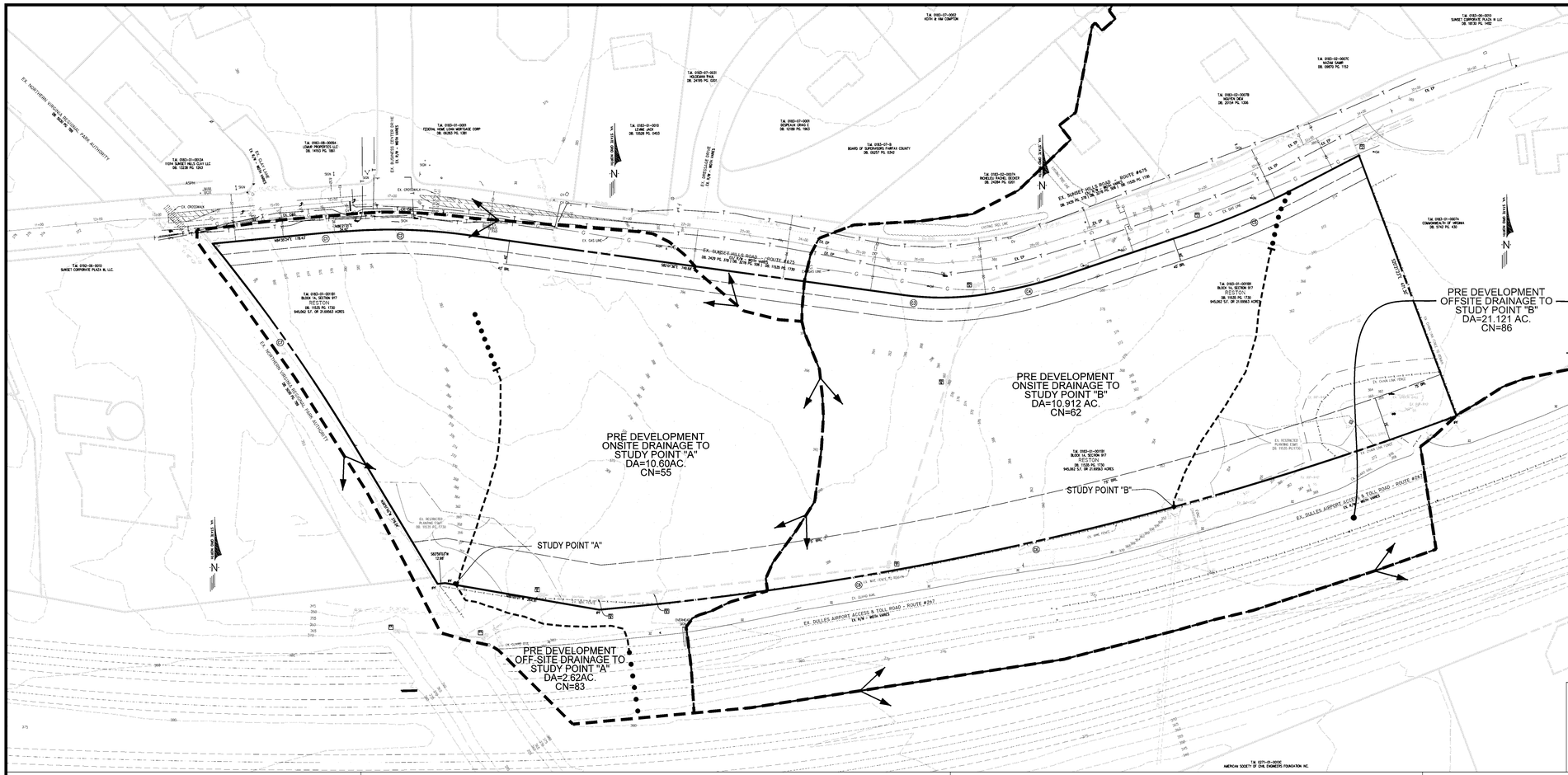
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=100' C.I.=2' DATE: JAN. 2016

SHEET 17 OF 36

FILE No. RZ-12794

Urban, Ltd. – U:\JOBS\Reston\917\CDPA_FDPA\21-SWM POST.dwg [SWM POST (3)] August 22, 2016 – 2:23pm reynolds



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

LEGEND

●●●●●●●●● SHEET FLOW PATH

- - - - - - - - - - SHALLOW CONCENTRATED FLOW PATH

SHED TO STUDY POINT "A"

Pre Development Runoff Calculations - Study Point "A"

Onsite Curve Number Calculations

Area (ac)	CN	Description
10.600	55	Woods, Good, HSG B
10.600		100.00% Pervious Area

Offsite Curve Number Calculations

Area (ac)	CN	Description
0.940	98	Paved parking, HSG D
0.200	82	Woods/grass comb., Fair, HSG D
0.260	89	<50% Grass cover, Poor, HSG D
0.120	98	Paved parking, HSG D
0.040	98	Paved parking, HSG B
1.060	65	Woods/grass comb., Fair, HSG B
2.620	83	Weighted Average
1.520		58.02% Pervious Area
1.100		41.98% Impervious Area

Time of Concentration Calculations

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
32.6	100	0.0300	0.05		**Sheet Flow, Sheet** Woods: Dense underbrush n= 0.800 P2= 3.05"
3.6	378	0.1200	1.73		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
36.2	478	Total			

1 Year Flow Calculations

Inflow Area = 575,863 sf , 8.32% Impervious , Inflow Depth = 0.34" for 1-year event
Inflow = 2.47 cfs @ 12.34 hrs , Volume= 16,208 cf
Primary = 2.47 cfs @ 12.34 hrs , Volume= 16,208 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

2 Year Flow Calculations

Inflow Area = 575,863 sf , 8.32% Impervious , Inflow Depth = 0.52" for 2-year event
Inflow = 3.87 cfs @ 12.36 hrs , Volume= 24,958 cf
Primary = 3.87 cfs @ 12.36 hrs , Volume= 24,958 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

10 Year Flow Calculations

Inflow Area = 575,863 sf , 8.32% Impervious , Inflow Depth = 1.53" for 10-year event
Inflow = 13.55 cfs @ 12.35 hrs , Volume= 73,517 cf
Primary = 13.55 cfs @ 12.35 hrs , Volume= 73,517 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

SHED TO STUDY POINT "B"

Pre Development Runoff Calculations - Study Point "B"

Onsite Curve Number Calculations

Area (ac)	CN	Description
6.810	55	Woods, Good, HSG B
1.940	70	Woods, Good, HSG C
1.970	77	Woods, Good, HSG D
0.108	55	Woods, Good, HSG B
0.084	55	Woods, Good, HSG B
10.912	62	Weighted Average
10.912		100.00% Pervious Area

Offsite Curve Number Calculations

Area (ac)	CN	Description
7.350	69	50-75% Grass cover, Fair, HSG B
1.814	84	50-75% Grass cover, Fair, HSG D
1.165	98	Paved parking, HSG B
4.954	98	Paved parking, HSG D
1.387	84	50-75% Grass cover, Fair, HSG D
4.451	98	Paved parking, HSG D
21.121	86	Weighted Average
10.551		49.96% Pervious Area
10.570		50.04% Impervious Area

Time of Concentration Calculations

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	100	0.0697	0.07		**Sheet Flow, Sheet Flow** Woods: Dense underbrush n= 0.800 P2= 3.05"
9.8	594	0.0405	1.01		**Shallow Concentrated Flow, Shallow Concentrated** Woodland Kv= 5.0 fps
33.0	694	Total			

1 Year Flow Calculations

Inflow Area = 1,395,357 sf , 33.00% Impervious , Inflow Depth = 1.03" for 1-year event
Inflow = 25.27 cfs @ 12.29 hrs , Volume= 119,322 cf
Primary = 25.27 cfs @ 12.29 hrs , Volume= 119,322 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

2 Year Flow Calculations

Inflow Area = 1,395,357 sf , 33.00% Impervious , Inflow Depth = 1.37" for 2-year event
Inflow = 34.22 cfs @ 12.29 hrs , Volume= 159,748 cf
Primary = 34.22 cfs @ 12.29 hrs , Volume= 159,748 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

10 Year Flow Calculations

Inflow Area = 1,395,357 sf , 33.00% Impervious , Inflow Depth = 2.94" for 10-year event
Inflow = 74.89 cfs @ 12.28 hrs , Volume= 342,077 cf
Primary = 74.89 cfs @ 12.28 hrs , Volume= 342,077 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

No.	DATE	DESCRIPTION
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PLAN DATE
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PROFESSIONAL ENGINEER

SWM - PRE-DEVELOPMENT

RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016

SCALE: 1"= 100'

C.I.= 2'

SHEET 18 OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\21-SWM PRE.dwg [SWM PRE] August 22, 2016 - 2:23pm jreynolds

STORMWATER MANAGEMENT NARRATIVE:

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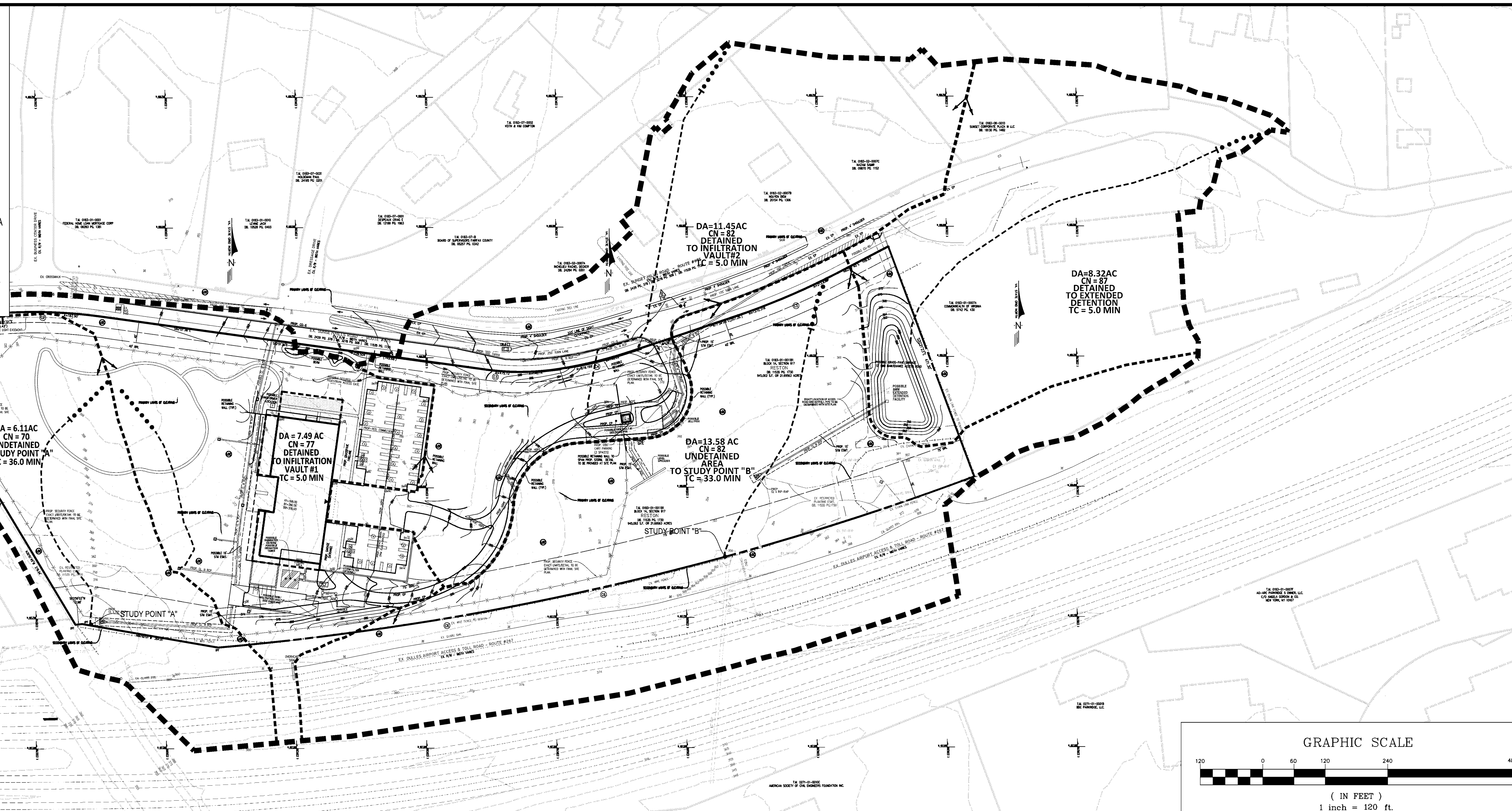
SUNSET HILLS ROAD ULTIMATE BUILD-OUT

SHEETS #20A-20B PORTRAY THE ULTIMATE BUILD-OUT AND WIDENING OF SUNSET HILLS ROAD. THE PRELIMINARY DESIGN OF EACH STORMWATER MANAGEMENT FACILITY SHALL ACCOMMODATE THE INCREASE OF IMPERVIOUS AREA ASSOCIATED WITH THE WIDENING TO A 124' WIDE R/W CONDITION. AS SHOWN ON SHEETS 20A-20B, THE CURVE NUMBERS (Cn) REPRESENTING THE DRAINAGE AREAS CONTAINING SUNSET HILLS ROAD HAVE BEEN ADJUSTED TO ACCOUNT FOR THE ANTICIPATED INCREASE IN IMPERVIOUS AREA. PER THE REQUIREMENTS REPRESENTED IN THE ROUTINGS FOR THE LAYOUT SHOWN ON SHEETS #08-09, THE POST-DEVELOPMENT PEAK FLOWS FOR THE 1YR, 2YR, AND 10YR STORM EVENTS SHALL REMAIN BELOW THE PRE-DEVELOPMENT PEAK FLOWS IN THE ULTIMATE CONDITION. IT SHOULD BE NOTED THAT ALL FACILITIES HAVE BEEN SIZED PER THE ULTIMATE CONDITION AND THE FACILITIES SHALL REQUIRE NO ADDITIONAL MODIFICATION(S) AT TIME OF THE ULTIMATE WIDENING OF SUNSET HILLS ROAD.



LEGEND

●●●●●●●●● SHEET FLOW PATH

- - - - - - - - SHALLOW CONCENTRATED FLOW PATH

GRAPHIC SCALE

120 0 60 120 240 480

(IN FEET)
1 inch = 120 ft.

SHED TO STUDY POINT "A"

Curve Number & Time of Concentration Calculations

Controlled area by SWM Vault #1 - To Study Point "A"

	Area (ac)	CN	Description
	2.350	98	Paved parking, HSG D
	0.170	84	50-75% Grass cover, Fair, HSG D
	1.800	69	50-75% Grass cover, Fair, HSG B
	1.590	60	Woods, Fair, HSG B
*	1.580	73	BMP ADJUSTED CN
	7.490	77	Weighted Average
	5.140		68.62% Pervious Area
	2.350		31.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Uncontrolled Area - To Study Point "A"

Area (ac)	CN	Description
0.742	98	Paved parking, HSG D
0.365	82	Woods/grass comb., Fair, HSG D
0.078	98	Paved parking, HSG B
4.921	65	Woods/grass comb., Fair, HSG B
6.106	70	Weighted Average
5.286		86.57% Pervious Area
0.820		13.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.6	100	0.0350	0.05		**Sheet Flow, Sheet Flow** Woods: Dense underbrush n= 0.800 P2= 3.05"
5.4	460	0.0820	1.43		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
36.0	560	Total			

Post Development Runoff Calculations - Study Point "A"

1 Year Flow Calculations

Inflow Area = 592,242 sf , 23.32% Impervious , Inflow Depth = 0.25" for 1-year event
Inflow = 2.04 cfs @ 12.37 hrs , Volume= 12,283 cf
Primary = 2.04 cfs @ 12.37 hrs , Volume= 12,283 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

ENERGY BALANCE METHOD TO STUDY POINT "A"

$Q_{(Developed)}$=	2.04	cfs
$Q_{(Pre-Developed)}$=	2.47	cfs
$RV_{(Pre-Developed)}$=	16208.00	cf
$RV_{(Developed)}$=	12283.00	cf
I.F. =	0.8	(0.8 for sites greater than one acre) (0.9 for sites less than or equal to one acre)

Q Developed		I.F x ($Q_{Pre-Developed}$ x RV $_{Pre-Developed}$)/RV $_{Developed}$
2.04	≤	**2.61**

2 Year Flow Calculations

Inflow Area = 592,242 sf , 23.32% Impervious , Inflow Depth = 0.38" for 2-year event
Inflow = 3.37 cfs @ 12.36 hrs , Volume= 18,801 cf
Primary = 3.37 cfs @ 12.36 hrs , Volume= 18,801 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

10 Year Flow Calculations

Inflow Area = 592,242 sf , 23.32% Impervious , Inflow Depth > 1.09" for 10-year event
Inflow = 10.01 cfs @ 12.33 hrs , Volume= 53,870 cf
Primary = 10.01 cfs @ 12.33 hrs , Volume= 53,870 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

Allowable Post Peak Flows - Study Point "A"

1 Year Allowable : 2.61 cfs (Per Energy Balance Method)
2 Year Allowable : 3.87 cfs
10 Year Allowable: 13.55 cfs

SHED TO STUDY POINT "B"

Curve Number & Time of Concentration Calculations

Controlled area by SWM Vault #2 - To Study Point "B"

	Area (ac)	CN	Description
	2.330	98	Paved parking, HSG D
	0.200	84	50-75% Grass cover, Fair, HSG D
*	2.710	98	Paved parking, HSG B
	6.210	69	50-75% Grass cover, Fair, HSG B
	11.450	82	Weighted Average
	6.410		55.98% Pervious Area
	5.040		44.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Controlled area by EXTENDED DETENTION - To Study Point "B"

Area (ac)	CN	Description
3.090	69	50-75% Grass cover, Fair, HSG B
5.230	98	Paved parking, HSG D
8.320	87	Weighted Average
3.090		37.14% Pervious Area
5.230		62.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	836		2.79		**Direct Entry, Manual**

Uncontrolled Area - To Study Point "B"

Area (ac)	CN	Description
4.660	65	Woods/grass comb., Fair, HSG B
1.780	76	Woods/grass comb., Fair, HSG C
1.380	82	Woods/grass comb., Fair, HSG D
5.760	98	Paved parking, HSG D
13.580	82	Weighted Average
7.820		57.58% Pervious Area
5.760		42.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	100	0.0697	0.07		**Sheet Flow, Sheet Flow** Woods: Dense underbrush n= 0.800 P2= 3.05"
9.8	594	0.0405	1.01		Shallow Concentrated Flow, Shallow Concentrated Woodland Kv= 5.0 fps
33.0	694	Total			

Post Development Runoff Calculations - Study Point "B"

1 Year Flow Calculations

Inflow Area = 1,452,726 sf , 48.07% Impervious , Inflow Depth > 1.22" for 1-year event
Inflow = 15.30 cfs @ 12.29 hrs , Volume= 147,680 cf
Primary = 15.30 cfs @ 12.29 hrs , Volume= 147,680 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

$Q_{(Developed)}$=	15.30	cfs
$Q_{(Pre-Developed)}$=	25.27	cfs
$RV_{(Pre-Developed)}$=	119322.00	CF
$RV_{(Developed)}$=	147680.00	CF
I.F. =	0.8	(0.8 for sites greater than one acre) (0.9 for sites less than or equal to one acre)

Q Developed		I.F x ($Q_{Pre-Developed}$ x RV $_{Pre-Developed}$)/RV $_{Developed}$
15.30	≤	**16.33**

2 Year Flow Calculations

Inflow Area = 1,452,726 sf , 48.07% Impervious , Inflow Depth > 1.62" for 2-year event
Inflow = 28.36 cfs @ 12.29 hrs , Volume= 196,148 cf
Primary = 28.36 cfs @ 12.29 hrs , Volume= 196,148 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

10 Year Flow Calculations

Inflow Area = 592,242 sf , 23.32% Impervious , Inflow Depth > 1.09" for 10-year event
Inflow = 10.01 cfs @ 12.33 hrs , Volume= 53,870 cf
Primary = 10.01 cfs @ 12.33 hrs , Volume= 53,870 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

Allowable Post Peak Flows - Study Point "B"

1 Year Allowable : 16.04 cfs (Per Energy Balance Method)
2 Year Allowable : 34.22 cfs
10 Year Allowable: 74.89 cfs

REVISIONS

No.	DATE	DESCRIPTION

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

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08/22/2016
PROFESSIONAL ENGINEER

SWM - POST-DEVELOPMENT
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=100' C.I.= 2' DATE: JAN. 2016

SHEET 19 OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\21-SWM POST.dwg [SWM POST] August 22, 2016 - 2:24pm jreynolds

SWM VAULT #1

* SEE SHEET #19 FOR DRAINAGE AREA AND TIME CONCENTRATION COMPUTATIONS TO VAULT #1

VAULT #1 VOLUME SUMMARY

Volume	Invert	Avail.Storage	Storage Description
#1	353.00'	58,770 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
353.00	5,877	0	0
363.00	5,877	58,770	58,770

Device	Routing	Invert	Outlet Devices
#1	Discarded	353.00'	**3.500 in/hr Exfiltration over Surface area**
#2	Primary	353.92'	**15.0" Vert. Orifice/Grate** C= 0.600
#3	Device 2	355.40'	**1.0" Vert. Orifice/Grate** C= 0.600
#4	Device 2	362.00'	**32.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600

STAGE-AREA-STORAGE TABLE

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
353.00	**5,877**	0
353.20	5,877	1,175
353.40	5,877	2,351
353.60	5,877	3,526
353.80	5,877	4,702
354.00	5,877	5,877
354.20	5,877	7,052
354.40	5,877	8,228
354.60	5,877	9,403
354.80	5,877	10,579
355.00	5,877	11,754
355.20	5,877	12,929
355.40	5,877	14,105
355.60	5,877	15,280
355.80	5,877	16,456
356.00	5,877	17,631
356.20	5,877	18,806
356.40	5,877	19,982
356.60	5,877	21,157
356.80	5,877	22,333
357.00	5,877	23,508
357.20	5,877	24,683
357.40	5,877	25,859
357.60	5,877	27,034
357.80	5,877	28,210
358.00	5,877	29,385
358.20	5,877	30,560
358.40	5,877	31,736
358.60	5,877	32,911
358.80	5,877	34,087
359.00	5,877	35,262
359.20	5,877	36,437
359.40	5,877	37,613
359.60	5,877	38,788
359.80	5,877	39,964
360.00	5,877	41,139
360.20	5,877	42,314
360.40	5,877	43,490
360.60	5,877	44,665
360.80	5,877	45,841
361.00	5,877	47,016
361.20	5,877	48,191
361.40	5,877	49,367
361.60	5,877	50,542
361.80	5,877	51,718
362.00	5,877	52,893
362.20	5,877	54,068
362.40	5,877	55,244
362.60	5,877	56,419
362.80	5,877	57,595
363.00	5,877	**58,770**

1 YEAR EVENT SUMMARY

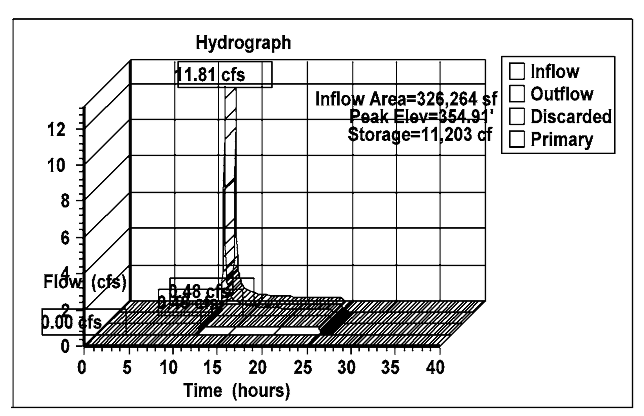
Inflow Area = 326,264 sf , 31.38% Impervious , Inflow Depth = 0.87" for 1-year event
Inflow = 11.81 cfs @ 11.97 hrs , Volume= 23,617 cf
Outflow = 0.48 cfs @ 11.76 hrs , Volume= 23,617 cf , Atten= 96% , Lag= 0.0 min
Discarded = 0.48 cfs @ 11.76 hrs , Volume= 23,617 cf
Primary = 0.00 cfs @ 0.00 hrs , Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 354.91' @ 13.90 hrs Surf.Area= 5,877 sf Storage= 11,203 cf

Plug-Flow detention time= 251.5 min calculated for 23,617 cf (100% of inflow)
Center-of-Mass det. time= 251.3 min (1,109.6 - 858.3)

Discarded OutFlow Max=0.48 cfs @ 11.76 hrs HW=353.12' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.48 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=353.00' (Free Discharge)
└─**2=Orifice/Grate** (Controls 0.00 cfs)
  ├─**3=Orifice/Grate** (Controls 0.00 cfs)
  └─**4=Orifice/Grate** (Controls 0.00 cfs)



2 YEAR EVENT SUMMARY

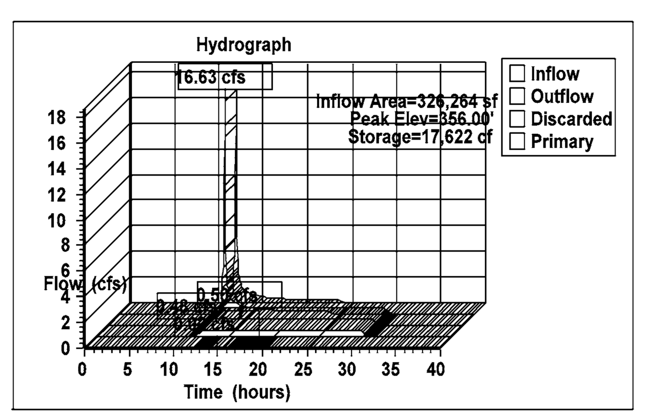
Inflow Area = 326,264 sf , 31.38% Impervious , Inflow Depth = 1.21" for 2-year event
Inflow = 16.63 cfs @ 11.96 hrs , Volume= 32,947 cf
Outflow = 0.50 cfs @ 14.91 hrs , Volume= 32,947 cf , Atten= 97% , **Lag= 176.5 min**
Discarded = 0.48 cfs @ 11.68 hrs , Volume= 32,501 cf
Primary = 0.02 cfs @ 14.91 hrs , Volume= 446 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 356.00' @ 14.91 hrs Surf.Area= 5,877 sf Storage= 17,622 cf

Plug-Flow detention time= 397.8 min calculated for 32,914 cf (100% of inflow)
Center-of-Mass det. time= 397.9 min (1,245.9 - 848.1)

Discarded OutFlow Max=0.48 cfs @ 11.68 hrs HW=353.12' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.48 cfs)

Primary OutFlow Max=0.02 cfs @ 14.91 hrs HW=356.00' (Free Discharge)
└─**2=Orifice/Grate** (Passes 0.02 cfs of 7.12 cfs potential flow)
  ├─**3=Orifice/Grate** (Orifice Controls 0.02 cfs @ 3.59 fps)
  └─**4=Orifice/Grate** (Controls 0.00 cfs)



10 YEAR EVENT SUMMARY

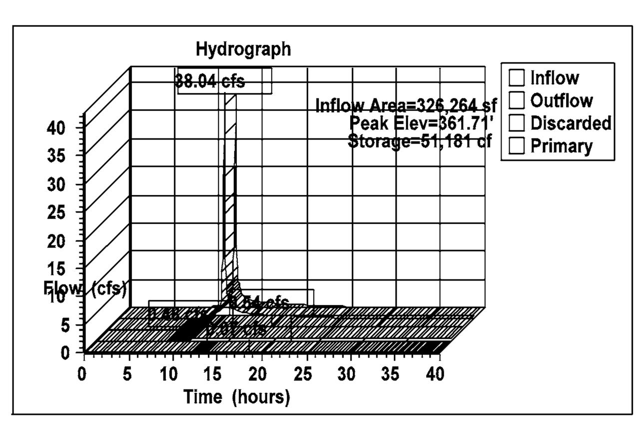
Inflow Area = 326,264 sf , 31.38% Impervious , Inflow Depth = 2.79" for 10-year event
Inflow = 38.04 cfs @ 11.96 hrs , Volume= 75,888 cf
Outflow = 0.54 cfs @ 18.62 hrs , Volume= 57,075 cf , Atten= 99% , **Lag= 399.7 min**
Discarded = 0.48 cfs @ 10.80 hrs , Volume= 51,653 cf
Primary = 0.07 cfs @ 18.62 hrs , Volume= 5,422 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 361.71' @ 18.62 hrs Surf.Area= 5,877 sf Storage= 51,181 cf

Plug-Flow detention time= 763.1 min calculated for 57,018 cf (75% of inflow)
Center-of-Mass det. time= 669.6 min (1,493.4 - 823.9)

Discarded OutFlow Max=0.48 cfs @ 10.80 hrs HW=353.10' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.48 cfs)

Primary OutFlow Max=0.07 cfs @ 18.62 hrs HW=361.71' (Free Discharge)
└─**2=Orifice/Grate** (Passes 0.07 cfs of 15.82 cfs potential flow)
  ├─**3=Orifice/Grate** (Orifice Controls 0.07 cfs @ 12.05 fps)
  └─**4=Orifice/Grate** (Controls 0.00 cfs)



SWM VAULT #2

* SEE SHEET #19 FOR DRAINAGE AREA AND TIME CONCENTRATION COMPUTATIONS TO VAULT #2

VAULT #2 VOLUME SUMMARY

Volume	Invert	Avail.Storage	Storage Description
#1	362.00'	46,200 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
362.00	3,850	0	0
374.00	3,850	46,200	46,200

Device	Routing	Invert	Outlet Devices
#1	Primary	362.00'	**36.0" Vert. Orifice/Grate** C= 0.600
#2	Device 1	362.00'	**6.5" Vert. Orifice/Grate** C= 0.600
#3	Device 1	367.15'	**40.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600

STAGE-AREA-STORAGE TABLE

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
362.00	**3,850**	0
362.30	3,850	1,155
362.60	3,850	2,310
362.90	3,850	3,465
363.20	3,850	4,620
363.50	3,850	5,775
363.80	3,850	6,930
364.10	3,850	8,085
364.40	3,850	9,240
364.70	3,850	10,395
365.00	3,850	11,550
365.30	3,850	12,705
365.60	3,850	13,860
365.90	3,850	15,015
366.20	3,850	16,170
366.50	3,850	17,325
366.80	3,850	18,480
367.10	3,850	19,635
367.40	3,850	20,790
367.70	3,850	21,945
368.00	3,850	23,100
368.30	3,850	24,255
368.60	3,850	25,410
368.90	3,850	26,565
369.20	3,850	27,720
369.50	3,850	28,875
369.80	3,850	30,030
370.10	3,850	31,185
370.40	3,850	32,340
370.70	3,850	33,495
371.00	3,850	34,650
371.30	3,850	35,805
371.60	3,850	36,960
371.90	3,850	38,115
372.20	3,850	39,270
372.50	3,850	40,425
372.80	3,850	41,580
373.10	3,850	42,735
373.40	3,850	43,890
373.70	3,850	45,045
374.00	3,850	**46,200**

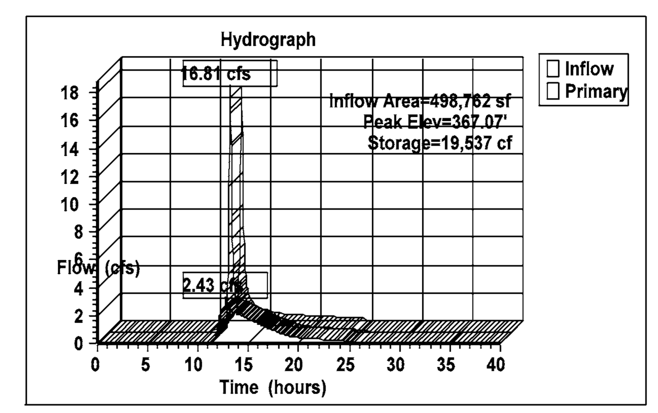
1 YEAR EVENT SUMMARY

Inflow Area = 498,762 sf , 44.02% Impervious , Inflow Depth = 1.15" for 1-year event
Inflow = 16.81 cfs @ 12.08 hrs , Volume= 47,681 cf
Outflow = 2.43 cfs @ 12.61 hrs , Volume= 47,678 cf , Atten= 86% , Lag= 32.2 min
Primary = 2.43 cfs @ 12.61 hrs , Volume= 47,678 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 367.07' @ 12.61 hrs Surf.Area= 3,850 sf Storage= 19,537 cf

Plug-Flow detention time= 99.7 min calculated for 47,678 cf (100% of inflow)
Center-of-Mass det. time= 99.6 min (949.5 - 849.9)

Primary OutFlow Max=2.43 cfs @ 12.61 hrs HW=367.07' (Free Discharge)
└─**1=Orifice/Grate** (Passes 2.43 cfs of 64.34 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 2.43 cfs @ 10.55 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)



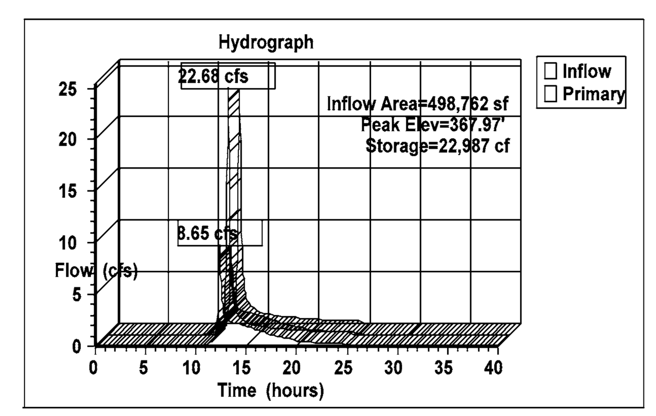
2 YEAR EVENT SUMMARY

Inflow Area = 498,762 sf , 44.02% Impervious , Inflow Depth = 1.54" for 2-year event
Inflow = 22.68 cfs @ 12.07 hrs , Volume= 63,929 cf
Outflow = 8.65 cfs @ 12.29 hrs , Volume= 63,925 cf , Atten= 62% , Lag= 13.0 min
Primary = 8.65 cfs @ 12.29 hrs , Volume= 63,925 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 367.97' @ 12.29 hrs Surf.Area= 3,850 sf Storage= 22,987 cf

Plug-Flow detention time= 89.9 min calculated for 63,925 cf (100% of inflow)
Center-of-Mass det. time= 89.7 min (931.1 - 841.4)

Primary OutFlow Max=8.62 cfs @ 12.29 hrs HW=367.96' (Free Discharge)
└─**1=Orifice/Grate** (Passes 8.62 cfs of 71.90 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 2.65 cfs @ 11.49 fps)
  └─**3=Orifice/Grate** (Orifice Controls 5.97 cfs @ 3.58 fps)



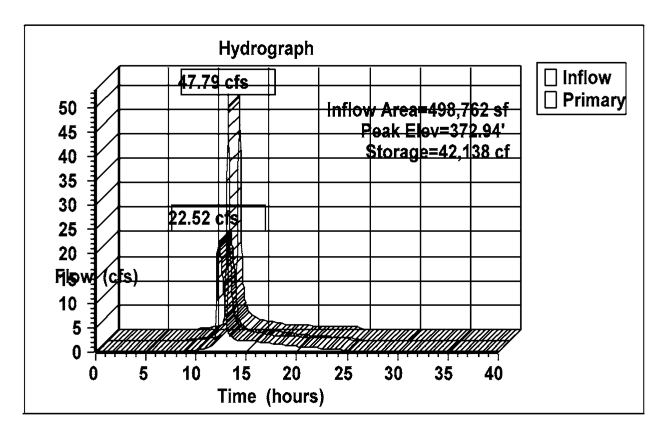
10 YEAR EVENT SUMMARY

Inflow Area = 498,762 sf , 44.02% Impervious , Inflow Depth = 3.26" for 10-year event
Inflow = 47.79 cfs @ 12.07 hrs , Volume= 135,437 cf
Outflow = 22.52 cfs @ 12.24 hrs , Volume= 135,433 cf , Atten= 53% , Lag= 10.5 min
Primary = 22.52 cfs @ 12.24 hrs , Volume= 135,433 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 372.94' @ 12.24 hrs Surf.Area= 3,850 sf Storage= 42,138 cf

Plug-Flow detention time= 69.5 min calculated for 135,298 cf (100% of inflow)
Center-of-Mass det. time= 69.9 min (889.9 - 819.9)

Primary OutFlow Max=22.50 cfs @ 12.24 hrs HW=372.93' (Free Discharge)
└─**1=Orifice/Grate** (Passes 22.50 cfs of 104.54 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 3.62 cfs @ 15.72 fps)
  └─**3=Orifice/Grate** (Orifice Controls 18.88 cfs @ 11.33 fps)



EXTENDED DETENTION

* SEE SHEET #19 FOR DRAINAGE AREA AND TIME CONCENTRATION COMPUTATIONS TO EXTENDED DETENTION

VAULT #2 VOLUME SUMMARY

Volume	Invert	Avail.Storage	Storage Description
#1	362.00'	46,200 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
362.00	3,850	0	0
374.00	3,850	46,200	46,200

Device	Routing	Invert	Outlet Devices
#1	Primary	362.00'	**36.0" Vert. Orifice/Grate** C= 0.600
#2	Device 1	362.00'	**7.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	367.15'	**40.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600

STAGE-AREA-STORAGE TABLE

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
362.00	**3,850**	0
362.30	3,850	1,155
362.60	3,850	2,310
362.90	3,850	3,465
363.20	3,850	4,620
363.50	3,850	5,775
363.80	3,850	6,930
364.10	3,850	8,085
364.40	3,850	9,240
364.70	3,850	10,395
365.00	3,850	11,550
365.30	3,850	12,705
365.60	3,850	13,860
365.90	3,850	15,015
366.20	3,850	16,170
366.50	3,850	17,325
366.80	3,850	18,480
367.10	3,850	19,635
367.40	3,850	20,790
367.70	3,850	21,945
368.00	3,850	23,100
368.30	3,850	24,255
368.60	3,850	25,410
368.90	3,850	26,565
369.20	3,850	27,720
369.50	3,850	28,875
369.80	3,850	30,030
370.10	3,850	31,185
370.40	3,850	32,340
370.70	3,850	33,495
371.00	3,850	34,650
371.30	3,850	35,805
371.60	3,850	36,960
371.90	3,850	38,115
372.20	3,850	39,270
372.50	3,850	40,425
372.80	3,850	41,580
373.10	3,850	42,735
373.40	3,850	43,890
373.70	3,850	45,045
374.00	3,850	**46,200**

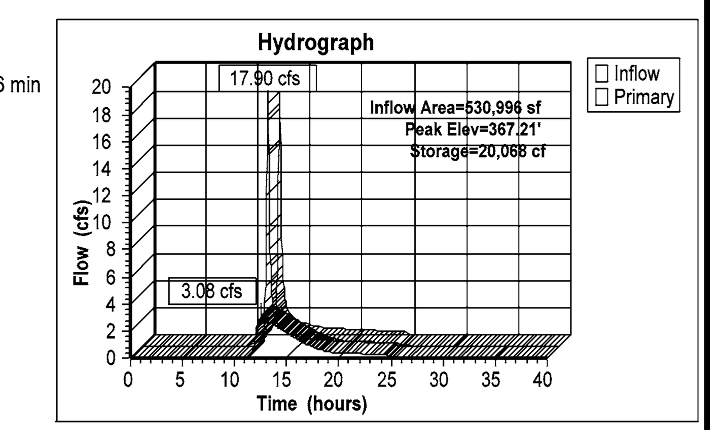
1 YEAR EVENT SUMMARY

Inflow Area = 530,996 sf , 42.74% Impervious , Inflow Depth = 1.15" for 1-year event
Inflow = 17.90 cfs @ 12.08 hrs , Volume= 50,763 cf
Outflow = 3.08 cfs @ 12.54 hrs , Volume= 50,760 cf , Atten= 83% , Lag= 27.6 min
Primary = 3.08 cfs @ 12.54 hrs , Volume= 50,760 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 367.21' @ 12.54 hrs Surf.Area= 3,850 sf Storage= 20,068 cf

Plug-Flow detention time= 86.6 min calculated for 50,710 cf (100% of inflow)
Center-of-Mass det. time= 87.0 min (936.9 - 849.9)

Primary OutFlow Max=3.01 cfs @ 12.54 hrs HW=367.21' (Free Discharge)
└─**1=Orifice/Grate** (Passes 3.01 cfs of 65.56 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 2.85 cfs @ 10.68 fps)
  └─**3=Orifice/Grate** (Orifice Controls 0.16 cfs @ 0.79 fps)



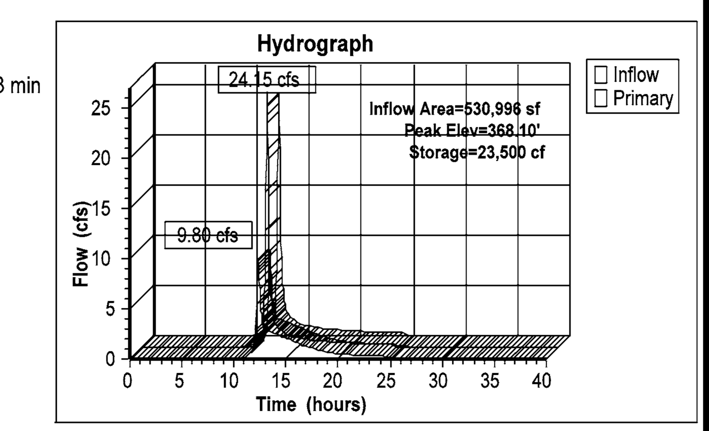
2 YEAR EVENT SUMMARY

Inflow Area = 530,996 sf , 42.74% Impervious , Inflow Depth = 1.54" for 2-year event
Inflow = 24.15 cfs @ 12.07 hrs , Volume= 68,061 cf
Outflow = 9.80 cfs @ 12.28 hrs , Volume= 68,058 cf , Atten= 59% , Lag= 12.3 min
Primary = 9.80 cfs @ 12.28 hrs , Volume= 68,058 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 368.10' @ 12.28 hrs Surf.Area= 3,850 sf Storage= 23,500 cf

Plug-Flow detention time= 76.8 min calculated for 67,990 cf (100% of inflow)
Center-of-Mass det. time= 77.3 min (918.7 - 841.4)

Primary OutFlow Max=9.80 cfs @ 12.28 hrs HW=368.10' (Free Discharge)
└─**1=Orifice/Grate** (Passes 9.80 cfs of 73.02 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 3.10 cfs @ 11.61 fps)
  └─**3=Orifice/Grate** (Orifice Controls 6.69 cfs @ 4.02 fps)



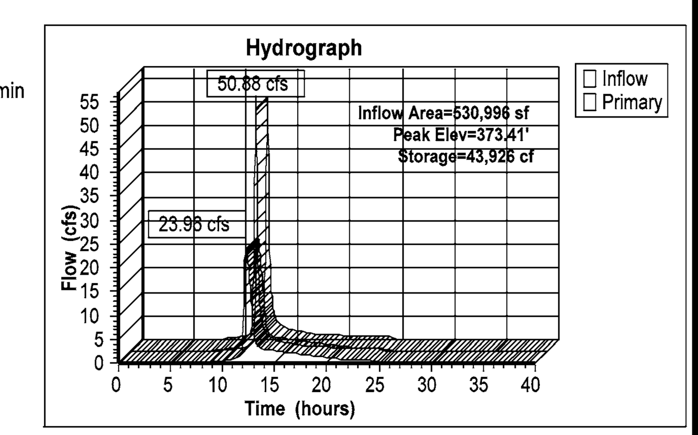
10 YEAR EVENT SUMMARY

Inflow Area = 530,996 sf , 42.74% Impervious , Inflow Depth = 3.26" for 10-year event
Inflow = 50.88 cfs @ 12.07 hrs , Volume= 144,190 cf
Outflow = 23.96 cfs @ 12.24 hrs , Volume= 144,187 cf , Atten= 53% , Lag= 10.5 min
Primary = 23.96 cfs @ 12.24 hrs , Volume= 144,187 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 373.41' @ 12.24 hrs Surf.Area= 3,850 sf Storage= 43,926 cf

Plug-Flow detention time= 61.4 min calculated for 144,187 cf (100% of inflow)
Center-of-Mass det. time= 61.2 min (881.2 - 819.9)

Primary OutFlow Max=23.94 cfs @ 12.24 hrs HW=373.40' (Free Discharge)
└─**1=Orifice/Grate** (Passes 23.94 cfs of 107.08 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 4.29 cfs @ 16.05 fps)
  └─**3=Orifice/Grate** (Orifice Controls 19.65 cfs @ 11.79 fps)



No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016
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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 038790
08/22/2016
PROFESSIONAL ENGINEER

SWM - VAULT COMPUTATIONS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

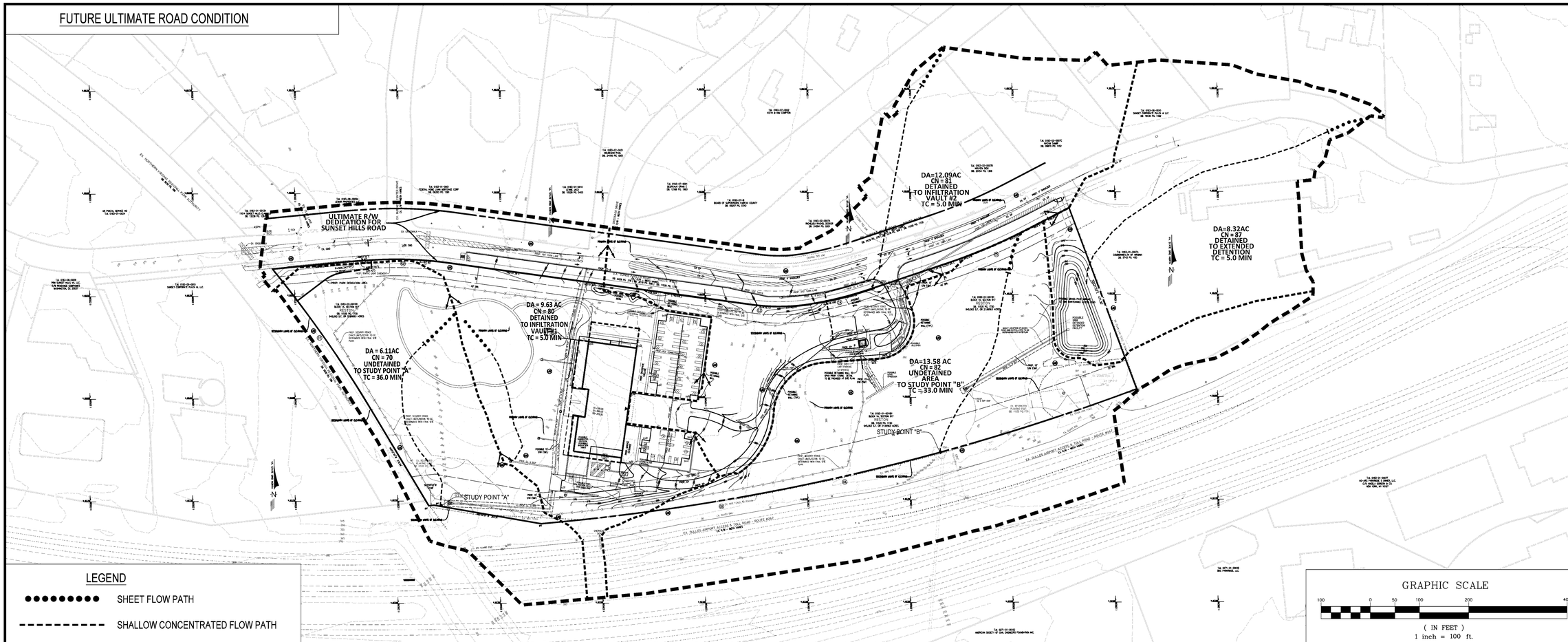
SCALE: N/A C.I.= N/A DATE: JAN. 2016

SHEET
20
OF
36

FILE No.
RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\21-SWM POST.dwg [SWM POST (2)] August 22, 2016 - 2:24pm jreynolds

FUTURE ULTIMATE ROAD CONDITION



SHED TO STUDY POINT "A"

Curve Number & Time of Concentration Calculations

Controlled area by SWM Vault #1 - To Study Point "A"

	Area (ac)	CN	Description
	3.770	98	Paved parking, HSG D
	0.260	84	50-75% Grass cover, Fair, HSG D
	2.020	69	50-75% Grass cover, Fair, HSG B
	1.690	60	Woods, Fair, HSG B
*	1.890	73	BMP ADJUSTED CN
	9.630	80	Weighted Average
	5.860		60.85% Pervious Area
	3.770		39.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Uncontrolled Area - To Study Point "A"

Area (ac)	CN	Description
0.742	98	Paved parking, HSG D
0.365	82	Woods/grass comb., Fair, HSG D
0.078	98	Paved parking, HSG B
4.921	65	Woods/grass comb., Fair, HSG B
6.106	70	Weighted Average
5.286		86.57% Pervious Area
0.820		13.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.6	100	0.0350	0.05		**Sheet Flow, Sheet Flow** Woods: Dense underbrush n= 0.800 P2= 3.05"
5.4	460	0.0820	1.43		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
36.0	560	Total			

Post Development Runoff Calculations - Study Point "A"

1 Year Flow Calculations

Inflow Area = 685,460 sf , 29.17% Impervious , Inflow Depth = 0.23" for 1-year event
Inflow = 2.06 cfs @ 12.37 hrs , Volume= 13,053 cf
Primary = 2.06 cfs @ 12.37 hrs , Volume= 13,053 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

ENERGY BALANCE METHOD TO STUDY POINT "A"

$Q_{(Developed)i}$=	2.06	cfs
$Q_{(Pre\text{-}Developed)i}$=	2.47	cfs
$RV_{(Pre\text{-}Developed)i}$=	16208.00	cf
$RV_{(Developed)i}$=	13053.00	cf
I.F. =	0.8	(0.8 for sites greater than one acre) (0.9 for sites less than or equal to one acre)

Q Developed		I.F x ($Q_{Pre\text{-}Developed}$ x $RV_{Pre\text{-}Developed}$)/$RV_{Developed}$
2.06	≤	2.45

2 Year Flow Calculations

Inflow Area = 685,460 sf , 29.17% Impervious , Inflow Depth = 0.36" for 2-year event
Inflow = 3.39 cfs @ 12.36 hrs , Volume= 20,539 cf
Primary = 3.39 cfs @ 12.36 hrs , Volume= 20,539 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

10 Year Flow Calculations

Inflow Area = 685,460 sf , 29.17% Impervious , Inflow Depth > 1.40" for 10-year event
Inflow = 12.47 cfs @ 12.37 hrs , Volume= 80,210 cf
Primary = 12.47 cfs @ 12.37 hrs , Volume= 80,210 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

Allowable Post Peak Flows - Study Point "A"

1 Year Allowable : 2.45 cfs (Per Energy Balance Method)
2 Year Allowable : 3.87 cfs
10 Year Allowable: 13.55 cfs

SHED TO STUDY POINT "B"

Curve Number & Time of Concentration Calculations

Controlled area by SWM Vault #2 - To Study Point "B"

Area (ac)	CN	Description
2.330	98	Paved parking, HSG D
0.200	84	50-75% Grass cover, Fair, HSG D
2.760	98	Paved parking, HSG B
6.800	69	50-75% Grass cover, Fair, HSG B
12.090	81	Weighted Average
7.000		57.90% Pervious Area
5.090		42.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry,**

Controlled area by EXTENDED DETENTION - To Study Point "B"

Area (ac)	CN	Description
3.090	69	50-75% Grass cover, Fair, HSG B
5.230	98	Paved parking, HSG D
8.320	87	Weighted Average
3.090		37.14% Pervious Area
5.230		62.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	836		2.79		**Direct Entry, Manual**

Uncontrolled Area - To Study Point "B"

Area (ac)	CN	Description
4.660	65	Woods/grass comb., Fair, HSG B
1.780	76	Woods/grass comb., Fair, HSG C
1.380	82	Woods/grass comb., Fair, HSG D
5.760	98	Paved parking, HSG D
13.580	82	Weighted Average
7.820		57.58% Pervious Area
5.760		42.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	100	0.0697	0.07		**Sheet Flow, Sheet Flow** Woods: Dense underbrush n= 0.800 P2= 3.05"
9.8	594	0.0405	1.01		**Shallow Concentrated Flow, Shallow Concentrated** Woodland Kv= 5.0 fps
33.0	694	Total			

Post Development Runoff Calculations - Study Point "B"

1 Year Flow Calculations

Inflow Area = 1,480,604 sf , 47.31% Impervious , Inflow Depth > 1.20" for 1-year event
Inflow = 15.28 cfs @ 12.29 hrs , Volume= 147,724 cf
Primary = 15.28 cfs @ 12.29 hrs , Volume= 147,724 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

ENERGY BALANCE METHOD TO STUDY POINT "B"

$Q_{(Developed)i}$=	15.28	cfs
$Q_{(Pre\text{-}Developed)i}$=	25.27	cfs
$RV_{(Pre\text{-}Developed)i}$=	119322.00	CF
$RV_{(Developed)i}$=	147724.00	CF
I.F. =	0.8	(0.8 for sites greater than one acre) (0.9 for sites less than or equal to one acre)

Q Developed		I.F x ($Q_{Pre\text{-}Developed}$ x $RV_{Pre\text{-}Developed}$)/$RV_{Developed}$
15.28	≤	16.33

2 Year Flow Calculations

Inflow Area = 1,480,604 sf , 47.31% Impervious , Inflow Depth > 1.59" for 2-year event
Inflow = 28.34 cfs @ 12.29 hrs , Volume= 196,690 cf
Primary = 28.34 cfs @ 12.29 hrs , Volume= 196,690 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

10 Year Flow Calculations

Inflow Area = 1,480,604 sf , 47.31% Impervious , Inflow Depth > 3.33" for 10-year event
Inflow = 72.84 cfs @ 12.05 hrs , Volume= 410,747 cf
Primary = 72.84 cfs @ 12.05 hrs , Volume= 410,747 cf , Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

Allowable Post Peak Flows - Study Point "B"

1 Year Allowable : 16.04 cfs (Per Energy Balance Method)
2 Year Allowable : 34.22 cfs
10 Year Allowable: 74.89 cfs

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
04/29/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
Clayton C. Fox
LICENSE NO. 038790
06/22/2016
PROFESSIONAL ENGINEER

SWM - POST-DEVELOPMENT (ULTIMATE ROAD CONDITION)

RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016
SCALE: 1"=100'
C.I.= 2'

SHEET 20A OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\21-SWM POST - ULTIMATE RD.dwg [SWM POST] August 22, 2016 - 2:24pm Reynolds

SWM VAULT #1

* SEE SHEET #19 FOR DRAINAGE AREA AND TIME CONCENTRATION COMPUTATIONS TO VAULT #1

Volume	Invert	Avail.Storage	Storage Description
#1	353.00'	58,770 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
353.00	5,877	0	0
363.00	5,877	58,770	58,770

Device	Routing	Invert	Outlet Devices
#1	Discarded	353.00'	**3.500 in/hr Exfiltration over Surface area**
#2	Primary	353.92'	**15.0" Vert. Orifice/Grate** C= 0.600
#3	Device 2	355.40'	**1.0" Vert. Orifice/Grate** C= 0.600
#4	Device 2	362.00'	**32.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
353.00	**5,877**	0
353.20	5,877	1,175
353.40	5,877	2,351
353.60	5,877	3,526
353.80	5,877	4,702
354.00	5,877	5,877
354.20	5,877	7,052
354.40	5,877	8,228
354.60	5,877	9,403
354.80	5,877	10,579
355.00	5,877	11,754
355.20	5,877	12,929
355.40	5,877	14,105
355.60	5,877	15,280
355.80	5,877	16,456
356.00	5,877	17,631
356.20	5,877	18,806
356.40	5,877	19,982
356.60	5,877	21,157
356.80	5,877	22,333
357.00	5,877	23,508
357.20	5,877	24,683
357.40	5,877	25,859
357.60	5,877	27,034
357.80	5,877	28,210
358.00	5,877	29,385
358.20	5,877	30,560
358.40	5,877	31,736
358.60	5,877	32,911
358.80	5,877	34,087
359.00	5,877	35,262
359.20	5,877	36,437
359.40	5,877	37,613
359.60	5,877	38,788
359.80	5,877	39,964
360.00	5,877	41,139
360.20	5,877	42,314
360.40	5,877	43,490
360.60	5,877	44,665
360.80	5,877	45,841
361.00	5,877	47,016
361.20	5,877	48,191
361.40	5,877	49,367
361.60	5,877	50,542
361.80	5,877	51,718
362.00	5,877	52,893
362.20	5,877	54,068
362.40	5,877	55,244
362.60	5,877	56,419
362.80	5,877	57,595
363.00	5,877	**58,770**

1 YEAR EVENT SUMMARY

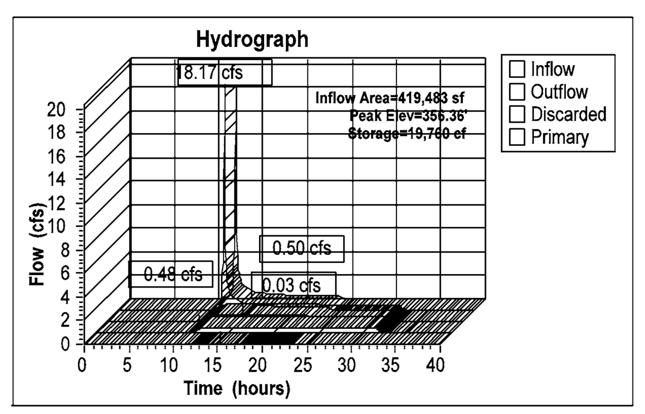
Inflow Area = 419,483 sf , 39.15% Impervious , Inflow Depth = 1.03" for 1-year event
Inflow = 18.17 cfs @ 11.96 hrs , Volume= 35,998 cf
Outflow = 0.50 cfs @ 15.25 hrs , Volume= 35,998 cf , Atten= 97% , Lag= 197.4 min
Discarded = 0.48 cfs @ 11.68 hrs , Volume= 35,228 cf
Primary = 0.03 cfs @ 15.25 hrs , Volume= 770 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 356.36' @ 15.25 hrs Surf.Area= 5,877 sf Storage= 19,760 cf

Plug-Flow detention time= 441.5 min calculated for 35,962 cf (100% of inflow)
Center-of-Mass det. time= 441.6 min (1,289.3 - 847.6)

Discarded OutFlow Max=0.48 cfs @ 11.68 hrs HW=353.13' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.48 cfs)

Primary OutFlow Max=0.03 cfs @ 15.25 hrs HW=356.36' (Free Discharge)
2=Orifice/Grate (Passes 0.03 cfs of 7.97 cfs potential flow)
3=Orifice/Grate (Orifice Controls 0.03 cfs @ 4.62 fps)
4=Orifice/Grate (Controls 0.00 cfs)



2 YEAR EVENT SUMMARY

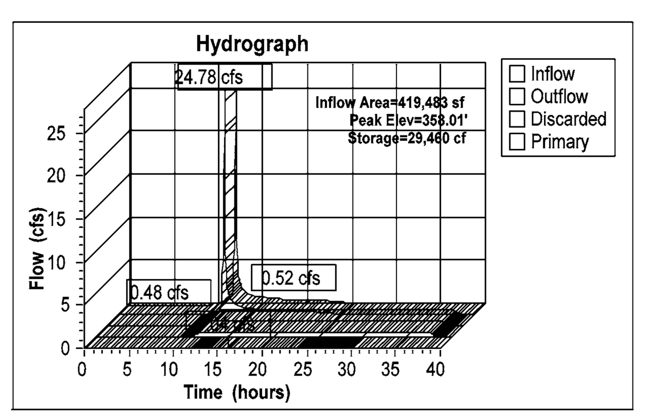
Inflow Area = 419,483 sf , 39.15% Impervious , Inflow Depth = 1.40" for 2-year event
Inflow = 24.78 cfs @ 11.96 hrs , Volume= 49,007 cf
Outflow = 0.52 cfs @ 16.16 hrs , Volume= 49,006 cf , Atten= 98% , Lag= 251.6 min
Discarded = 0.48 cfs @ 11.44 hrs , Volume= 46,821 cf
Primary = 0.04 cfs @ 16.16 hrs , Volume= 2,185 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 358.01' @ 16.16 hrs Surf.Area= 5,877 sf Storage= 29,460 cf

Plug-Flow detention time= 621.2 min calculated for 49,006 cf (100% of inflow)
Center-of-Mass det. time= 621.2 min (1,459.7 - 838.5)

Discarded OutFlow Max=0.48 cfs @ 11.44 hrs HW=353.10' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.48 cfs)

Primary OutFlow Max=0.04 cfs @ 16.16 hrs HW=358.01' (Free Discharge)
2=Orifice/Grate (Passes 0.04 cfs of 11.00 cfs potential flow)
3=Orifice/Grate (Orifice Controls 0.04 cfs @ 7.72 fps)
4=Orifice/Grate (Controls 0.00 cfs)



10 YEAR EVENT SUMMARY

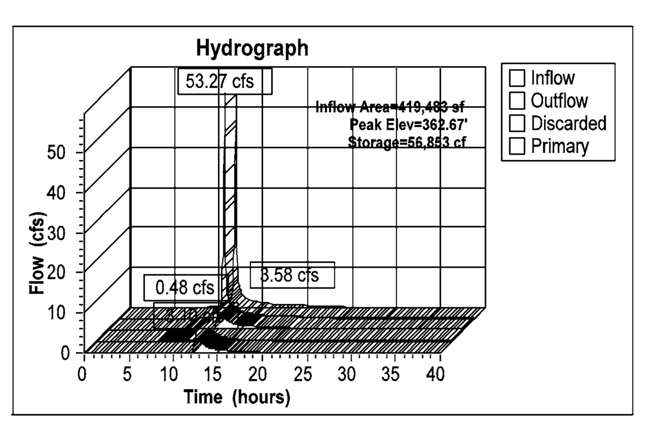
Inflow Area = 419,483 sf , 39.15% Impervious , Inflow Depth = 3.07" for 10-year event
Inflow = 53.27 cfs @ 11.96 hrs , Volume= 107,250 cf
Outflow = 3.58 cfs @ 12.61 hrs , Volume= 84,849 cf , Atten= 93% , Lag= 39.0 min
Discarded = 0.48 cfs @ 10.20 hrs , Volume= 53,087 cf
Primary = 3.10 cfs @ 12.61 hrs , Volume= 31,762 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 362.67' @ 12.61 hrs Surf.Area= 5,877 sf Storage= 56,853 cf

Plug-Flow detention time= 552.2 min calculated for 84,764 cf (79% of inflow)
Center-of-Mass det. time= 468.3 min (1,284.4 - 816.1)

Discarded OutFlow Max=0.48 cfs @ 10.20 hrs HW=353.10' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.48 cfs)

Primary OutFlow Max=3.10 cfs @ 12.61 hrs HW=362.67' (Free Discharge)
2=Orifice/Grate (Passes 3.10 cfs of 16.85 cfs potential flow)
3=Orifice/Grate (Orifice Controls 0.07 cfs @ 12.95 fps)
4=Orifice/Grate (Orifice Controls 3.03 cfs @ 3.41 fps)



SWM VAULT #2

* SEE SHEET #19 FOR DRAINAGE AREA AND TIME CONCENTRATION COMPUTATIONS TO VAULT #2

Volume	Invert	Avail.Storage	Storage Description
#1	362.00'	46,200 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
362.00	3,850	0	0
374.00	3,850	46,200	46,200

Device	Routing	Invert	Outlet Devices
#1	Primary	362.00'	**36.0" Vert. Orifice/Grate** C= 0.600
#2	Device 1	362.00'	**6.5" Vert. Orifice/Grate** C= 0.600
#3	Device 1	367.15'	**40.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
362.00	**3,850**	0
362.30	3,850	1,155
362.60	3,850	2,310
362.90	3,850	3,465
363.20	3,850	4,620
363.50	3,850	5,775
363.80	3,850	6,930
364.10	3,850	8,085
364.40	3,850	9,240
364.70	3,850	10,395
365.00	3,850	11,550
365.30	3,850	12,705
365.60	3,850	13,860
365.90	3,850	15,015
366.20	3,850	16,170
366.50	3,850	17,325
366.80	3,850	18,480
367.10	3,850	19,635
367.40	3,850	20,790
367.70	3,850	21,945
368.00	3,850	23,100
368.30	3,850	24,255
368.60	3,850	25,410
368.90	3,850	26,565
369.20	3,850	27,720
369.50	3,850	28,875
369.80	3,850	30,030
370.10	3,850	31,185
370.40	3,850	32,340
370.70	3,850	33,495
371.00	3,850	34,650
371.30	3,850	35,805
371.60	3,850	36,960
371.90	3,850	38,115
372.20	3,850	39,270
372.50	3,850	40,425
372.80	3,850	41,580
373.10	3,850	42,735
373.40	3,850	43,890
373.70	3,850	45,045
374.00	3,850	**46,200**

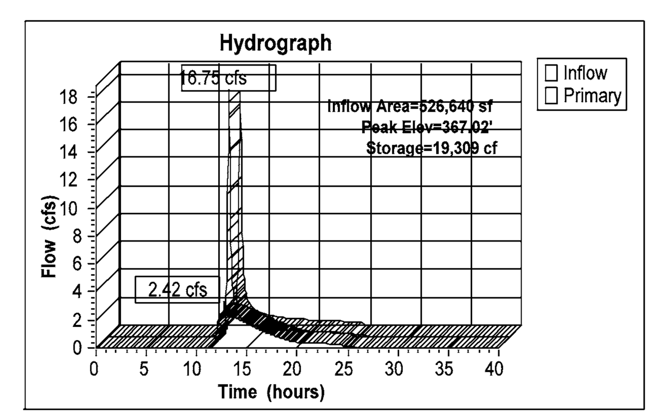
1 YEAR EVENT SUMMARY

Inflow Area = 526,640 sf , 42.10% Impervious , Inflow Depth = 1.09" for 1-year event
Inflow = 16.75 cfs @ 12.08 hrs , Volume= 47,725 cf
Outflow = 2.42 cfs @ 12.62 hrs , Volume= 47,721 cf , Atten= 86% , Lag= 32.7 min
Primary = 2.42 cfs @ 12.62 hrs , Volume= 47,721 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 367.02' @ 12.62 hrs Surf.Area= 3,850 sf Storage= 19,309 cf

Plug-Flow detention time= 99.3 min calculated for 47,721 cf (100% of inflow)
Center-of-Mass det. time= 99.2 min (952.6 - 853.4)

Primary OutFlow Max=2.42 cfs @ 12.62 hrs HW=367.01' (Free Discharge)
1=Orifice/Grate (Passes 2.42 cfs of 63.81 cfs potential flow)
2=Orifice/Grate (Orifice Controls 2.42 cfs @ 10.49 fps)
3=Orifice/Grate (Controls 0.00 cfs)



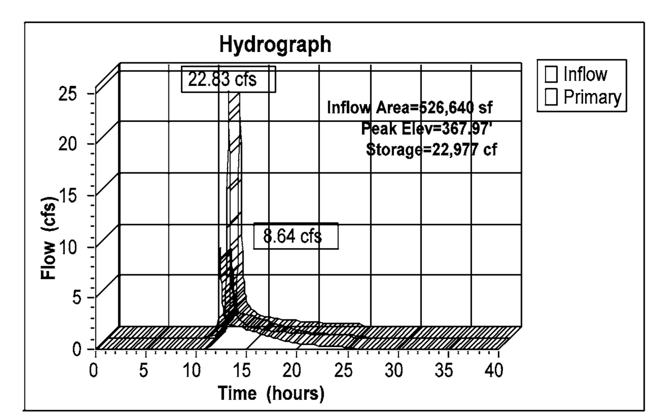
2 YEAR EVENT SUMMARY

Inflow Area = 526,640 sf , 42.10% Impervious , Inflow Depth = 1.47" for 2-year event
Inflow = 22.83 cfs @ 12.08 hrs , Volume= 64,471 cf
Outflow = 8.64 cfs @ 12.29 hrs , Volume= 64,467 cf , Atten= 62% , Lag= 13.1 min
Primary = 8.64 cfs @ 12.29 hrs , Volume= 64,467 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 367.97' @ 12.29 hrs Surf.Area= 3,850 sf Storage= 22,977 cf

Plug-Flow detention time= 89.4 min calculated for 64,403 cf (100% of inflow)
Center-of-Mass det. time= 89.9 min (934.5 - 844.6)

Primary OutFlow Max=8.60 cfs @ 12.29 hrs HW=367.96' (Free Discharge)
1=Orifice/Grate (Passes 8.60 cfs of 71.87 cfs potential flow)
2=Orifice/Grate (Orifice Controls 2.65 cfs @ 11.48 fps)
3=Orifice/Grate (Orifice Controls 5.95 cfs @ 3.57 fps)



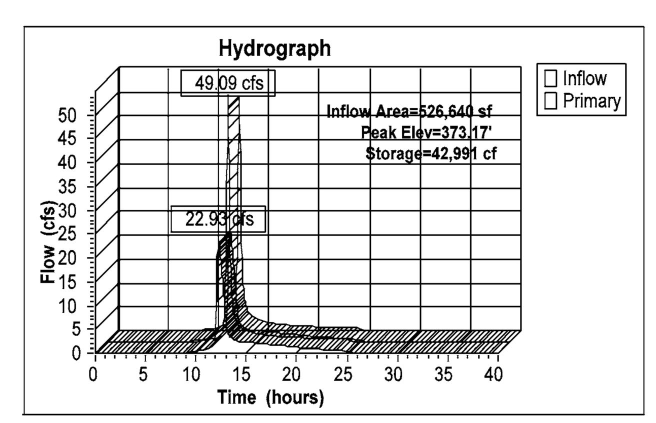
10 YEAR EVENT SUMMARY

Inflow Area = 526,640 sf , 42.10% Impervious , Inflow Depth = 3.16" for 10-year event
Inflow = 49.09 cfs @ 12.07 hrs , Volume= 138,801 cf
Outflow = 22.93 cfs @ 12.25 hrs , Volume= 138,796 cf , Atten= 53% , Lag= 10.6 min
Primary = 22.93 cfs @ 12.25 hrs , Volume= 138,796 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 373.17' @ 12.25 hrs Surf.Area= 3,850 sf Storage= 42,991 cf

Plug-Flow detention time= 70.0 min calculated for 138,796 cf (100% of inflow)
Center-of-Mass det. time= 69.9 min (892.5 - 822.7)

Primary OutFlow Max=22.91 cfs @ 12.25 hrs HW=373.15' (Free Discharge)
1=Orifice/Grate (Passes 22.91 cfs of 105.74 cfs potential flow)
2=Orifice/Grate (Orifice Controls 3.66 cfs @ 15.88 fps)
3=Orifice/Grate (Orifice Controls 19.25 cfs @ 11.55 fps)



EXTENDED DETENTION

* SEE SHEET #19 FOR DRAINAGE AREA AND TIME CONCENTRATION COMPUTATIONS TO EXTENDED DETENTION

Volume	Invert	Avail.Storage	Storage Description
#1	356.00'	119,914 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
356.00	8,839	0	0
358.00	11,716	20,555	20,555
360.00	14,820	26,536	47,091
362.00	18,149	32,969	80,060
364.00	21,705	39,854	119,914

Device	Routing	Invert	Outlet Devices
#1	Primary	356.00'	**36.0" Vert. Orifice/Grate** C= 0.600
#2	Device 1	356.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	358.35'	**36.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600
#4	Device 1	359.10'	**60.0" x 60.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

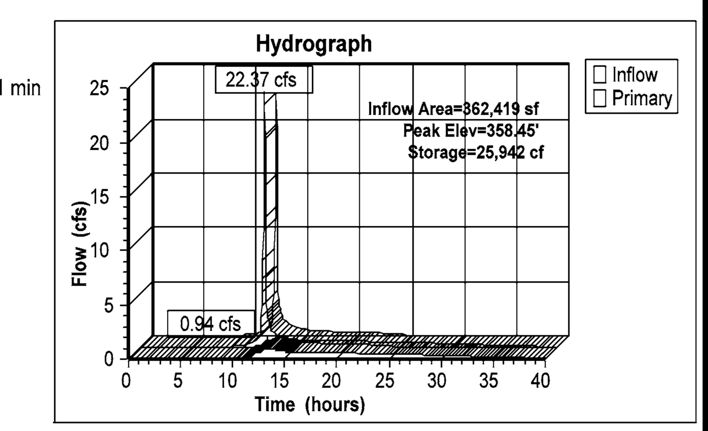
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
356.00	8,839	0
356.20	9,127	1,797
356.40	9,414	3,651
356.60	9,702	5,562
356.80	9,990	7,532
357.00	10,278	9,558
357.20	10,565	11,643
357.40	10,853	13,784
357.60	11,141	15,984
357.80	11,428	18,241
358.00	11,716	20,555
358.20	12,026	22,929
358.40	12,337	25,366
358.60	12,647	27,864
358.80	12,958	30,424
359.00	13,268	33,047
359.20	13,578	35,732
359.40	13,889	38,478
359.60	14,199	41,287
359.80	14,510	44,158
360.00	14,820	47,091
360.20	15,153	50,088
360.40	15,486	53,152
360.60	15,819	56,283
360.80	16,152	59,480
361.00	16,485	62,743
361.20	16,817	66,073
361.40	17,150	69,470
361.60	17,483	72,934
361.80	17,816	76,463
362.00	18,149	80,060
362.20	18,505	83,725
362.40	18,860	87,462
362.60	19,216	91,269
362.80	19,571	95,148
363.00	19,927	99,098
363.20	20,283	103,119
363.40	20,638	107,211
363.60	20,994	111,374
363.80	21,349	115,609
364.00	**21,705**	**119,914**

Inflow Area = 362,419 sf , 62.86% Impervious , Inflow Depth = 1.48" for 1-year event
Inflow = 22.37 cfs @ 11.96 hrs , Volume= 44,701 cf
Outflow = 0.94 cfs @ 13.40 hrs , Volume= 43,451 cf , Atten= 96% , Lag= 86.1 min
Primary = 0.94 cfs @ 13.40 hrs , Volume= 43,451 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 358.45' @ 13.40 hrs Surf.Area= 12,409 sf Storage= 25,942 cf

Plug-Flow detention time= 491.2 min calculated for 43,451 cf (97% of inflow)
Center-of-Mass det. time= 474.7 min (1,296.9 - 822.2)

Primary OutFlow Max=0.92 cfs @ 13.40 hrs HW=358.45' (Free Discharge)
1=Orifice/Grate (Passes 0.92 cfs of 32.87 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.63 cfs @ 7.27 fps)
3=Orifice/Grate (Orifice Controls 0.29 cfs @ 1.00 fps)
4=Orifice/Grate (Controls 0.00 cfs)

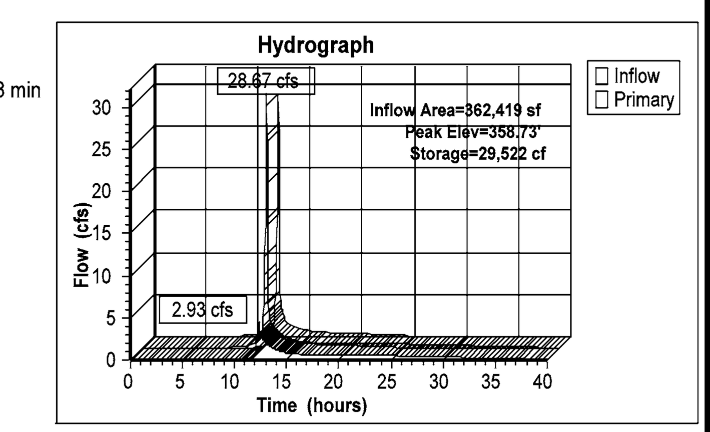


Inflow Area = 362,419 sf , 62.86% Impervious , Inflow Depth = 1.91" for 2-year event
Inflow = 28.67 cfs @ 11.96 hrs , Volume= 57,832 cf
Outflow = 2.93 cfs @ 12.37 hrs , Volume= 56,401 cf , Atten= 90% , Lag= 24.8 min
Primary = 2.93 cfs @ 12.37 hrs , Volume= 56,401 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 358.73' @ 12.37 hrs Surf.Area= 12,849 sf Storage= 29,522 cf

Plug-Flow detention time= 415.1 min calculated for 56,401 cf (98% of inflow)
Center-of-Mass det. time= 400.3 min (1,215.2 - 814.9)

Primary OutFlow Max=2.93 cfs @ 12.37 hrs HW=358.73' (Free Discharge)
1=Orifice/Grate (Passes 2.93 cfs of 37.99 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.67 cfs @ 7.71 fps)
3=Orifice/Grate (Orifice Controls 2.25 cfs @ 1.98 fps)
4=Orifice/Grate (Controls 0.00 cfs)

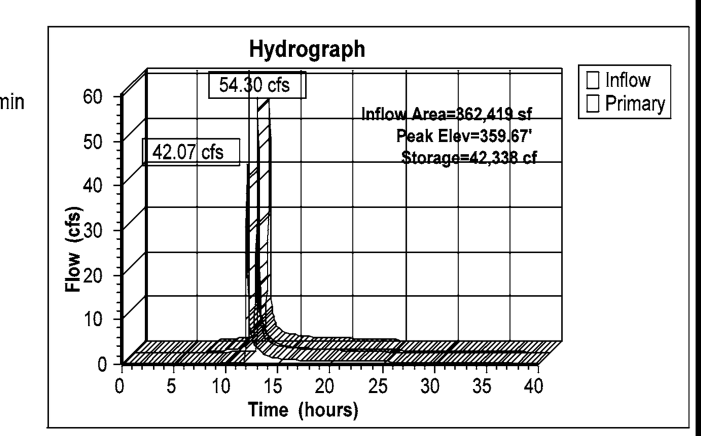


Inflow Area = 362,419 sf , 62.86% Impervious , Inflow Depth = 3.76" for 10-year event
Inflow = 54.30 cfs @ 11.96 hrs , Volume= 113,438 cf
Outflow = 42.07 cfs @ 12.01 hrs , Volume= 111,318 cf , Atten= 23% , Lag= 3.4 min
Primary = 42.07 cfs @ 12.01 hrs , Volume= 111,318 cf

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs
Peak Elev= 359.67' @ 12.01 hrs Surf.Area= 14,314 sf Storage= 42,338 cf

Plug-Flow detention time= 255.9 min calculated for 111,207 cf (98% of inflow)
Center-of-Mass det. time= 245.0 min (1,040.8 - 795.7)

Primary OutFlow Max=40.52 cfs @ 12.01 hrs HW=359.65' (Free Discharge)
1=Orifice/Grate (Passes 40.52 cfs of 49.96 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.78 cfs @ 8.99 fps)
3=Orifice/Grate (Orifice Controls 12.73 cfs @ 4.24 fps)
4=Orifice/Grate (Weir Controls 27.00 cfs @ 2.43 fps)



REVISIONS

No.	DATE	DESCRIPTION

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 038790
08/22/2016
PROFESSIONAL ENGINEER

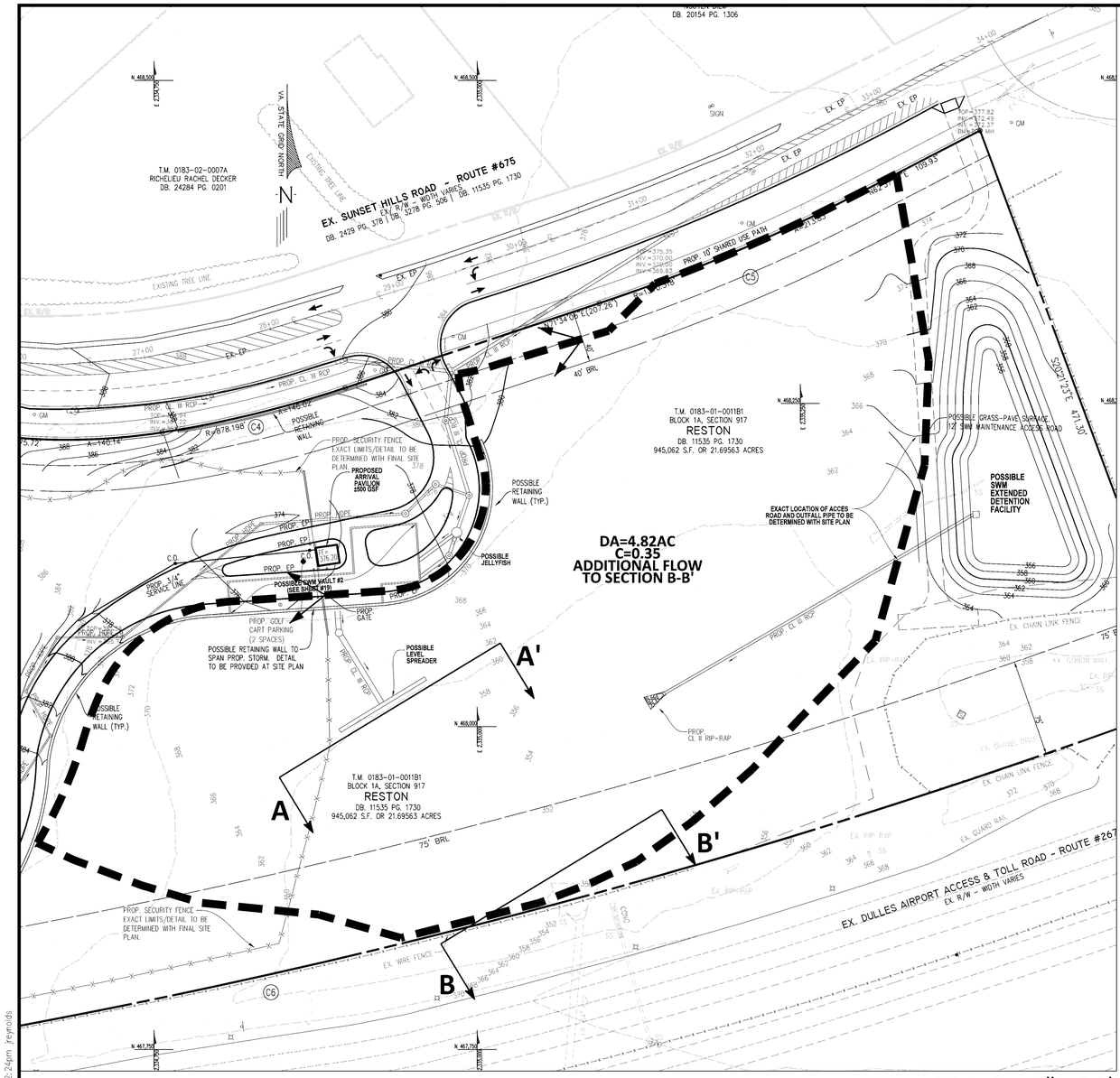
SWM - VAULT COMPUTATIONS (ULTIMATE ROAD CONDITION)
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: N/A
C.I.= N/A
DATE: JAN. 2016

SHEET
20B
OF
36

FILE No.
RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\21-SWM POST - ULTIMATE RD.dwg [SWM POST (2)] August 22, 2016 - 2:24pm jreynolds



SCALE: 1"=50'

2-YEAR STORM COMPUTATIONS

Worksheet for SECTION A-A'

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.05420	ft/ft
Discharge	8.64	ft³/s

Section Definitions

Station (ft)	Elevation (ft)
9+50	361.20
9+75	360.50
10+00	360.10
10+25	359.80
10+50	359.80
10+75	359.80
11+00	360.70
11+25	361.30
11+50	361.50

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(9+50, 361.20)	(11+50, 361.50)	0.033

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.08	ft
Elevation Range	359.80 to 361.50 ft	
Flow Area	4.55	ft²
Wetted Perimeter	59.25	ft

Bentley Systems, Inc. Haestad Methods Solution Center Bentley FlowMaster V8i (SELECTseries 1) [08.11.01.03]
8/18/2016 11:59:36 PM 27 Siemons Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666 Page 1 of 2

Worksheet for SECTION A-A'

Results

Hydraulic Radius	0.08	ft
Top Width	59.25	ft
Normal Depth	0.08	ft
Critical Depth	0.09	ft
Critical Slope	0.03596	ft/ft
Velocity	1.90	ft/s
Velocity Head	0.06	ft
Specific Energy	0.14	ft
Froude Number	1.21	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.08	ft
Critical Depth	0.09	ft
Channel Slope	0.05420	ft/ft
Critical Slope	0.03596	ft/ft

Bentley Systems, Inc. Haestad Methods Solution Center Bentley FlowMaster V8i (SELECTseries 1) [08.11.01.03]
8/18/2016 11:59:36 PM 27 Siemons Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666 Page 2 of 2

2-YEAR STORM COMPUTATIONS

Worksheet for SECTION B-B'

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.05420	ft/ft
Discharge	28.34	ft³/s

Section Definitions

Station (ft)	Elevation (ft)
9+50	352.80
9+75	352.00
10+00	352.00
10+25	350.70
10+50	350.30
10+75	350.70
11+00	351.50
11+25	352.50
11+50	353.30

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(9+50, 352.80)	(11+50, 353.30)	0.033

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.37	ft
Elevation Range	350.30 to 353.30 ft	
Flow Area	8.38	ft²
Wetted Perimeter	45.79	ft

Bentley Systems, Inc. Haestad Methods Solution Center Bentley FlowMaster V8i (SELECTseries 1) [08.11.01.03]
8/19/2016 12:10:17 AM 27 Siemons Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666 Page 1 of 2

Worksheet for SECTION B-B'

Results

Hydraulic Radius	0.18	ft
Top Width	45.78	ft
Normal Depth	0.37	ft
Critical Depth	0.42	ft
Critical Slope	0.02658	ft/ft
Velocity	3.38	ft/s
Velocity Head	0.18	ft
Specific Energy	0.54	ft
Froude Number	1.39	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.37	ft
Critical Depth	0.42	ft
Channel Slope	0.05420	ft/ft
Critical Slope	0.02658	ft/ft

Bentley Systems, Inc. Haestad Methods Solution Center Bentley FlowMaster V8i (SELECTseries 1) [08.11.01.03]
8/19/2016 12:10:17 AM 27 Siemons Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666 Page 2 of 2

LEVEL SPREADER OUTFALL NARRATIVE

SEE THIS SHEET FOR A DETAILED ANALYSIS OF THE CHARACTERISTICS OF THE OUTFALL ATTRIBUTED TO THE LEVEL SPREADER AND SUBSEQUENT DOWNSTREAM CROSS-SECTION WITH THE ADDITIONAL OVERLAND STORM RUNOFF CONTEMPLATED. A MANNING'S 'n' COEFFICIENT OF 0.033 WAS APPLIED TO THE 2-YEAR STORM OUTFLOW OF THE FACILITY OF 8.64 CFS AS CALCULATED FOR VAULT #2 ON SHEET #20B WHICH IS REPRESENTATIVE OF THE ANTICIPATED RUNOFF ACCOUNTING FOR THE ULTIMATE WIDENING OF SUNSET HILLS ROAD. AN ANALYSIS OF SECTION A-A', WHICH IS 5' PAST THE LEVEL SPREADER, RESULTS IN A VELOCITY OF 1.90 FT/S, WITHOUT CONSIDERATION OF ANY VELOCITY LOSSES ATTRIBUTED TO THE LEVEL SPREADER AS A CONSERVATIVE DESIGN MEASURE. ACCORDING TO THE INTERPRETIVE GUIDE TO SOILS IN FAIRFAX COUNTY, THE SOIL CONDITION IN THIS VICINITY HAS A NON-EROSIVE K-FACTOR OF 0.32. THE RESULTANT VELOCITY OF 1.90 FT/S WILL NOT CREATE AN EROSIVE CONDITION. A SIMILAR ANALYSIS WAS PERFORMED FOR SECTION B-B' WITH CONTEMPLATION OF ADDITIONAL DRAINAGE AREA DEPICTED ON THIS SHEET, AGAIN ACCOUNTING FOR THE RUNOFF ANTICIPATED WITH THE ULTIMATE WIDENING OF SUNSET HILLS ROAD. A TOTAL Q2 OF 28.34 CFS WAS UTILIZED, TRANSLATING TO A VELOCITY OF 3.38 FT/S, WHICH STILL DOES NOT POSE A RISK FOR EROSION. AS SUCH, THE LEVEL SPREADER OUTFALL IS ADEQUATE AND WILL NOT CAUSE EXCESS EROSION ON THE SITE DURING THE ULTIMATE BUILDOUT OF SUNSET HILLS ROAD. AS THE INTERIM CONDITION ATTRIBUTES LESSER FLOWS TO EACH FACILITYY, THE COMPUTATIONS SHOWN ON THIS SHEET ARE REFLECTIVE OF THE CRITICAL SCENARIO.

No.	DATE	DESCRIPTION
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
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REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/20/2016
06/21/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
CLAYTON C. BOTOK
LIC. No. 038706
08/22/2016
PROFESSIONAL ENGINEER

SWM - LEVEL SPREADER COMPUTATIONS

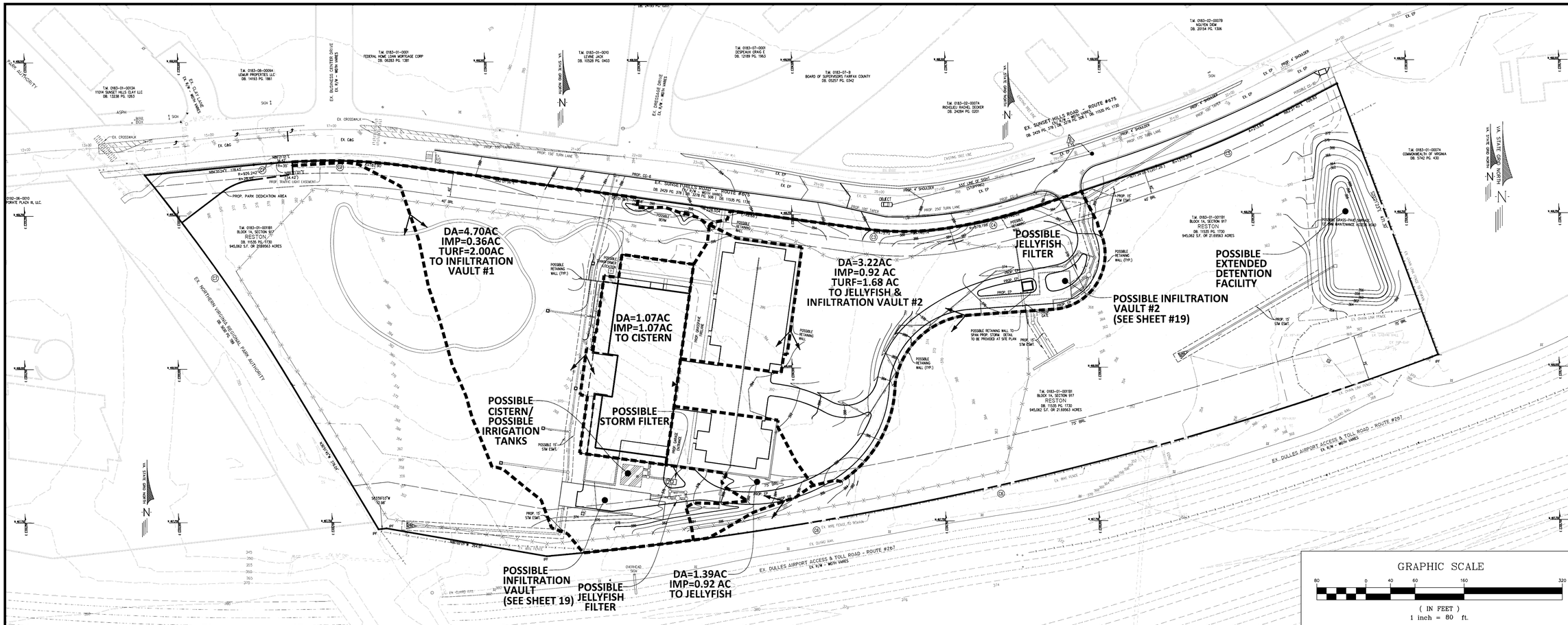
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: AS NOTED
C.I.= 2'
DATE: JAN. 2016

SHEET
20C
OF
36

FILE No.
RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\21-FLOWMASTER.dwg [LAYOUT] August 22, 2016 - 2:24pm jreynolds



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	2.27	0.00	0.00	2.27	0.03
Managed Turf (acres)	0.00	2.54	0.00	0.00	2.54	0.20
Impervious Cover (acres)	0.00	2.35	0.00	0.00	2.35	0.95
				Total	7.16	

Total Phosphorus Available for Removal in D.A. A (lb/yr): 6.25
Post Development Treatment Volume in D.A. A (ft^3): 9,948

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists-

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft^3)	Runoff Reduction (ft^3)	Remaining Runoff Volume (ft^3)	Total BMP Treatment Volume (ft^3)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
2.h. To Rainwater Harvesting (Spec #6)	40		1.07	0	1,476	2,214	3,690	0	0.00	2.32	0.93	1.39	14.b. MTD - Filtering
7.a. Infiltration #1 (Spec #8)	50	2.00	0.36	5,728	4,211	4,211	8,421	25	1.80	1.69	2.18	1.31	
14.a. Manufactured Treatment Device-Hydrodynamic	0	0.47	0.92	0	0	3,514	3,514	50	0.00	2.21	1.10	1.10	7.a. Infiltration #1
14.b. Manufactured Treatment Device-Filtering	0	0.00	0.00	2,214	0	2,214	2,214	50	1.39	0.00	0.69	0.69	7.a. Infiltration #1

Drainage Area B

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)	0.00	0.44	0.00	0.00	0.44	0.03
Managed Turf (acres)	0.00	1.68	0.00	0.18	1.86	0.20
Impervious Cover (acres)	0.00	0.77	0.00	0.15	0.92	0.95
				Total	3.22	

Total Phosphorus Available for Removal in D.A. B (lb/yr): 2.86
Post Development Treatment Volume in D.A. B (ft^3): 4,556

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists-

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft^3)	Runoff Reduction (ft^3)	Remaining Runoff Volume (ft^3)	Total BMP Treatment Volume (ft^3)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
7.a. Infiltration #1 (Spec #8)	50	0.00	0.00	4,556	2,278	2,278	4,556	25	1.43	0.00	0.89	0.54	
14.a. Manufactured Treatment Device-Hydrodynamic	0	1.86	0.92	0	0	4,556	4,556	50	0.00	2.86	1.43	1.43	7.a. Infiltration #1

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	10.75
TP LOAD REDUCTION REQUIRED (lb/yr)	1.95
TP LOAD REDUCTION ACHIEVED (lb/yr)	7.23
TP LOAD REMAINING (lb/yr):	3.53
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.00 **

** TARGET TP REDUCTION EXCEEDED BY 5.28 LB/YEAR **

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	76.92
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	40.13
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	36.79

Project Name: Reston 917
Date: 1-Aug-16
BMP Design Specifications List: 2013 Draft Stds & Specs
(Ctrl+Shift+A)
Enal results

Site Information

Post-Development Project (Treatment Volume and Loads)

Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed, protected forest/open space or reforested	0.00	0.52	1.72	1.18	12.42 *
Managed Turf (acres) – disturbed, graded for yards or other turf to be maintained	0.00	4.92	0.23	0.64	5.79
Impervious Cover (acres)	0.00	3.12	0.00	0.15	3.27
					21.48

* Forest/Open Space areas must be protected in accordance with the Virginia Runoff Reduction Method

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total Phosphorus (TP) EMC (mg/L)	0.33
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
Pj (unitless correction factor)	0.90

Runoff Coefficients (Rv)

	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

TP Load Reduction Required (lb/yr): 1.95

LAND COVER SUMMARY – POST DEVELOPMENT

Land Cover Summary

Forest/Open Space Cover (acres)	12.42
Weighted Rv (forest)	0.03
% Forest	58%
Managed Turf Cover (acres)	5.79
Weighted Rv (turf)	0.21
% Managed Turf	27%
Impervious Cover (acres)	3.27
Rv (impervious)	0.95
% Impervious	15%
Site Area (acres)	21.48
Site Rv	0.22

Treatment Volume and Nutrient Loads

Treatment Volume (acre-ft)	0.3929
Treatment Volume (cubic feet)	17,114
TP Load (lb/yr)	10.75
TN Load (lb/yr)	76.92
Informational Purposes Only	

LEGEND

- PROPOSED ON-SITE IMPERVIOUS AREA
- POSSIBLE LOCATION OF RAINWATER CISTERN
- POSSIBLE LOCATION OF JELLYFISH FILTER
- POSSIBLE LOCATION OF STORM FILTER

BMP NARRATIVE:

THIS PLAN PROPOSES AN OFFICE BUILDING WITH ASSOCIATED GARAGE PARKING. THE RESULT OF THE IMPROVEMENTS IS AN INCREASE OF APPROXIMATELY 3.27 AC OF IMPERVIOUS AREA AND 5.79 OF MANAGED TURF LOCATED WITHIN THE SUBJECT PROPERTY. PER THE VIRGINIA RUNOFF REDUCTION METHOD (VRRM) NEW DEVELOPMENT REQUIREMENTS, A COMBINATION OF PROPOSED BMP FACILITIES SHALL PROVIDE THE MINIMUM POLLUTANT REDUCTIONS AS COMPUTED ON THIS SHEET.

BMP REQUIREMENTS FOR THIS SITE MAY INCLUDE BUT ARE NOT LIMITED TO: BELOW GRADE STORM FILTERS, RAINWATER CISTERNS, INFILTRATION SYSTEMS, AND JELLYFISH FILTERS. PLEASE SEE THIS SHEET FOR THE PRELIMINARY COMPUTATIONS WHICH SHOW THAT, BY TREATING ± 3.27 ACRES OF IMPERVIOUS AREA AND 4.40 ACRES OF MANAGED TURF WITH VARIOUS TREATMENT METHODS, THE REQUIRED PHOSPHORUS REMOVAL CAN BE ACHIEVED.

THE PROPOSED BMP FACILITIES SHALL BE PRIVATELY MAINTAINED BY THE PROPERTY OWNER. VIRGINIA'S STORMWATER MANAGEMENT REGULATIONS REQUIRE INSPECTIONS TWICE A YEAR, AND AFTER ANY STORM EVENT THAT EXCEEDS THE CAPACITY OF THE FACILITY TO ENSURE THAT THE FACILITIES REMAIN OPERATIONAL. A DETAILED INSPECTION SHALL BE PERFORMED ANNUALLY BY A QUALIFIED PROFESSIONAL IN ORDER TO ENSURE THAT THE FACILITIES ARE OPERATIONAL AS DESIGNED, AND TO PROVIDE AN OPPORTUNITY TO SCHEDULE ANY MAINTENANCE THAT THE FACILITIES MAY REQUIRE.

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/27/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
Clayton Tyler Clayton
LICENSE NO. 0402020
08/22/2016
PROFESSIONAL ENGINEER

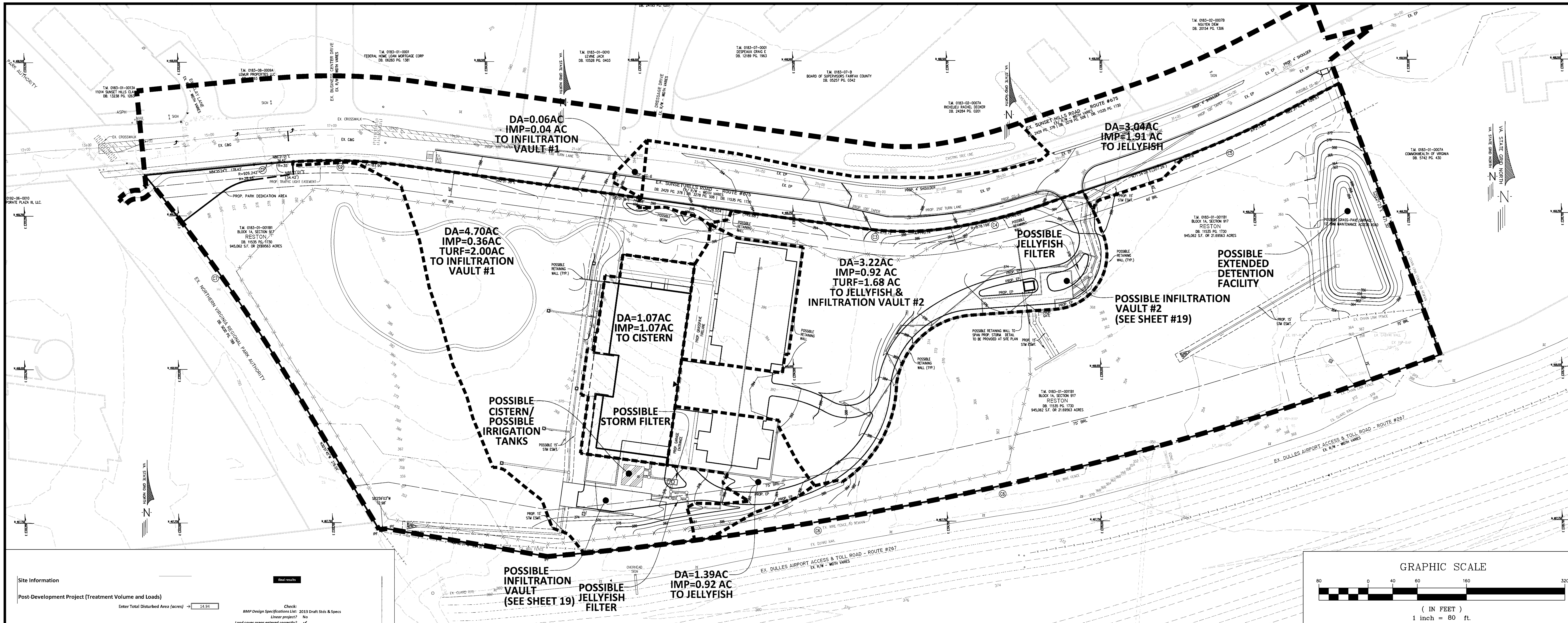
BMP COMPUTATIONS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016
SCALE: 1"=80'
C.I.= 2'

SHEET 21 OF 36

FILE No. RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\22-BMP.dwg [BMP COMPS] August 22, 2016 – 2:24pm jreynolds



GRAPHIC SCALE

80 0 40 60 160 320

(IN FEET)
1 inch = 80 ft.

Site Information

final results

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 14.94

Check:
BMP Design Specifications List: 2013 Draft Stds & Specs
Linear project? No
Land cover areas entered correctly? ✔
Total disturbed area entered? ✔

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested	0.00	17.56	1.95	1.97	21.48
Managed Turf (acres) -- disturbed, graded for yards or other turf to be	0.00	2.19	0.00	2.45	4.64
Impervious Cover (acres)	0.00	0.30	0.00	1.49	1.79
					27.91

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested	0.00	9.52	1.72	1.18	12.42 *
Managed Turf (acres) -- disturbed, graded for yards or other turf to be	0.00	6.11	0.23	1.63	7.97
Impervious Cover (acres)	0.00	4.42	0.00	3.10	7.52
Area Check	OK.	OK.	OK.	OK.	27.91

** Forest/Open Space areas must be protected in accordance with the Virginia Runoff Reduction Method*

Constants

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

Runoff Coefficients (Rv)

	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 -- PRE-REDEVELOPMENT

Land Cover Summary-Pre

Pre-ReDevelopment	Listed	Adjusted[1]
Forest/Open Space Cover (acres)	21.48	16.57
Weighted Rv(forest)	0.03	0.03
% Forest	77%	75%
Managed Turf Cover (acres)	4.64	3.82
Weighted Rv(turf)	0.23	0.22
% Managed Turf	17%	17%
Impervious Cover (acres)	1.79	1.79
Rv(impervious)	0.95	0.95
% Impervious	6%	8%
Total Site Area (acres)	**27.91**	**22.18**
Site Rv	**0.12**	**0.14**

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)

Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	12.42
Weighted Rv(forest)	0.03
% Forest	45%
Managed Turf Cover (acres)	7.97
Weighted Rv (turf)	0.21
% Managed Turf	29%
Impervious Cover (acres)	7.52
Rv(impervious)	0.95
% Impervious	27%
Final Site Area (acres)	**27.91**
Final Post Dev Site Rv	**0.33**

Land Cover Summary-Post

Post-ReDevelopment	
Forest/Open Space Cover (acres)	12.42
Weighted Rv(forest)	0.03
% Forest	56%
Managed Turf Cover (acres)	7.97
Weighted Rv (turf)	0.21
% Managed Turf	36%
ReDev. Impervious Cover (acres)	1.79
Rv(impervious)	0.95
% Impervious	8%
Total ReDev. Site Area (acres)	**22.18**
ReDev Site Rv	**0.17**

Land Cover Summary-Post

Post-Development New Impervious	
New Impervious Cover (acres)	5.73
Rv(impervious)	0.95

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.2879	0.2572	
Pre-ReDevelopment Treatment Volume (cubic feet)	12,539	11,203	
Pre-ReDevelopment TP Load (lb/yr)	**7.88**	**7.04**	*
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	0.28	0.32	*
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		*9.09*	

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.7698
Final Post-Development Treatment Volume (cubic feet)	33,532
Final Post-Development TP Load (lb/yr)	**21.07**
Final Post-Development TP Load per acre (lb/acre/yr)	0.75

Post-ReDevelopment Treatment Volume (acre-ft)	0.3162
Post-ReDevelopment Treatment Volume (cubic feet)	13,772
* Post-ReDevelopment Load (TP) (lb/yr)*	**8.65**
Post-ReDevelopment TP Load per acre (lb/acre/yr)	0.39
Max. Reduction Required (Below Pre-ReDevelopment Load)	20%
* **TP Load Reduction Required for Redeveloped Area (lb/yr)**	**-0.44**

** Reduction below new development load limitation not required*

Post-Development Treatment Volume (acre-ft)	0.4536
Post-Development Treatment Volume (cubic feet)	19,760
Post-Development TP Load (lb/yr)	**12.42**
TP Load Reduction Required for New Impervious Area (lb/yr)	**10.07**

[1] Adjusted Land Cover Summary:
Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).

Column I shows load reduction requriement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

TP Load Reduction Required (lb/yr)	**9.63**
Linear Project TP Load Reduction Required (lb/yr):	**N/A**

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	56.36
Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	150.72

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)		2.27			2.27	0.03
Managed Turf (acres)		2.56			2.56	0.20
Impervious Cover (acres)		2.37		0.02	2.39	0.95
				Total	7.22	

Total Phosphorus Available for Removal in D.A. A (lb/yr)	6.35
Post Development Treatment Volume in D.A. A (ft^3)	10,100

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists-

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft^3)	Runoff Reduction (ft^3)	Remaining Runoff Volume (ft^3)	Total BMP Treatment Volume (ft^3)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
2.h. To Rainwater Harvesting (Spec #6)	40		1.07	0	1,476	2,214	3,690	0	0.00	2.32	0.93	1.39	14.b. MTD - Filtering
7.a. Infiltration #1 (Spec #8)	50	2.00	0.36	5,779	4,236	4,236	8,472	25	1.81	1.69	2.19	1.31	
14.b. Manufactured Treatment Device-Filtering	0	0.00	0.00	2,214	0	2,214	2,214	50	1.39	0.00	0.69	0.69	7.a. Infiltration #1
14.c. Manufactured Treatment Device-Generic	0	0.54	0.92	0	0	3,565	3,565	50	0.00	2.24	1.12	1.12	7.a. Infiltration #1

Drainage Area B

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)	0.00	0.44	0.00	0.00	0.44	0.03
Managed Turf (acres)	0.00	2.46	0.00	0.53	2.99	0.21
Impervious Cover (acres)	0.00	1.90	0.00	0.93	2.83	0.95
				Total	6.26	

Total Phosphorus Available for Removal in D.A. B (lb/yr)	7.56
Post Development Treatment Volume in D.A. B (ft^3)	12,026

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists-

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft^3)	Runoff Reduction (ft^3)	Remaining Runoff Volume (ft^3)	Total BMP Treatment Volume (ft^3)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
7.a. Infiltration #1 (Spec #8)	50	0.00	0.00	12,026	6,013	6,013	12,026	25	3.77	0.00	2.36	1.42	
14. Manufactured Treatment Devices (no RR)													
14.b. Manufactured Treatment Device-Filtering	0	2.99	2.83	0	0	12,026	12,026	50	0.00	7.55	3.77	3.77	7.a. Infiltration #1

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	21.07
TP LOAD REDUCTION REQUIRED (lb/yr)	9.63
TP LOAD REDUCTION ACHIEVED (lb/yr)	11.06
TP LOAD REMAINING (lb/yr):	10.01
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.00 **

** TARGET TP REDUCTION EXCEEDED BY 1.44 LB/YEAR **

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	150.72
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	59.54
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	91.17

LEGEND

- PROPOSED ON-SITE IMPERVIOUS AREA
- POSSIBLE LOCATION OF RAINWATER CISTERN
- POSSIBLE LOCATION OF JELLYFISH FILTER
- POSSIBLE LOCATION OF STORM FILTER

BMP NARRATIVE:

THIS BMP PLAN CONTEMPLATES THE ULTIMATE CONDITION OF SUNSET HILLS ROAD. THE ANALYSIS WAS PERFORMED USING NEW DEVELOPMENT CRITERIA FOR AREAS LOCATED ONSITE AS WAS DONE ON SHEET #21 AND REDEVELOPMENT CRITERIA FOR OFFSITE IMPROVEMENTS. THE RESULT OF THE IMPROVEMENTS IS AN INCREASE OF APPROXIMATELY 4.25 AC OF IMPERVIOUS AREA COMPARED TO THE ONSITE BMP COMPUTATIONS ON SHEET #21. PER THE VIRGINIA RUNOFF REDUCTION METHOD (VRRM) REDEVELOPMENT REQUIREMENTS, A COMBINATION OF PROPOSED BMP FACILITIES SHALL PROVIDE THE MINIMUM POLLUTANT REDUCTIONS COMPUTED ON THIS SHEET.

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No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 038790
08/22/2016
PROFESSIONAL ENGINEER

BMP COMPUTATIONS (ULTIMATE ROAD CONDITION)

RESTON EASTGATE CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=80'
C.I.=2'
DATE: JAN. 2016

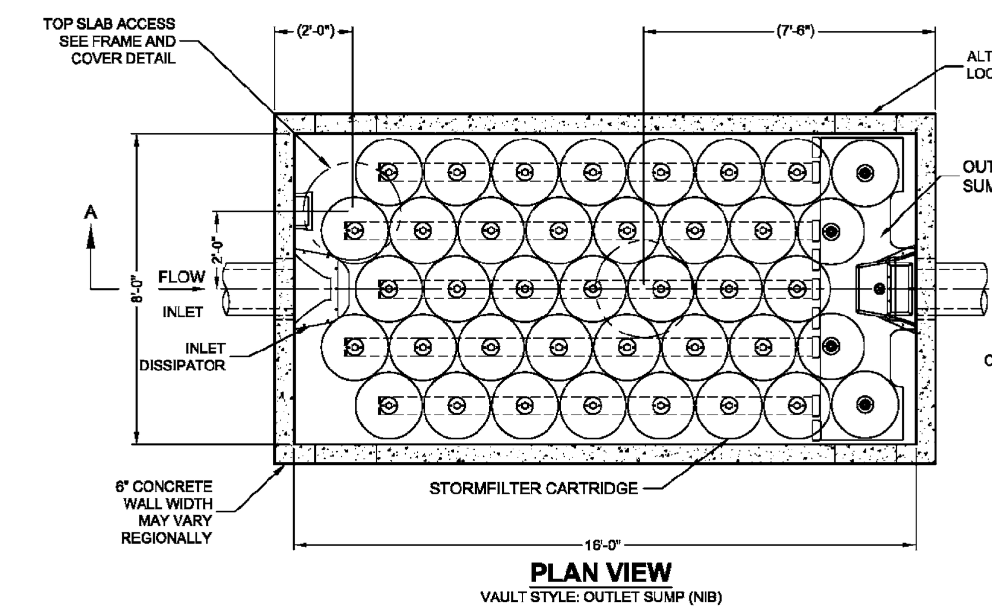
SHEET 21A OF 36

FILE No. RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\22-BMP-ULTIMATE RD.dwg [BMP ULTIMATE] August 22, 2016 – 2:24pm jreynolds

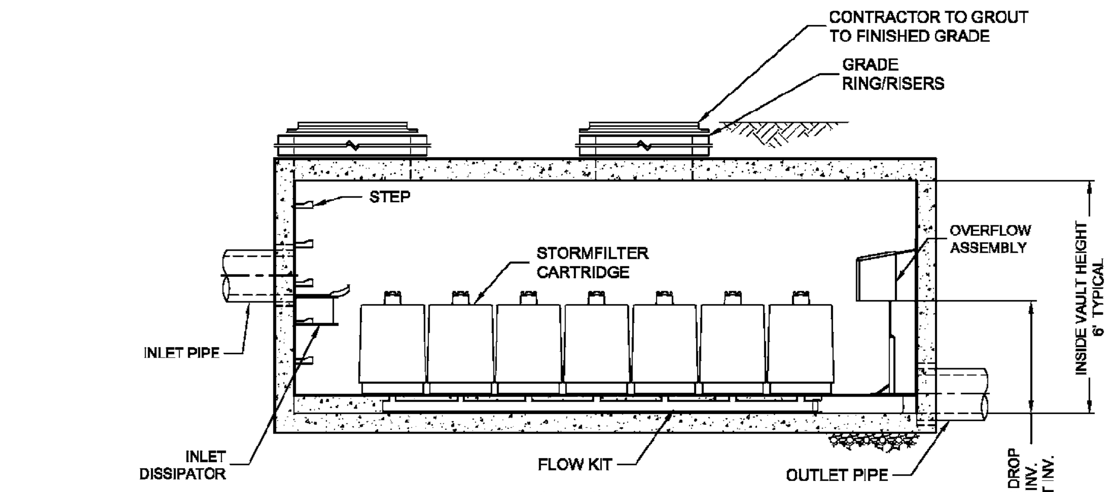
STORM FILTER STANDARD DETAIL

(OR APPROVED EQUAL)

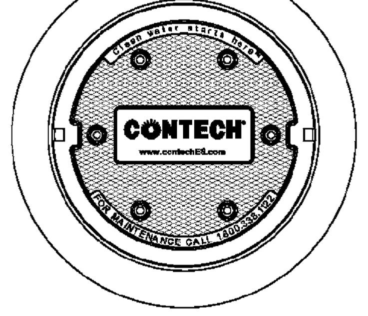


PLAN VIEW

VAULT STYLE: OUTLET SUMP (NIB)



SECTION A-A



FRAME AND COVER

(DIAMETER VARIES)

N.T.S.

STORMFILTER DESIGN NOTES

STORMFILTER TREATMENTCAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD VAULT STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (39). VAULT STYLE OPTIONS INCLUDE INLET BAY (32), INLET BAY/OUTLET BAY (27), OUTLET BAY (34), INLET BAY/FULL HEIGHT BAFFLE (23), FULL HEIGHT BAFFLE WALL (30).

STORMFILTER 8X16 PEAK HYDRAULIC CAPACITY IS 1.8 CFS. IF THE SITE CONDITIONS EXCEED 1.8 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION

CARTRIDGE HEIGHT	27"		18"		LOW DROP	
RECOMMENDED HYDRAULIC DROP (H)	3.05'		2.3'		1.8'	
SPECIFIC FLOW RATE (gpm/sf)	2 gpm/ft²	1 gpm/ft²	2 gpm/ft²	1 gpm/ft²	2 gpm/ft²	1 gpm/ft²
CARTRIDGE FLOW RATE (gpm)	22.5	11.25	15	7.5	10	5

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			*
WATER QUALITY FLOW RATE (cfs)			*
PEAK FLOW RATE (cfs)			*
RETURN PERIOD OF PEAK FLOW (yrs)			*
# OF CARTRIDGES REQUIRED			*
CARTRIDGE FLOW RATE			*
MEDIA TYPE (CSF, PERLITE, ZPG, GAC, PHS)			*
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE #1	*	*	*
INLET PIPE #2	*	*	*
OUTLET PIPE	*	*	*
UPSTREAM RIM ELEVATION			*
DOWNSTREAM RIM ELEVATION			*
ANTI-FLOTATION BALLAST		WIDTH	HEIGHT
		*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
6. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 39 SECONDS.
7. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).

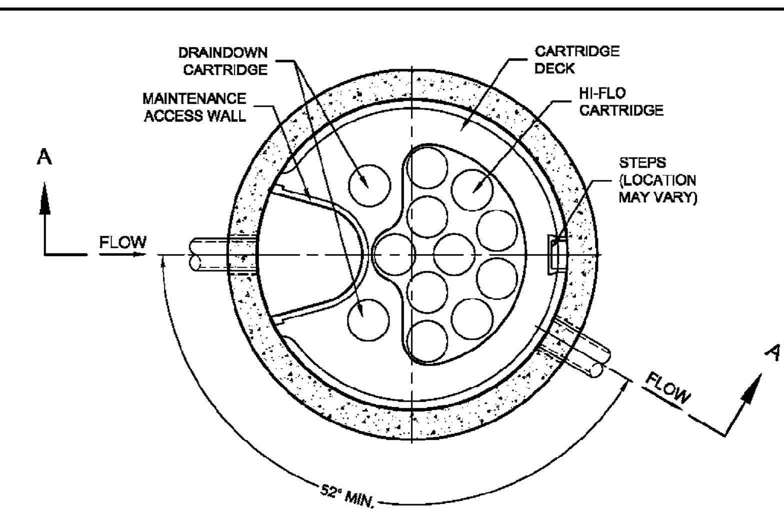
INSTALLATION NOTES
1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
2. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER VAULT (LIFTING CLUTCHES PROVIDED).
3. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL VAULT SECTIONS AND ASSEMBLE VAULT.
4. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH OUTLET PIPE INVERT WITH OUTLET BAY FLOOR.
5. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

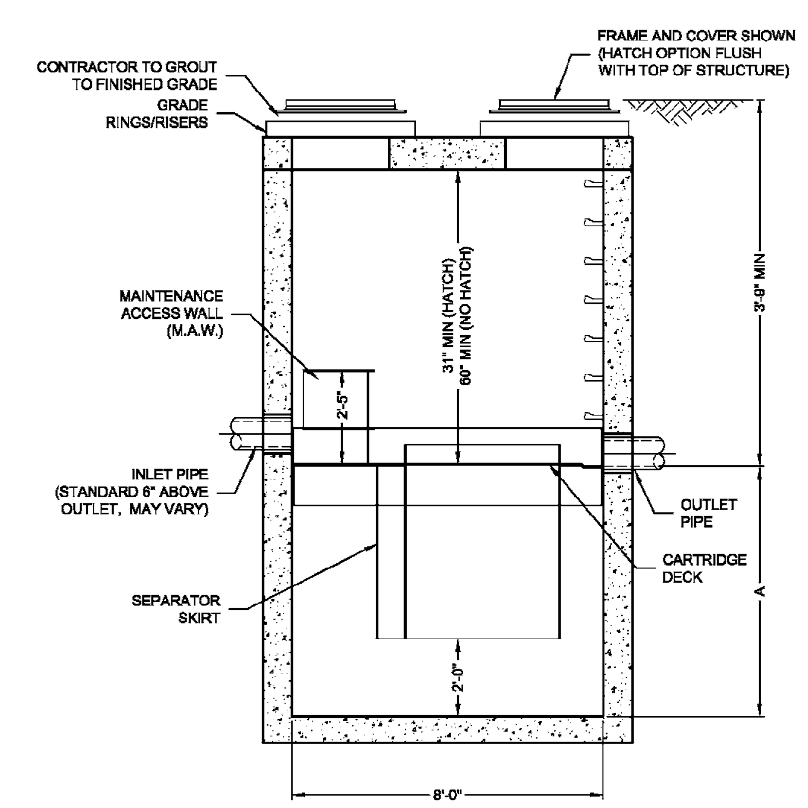
SF0816
STORMFILTER
STANDARD DETAIL

JELLYFISH FILTER STANDARD DETAIL

(OR APPROVED EQUAL)

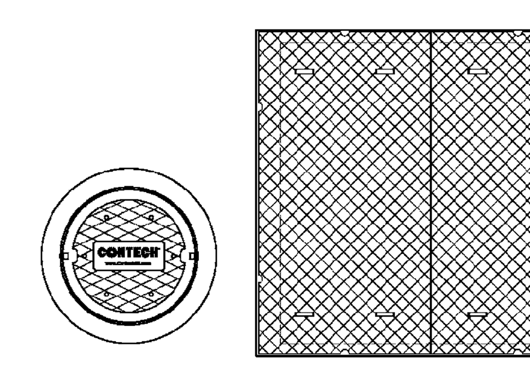


PLAN VIEW



SECTION A-A

Jellyfish® Filter



FRAME AND COVER

(DIAMETER VARIES)

N.T.S.

HATCH

(72" x 72" CAST INTO SLAB)

N.T.S.

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN. Ø96" MANHOLE JELLYFISH PEAK TREATMENT CAPACITY IS 1.96 CFS. IF THE SITE CONDITIONS EXCEED 1.96 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION

CARTRIDGE DEPTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-5"	5'-3"	4'-2"	3'-2"
FLOW RATE HIGH-FLO / DRAINDOWN (cfs) (per cart)	0.18 / 0.09	0.13 / 0.065	0.09 / 0.045	0.05 / 0.025
MAX. CARTS HIGH-FLO / DRAINDOWN	10 / 2			

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			*
WATER QUALITY FLOW RATE (cfs)			*
PEAK FLOW RATE (cfs)			*
RETURN PERIOD OF PEAK FLOW (yrs)			*
# OF CARTRIDGES REQUIRED (HF / DD)			* / *
CARTRIDGE SIZE			*
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE #1	*	*	*
INLET PIPE #2	*	*	*
OUTLET PIPE	*	*	*
RIM ELEVATION			*
ANTI-FLOTATION BALLAST		WIDTH	HEIGHT
		*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 3', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED)
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT)
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
E. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION AT (866) 740-3318.

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JF8
STANDARD DETAIL
OFFLINE CONFIGURATION

NOTE:

APPLICANT RESERVES THE RIGHT TO SELECT ALTERNATE SWM/BMP FACILITIES THAT ARE APPROVED EQUIVALENTS AT THE TIME OF FINAL SITE PLAN. FINAL SIZING AND DETAILS OF SWM AND BMP FACILITIES SHALL BE DETERMINED AT TIME OF FINAL SITE PLAN.

REVISIONS

No.	DATE	DESCRIPTION

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

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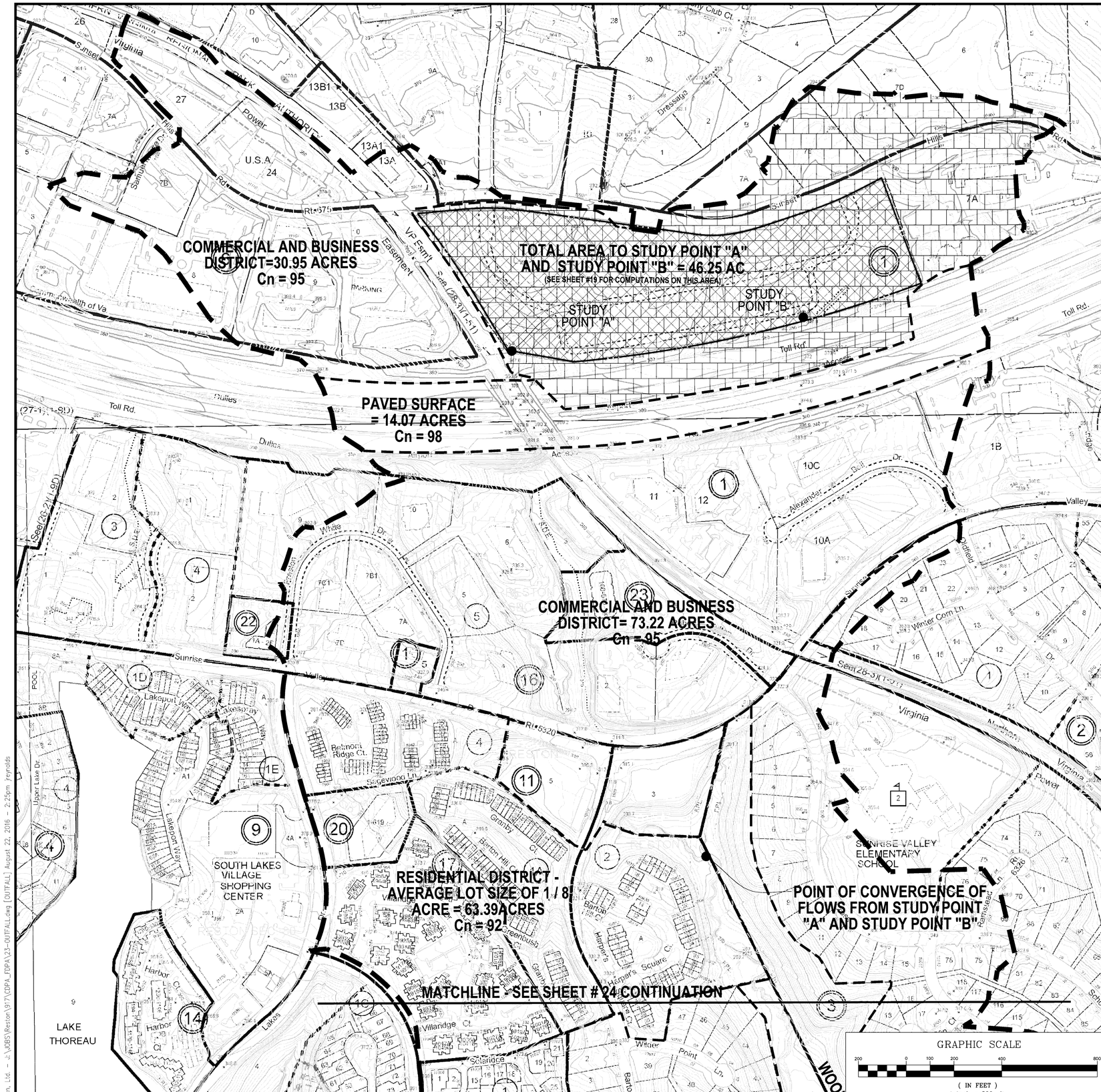
CLAYTON C. TOCK
Lic. No. 036790
08/22/2016
PROFESSIONAL ENGINEER

BMP DETAILS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=60' C.I.= 2' DATE: JAN. 2016

FILE No.
RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\22-BMP.dwg [BMP DETAILS] August 22, 2016 – 2:25pm jreynolds



OUTFALL ANALYSIS NARRATIVE:

THE SUBJECT SITE IS LOCATED BETWEEN THE DULLES TOLL ROAD AND SUNSET HILLS RD. THE EXISTING TOPOGRAPHY OF THE SITE DRAINS SOUTH AND SOUTHWEST TO TWO DIFFERENT CULVERTS. TWO STUDY POINTS HAVE BEEN ESTABLISHED AT LOCATIONS WHERE STORMWATER RUNOFF LEAVES THE SITE. STUDY POINT "A" IS LOCATED JUST BEFORE THE EXISTING 36" CMP CULVERT WHICH CROSSES THE WASHINGTON AND OLD DOMINION TRAIL AT THE SOUTH WEST REGION OF THE SITE. STUDY POINT "B" IS LOCATED SOUTH OF THE SITE JUST BEFORE AN EXISTING 54" RCP CULVERT THAT CROSSES THE DULLES TOLL RD. CULVERT COMPUTATIONS HAVE BEEN PROVIDED FOR BOTH CULVERTS AND CAN BE FOUND ON SHEET #25. THESE COMPUTATIONS CONTEMPLATE THE CRITICAL CONDITIONS CONTEMPLATED WITH THE ULTIMATE BUILDOUT OF SUNSET HILLS ROAD. AS THIS CONDITION YIELDS MORE FLOW TO THE RESPECTIVE CULVERTS, THE CONTRIBUTING FLOWS TO THE DOWNSTREAM CULVERTS WERE TAKEN FROM SHEETS #20A-20B, WHICH DEPICT THE ULTIMATE ROAD WIDENING CONDITION.

AS SHOWN ON THE SWM ANALYSIS SHEETS, THE SITE HAS BEEN ENGINEERED TO REDUCE THE POST-DEVELOPMENT PEAK FLOWS FOR THE 1 YR , 2YR AND 10 YR 24-HR STORM. IN ADDITION, SWM FACILITIES HAVE BEEN DESIGNED TO DETAIN THE 1 YR - 24 HR STORM PER THE ENERGY BALANCE EQUATION METHOD IN COMPLIANCE WITH CHAPTER 124-4-4.B3(c). STORMWATER RUNOFF LEAVES THE SITE VIA TWO DIFFERENT CULVERTS MAKING ITS WAY ACROSS THE DULLES TOLL RD. AND EVENTUALLY CONVERGING IN A CHANNEL FOUND IN A MAPPED FLOODPLAIN NEAR RT 5320. (SEE THIS SHEET FOR LOCATION) . PER CHAPTER 124-4-4.B6(d) "IF SECTION 124-4-4B3 IS USED TO SHOW COMPLIANCE WITH CHANNEL PROTECTION THE CRITERIA ABOVE THE LIMIT OF ANALYSIS MAY EXTEND TO A POINT THAT IS AT LEAST 150 FEET DOWNSTREAM OF A POINT WHERE THE DRAINAGE AREA IS 360 ACRES OR GREATER." POINT OF CONFLUENCE "A" HAS BEEN DETERMINED TO SHOW COMPLIANCE WITH THIS SECTION SINCE THIS POINT RECEIVES A TOTAL OF 453.13 AC OF STORMWATER RUNOFF. THREE CROSS SECTIONS HAVE BEEN PROVIDED AT EVERY 50 FEET ON SHEET #25 AND VERIFIED THAT THE PROPOSED 10 YR WATER SURFACE ELEVATION DOES NOT FLOOD THE CHANNEL.

FURTHERMORE COMPLIANCE WITH FLOOD PROTECTION IS BASED ON CHAPTER 124-4-4.C.6.(c) WHERE "THE DOWNSTREAM LIMITS OF ANALYSIS MAY EXTEND TO A POINT WHERE STORMWATER CONVEYANCE SYSTEM ENTERS A MAPPED FLOODPLAIN OR OTHER FLOOD PRONE AREA, ADOPTED BY ORDINANCE". POINT OF CONFLUENCE "A" IS LOCATED IN SNAKEDEN BRANCH WHICH IS FOUND INSIDE A MAPPED FLOOD PLAIN PER THE FAIRFAX COUNTY MAP GIS.

AS A PROFESSIONAL ENGINEER, IT IS THE OPINION OF URBAN ENGINEERING & ASSOCIATES, INC THAT AN ADEQUATE OUTFALL EXISTS FOR THIS SITE: Clayton Tock 08/22/2016

URBAN ENGINEERING & ASSOCIATES, INC. — DATE
CLAYTON C TOCK, P.E., ASSOCIATE

VA. STATE GRID NORTH

LEGEND

- DIVIDE BETWEEN DISTRICTS
- DRAINAGE DIVIDE TO POINT OF CONFLUENCE
- ON-SITE & OFF-SITE AREA ANALYZED WITH SWM PLAN TOTAL AREA = 46.25 AC - SEE SHEET #19 FOR COMPUTATIONS
- SITE = 21.70 AC

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/27/2016
06/27/2016
08/01/2016
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COMMONWEALTH OF VIRGINIA
CLAYTON C. TOCK
Lic. No. 036790
08/22/2016
PROFESSIONAL ENGINEER

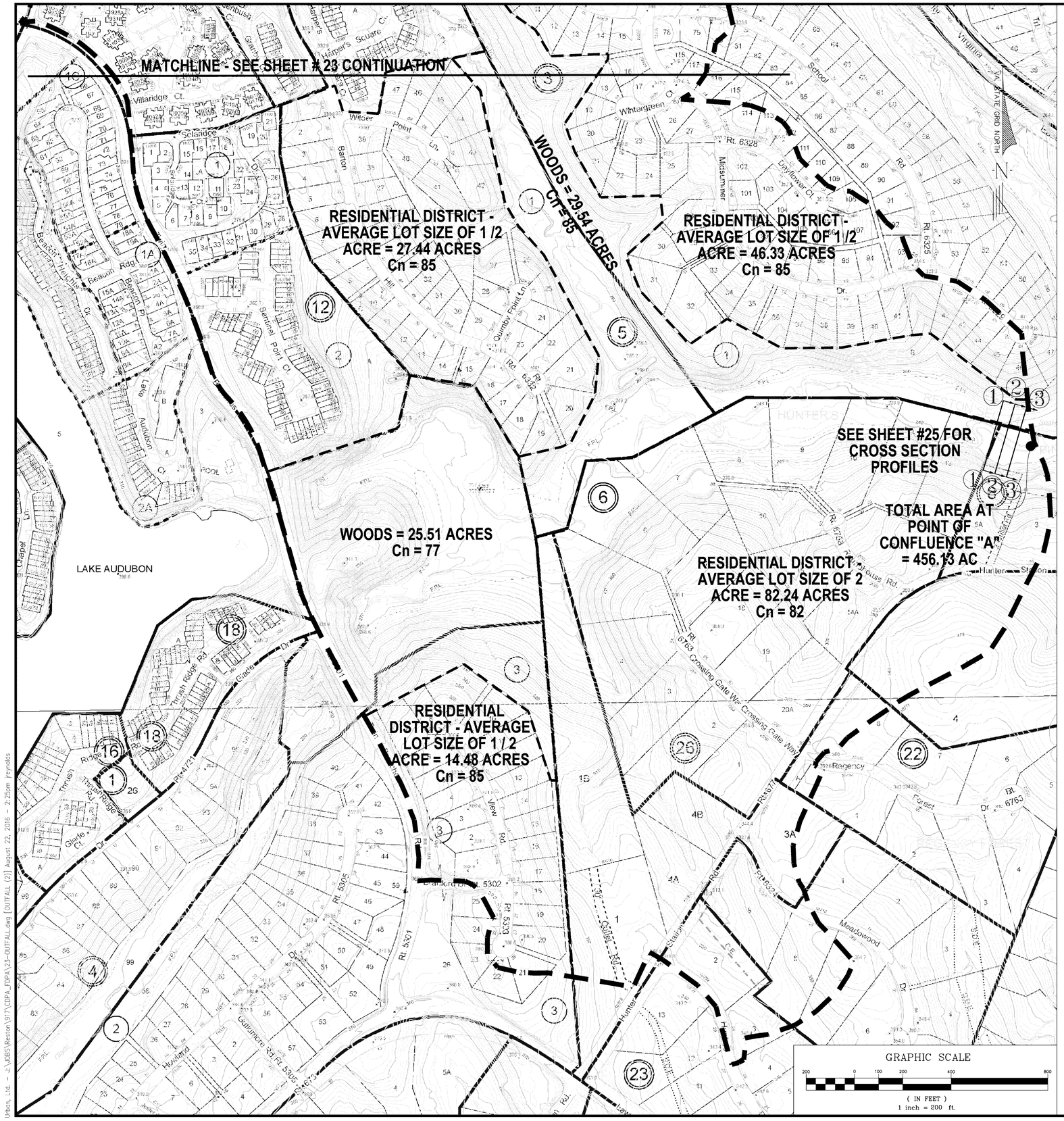
OUTFALL ANALYSIS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=200' | C.I.= 2' | DATE: JAN. 2016

SHEET 23 OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\23-OUTFALL.dwg [OUTFALL] August 22, 2016 - 2:25pm reynolds



LEGEND

- DIVIDE BETWEEN DISTRICTS
- DRAINAGE DIVIDE TO POINT OF CONFLUENCE
- ON-SITE & OFF-SITE AREA ANALYZED WITH SWM PLAN TOTAL AREA = 46.25 AC - SEE SHEET #19 FOR COMPUTATIONS
- SITE = 21.70 AC

No.	DATE	DESCRIPTION
-	-	-

REVISIONS

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OUTFALL ANALYSIS
RESTON EASTGATE
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HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=200'
CI.= 2'
DATE: JAN. 2016

SHEET 24 OF 36

FILE No. RZ-12794

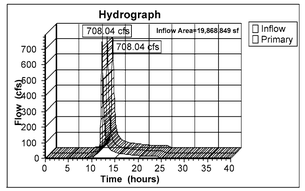
Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\23-OUTFALL.dwg [OUTFALL (2)] August 22, 2016 – 2:25pm Reynolds

Curve Number & Time of Concentration Calculations

	Area (ac)	CN	Description
	30.950	95	Urban commercial, 85% imp, HSG D
*	14.070	98	Paved Surfaces
	73.220	95	Urban commercial, 85% imp, HSG D
	63.390	92	1/8 acre lots, 65% imp, HSG D
	27.440	85	1/2 acre lots, 25% imp, HSG D
	46.330	85	1/2 acre lots, 25% imp, HSG D
	29.540	77	Woods, Good, HSG D
	25.510	77	Woods, Good, HSG D
	14.480	85	1/2 acre lots, 25% imp, HSG D
	82.240	82	2 acre lots, 12% imp, HSG D
	407.170	87	Weighted Average
	231.421		56.84% Pervious Area
	175.749		43.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.0					**Direct Entry,**

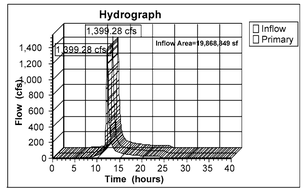
* For areas that drain directly to Study Point "A" and Study Point "B" refer to sheet #19 for Tc, Curve Number calculations and releases.



2 YR STORM

Inflow Area = 19,868,849 sf 43.06%Impervious Inflow Depth =1.84" for 2-year event
Inflow = 708.04 cfs@ 12.24 hrs Volume= 3,049,742 cf
Primary = 708.04 cfs@ 12.24 hrs Volume= 3,049,742 cf Atten= 0% Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs



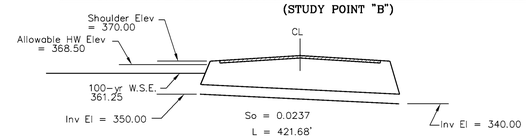
10 YR STORM

Inflow Area = 19,868,849 sf 43.06%Impervious Inflow Depth =3.66" for 10-year event
Inflow = 1,399.28 cfs@ 12.24 hrs Volume= 6,063,078 cf
Primary = 1,399.28 cfs@ 12.24 hrs Volume= 6,063,078 cf Atten= 0% Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.04 hrs

54" RCP CULVERT ACROSS DULLES TOLL RD 100 YR ANALYSIS

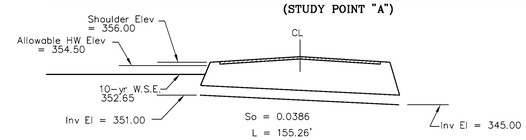
(STUDY POINT "B")



Pipe	CULVERT DESCRIPTION Material	Shape	Size	Entrance N	INVo	INVin	Type	D (in)	Total Flow Q (cfs)	Flow per Barrel Q/N (cfs) (1)	HEADWATER CALCULATIONS INLET CONTROL HW/D (2)	HWi	EL_{HW}	OUTLET CONTROL TW (3)	D_c	(dc+D)/2	H_o (6)	k_e	H (7)	EL_{HW} (8)	ELEVATION HEADWATER CONTROL	VELOCITY OUT	COMMENTS
DULLES TOLL RD	1-54	RCP	1	340.00	350.00		RCP	54.00	234.12	234.12	2.50	11.25	361.25	0.00	4.25	4.38	4.35	0.50	6.25	340.63	361.25	20.90	(100 YR STORM)

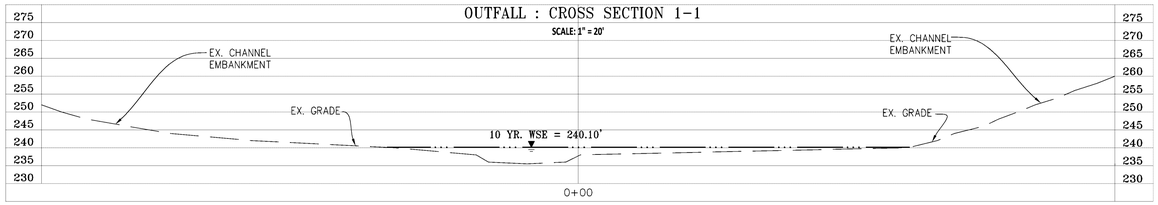
36" CMP CULVERT ACROSS W&OD TRAIL 10 YR ANALYSIS

(STUDY POINT "A")



Pipe	CULVERT DESCRIPTION Material	Shape	Size	Entrance N	INVo	INVin	Type	D (in)	Total Flow Q (cfs)	Flow per Barrel Q/N (cfs) (1)	HEADWATER CALCULATIONS INLET CONTROL HW/D (2)	HWi	EL_{HW}	OUTLET CONTROL TW (3)	D_c	(dc+D)/2	H_o (6)	k_e	H (7)	EL_{HW} (8)	ELEVATION HEADWATER CONTROL	VELOCITY OUT	COMMENTS
W&OD TRAIL	1-36" CMP		1	345.00	351.00		RCP	36.00	12.47	12.47	0.55	1.65	352.65	0.00	1.50	2.25	2.25	0.50	4.50	345.75	352.65	12.00	(10 YR STORM)

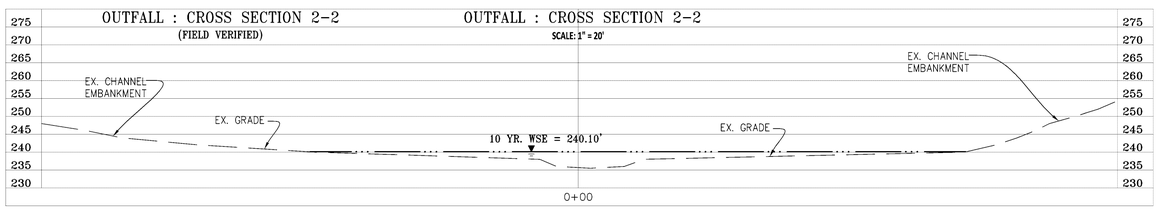
NOTE: CULVERT COMPUTATIONS DEPICT THE CRITICAL FLOW SCENARIO WHICH CONTEMPLATES AND ACCOUNTS FOR THE ULTIMATE WIDENING OF SUNSET HILLS ROAD



POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE:
CROSS SECTION 1-1

DA	=	456.13 AC.
'Cn'	=	86
I2	=	5.45 IN/HR
I10	=	7.27 IN/HR
Q2	=	708.04 CFS
Q10	=	1399.28 CFS
CHANNEL SLOPE	=	0.007%
'n' FACTOR	=	0.03

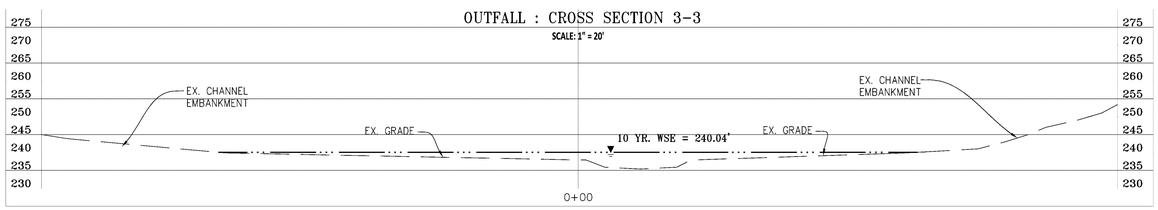
V2 = 4.90 FPS
D10 = 4.10 FT.



POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE:
CROSS SECTION 2-2

DA	=	456.13 AC.
'Cn'	=	86
I2	=	5.45 IN/HR
I10	=	7.27 IN/HR
Q2	=	708.04 CFS
Q10	=	1399.28CFS
CHANNEL SLOPE	=	0.007%
'n' FACTOR	=	0.03

V2 = 4.82 FPS
D10 = 4.10 FT.



POST-DEVELOPMENT CONDITIONS - POINT OF CONFLUENCE:
CROSS SECTION 3-3

DA	=	456.13 AC.
'Cn'	=	86
I2	=	5.45 IN/HR
I10	=	7.27 IN/HR
Q2	=	708.40 CFS
Q10	=	1399.28 CFS
CHANNEL SLOPE	=	0.007%
'n' FACTOR	=	0.03

V2 = 4.99 FPS
D10 = 4.17FT.

REVISIONS

No.	DATE	DESCRIPTION

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/09/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
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08/22/2016
PROFESSIONAL ENGINEER

OUTFALL ANALYSIS

RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016

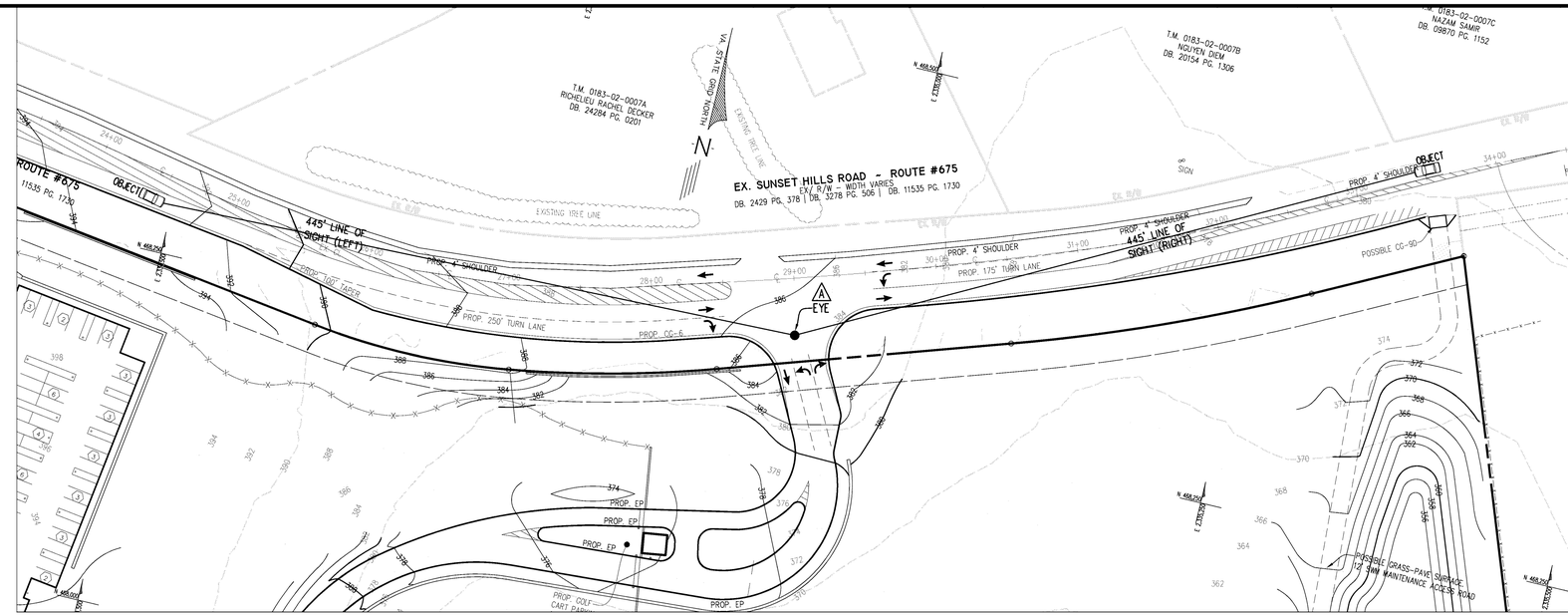
SCALE: AS SHOWN

C.I.= N/A

SHEET 25 OF 36

FILE No. RZ-12794

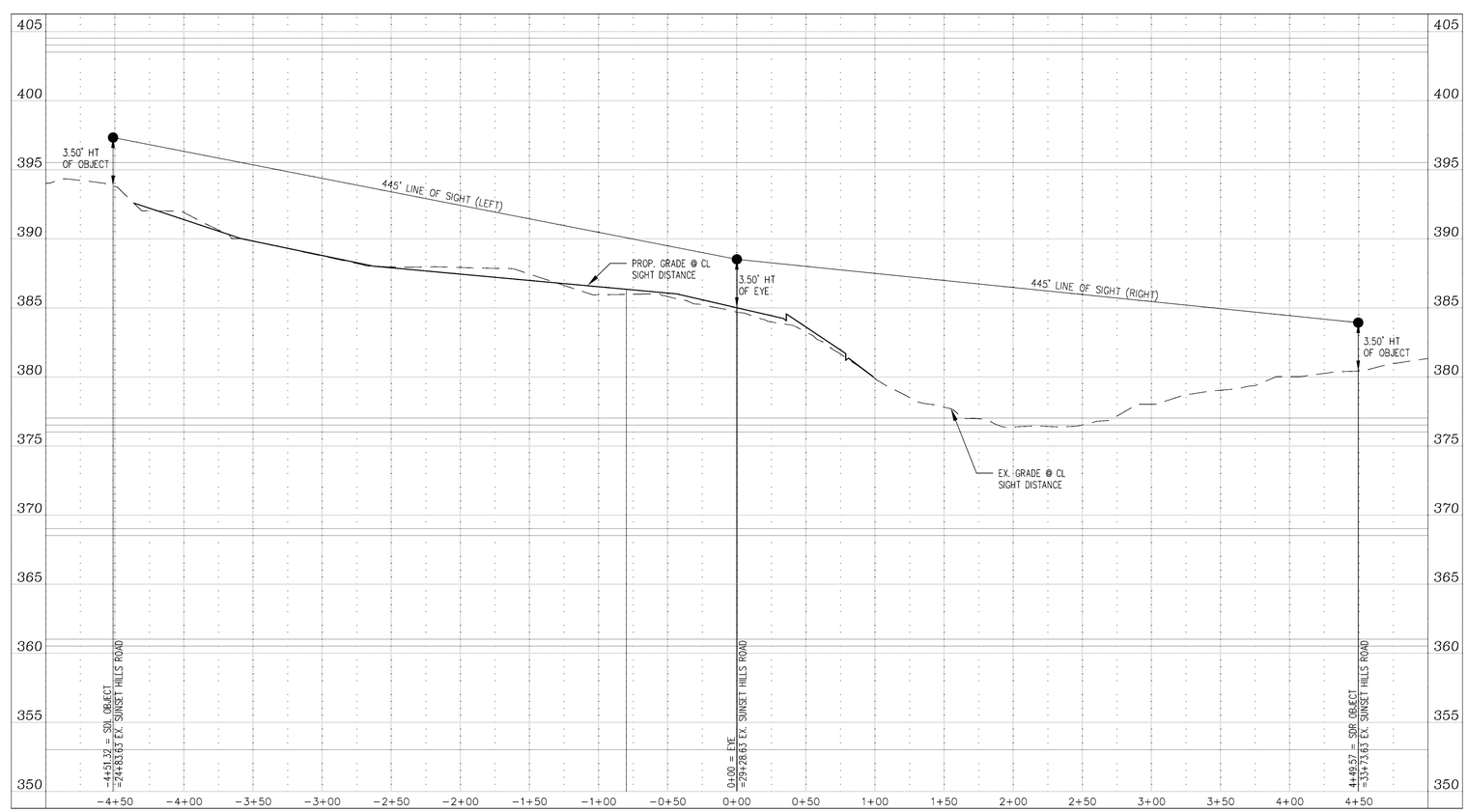
Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\23-OUTFALL.dwg [OUTFALL (3)] August 22, 2016 - 2:25pm jreynolds



PLAN VIEW
SCALE: 1"=50'

SIGHT DISTANCE PROFILE
MAIN ENTRANCE ON SUNSET HILLS ROAD RT # 675

POSTED SPEED = 35 MPH
DESIGN SPEED = 40MPH
PROFILE SCALE: 1" = 5 0' (H); 1" = 5' (V)



No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
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05/05/2016
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08/22/2016

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COMMONWEALTH OF VIRGINIA
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06/22/2016
PROFESSIONAL ENGINEER

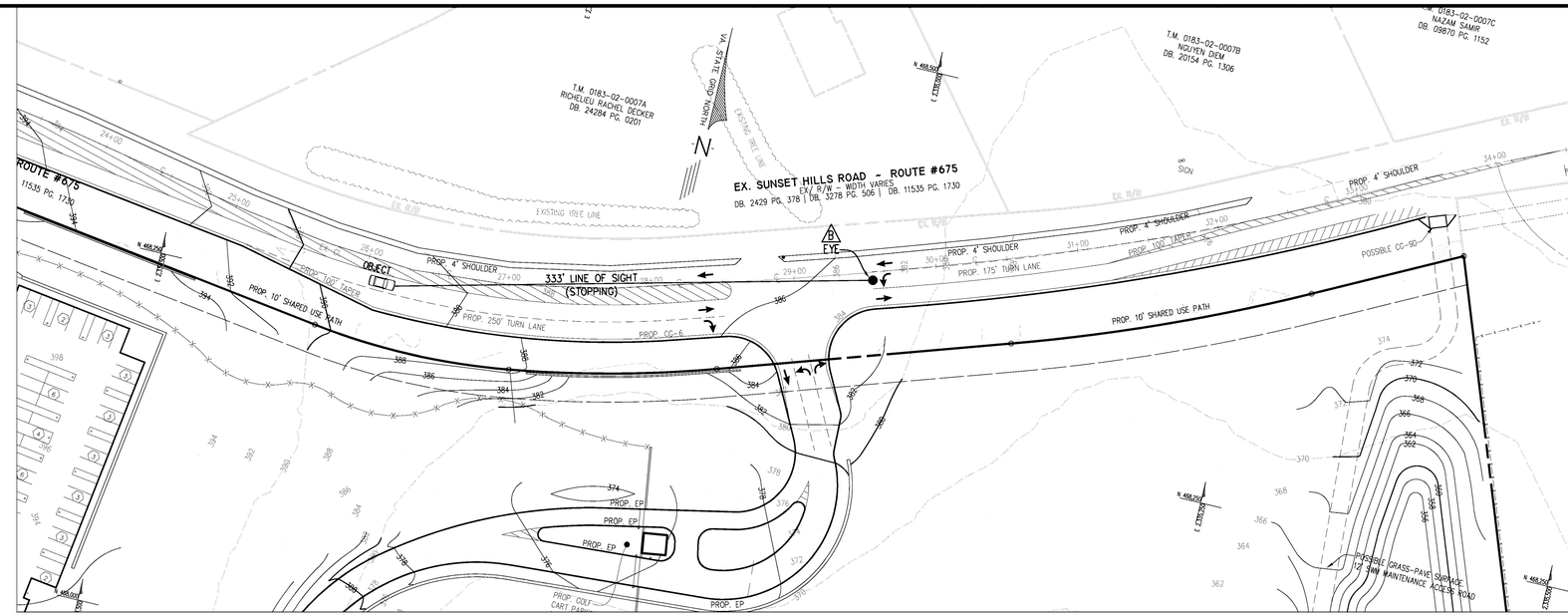
SIGHT DISTANCE PROFILES
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"= AS NOTED
C.I.= 2'
DATE: JAN. 2016

SHEET
26
OF
36

FILE No.
RZ-12794

Urban, Ltd. – u:\V385\Reston\917\CDPA_FDPA\14-SIGHT DISTANCE.dwg [LAYOUT] August 22, 2016 – 2:25pm jreynolds



PLAN VIEW

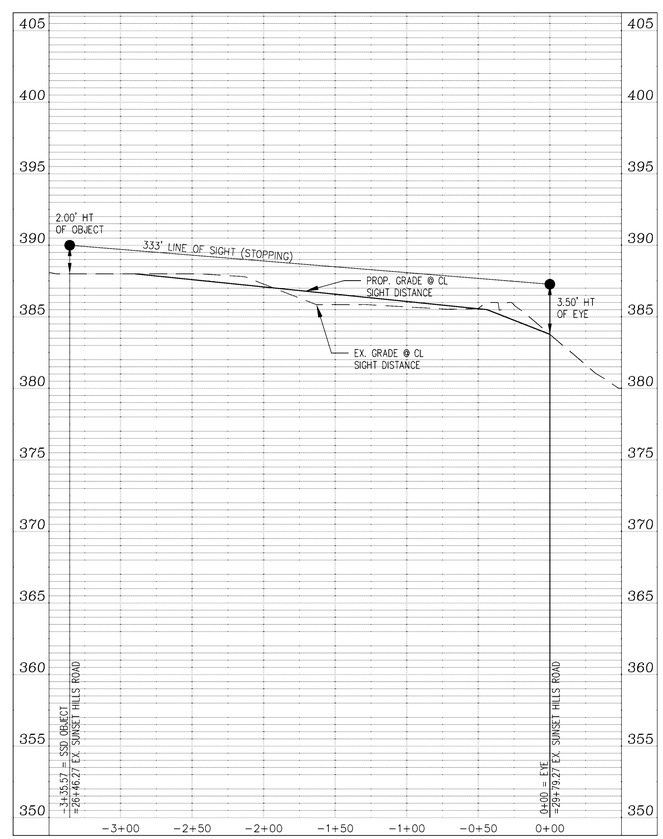
SCALE: 1"=50'

STOPPING SIGHT DISTANCE PROFILE
MAIN ENTRANCE ON SUNSET HILLS ROAD RT # 675

POSTED SPEED = 35 MPH

DESIGN SPEED = 40MPH

PROFILE SCALE: 1" = 5 0' (H); 1" = 5' (V)



No.	DATE	DESCRIPTION

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PROFESSIONAL ENGINEER

SIGHT DISTANCE PROFILES

RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"= AS NOTED

C.I.= 2'

DATE: JAN. 2016

SHEET 27 OF 36

FILE No. RZ-12794

Urban, Ltd. - u:\V385\Reston\917\CDPA_FDPA\14-SIGHT DISTANCE.dwg [LAYOUT (2)] August 22, 2016 - 2:25pm Reynolds

EXISTING VEGETATION SUMMARY

	Cover Type	Dominant Species	Successional Stage	Condition	Area	Comments
A	Forest Community	Northern Red Oak (Quercus rubra)(6"-20" D.B.H.), Red Maple (Acer rubrum)(4"-12" D.B.H.), Tulip Poplar (Liriodendron tulipifera)(6"-24" D.B.H.)	Climax	Good	546,885 sf.	This cover type consists of tree canopy that has developed through natural succession. The dominant species' found throughout this cover type are Northern Red Oak (Quercus rubra)(6"-20" D.B.H.), Red Maple (Acer rubrum)(4"-12" D.B.H.), and Tulip Poplar (Liriodendron tulipifera)(6"-24" D.B.H.), while other common species include Black Cherry (Prunus serotina), Pignut HIckory (Carya glabra), Sour Gum (Nyssa sylvatica), White Oak (Quercus alba), and several Virginia Pine (Pinus virginiana). Understory trees found throughout the site include American Holly (Ilex opaca), Flowering Dogwood (Cornus florida) and a few Eastern Redcedar (Juniperas virginiana). The cover type is in generally good health.
B	Forest Community	Virginia Pine (Pinus virginiana)(4"-16" D.B.H.)	Sub-Climax	Fair	349,408 sf.	This cover type consists completely of tree canopy that has been established through natural development. The dominant species found throughout the area is Virginia Pine. Other common species include Shortleaf Pine (Pinus echinata), Eastern Redcedar (Juniperus virginiana), Red Maple (Acer rubrum), Pignut Hickory (Carya glabra), and Flowering Dogwood (Cornus florida). Within the canopy trees is a layer of scattered forest brush and sparse groundcover due to leaf litter and canopy closure.
C	Maintained Grasslands	N/A	N/A	N/A	99,152 sf.	This cover type consists of maintained open turf areas along roadways as well as areas of grassland from previously cleared development that is occasionally maintained.
D	Developed Land	N/A	N/A	N/A	26,536 sf.	This cover type consists of constructed features including roadways and a stormwater management pond.
Total					1,021,981 sf.	

*D.B.H. = diameter at breast height (trunk measured 4.5 ft. above the ground).
Note: Field data collected during site visit between August 12, 2015 to October 5, 2015.

No.	DATE	DESCRIPTION
-	-	-

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/20/2016
06/21/2016
08/01/2016
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COMMONWEALTH OF VIRGINIA
Kevin J. Tankersley
Lic. No. 983
08/22/2016
LANDSCAPE ARCHITECT

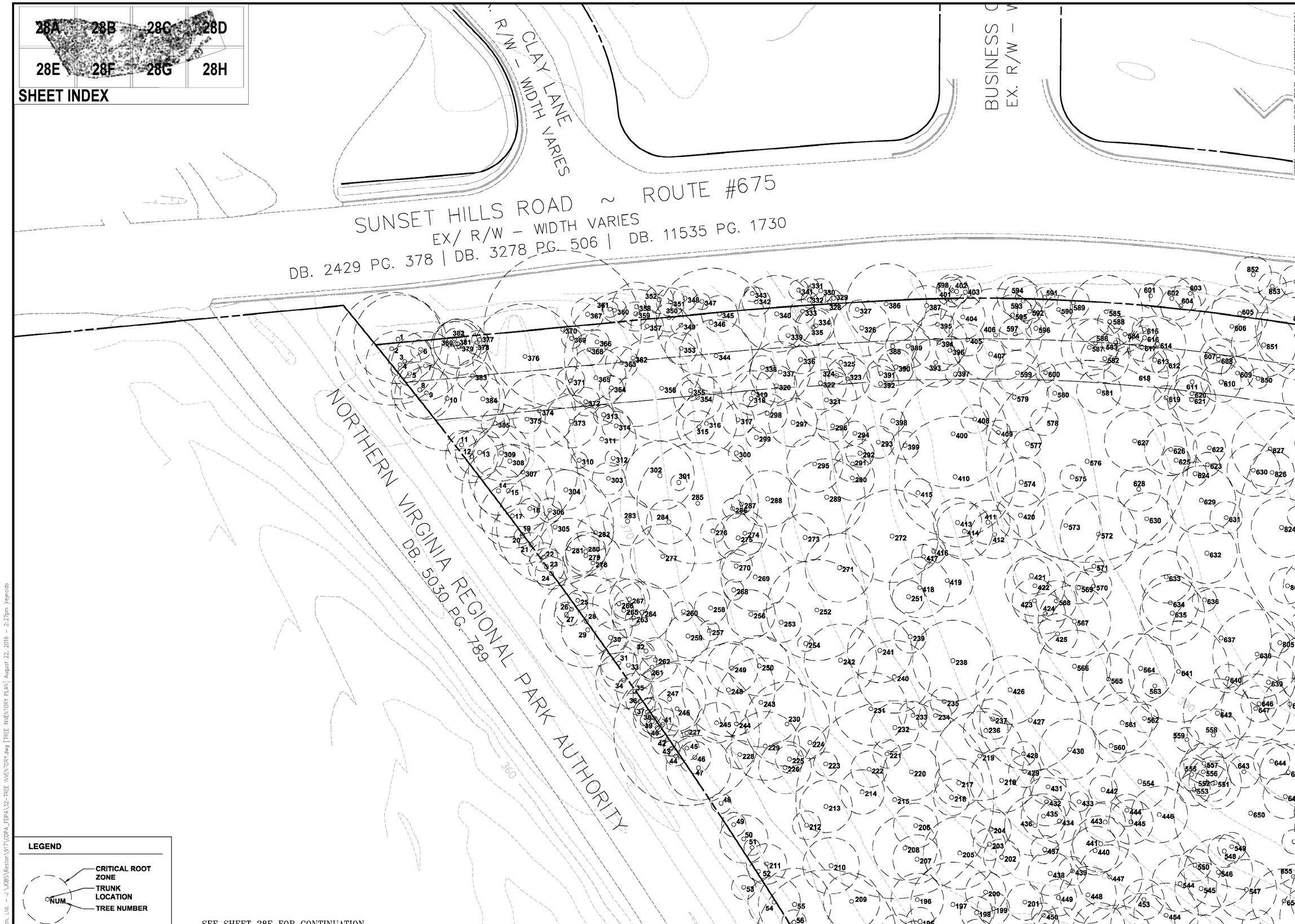
EXISTING VEGETATION MAP
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=80'
CI.=2'
DATE: JAN. 2016

SHEET 28 OF 36

FILE No.
RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\32-EVI.dwg [LAYOUT] August 22, 2016 – 2:25pm jreynolds



No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/05/2016
06/27/2016
08/01/2016
08/22/2016

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Lic. No. 983
08/22/2016
LANDSCAPE ARCHITECT

TREE INVENTORY PLAN
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=20'
C.I.= 2'
DATE: JAN. 2016

SHEET 28A OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [TREE INVENTORY PLAN] August 22, 2016 - 2:27pm reynolds

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
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08/01/2016
08/22/2016

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TREE INVENTORY PLAN

RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016

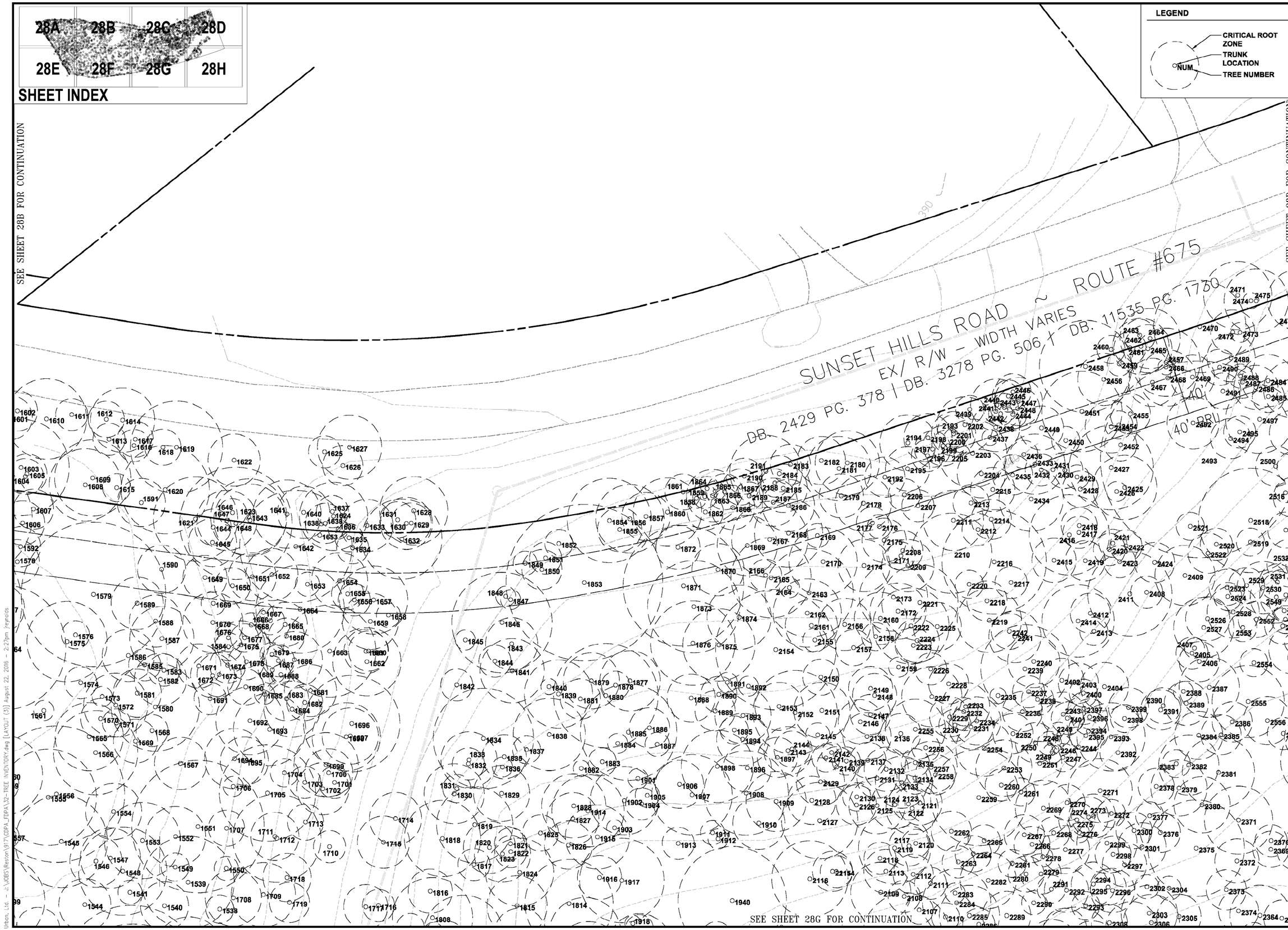
SCALE: 1"=20'

CI.=2'

SHEET 28B OF 36

FILE No. RZ-12794

Urban, Ltd. – J:\JOBS\Reston\017\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (2)] August 22, 2016 – 2:27pm jreynolds



No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/05/2016
06/27/2016
08/01/2016
08/22/2016

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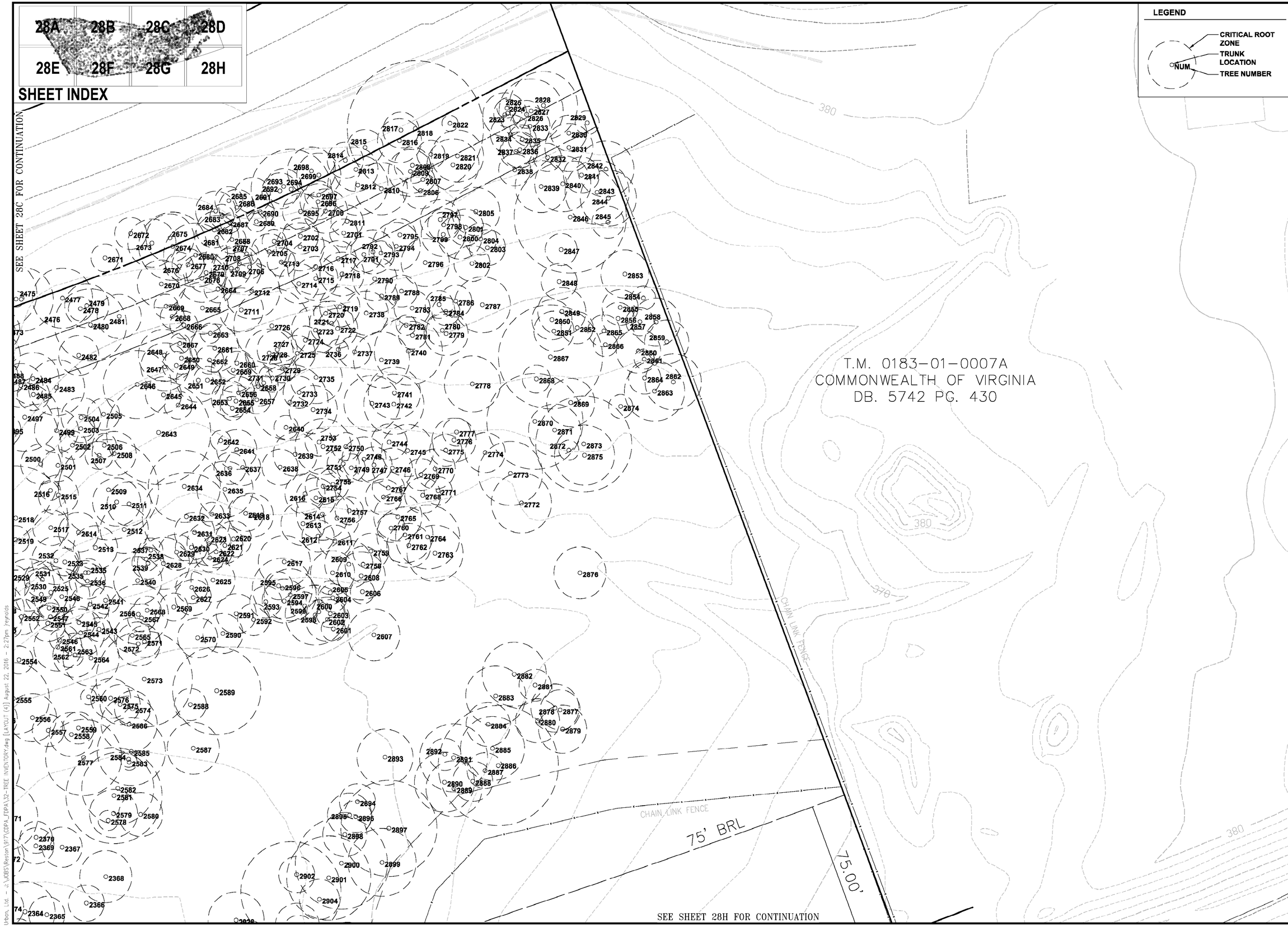
TREE INVENTORY PLAN
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016
SCALE: 1"=20'
C.I.= 2'

SHEET 28C OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (3)] August 22, 2016 - 2:27pm jreynolds



No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
01/04/2016
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04/01/2016
06/01/2016
06/27/2016
08/01/2016
08/22/2016

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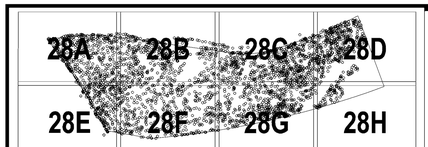
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=20' C.I.= 2' DATE: JAN. 2016

SHEET 28D OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (4)] August 22, 2016 - 2:27pm Tpenoyd



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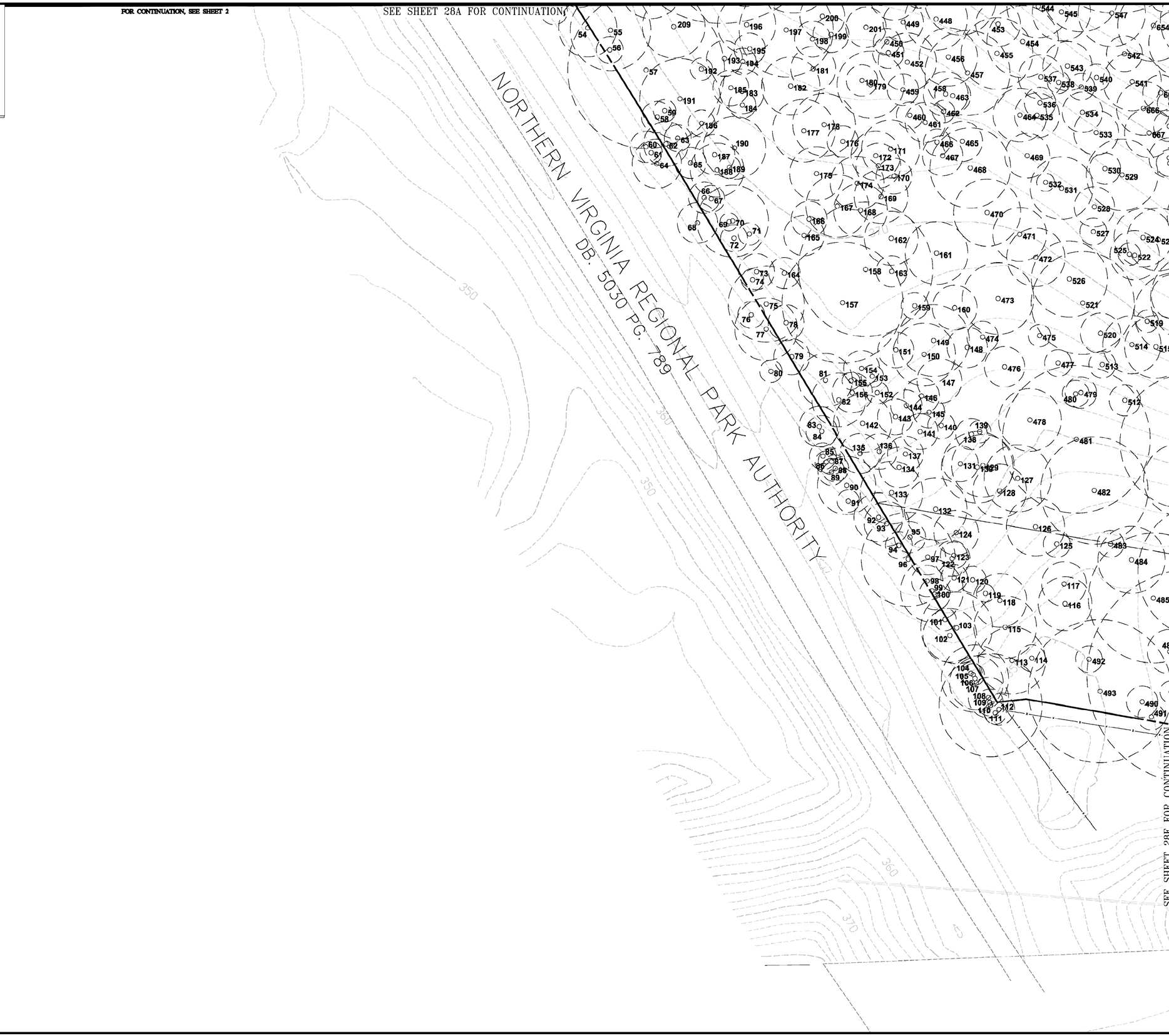
FOR CONTINUATION, SEE SHEET 2

SEE SHEET 28A FOR CONTINUATION



SEE SHEET 28F FOR CONTINUATION

LEGEND

CRITICAL ROOT ZONE

TRUNK LOCATION

NUM

TREE NUMBER

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
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RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=20'

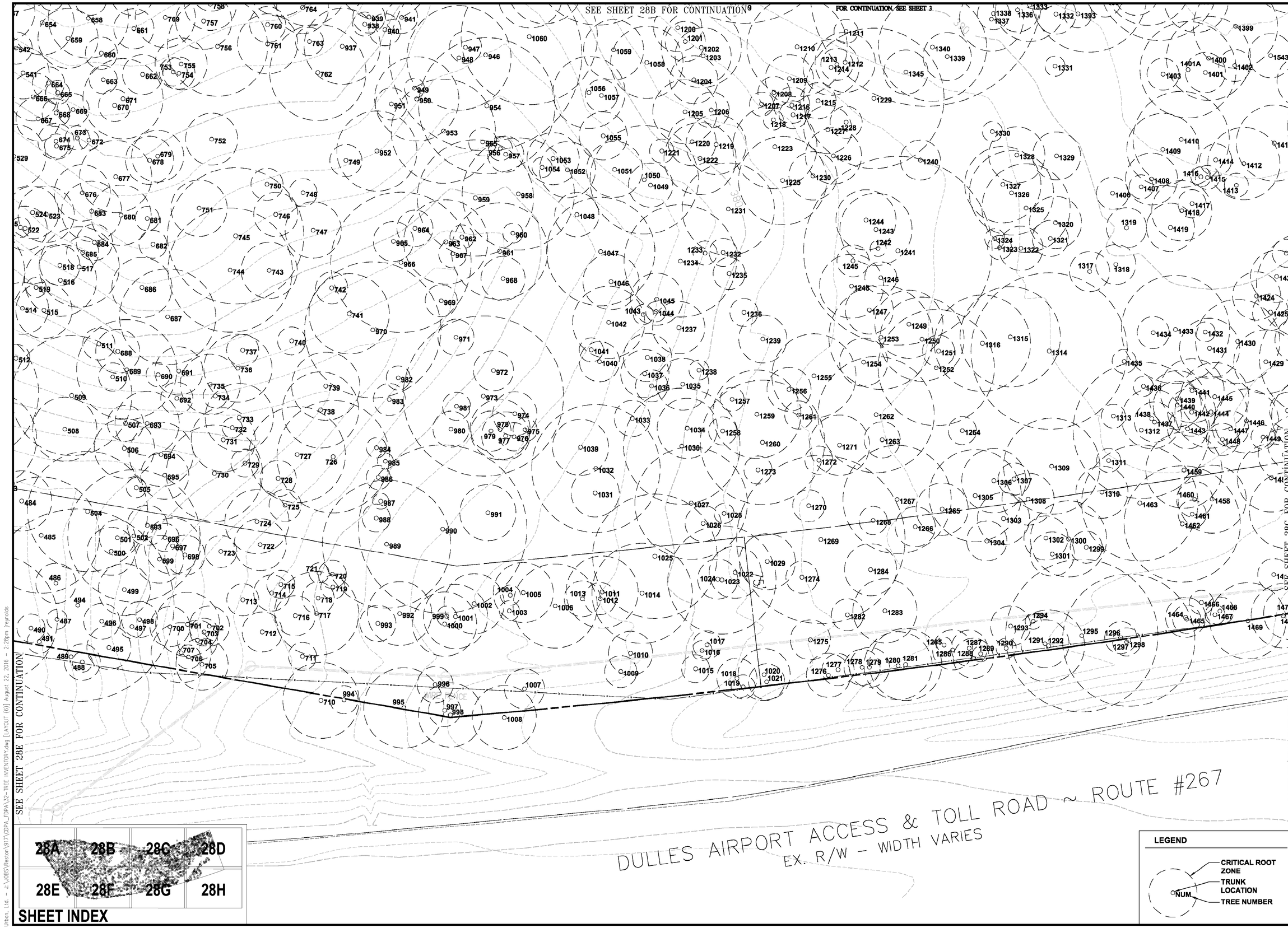
C.I.= 2'

DATE: JAN. 2016

SHEET 28E OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (5)] August 22, 2016 - 2:27pm reynolds



SHEET INDEX

LEGEND

- CRITICAL ROOT ZONE
- TRUNK LOCATION
- TREE NUMBER

NUM

No.	DATE	DESCRIPTION
		REVISIONS

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CDPA-FDPA
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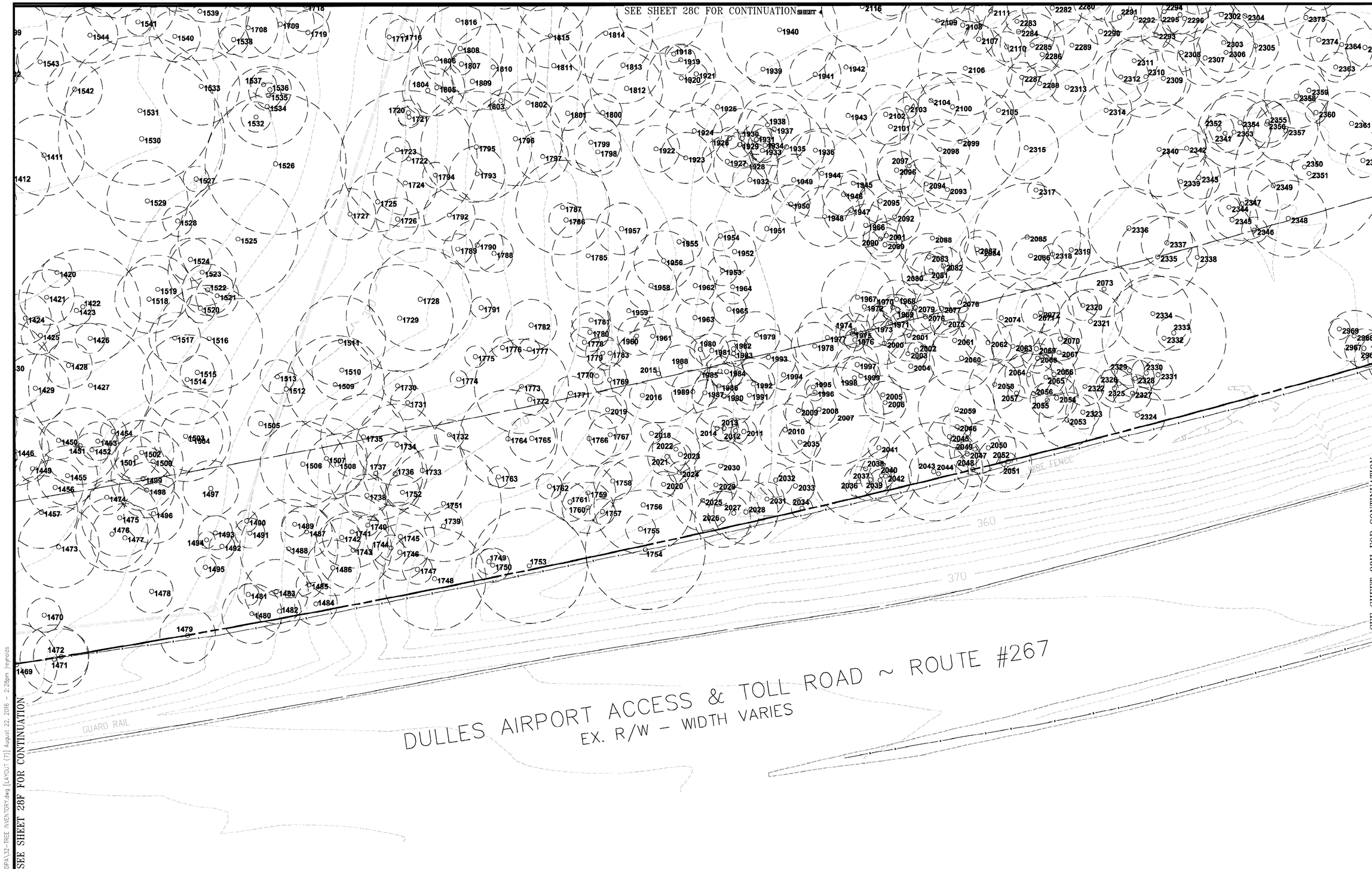
FAIRFAX COUNTY, VIRGINIA

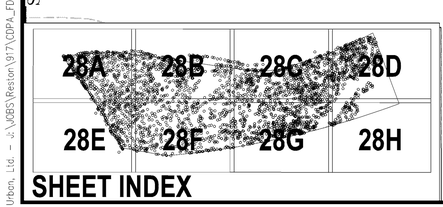
DATE: JAN. 2016
SCALE: 1"=20'
C.I.= 2'

SHEET 28F OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (6)] August 22, 2016 - 2:28pm reynolds





SHEET INDEX

LEGEND

- CRITICAL ROOT ZONE
- TRUNK LOCATION
- TREE NUMBER

NUM

No.	DATE	DESCRIPTION

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06/27/2016
08/01/2016
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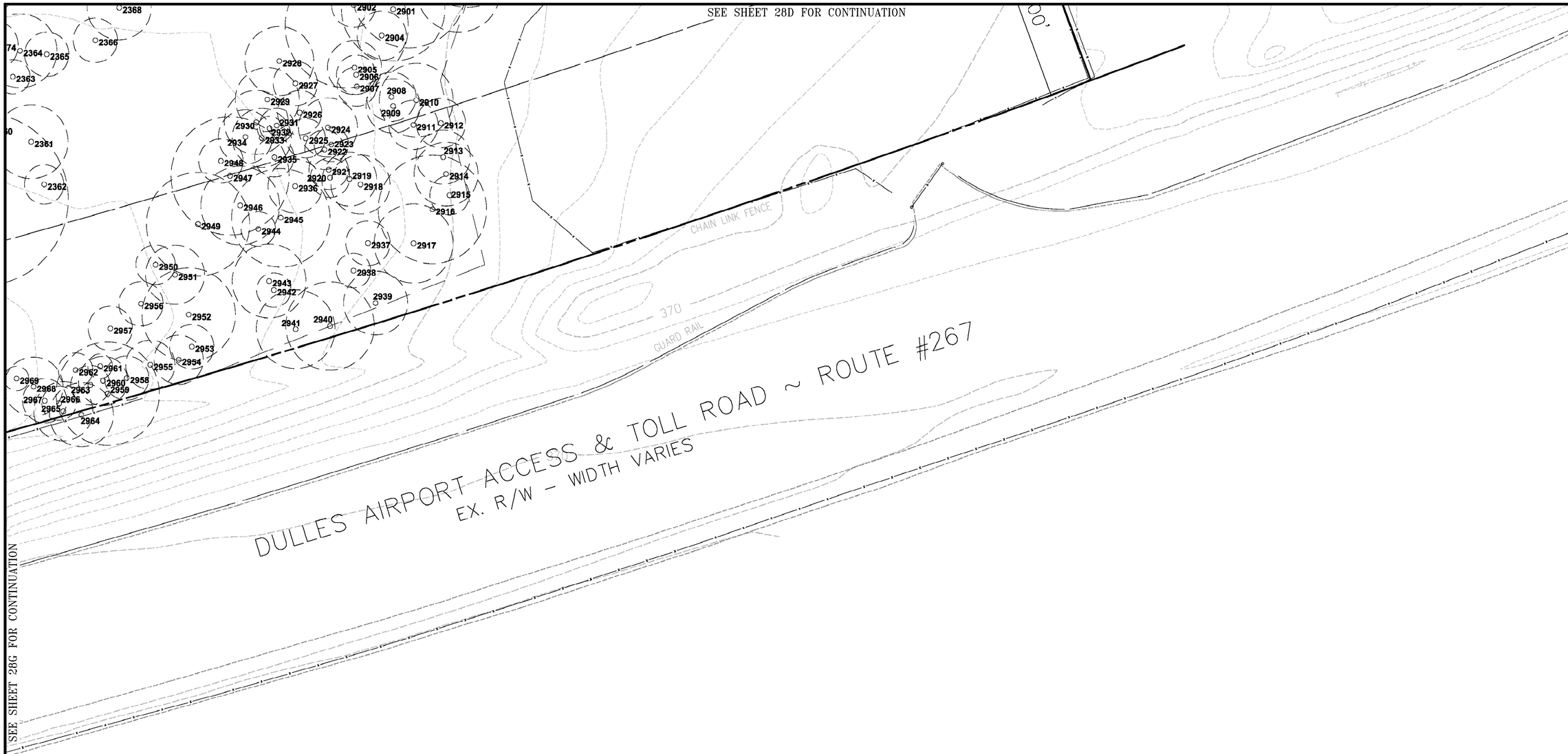
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

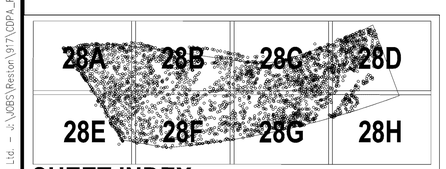
DATE: JAN. 2016
SCALE: 1"=20'
CI.= 2'

SHEET 28G OF 36

FILE No. RZ-12794

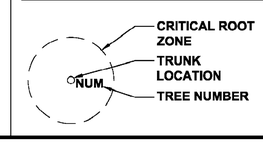
Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (7)] August 22, 2016 – 2:28pm jreynolds





SHEET INDEX

LEGEND



No.	DATE	DESCRIPTION

REVISIONS

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01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
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TREE INVENTORY PLAN

RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016

SCALE: 1"=20'

C.I.=2'

SHEET 28H OF 36

FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (8)] August 22, 2016 - 2:28pm jreynolds

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
1	*Acer rubrum*	Red Maple	22"	Multistem	53.13
2	*Quercus alba*	White Oak	28"	Co-dom	68.75
3	*Acer rubrum*	Red Maple	8"		71.88
4	*Liriodendron tulipifera*	Tulip Poplar	17"		78.13
5	*Nyssa sylvatica*	Sourgum	6"		71.88
6	*Acer rubrum*	Red Maple	5"		65.63
7	*Liriodendron tulipifera*	Tulip Poplar	17"		81.25
8	*Acer rubrum*	Red Maple	14"		59.38
9	*Acer rubrum*	Red Maple	13"		62.50
10	*Quercus falcata*	Southern Red Oak	26"	canopy dieback	50.00
11	*Acer rubrum*	Red Maple	7"		53.13
12	*Acer rubrum*	Red Maple	13"		65.63
13	*Acer rubrum*	Red Maple	12"		75.00
14	*Acer rubrum*	Red Maple	12"		71.88
15	*Quercus alba*	White Oak	23"		59.28
16	*Ilex opaca*	American Holly	6"	Multistem	84.38
17	*Quercus rubra*	Northern Red Oak	16"	Co-dom	40.63
18	*Acer rubrum*	Red Maple	5"		93.75
19	*Quercus rubra*	Northern Red Oak	15"		68.75
20	*Quercus rubra*	Northern Red Oak	4"		71.88
21	*Liriodendron tulipifera*	Tulip Poplar	6"		90.63
22	*Quercus rubra*	Northern Red Oak	7"		50.00
23		Unknown	9"	Dead	0.00
24	*Quercus rubra*	Northern Red Oak	8"	Dying	12.50
25	*Quercus alba*	White Oak	5"		87.50
26	*Quercus rubra*	Northern Red Oak	8"		37.50
27	*Liriodendron tulipifera*	Tulip Poplar	6"		43.75
28	*Quercus rubra*	Northern Red Oak	23"	Basal convection to 2nd leader	62.50
29	*Quercus alba*	White Oak	13"		75.00
30	*Quercus rubra*	Northern Red Oak	8"		62.50
31	*Quercus alba*	White Oak	9"	Co-dom	53.13
32	*Ilex opaca*	American Holly	4"		81.25
33	*Liriodendron tulipifera*	Tulip Poplar	14"		68.75
34	*Quercus rubra*	Northern Red Oak	14"		79.38
35	*Quercus alba*	White Oak	9"		71.88
36	*Quercus rubra*	Northern Red Oak	7"		84.38
37	*Quercus rubra*	Northern Red Oak	7"		68.75
38	*Quercus rubra*	Northern Red Oak	6"		46.88
39	*Pinus virginiana*	Virginia Pine	10"	Central leader broken off	40.63
40	*Pinus virginiana*	Virginia Pine	5"		43.75
41	*Quercus rubra*	Northern Red Oak	8"		46.88
42	*Pinus virginiana*	Virginia Pine	8"		13.13
43	*Pinus virginiana*	Virginia Pine	4"		59.38
44	*Pinus virginiana*	Virginia Pine	5"		43.75
45	*Quercus rubra*	Northern Red Oak	6"		43.75
46	*Pinus virginiana*	Virginia Pine	8"		37.55
47	*Quercus rubra*	Northern Red Oak	16"		62.50
48	*Pinus virginiana*	Virginia Pine	5"	Leaning	50.00
49	*Pinus virginiana*	Virginia Pine	6"	Leaning	71.88
50		Unknown	12"	Dead	0.00
51	*Quercus rubra*	Northern Red Oak	4"	Crooked trunk	62.50
52	*Quercus rubra*	Northern Red Oak	5"		65.63
53	*Pinus virginiana*	Virginia Pine	6"	Co-dom, leaning	56.25
54	*Quercus rubra*	Northern Red Oak	13"	1/2 canopy trimmed out	43.75
55	*Quercus alba*	White Oak	18"		56.25
56	*Acer rubrum*	Red Maple	6"		68.75
57	*Quercus alba*	White Oak	35"		43.75
58	*Pinus virginiana*	Virginia Pine	7"		53.13
59	*Pinus virginiana*	Virginia Pine	5"		59.38
60	*Pinus virginiana*	Virginia Pine	7"	one-sided	40.63
61	*Pinus virginiana*	Virginia Pine	5"		46.88
62	*Quercus alba*	White Oak	10"		71.88
63	*Pinus virginiana*	Virginia Pine	6"	Reduced canopy	40.63
64	*Pinus virginiana*	Virginia Pine	11"		50.00
65	*Quercus alba*	White Oak	7"		81.25
66	*Quercus alba*	White Oak	7"		53.13
67	*Pinus virginiana*	Virginia Pine	6"	One sided	86.88
68	*Pinus virginiana*	Virginia Pine	9"	One sided	50.00
69	*Carya glabra*	Pignut Hickory	4"		65.63
70	*Quercus alba*	White Oak	16"		78.13
71	*Pinus virginiana*	Virginia Pine	5"		59.38
72	*Pinus virginiana*	Virginia Pine	6"		56.25
73	*Quercus rubra*	Northern Red Oak	8"		68.75
74	*Quercus alba*	White Oak	5"		59.38
75	*Liriodendron tulipifera*	Tulip Poplar	17"		78.13
76	*Quercus rubra*	Northern Red Oak	6"		53.13
77	*Pinus virginiana*	Virginia Pine	14"		59.38
78	*Pinus virginiana*	Virginia Pine	8"		53.13
79	*Pinus virginiana*	Virginia Pine	9"		62.50
80	*Pinus virginiana*	Virginia Pine	5"		86.88
81	*Pinus virginiana*	Virginia Pine	12"		56.25
82	*Pinus virginiana*	Virginia Pine	12"		62.50
83	*Pinus virginiana*	Virginia Pine	9"		59.38
84	*Pinus virginiana*	Virginia Pine	7"		56.25
85	*Pinus virginiana*	Virginia Pine	6"		59.38
86	*Acer rubrum*	Red Maple	5"		68.75
87	*Pinus virginiana*	Virginia Pine	6"		68.75
88	*Pinus virginiana*	Virginia Pine	6"		56.25
89	*Nyssa sylvatica*	Sourgum	6"		50.00
90	*Liriodendron tulipifera*	Tulip Poplar	13"		28.13
91	*Quercus rubra*	Northern Red Oak	5"		46.88
92	*Liriodendron tulipifera*	Tulip Poplar	11"	Crooked trunk	65.63
93	*Liriodendron tulipifera*	Tulip Poplar	10"	Crooked trunk	68.75
94	*Quercus rubra*	Northern Red Oak	6"		71.88
95	*Liriodendron tulipifera*	Tulip Poplar	7"		75.00
96	*Liriodendron tulipifera*	Tulip Poplar	21"	Co-dom	71.88
97	*Pinus virginiana*	Virginia Pine	8"		62.50
98	*Liriodendron tulipifera*	Tulip Poplar	7"		68.75
99	*Liriodendron tulipifera*	Tulip Poplar	14"		65.63
100	*Pinus strobus*	White Pine	7"		58.38

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
101	*Liriodendron tulipifera*	Tulip Poplar	5"	Crooked trunk	62.50
102	*Pinus virginiana*	Virginia Pine	12"	Dead	0.00
103	*Quercus rubra*	Northern Red Oak	16"		68.75
104	*Acer rubrum*	Red Maple	5"	Upper trunk growth into 105	53.13
105	*Acer rubrum*	Red Maple	5"	Upper trunk growth into 104	50.00
106	*Liriodendron tulipifera*	Tulip Poplar	15"		78.13
107	*Liriodendron tulipifera*	Tulip Poplar	12"		62.50
108	*Acer rubrum*	Red Maple	9"		59.38
109	*Acer rubrum*	Red Maple	6"		56.25
110	*Acer rubrum*	Red Maple	23"		71.88
111	*Acer rubrum*	Red Maple	5"		56.25
112	*Acer rubrum*	Red Maple	7"		59.38
113		Unknown	15"	Dead	0.00
114	*Acer rubrum*	Red Maple	6"		75.00
115	*Carya glabra*	Pignut Hickory	14"	12" cavity on trunk	53.13
116	*Liriodendron tulipifera*	Tulip Poplar	12"		71.88
117	*Liriodendron tulipifera*	Tulip Poplar	10"		81.25
118	*Carya glabra*	Pignut Hickory	12"		56.25
119	*Acer rubrum*	Red Maple	4"		87.50
120	*Acer rubrum*	Red Maple	6"		84.38
121	*Pinus virginiana*	Virginia Pine	6"		56.25
122	*Pinus virginiana*	Virginia Pine	8"		62.50
123	*Liriodendron tulipifera*	Tulip Poplar	6"		71.88
124	*Populus grandidentata*	Big Tooth Aspen	10"		65.63
125	*Liriodendron tulipifera*	Tulip Poplar	6"		87.50
126	*Quercus alba*	White Oak	13"		68.75
127	*Liriodendron tulipifera*	Tulip Poplar	15"	Hanging dead branch	59.38
128		Unknown	12"	Dead	0.00
129	*Liriodendron tulipifera*	Tulip Poplar	14"		71.88
130	*Liriodendron tulipifera*	Tulip Poplar	16"		56.25
131	*Pinus virginiana*	Virginia Pine	8"		56.25
132	*Pinus virginiana*	Virginia Pine	14"		50.00
133	*Pinus virginiana*	Virginia Pine	14"		53.13
134	*Pinus virginiana*	Virginia Pine	9"		50.00
135	*Pinus virginiana*	Virginia Pine	9"		50.00
136	*Pinus virginiana*	Virginia Pine	8"		46.88
137	*Pinus virginiana*	Virginia Pine	8"		50.00
138	*Pinus virginiana*	Virginia Pine	7"		46.88
139	*Pinus virginiana*	Virginia Pine	5"		43.75
140	*Quercus alba*	White Oak	6"	Adjacent dead tree leaning in canopy	65.63
141	*Quercus rubra*	Northern Red Oak	8"		71.88
142	*Pinus virginiana*	Virginia Pine	13"		56.25
143	*Pinus virginiana*	Virginia Pine	8"		53.13
144	*Pinus virginiana*	Virginia Pine	7"		46.88
145	*Pinus virginiana*	Virginia Pine	7"		50.00
146	*Pinus virginiana*	Virginia Pine	8"		46.88
147	*Pinus virginiana*	Virginia Pine	10"		46.88
148	*Acer rubrum*	Red Maple	9"	Dead	0.00
149	*Liriodendron tulipifera*	Tulip Poplar	16"		78.13
150	*Nyssa sylvatica*	Sourgum	14"	Major Decay	34.38
151	*Pinus virginiana*	Virginia Pine	8"		43.75
152	*Quercus rubra*	Northern Red Oak	5"		71.88
153	*Pinus virginiana*	Virginia Pine	5"		43.75
154	*Pinus virginiana*	Virginia Pine	8"		50.00
155	*Pinus virginiana*	Virginia Pine	4"		40.63
156	*Pinus virginiana*	Virginia Pine	9"		53.13
157	*Quercus alba*	White Oak	27"	Barbed Wire Inside	62.50
158	*Quercus rubra*	Northern Red Oak	30"	In decline/dying	15.63
159	*Pinus virginiana*	Virginia Pine	6"		50.00
160	*Quercus alba*	White Oak	10"		71.88
161	*Pinus virginiana*	Virginia Pine	14"	Leaning	53.13
162	*Liriodendron tulipifera*	Tulip Poplar	12"		78.13
163	*Carya glabra*	Pignut Hickory	7"		90.63
164	*Carya glabra*	Pignut Hickory	7"		87.50
165	*Quercus rubra*	Northern Red Oak	9"		75.00
166	*Quercus alba*	White Oak	8"		71.88
167	*Quercus rubra*	Northern Red Oak	14"		78.13
168	*Acer rubrum*	Red Maple	12"	Co-dominant	62.50
169	*Carya glabra*	Pignut Hickory	12"		75.00
170	*Pinus virginiana*	Virginia Pine	8"		46.88
171	*Quercus rubra*	Northern Red Oak	13"		65.63
172	*Quercus rubra*	Northern Red Oak	11"		59.38
173	*Pinus virginiana*	Virginia Pine	10"		53.13
174	*Quercus rubra*	Northern Red Oak	12"		78.13
175	*Pinus virginiana*	Virginia Pine	12"		56.25
176	*Pinus virginiana*	Virginia Pine	7"		46.88
177	*Quercus rubra*	Northern Red Oak	14"		84.38
178	*Quercus rubra*	Northern Red Oak	14"	Basil Decay	78.13
179	*Quercus rubra*	Northern Red Oak	15"		78.13
180	*Quercus rubra*	Northern Red Oak	7"		81.25
181	*Pinus virginiana*	Virginia Pine	10"		46.88
182	*Quercus rubra*	Northern Red Oak	13"		79.00
183	*Liriodendron tulipifera*	Tulip Poplar	10"		84.38
184	*Acer rubrum*	Red Maple	6"	Adveticious Roots	81.25
185	*Quercus rubra*	Northern Red Oak	8"		46.88
186	*Quercus rubra*	Northern Red Oak	6"		68.75
187	*Pinus virginiana*	Virginia Pine	9"		46.88
188	*Quercus rubra*	Northern Red Oak	12"		75.00
189	*Pinus virginiana*	Virginia Pine	5"		37.50
190	*Quercus rubra*	Northern Red Oak	14"		65.63
191	*Liriodendron tulipifera*	Tulip Poplar	18"		78.13
192	*Quercus rubra*	Northern Red Oak	5"		81.25
193	*Quercus rubra*	Northern Red Oak	8"		78.13
194	*Quercus rubra*	Northern Red Oak	6"	Dead	0.00
195	*Quercus rubra*	Northern Red Oak	7"		81.25
196	*Quercus rubra*	Northern Red Oak	13"		71.88
197	*Quercus rubra*	Northern Red Oak	21"	Co-Dominant; 1 Leader Dead	56.25
198	*Pinus virginiana*	Virginia Pine	8"		46.88
199	*Pinus virginiana*	Virginia Pine	8"		46.88
200	*Pinus virginiana*	Virginia Pine	10"		50.00

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
201	*Pinus virginiana*	Virginia Pine	9"		50.00
202		Unknown	9"	Dead	0.00
203	*Quercus rubra*	Northern Red Oak	8"		78.13
204	*Pinus virginiana*	Virginia Pine	10"	Decay in Trunk	23.13
205	*Quercus prinus*	Chestnut Oak	18"	Co-Dominant	68.75
206	*Quercus rubra*	Northern Red Oak	11"		78.13
207	*Quercus rubra*	Northern Red Oak	12"	Basil Decay	28.13
208	*Quercus rubra*	Northern Red Oak	16"		78.13
209	*Quercus rubra*	Northern Red Oak	14"		81.25
210	*Quercus rubra*	Northern Red Oak	14"		81.25
211	*Pinus virginiana*	Virginia Pine	10"		53.13
212	*Quercus rubra*	Northern Red Oak	7"		75.00
213	*Quercus alba*	White Oak	13"		84.38
214	*Quercus rubra*	Northern Red Oak	11"		71.88
215	*Quercus prinus*	Chestnut Oak	49"	Multi-Stem	62.50
216	*Quercus rubra*	Northern Red Oak	9"		75.00
217	*Pinus echinata*	Shortleaf Pine	12"		71.88
218	*Quercus rubra*	Northern Red Oak	16"	Co-Dom; 1 Leader Dead	62.50
219	*Quercus rubra*	Northern Red Oak	22"		87.50
220	*Pinus virginiana*	Virginia Pine	14"		53.13
221	*Quercus rubra*	Northern Red Oak	7"	Dead Adjacent Tree Leaning on	59.38
222	*Quercus rubra*	Northern Red Oak	9"		65.63
223	*Nyssa sylvatica*	Sourgum	6"		84.38
224	*Quercus alba*	White Oak	8"	No canopy	15.63
225	*Nyssa sylvatica*	Sourgum	7"		81.25
226	*Quercus rubra*	Northern Red Oak	13"	Dead	0.00
227	*Quercus rubra*	Northern Red Oak	36"	Co-Dominant	81.25
228	*Quercus rubra*	Northern Red Oak	7"		75.00
229	*Quercus rubra*	Northern Red Oak	17"	Co-Dom; 1 Leader Dead	67.50
230	*Liriodendron tulipifera*	Tulip Poplar	21"	Crooked Trunk	78.13
231	*Quercus alba*	White Oak	18"		81.25
232	*Pinus virginiana*	Virginia Pine	12"		53.12
233	*Pinus virginiana*	Virginia Pine	7"		46.88
234	*Pinus virginiana*	Virginia Pine	8"		43.75
235	*Pinus virginiana*	Virginia Pine	7"		46.88
236	*Pinus virginiana*	Virginia Pine	11"		50.00
237	*Pinus virginiana*	Virginia Pine	10"		50.00
238	*Quercus rubra*	Northern Red Oak	20"		78.13
239	*Quercus alba*	White Oak	8"		81.25
240	*Quercus prinus*	Chestnut Oak	18"		84.38
241	*Quercus rubra*	Northern Red Oak	16"	Leaning	68.75
242	*Quercus rubra*	Northern Red Oak	18"		78.13
243	*Quercus rubra*	Northern Red Oak	22"	Co-Dom	71.88
244	*Acer rubrum*	Red Maple	6"		75.00
245	*Quercus rubra*	Northern Red Oak	10"		75.00
246	*Quercus rubra*	Northern Red Oak	11"		78.13
247	*Liriodendron tulipifera*	Tulip Poplar	18"		87.50
248	*Quercus prinus*	Chestnut Oak	23"		90.63
249	*Liriodendron tulipifera*	Tulip Poplar	13"		81.25
250	*Quercus rubra*	Northern Red Oak	15"	Dead	0.00
251	*Quercus rubra*	Northern Red Oak	8"	Decay in Root Flare	59.38
252	*Quercus rubra*	Northern Red Oak	25"		75.00
253	*Quercus prinus*	Chestnut Oak	10"		71.88
254	*Nyssa sylvatica*	Sourgum	4"		84.38
255	*Ilex opaca*	American Holly	5"		87.50
256	*Quercus rubra*	Northern Red Oak	12"		65.63
257	*Quercus rubra*	Northern Red Oak	5"		81.25
258	*Quercus rubra*	Northern Red Oak	8"	Dead	0.00
259		Unknown	11"	Dead	0.00
260	*Quercus rubra*	Northern Red Oak	5"		65.63
261	*Quercus rubra*	Northern Red Oak	6"		71.88
262	*Quercus alba*	White Oak	11"		62.50
263	*Quercus alba*	White Oak	4"		68.75
264	*Quercus rubra*	Northern Red Oak	15"	Basal Decay	59.38
265	*Quercus rubra*	Northern Red Oak	5"		71.88
266	*Quercus marilandica*	Blackjack Oak	13"		78.13
267	*Quercus marilandica*	Blackjack Oak	10"		75.00
268	*Quercus rubra*	Northern Red Oak	5"		84.38
269	*Nyssa sylvatica*	Sourgum	17"		81.25
270	*Quercus rubra*	Northern Red Oak	8"		71.88
271	*Nyssa sylvatica*	Sourgum	17"		75.00
272	*Quercus prinus*	Chestnut Oak	23"		68.75
273	*Quercus rubra*	Northern Red Oak	12"		87.50
274	*Quercus rubra*	Northern Red Oak	11"		71.88
275		Unknown	12"	Dead	0.00
276	*Quercus rubra*	Northern Red Oak	6"		68.75
277	*Quercus rubra*	Northern Red Oak	16"	Secondary Branch Decay	50.00
278	*Quercus rubra*	Northern Red Oak	15"	Secondary Branch Decay	53.13
279	*Quercus rubra*	Northern Red Oak	10"		65.63
280		Unknown	10"	Dead	0.00
281	*Quercus rubra*	Northern Red Oak	15"		71.88
282	*Quercus rubra*	Northern Red Oak	9"		62.50
283	*Pinus virginiana*	Virginia Pine	12"		53.13
284	*Pinus virginiana*	Virginia Pine	11"		56.25
285	*Quercus rubra*	Northern Red Oak	30"	Major Basal & Trunk Decay	46.88
286	*Quercus rubra*	Northern Red Oak	5"		68.75
287	*Ilex opaca*	American Holly	5"		90.63
288	*Quercus rubra*	Northern Red Oak	14"		71.88
289	*Quercus rubra*	Northern Red Oak	19"	Dying	28.13
290	*Pinus echinata*	Shortleaf Pine	11"		59.38
291	*Pinus virginiana*	Virginia Pine	9"		53.13
292	*Quercus rubra*	Northern Red Oak	7"		62.50
293	*Pinus virginiana*	Virginia Pine	8"		71.88
294	*Pinus virginiana*	Virginia Pine	6"		75.00
295	*Nyssa sylvatica*	Sourgum	14"		68.75
296	*Pinus virginiana*	Virginia Pine	8"		68.75
297	*Quercus rubra*	Northern Red Oak	12"		65.63
298	*Acer rubrum*	Red Maple	10"	Co-Dominant	62.50
299	*Quercus rubra*	Northern Red Oak	5"		84.38
300	*Quercus rubra*	Northern Red Oak	4"		81.25

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
301	*Acer rubrum*	Red Maple	4"	Co-Dominant	71.88
302	*Quercus rubra*	Northern Red Oak	17"	Canopy Dieback	40.63
303	*Pinus virginiana*	Virginia Pine	8"	Leaning	43.75
304	*Quercus rubra*	Northern Red Oak	10"	Dead	0.00
305	*Quercus rubra*	Northern Red Oak	29"	Co-Dominant (Half Dead)	46.88
306	*Acer rubrum*	Red Maple	6"		81.25
307	*Quercus rubra*	Northern Red Oak	27"	Co-Dominant (Half Dead)	43.75
308	*Acer rubrum*	Red Maple	8"		78.13
309	*Liriodendron tulipifera*	Tulip Poplar	14"		78.13
310	*Quercus prinus*	Chestnut Oak	4"		71.88
311	*Pinus virginiana*	Virginia Pine	17"		59.38
312	*Quercus alba*	White Oak	4"		87.50
313	*nyssa sylvatica*	Sourgum	5"		90.63
314		Unknown	7"	Dead	0.00
315	*Quercus rubra*	Northern Red Oak	8"		68.75
316	*Quercus rubra*	Northern Red Oak	15"		75.00
317	*Quercus rubra*	Northern Red Oak	8"	Dead	0.00
318	*Quercus prinus*	Chestnut Oak	4"		65.63
319	*Quercus prinus*	Chestnut Oak	11"		68.75
320	*Quercus prinus*	Chestnut Oak	10"		68.75
321	*Quercus rubra*	Northern Red Oak	15"	Dying	28.13
322	*Pinus virginiana*	Virginia Pine	13"		62.50
323		Unknown	11"	Dead	0.00
324	*Quercus alba*	White Oak	4"	Central leader broken off	25.00
325	*Quercus rubra*	Northern Red Oak	7"		59.38
326	*Quercus rubra*	Northern Red Oak	14"	Dying	15.63
327	*Pinus virginiana*	Virginia Pine	4"	Central leader broken off	18.75
328	*Pinus virginiana*	Virginia Pine	4"	Central leader broken off	31.25
329	*Pinus virginiana*	Virginia Pine	4"	Dead	0.00
330	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
331		Unknown	5"	Dead	0.00
332	*Quercus alba*	White Oak	4"	Central Leader Cut Off	31.25
333	*Quercus rubra*	Northern Red Oak	6"		68.75
334	*Quercus rubra*	Northern Red Oak	9"		62.50
335	*Quercus rubra*	Northern Red Oak	9"		65.63
336	*Pinus echinata*	Shortleaf Pine	7"		68.75
337	*Pinus echinata*	Shortleaf Pine	15"		71.88
338	*Quercus rubra*	Northern Red Oak	6"		75.00
339	*Quercus prinus*	Chestnut Oak	5"		62.50
340	*Quercus rubra*	Northern Red Oak	19"		71.88
341	*Nyssa sylvatica*	Sourgum	5"	Central Leader Cut Off	34.38
342	*Pinus virginiana*	Virginia Pine	7"	Central Leader Cut Off	34.38
343	*Pinus virginiana*	Virginia Pine	4"	Central Leader Cut Off	15.63
344	*Quercus prinus*	Chestnut Oak	18"		68.75
345	*Pinus virginiana*	Virginia Pine	9"		59.38
346	*Quercus rubra*	Northern Red Oak	27"	Co-Domination	62.50
347	*Nyssa sylvatica*	Sourgum	4"		65.63
348	*Acer rubrum*	Red Maple	6"	Central Leader Cut Off	28.13
349	*Nyssa sylvatica*	Sourgum	5"		81.25
350	*Pinus virginiana*	Virginia Pine	7"		62.50
351	*Pinus virginiana*	Virginia Pine	7"		56.25
352	*Quercus alba*	White Oak	7"		53.13
353	*Quercus rubra*	Northern Red Oak	8"		71.88
354	*Quercus rubra*	Northern Red Oak	12"		75.00
355	*Quercus prinus*	Chestnut Oak	5"		68.75
356	*Quercus rubra*	Northern Red Oak	26"	Co-Domination	62.50
357	*Pinus virginiana*	Virginia Pine	8"		50.00
358	*Quercus prinus*	Chestnut Oak	12"	Dead	0.00
359	*Quercus alba*	White Oak	6"		84.38
360	*Quercus prinus*	Chestnut Oak	6"	Dead	0.00
361	*Quercus prinus*	Chestnut Oak	4"	Dead	0.00
362	*Liriodendron tulipifera*	Tulip Poplar	34"	Co-Dom	56.25
363	*Quercus prinus*	Chestnut Oak	8"	Dual Leader	68.75
364	*Quercus prinus*	Chestnut Oak	6"		65.63
365	*Pinus virginiana*	Virginia Pine	15"		71.88
366	*Quercus rubra*	Northern Red Oak	6"		78.13
367	*Pinus virginiana*	Virginia Pine	8"		53.13
368	*Acer rubrum*	Red Maple	8"	Co-Dom	50.00
369	*Quercus rubra*	Northern Red Oak	5"	Dead	0.00
370	*Quercus prinus*	Chestnut Oak	39"	Multi Stem	65.63
371	*Quercus prinus*	Chestnut Oak	7"		71.88
372	*Quercus rubra*	Northern Red Oak	7"		71.88
373	*Quercus rubra*	Northern Red Oak	13"		78.13
374	*Quercus rubra*	Northern Red Oak	18"	Scaffold Branch Decay	36.25
375	*Quercus prinus*	Chestnut Oak	7"	Dead	0.00
376	*Acer rubrum*	Red Maple	26"	Root System Washed Out	68.75
377	*Nyssa sylvatica*	Sourgum	4"		59.38
378	*Quercus rubra*	Northern Red Oak	6"	Dying	37.50
379	*Quercus rubra*	Northern Red Oak	14"		75.00
380	*Quercus prinus*	Chestnut Oak	11"	Crooked Trunk	68.75
381	*Quercus prinus*	Chestnut Oak	12"		65.63
382	*Quercus alba*	White Oak	5"		56.25
383	*Acer rubrum*	Red Maple	8"	Co-Dom	68.75
384	*Quercus alba*	White Oak	11"		71.88
385	*Acer rubrum*	Red Maple	7"	Central Leader Broken Off	31.25
386	*Quercus alba*	White Oak	20"		78.13
387		Unknown	10"	Dead	0.00
388	*Pinus virginiana*	Virginia Pine	12"		52.13
389	*Quercus alba*	White Oak	11"		75.00
390	*Pinus virginiana*	Virginia Pine	9"		52.13
391	*Quercus alba*	White Oak	7"		78.13
392	*Pinus virginiana*	Virginia Pine	9"		50.00
393	*Quercus rubra*	Northern Red Oak	12"		81.25
394	*Quercus rubra*	Northern Red Oak	14"		87.50
395	*Quercus rubra*	Northern Red Oak	8"		78.13
396	*Pinus virginiana*	Virginia Pine	7"		50.00
397	*Pinus virginiana*	Virginia Pine	5"		46.88
398	*Pinus virginiana*	Virginia Pine	6"		50.00
399	*Pinus virginiana*	Virginia Pine	7"		46.88
400	*Quercus rubra*	Northern Red Oak	27"	Specimen	87.50

REVISIONS

No.	DATE	DESCRIPTION

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

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08/22/2016
LANDSCAPE ARCHITECT

TREE ANALYSIS
RESTON EASTGATE CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016
C.I.= N/A
SCALE: N/A

SHEET
28I
OF
36

FILE No.
RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [TREE ANALYSIS] August 22, 2016 – 2:28pm jreynolds

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
401	*Quercus alba*	White Oak	8"	Topped Off	18.75
402	*Quercus alba*	White Oak	6"	Dead	0.00
403	*Quercus alba*	White Oak	8"	Topped Off	18.75
404	*Pinus virginiana*	Virginia Pine	11"	Dead	0.00
405	*Quercus alba*	White Oak	8"		75.00
406	*Quercus alba*	White Oak	23"	Multi-Stem; 1 Dead	46.88
407	*Quercus alba*	White Oak	7"		71.88
408	*Pinus virginiana*	Virginia Pine	7"		46.88
409	*Quercus rubra*	Northern Red Oak	6"	Dying	43.75
410	*Quercus prinus*	Chestnut Oak	30"	Co-Dom	62.50
411	*Quercus rubra*	Northern Red Oak	11"	Trunk Decay	37.50
412	*Quercus rubra*	Northern Red Oak	12"		68.75
413	*Quercus rubra*	Northern Red Oak	12"	Trunk Leakage	46.88
414	*Pinus virginiana*	Virginia Pine	14"		50.00
415	*Quercus alba*	White Oak	7"		75.00
416	*Quercus rubra*	Northern Red Oak	6"		71.88
417	*Quercus prinus*	Chestnut Oak	6"		78.13
418	*Pinus virginiana*	Virginia Pine	15"		53.13
419		Unknown	13"	Dead	0.00
420	*Quercus rubra*	Northern Red Oak	12"		78.13
421	*Quercus alba*	White Oak	9"	Co-Dom - 1 Dead	50.00
422	*Quercus rubra*	Northern Red Oak	15"		78.13
423	*Quercus rubra*	Northern Red Oak	11"		78.13
424	*Acer rubrum*	Red Maple	10"	Co-Dom	62.50
425	*Quercus alba*	White Oak	10"		81.25
426	*Quercus rubra*	Northern Red Oak	17"		75.00
427	*Quercus alba*	White Oak	25"	Specimen	81.25
428	*Pinus virginiana*	Virginia Pine	6"	Knot in Trunk	43.75
429	*Pinus virginiana*	Virginia Pine	8"		50.00
430	*Quercus rubra*	Northern Red Oak	15"	Dead	0.00
431	*Quercus rubra*	Northern Red Oak	9"	Dead	0.00
432	*Quercus rubra*	Northern Red Oak	12"	Dead	0.00
433	*Quercus rubra*	Northern Red Oak	5"		68.75
434	*Quercus rubra*	Northern Red Oak	11"		75.00
435	*Pinus echinata*	Shortleaf Pine	11"		56.25
436	*Quercus rubra*	Northern Red Oak	15"		78.13
437	*Quercus rubra*	Northern Red Oak	7"		75.00
438	*Pinus echinata*	Shortleaf Pine	11"		59.39
439	*Pinus virginiana*	Virginia Pine	7"		53.13
440	*Pinus virginiana*	Virginia Pine	12"		50.00
441	*Quercus prinus*	Chestnut Oak	14"	Multi-Stem	78.13
442	*Quercus rubra*	Northern Red Oak	7"		68.75
443	*Quercus rubra*	Northern Red Oak	10"	Dead Tree Leaning Again	71.88
444	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
445	*Quercus rubra*	Northern Red Oak	11"		71.88
446	*Quercus rubra*	Northern Red Oak	14"		78.13
447	*Quercus rubra*	Northern Red Oak	16"		68.75
448	*Nyssa sylvatica*	Sourgum	14"		71.88
449	*Quercus rubra*	Northern Red Oak	9"		75.00
450	*Quercus rubra*	Northern Red Oak	6"		71.88
451	*Pinus virginiana*	Virginia Pine	7"		50.00
452	*Pinus virginiana*	Virginia Pine	13"		53.13
453		Unknown	10"	Dead	0.00
454	*Nyssa sylvatica*	Sourgum	16"	Topped Off; Dying	21.88
455	*Pinus virginiana*	Virginia Pine	16"		56.25
456	*Acer rubrum*	Red Maple	13"	Co-Dom	62.50
457		Unknown	19"	Dead	0.00
458	*Pinus virginiana*	Virginia Pine	10"		50.00
459	*Pinus virginiana*	Virginia Pine	7"		46.88
460	*Pinus virginiana*	Virginia Pine	6"		46.88
461	*Pinus virginiana*	Virginia Pine	9"		50.00
462	*Pinus virginiana*	Virginia Pine	5"	Open Wound in Trunk	40.63
463	*Pinus virginiana*	Virginia Pine	8"		46.88
464	*Quercus rubra*	Northern Red Oak	12"		78.13
465	*Quercus rubra*	Northern Red Oak	9"		81.25
466	*Pinus virginiana*	Virginia Pine	6"		50.00
467	*Pinus echinata*	Shortleaf Pine	9"		68.75
468	*Pinus virginiana*	Virginia Pine	18"		53.13
469	*Liriodendron tulipifera*	Tulip Poplar	10"		62.50
470	*Quercus alba*	White Oak	15"		87.50
471	*Liriodendron tulipifera*	Tulip Poplar	12"	Twist in Leader	71.88
472	*Pinus virginiana*	Virginia Pine	13"		53.13
473	*Pinus virginiana*	Virginia Pine	16"		56.25
474	*Carya glabra*	Pignut Hickory	7"		81.25
475	*Quercus rubra*	Northern Red Oak	5"	Swollen Root Flare	62.50
476	*Populus grandidentata*	Big Tooth Aspen	9"		71.88
477	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
478	*Liriodendron tulipifera*	Tulip Poplar	14"		87.50
479	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
480	*Acer rubrum*	Red Maple	6"	Dead Tree Leaning Against	46.88
481	*Quercus alba*	White Oak	33"	Co-Dom	81.25
482	*Quercus alba*	White Oak	24"		84.38
483	*Liriodendron tulipifera*	Tulip Poplar	6"		87.50
484	*Liriodendron tulipifera*	Tulip Poplar	15"		84.38
485	*Quercus rubra*	Northern Red Oak	29"	Specimen	87.50
486	*Liriodendron tulipifera*	Tulip Poplar	10"		84.38
487	*Pinus virginiana*	Virginia Pine	5"	Leaning Over	40.63
488	*Liriodendron tulipifera*	Tulip Poplar	9"		78.13
489	*Nyssa sylvatica*	Sourgum	5"		75.00
490	*Nyssa sylvatica*	Sourgum	7"		71.88
491	*Liriodendron tulipifera*	Tulip Poplar	6"		75.00
492	*Acer rubrum*	Red Maple	6"		78.13
493	*Quercus alba*	White Oak	32"	Specimen; Poison Ivy	81.25
494	*Quercus alba*	White Oak	48"	Specimen	84.38
495	*Pinus echinata*	Shortleaf Pine	11"		78.13
496	*Quercus alba*	White Oak	9"		68.75
497	*Pinus virginiana*	Virginia Pine	6"		53.13
498	*Acer rubrum*	Red Maple	9"		75.00
499	*Quercus alba*	White Oak	13"		78.13
500	*Liriodendron tulipifera*	Tulip Poplar	12"		81.25

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
501	*Liriodendron tulipifera*	Tulip Poplar	9"		81.25
502	*Quercus rubra*	Northern Red Oak	33"	Specimen	90.63
503	*Liriodendron tulipifera*	Tulip Poplar	10"		65.63
504	*Quercus alba*	White Oak	30"	Specimen	81.25
505	*Acer rubrum*	Red Maple	5"		71.88
506	*Liriodendron tulipifera*	Tulip Poplar	15"		75.00
507	*Liriodendron tulipifera*	Tulip Poplar	9"		78.13
508	*Pinus virginiana*	Virginia Pine	16"	Dead	0.00
509	*Quercus alba*	White Oak	30"	Specimen	71.88
510	*Nyssa sylvatica*	Sourgum	7"		65.63
511	*Nyssa sylvatica*	Sourgum	8"	Leaning	53.13
512	*Acer rubrum*	Red Maple	7"		56.25
513	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
514	*Quercus alba*	White Oak	13"		75.00
515	*Pinus virginiana*	Virginia Pine	14"		46.88
516	*Pinus virginiana*	Virginia Pine	18"		50.00
517	*Pinus virginiana*	Virginia Pine	20"		56.25
518	*Pinus taeda*	Loblolly Pine	10"	Leaning	40.63
519	*Nyssa sylvatica*	Sourgum	5"		56.25
520	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
521	*Quercus alba*	White Oak	23"		78.13
522	*Pinus taeda*	Loblolly Pine	11"		62.50
523	*Nyssa sylvatica*	Sourgum	14"		65.63
524	*Pinus virginiana*	Virginia Pine	13"		50.00
525	*Acer rubrum*	Red Maple	5"		71.88
526		Unknown	17"	Dead	0.00
527	*Acer rubrum*	Red Maple	6"		68.75
528	*Liriodendron tulipifera*	Tulip Poplar	9"		81.25
529	*Pinus virginiana*	Virginia Pine	16"		53.13
530	*Quercus rubra*	Northern Red Oak	7"		71.88
531	*Liriodendron tulipifera*	Tulip Poplar	14"		78.13
532	*Pinus virginiana*	Virginia Pine	4"	Leaning	46.88
533	*Quercus rubra*	Northern Red Oak	10"		71.88
534		Unknown	9"	Dead	0.00
535	*Pinus virginiana*	Virginia Pine	10"	Leaning	43.75
536	*Pinus virginiana*	Virginia Pine	7"	Leaning	46.88
537	*Quercus rubra*	Northern Red Oak	10"		81.25
538	*Quercus rubra*	Northern Red Oak	5"	Dying	18.75
539	*Pinus virginiana*	Virginia Pine	6"		50.00
540	*Pinus virginiana*	Virginia Pine	6"		46.88
541	*Pinus virginiana*	Virginia Pine	13"		53.13
542	*Nyssa sylvatica*	Sourgum	8"		65.63
543	*Pinus taeda*	Loblolly Pine	11"	Barbed Wire Grown In	59.38
544	*Pinus virginiana*	Virginia Pine	14"		56.25
545	*Pinus virginiana*	Virginia Pine	13"	Dead	0.00
546	*Pinus virginiana*	Virginia Pine	17"		53.13
547	*Nyssa sylvatica*	Sourgum	15"	Barbed Wire Grown In	56.25
548	*Quercus rubra*	Northern Red Oak	8"		78.13
549	*Quercus rubra*	Northern Red Oak	7"		75.00
550	*Pinus virginiana*	Virginia Pine	8"		46.88
551	*Quercus rubra*	Northern Red Oak	13"	Dead Adjacent Leaning Against	78.13
552	*Pinus virginiana*	Virginia Pine	9"		50.00
553	*Pinus virginiana*	Virginia Pine	8"		46.88
554	*Quercus rubra*	Northern Red Oak	14"		78.13
555	*Pinus virginiana*	Virginia Pine	8"		43.75
556	*Quercus rubra*	Northern Red Oak	12"		71.88
557	*Quercus alba*	White Oak	10"		75.00
558	*Pinus virginiana*	Virginia Pine	13"		50.00
559	*Pinus virginiana*	Virginia Pine	6"		43.75
560	*Pinus virginiana*	Virginia Pine	8"		53.13
561	*Quercus rubra*	Northern Red Oak	15"		68.75
562	*Quercus rubra*	Northern Red Oak	7"		65.63
563		Unknown	6"	Dead	0.00
564		Unknown	17"	Dead	0.00
565	*Nyssa sylvatica*	Sourgum	13"		68.75
566	*Quercus rubra*	Northern Red Oak	18"		71.88
567	*Quercus rubra*	Northern Red Oak	18"		78.13
568	*Quercus rubra*	Northern Red Oak	10"		75.00
569		Unknown	8"	Dead	0.00
570	*Quercus rubra*	Northern Red Oak	9"		75.00
571	*Quercus alba*	White Oak	5"		68.75
572	*Nyssa sylvatica*	Sourgum	19"		78.13
573	*Nyssa sylvatica*	Sourgum	17"		81.25
574	*Quercus rubra*	Northern Red Oak	12"		68.75
575	*Pinus virginiana*	Virginia Pine	6"		50.00
576	*Quercus prinus*	Chestnut Oak	50"	Multi-Stem	
577	*Pinus virginiana*	Virginia Pine	7"		46.88
578	*Quercus rubra*	Northern Red Oak	7"		65.63
579	*Quercus rubra*	Northern Red Oak	17"		62.50
580	*Quercus rubra*	Northern Red Oak	4"	Dead	0.00
581	*Quercus rubra*	Northern Red Oak	11"		75.00
582	*Quercus rubra*	Northern Red Oak	12"	Dead	0.00
583	*Quercus rubra*	Northern Red Oak	7"		62.50
584	*Pinus virginiana*	Virginia Pine	9"		53.13
585	*Quercus alba*	White Oak	18"		65.63
586	*Quercus rubra*	Northern Red Oak	12"		62.50
587	*Quercus rubra*	Northern Red Oak	14"		65.63
588	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
589	*Pinus strobus*	White Pine	8"	Topped Off	40.63
590	*Pinus virginiana*	Virginia Pine	7"		53.13
591	*Quercus alba*	White Oak	5"	Topped Off	37.50
592	*Quercus alba*	White Oak	6"		62.50
593	*Quercus alba*	White Oak	10"	Co-Dominant; Topped Off	28.13
594	*Quercus rubra*	Northern Red Oak	10"	Topped Off	37.50
595	*Quercus alba*	White Oak	10"		62.50
596	*Quercus alba*	White Oak	5"		65.63
597	*Quercus alba*	White Oak	8"		75.00
598	*Quercus alba*	White Oak	6"		71.88
599	*Quercus rubra*	Northern Red Oak	11"		59.38
600	*Quercus rubra*	Northern Red Oak	5"		75.00

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
601	*Quercus alba*	White Oak	6"	Topped Off	37.50
602	*Quercus alba*	White Oak	11"	Co-Dom; Topped Off	28.13
603	*Quercus rubra*	Northern Red Oak	8"		62.50
604	*Pinus virginiana*	Virginia Pine	10"	Topped Off	25.00
605	*Quercus alba*	White Oak	14"		65.63
606	*Quercus rubra*	Northern Red Oak	15"		62.50
607	*Quercus rubra*	Northern Red Oak	9"		68.75
608	*Quercus rubra*	Northern Red Oak	7"		62.50
609	*Quercus alba*	White Oak	8"		71.88
610	*Quercus alba*	White Oak	10"		75.00
611	*Quercus alba*	White Oak	8"		68.75
612	*Pinus virginiana*	Virginia Pine	7"		50.00
613	*Quercus alba*	White Oak	6"		65.63
614	*Quercus rubra*	Northern Red Oak	14"		78.13
615	*Quercus rubra*	Northern Red Oak	6"		59.38
616	*Quercus rubra*	Northern Red Oak	6"		71.88
617	*Pinus virginiana*	Virginia Pine	7"		46.88
618	*Quercus rubra*	Northern Red Oak	16"		75.00
619	*Pinus virginiana*	Virginia Pine	6"		46.88
620	*Quercus rubra*	Northern Red Oak	9"	Dead	0.00
621	*Quercus alba*	White Oak	12"	Co-Dom; Dead Tree Stuck In	53.13
622	*Quercus rubra*	Northern Red Oak	8"	Dead	0.00
623	*Quercus rubra*	Northern Red Oak	6"		71.88
624	*Quercus alba*	White Oak	6"		68.75
625	*Quercus rubra*	Northern Red Oak	7"	Dead	0.00
626	*Quercus alba*	White Oak	13"	Co-Dom; Dead Tree Stuck In	43.75
627	*Quercus rubra*	Northern Red Oak	15"		81.25
628	*Quercus rubra*	Northern Red Oak	11"		62.50
629	*Quercus rubra*	Northern Red Oak	17"	Dying	27.50
630	*Quercus rubra*	Northern Red Oak	13"		59.38
631	*Quercus alba*	White Oak	8"		59.38
632	*Quercus rubra*	Northern Red Oak	15"	Dead	0.00
633		Unknown	13"	Dead	0.00
634	*Nyssa sylvatica*	Sourgum	14"		56.25
635	*Quercus alba*	White Oak	16"		65.63
636	*Quercus alba*	White Oak	6"		62.50
637	*Nyssa sylvatica*	Sourgum	25"	Large Open Wound In Trunk	37.50
638	*Quercus rubra*	Northern Red Oak	22"		78.13
639	*Pinus virginiana*	Virginia Pine	13"		53.13
640	*Quercus alba*	White Oak	7"		62.50
641	*Nyssa sylvatica*	Sourgum	25"		68.75
642	*Quercus rubra*	Northern Red Oak	17"		65.63
643	*Quercus rubra*	Northern Red Oak	8"		62.50
644	*Quercus rubra*	Northern Red Oak	9"	Dead	0.00
645	*Quercus alba*	White Oak	13"		71.88
646	*Nyssa sylvatica*	Sourgum	9"		75.00
647	*Quercus rubra*	Northern Red Oak	17"		75.00
648	*Quercus rubra*	Northern Red Oak	14"		62.50
649	*Quercus alba*	White Oak	11"	Co-Dominant	59.38
650	*Quercus rubra*	Northern Red Oak	38"	Co-Dominant	68.75
651	*Quercus rubra*	Northern Red Oak	10"		78.13
652	*Quercus rubra*	Northern Red Oak	15"		75.00
653	*Quercus rubra*	Northern Red Oak	18"	Co-Dominant	62.50
654	*Quercus alba*	White Oak	16"	Co-Dominant	65.63
655	*Acer rubrum*	Red Maple	6"		71.88
656	*Quercus rubra*	Northern Red Oak	6"		59.38
657	*Pinus virginiana*	Virginia Pine	8"		50.00
658	*Quercus rubra*	Northern Red Oak	20"		75.00
659	*Quercus alba*	White Oak	15"	Multi-Leader; 1 Dead	37.50
660	*Pinus virginiana*	Virginia Pine	8"		46.88
661	*Quercus prinus*	Chestnut Oak	10"		68.75
662	*Pinus virginiana*	Virginia Pine	10"		50.00
663	*Quercus rubra*	Northern Red Oak	7"		62.50
664	*Quercus rubra*	Northern Red Oak	8"		71.88
665	*Acer rubrum*	Red Maple	6"		62.50
666	*Pinus virginiana*	Virginia Pine	12"		50.00
667	*Pinus virginiana*	Virginia Pine	11"		53.13
668	*Quercus rubra*	Northern Red Oak	7"		68.75
669	*Pinus virginiana*	Virginia Pine	8"		50.00
670	*Quercus rubra*	Northern Red Oak	8"		71.88
671	*Liriodendron tulipifera*	Tulip Poplar	20"		81.25
672	*Pinus virginiana*	Virginia Pine	5"		46.88
673	*Pinus virginiana*	Virginia Pine	6"		53.13
674	*Pinus virginiana*	Virginia Pine	9"		50.00
675	*Acer rubrum*	Red Maple	6"		75.00
676	*Liriodendron tulipifera*	Tulip Poplar	14"	Curve in Trunk	62.50
677	*Pinus virginiana*	Virginia Pine	18"		56.25
678	*Pinus virginiana*	Virginia Pine	12"		53.13
679	*Pinus virginiana*	Virginia Pine	13"	Dead	0.00
680	*Pinus virginiana*	Virginia Pine	15"		50.00
681	*Acer rubrum*	Red Maple	6"		68.75
682	*Acer rubrum*	Red Maple	7"		65.63
683	*Nyssa sylvatica*	Sourgum	15"		71.88
684	*Liriodendron tulipifera*	Tulip Poplar	9"		75.00
685	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
686	*Nyssa sylvatica*	Sourgum	15"		78.13
687	*Quercus alba*	White Oak	24"		81.25
688	*Liriodendron tulipifera*	Tulip Poplar	11"		84.38
689	*Quercus rubra*	Northern Red Oak	25"		78.13
690	*Acer rubrum*	Red Maple	6"		75.00
691	*Pinus virginiana*	Virginia Pine	12"	Dead	0.00
692	*Liriodendron tulipifera*	Tulip Poplar	8"		71.88
693	*Liriodendron tulipifera*	Tulip Poplar	16"		81.25
694	*Nyssa sylvatica*	Sourgum	16"		75.00
695	*Nyssa sylvatica*	Sourgum	12"		71.88
696	*Liriodendron tulipifera*	Tulip Poplar	7"		78.13
697	*Liriodendron tulipifera*	Tulip Poplar	14"		68.75
698	*Acer rubrum*	Red Maple	10"		78.13
699	*Liriodendron tulipifera*	Tulip Poplar	12"	Curve in Trunk	65.63
700	*Pinus virginiana*	Virginia Pine	10"	Trunk Broken; Dead	0.00

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
701	*Quercus rubra*	Northern Red Oak	16"		78.13
702	*Pinus virginiana*	Virginia Pine	10"	Leaning	46.88
703	*Liriodendron tulipifera*	Tulip Poplar	7"	Curve in Trunk	62.50
704	*Pinus virginiana*	Virginia Pine	10"	Leaning	43.75
705	*Acer rubrum*	Red Maple	13"	Co-Dominant	59.38
706	*Acer rubrum*	Red Maple	6"		62.50
707	*Acer rubrum*	Red Maple	15"	Multi-Leader; 1 Dead	59.38
708	*Liriodendron tulipifera*	Tulip Poplar	16"		81.25
709	*Quercus alba*	White Oak	6"		78.12
710	*Liriodendron tulipifera*	Tulip Poplar	19"		84.38
711	*Liriodendron tulipifera*	Tulip Poplar	7"		78.13
712	*Liriodendron tulipifera*	Tulip Poplar	10"		78.13
713	*Prunus serotina*	Black Cherry	8"		65.63
714	*Pinus virginiana*	Virginia Pine	9"		50.00
715	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
716	*Liriodendron tulipifera*	Tulip Poplar	10"	Open Wound in Trunk	53.13
717	*Prunus serotina*	Black Cherry	21"	Co-Dominant	62.50
718	*Pinus virginiana*	Virginia Pine	8"		50.00
719	*Pinus virginiana*	Virginia Pine	6"	Leaning	46.88
720	*Quercus alba*	White Oak	7"		68.75
721	*Pinus virginiana*	Virginia Pine	5"		46.88
722	*Quercus alba*	White Oak	13"	Leaning	62.50
723	*Acer rubrum*	Red Maple	8"		65.63
724	*Quercus alba*	White Oak	16"		81.25
725	*Nyssa sylvatica*	Sourgum	8"		78.13
726	*Quercus alba*	White Oak	28"	Specimen	87.50
727	*Quercus rubra*	Northern Red Oak	24"	Specimen	81.25
728	*Liriodendron tulipifera*	Tulip Poplar	9"	Curves in Trunk	68.75
729	*Acer rubrum*	Red Maple	7"		71.88
730	*Quercus alba*	White Oak	24"	Poison Ivy Growing On	65.63
731	*Liriodendron tulipifera*	Tulip Poplar	16"		78.13
732	*Ilex opaca*	American Holly	5"		65.63
733	*Liriodendron tulipifera*	Tulip Poplar	17"		81.25
734	*Acer rubrum*	Red Maple	6"		68.75
735	*Acer rubrum*	Red Maple	15"	Co-Dominant	62.50
736	*Acer rubrum*	Red Maple	17"		78.13
737	*Acer rubrum*	Red Maple	8"		75.00
738	*Nyssa sylvatica*	Sourgum	19"		78.13
739	*Nyssa sylvatica*	Sourgum	17"		75.00
740	*Prunus serotina*	Black Cherry	7"		68.75
741	*Quercus alba*	White Oak	20"	Specimen	81.25
742	*Acer rubrum*	Red Maple	8"		79.00
743	*Prunus serotina*	Black Cherry	14"	Co-Dominant; 1 Dead	53.13
744	*Quercus alba*	White Oak	31"	Specimen	90.63
745		Unknown	34"	Dead	0.00
746	*Acer rubrum*	Red Maple	11"		75.00
747	*Acer rubrum*	Red Maple	14"		71.88
748	*Nyssa sylvatica*	Sourgum	7"		62.50
749	*Carya glabra*	Pignut Hickory	8"		65.63
750	*Carya glabra*	Pignut Hickory	8"		65.63
751	*Acer rubrum*	Red Maple	14"	Co-Dominant	75.00
752	*Acer rubrum*	Red Maple	13"	Co-Dominant	71.88
753	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
754	*Quercus prinus*	Chestnut Oak	8"	Co-Dominant	62.50
755	*Pinus virginiana*	Virginia Pine	13"		53.13
756		Unknown	25"	Dead	0.00
757	*Pinus virginiana*	Virginia Pine	14"		56.25
758	*Quercus rubra*	Northern Red Oak	13"		59.38
759	*Pinus virginiana*	Virginia Pine	10"		50.00
760	*Nyssa sylvatica*	Sourgum	9"		68.75
761	*Quercus prinus*	Chestnut Oak	15"		71.88
762	*Quercus alba*	White Oak	24"	Dead Virginia Pine Leaning Against	84.38
763	*Pinus virginiana*	Virginia Pine	7"	Dead Virginia Pine Leaning Against	0.00
764	*Quercus alba*	White Oak	13"		81.25
765	*Quercus rubra*	Northern Red Oak	19"	1 Dead Major Branch	56.25
766	*Quercus rubra*	Northern Red Oak	14"	Leaning	65.63
767	*Quercus alba*	White Oak	17"		78.13
768	*Pinus virginiana*	Virginia Pine	7"		46.88
769	*Pinus virginiana*	Virginia Pine	15"		50.00
770	*Quercus rubra*	Northern Red Oak	11"	Co-Dominant	65.63
771	*Quercus alba*	White Oak	5"		68.75
772	*Quercus rubra*	Northern Red Oak	12"	Co-Dom; 1 Dead	62.50
773	*Quercus rubra*	Northern Red Oak	10"	Dead	0.00
774	*Quercus prinus*	Chestnut Oak	13"		78.13
775	*Quercus rubra*	Northern Red Oak	15"		59.38
776	*Quercus rubra*	Northern Red Oak	28"	Co-Dominant	62.50
777	*Pinus virginiana*	Virginia Pine	6"		46.88
778	*Pinus virginiana*	Virginia Pine	7"		46.88
779	*Pinus virginiana*	Virginia Pine	7"		50.00
780	*Pinus virginiana*	Virginia Pine	6"		46.88
781	*Quercus alba*	White Oak	5"		68.75
782	*Quercus rubra*	Northern Red Oak	44"	Multi-Stem	62.50
783	*Quercus rubra*	Northern Red Oak	9"		68.75
784	*Quercus rubra*	Northern Red Oak	21"	Multi-Stem; 2 Dead	28.13
785	*Pinus virginiana*	Virginia Pine	8"		52.13
786	*Quercus alba*	White Oak	15"	Co-Dominant	65.63
787	*Quercus alba*	White Oak	8"	Leader Broken	28.13
788	*Quercus rubra*	Northern Red Oak	9"		62.50
789	*Pinus virginiana*	Virginia Pine	7"		46.88
790	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
791	*Quercus rubra*	Northern Red Oak	39"	Multi-Stem	71.88
792	*Quercus rubra*	Northern Red Oak	25"	Co-Dominant	68.75
793	*Quercus rubra*	Northern Red Oak	9"	Dead	0.00
794	*Quercus alba*	White Oak	6"		78.13
795	*Quercus rubra*	Northern Red Oak	18"	Co-Dominant	75.00
796	*Quercus rubra*	Northern Red Oak	7"		68.75
797	*Pinus virginiana*	Virginia Pine	9"		46.88
798	*Quercus alba*	White Oak	5"		62.50
799	*Quercus rubra*	Northern Red Oak	6"		68.75
800	*Acer rubrum*	Red Maple	10"		71.88

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
04/07/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
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08/22/2016
LANDSCAPE ARCHITECT

TREE ANALYSIS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016
CI.= N/A
SCALE: N/A

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Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (10)] August 22, 2016 – 2:28pm reynolds

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
801	*Pinus virginiana*	Virginia Pine	9"		46.88
802	*Quercus rubra*	Northern Red Oak	22"	Co-Dominant	56.25
803	*Nyssa sylvatica*	Sourgum	26"		75.00
804	*Quercus rubra*	Northern Red Oak	18"		71.88
805	*Quercus rubra*	Northern Red Oak	5"		65.63
806	*Quercus rubra*	Northern Red Oak	5"		62.50
807	*Acer rubrum*	Red Maple	5"		59.38
808	*Quercus rubra*	Northern Red Oak	9"		71.88
809	*Quercus rubra*	Northern Red Oak	13"		71.88
810	*Quercus rubra*	Northern Red Oak	6"	Dying	43.75
811	*Quercus rubra*	Northern Red Oak	15"	Dead; Co-Dom	0.00
812	*Quercus alba*	White Oak	9"		71.88
813	*Quercus rubra*	Northern Red Oak	10"		78.13
814	*Nyssa sylvatica*	Sourgum	17"		75.00
815	*Quercus rubra*	Northern Red Oak	8"	Co-Dominant; Dead	0.00
816	*Quercus rubra*	Northern Red Oak	6"		43.75
817	*Quercus rubra*	Northern Red Oak	31"	Co-Dominant	68.75
818	*Carya glabra*	Pignut Hickory	5"		62.50
819	*Nyssa sylvatica*	Sourgum	22"		78.13
820	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
821	*Quercus rubra*	Northern Red Oak	19"	Co-Dom; 1 Dead	56.25
822	*Quercus prinus*	Chestnut Oak	67"	Multi-Stem	68.75
823	*Quercus rubra*	Northern Red Oak	10"		65.63
824	*Quercus rubra*	Northern Red Oak	15"	Dying	34.38
825	*Quercus rubra*	Northern Red Oak	5"	Dying	34.38
826	*Quercus rubra*	Northern Red Oak	11"	Dead	0.00
827	*Quercus rubra*	Northern Red Oak	19"		81.25
828	*Quercus prinus*	Chestnut Oak	22"	Co-Dominant	71.88
829	*Pinus virginiana*	Virginia Pine	8"		46.88
830	*Quercus rubra*	Northern Red Oak	6"		67.50
831	*Carya glabra*	Pignut Hickory	8"		68.75
832	*Prunus serotina*	Black Cherry	8"		68.75
833	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
834	*Prunus serotina*	Black Cherry	45"	Multi-Stem	59.38
835	*Prunus serotina*	Black Cherry	8"		56.25
836	*Acer rubrum*	Red Maple	6"		71.88
837	*Acer rubrum*	Red Maple	18"	Co-Dom	68.75
838	*Acer rubrum*	Red Maple	5"		62.50
839	*Acer rubrum*	Red Maple	8"		71.88
840	*Acer rubrum*	Red Maple	13"	Wound in Trunk	46.88
841	*Quercus alba*	White Oak	10"	Co-Dom; 1 Dead	37.50
842	*Acer rubrum*	Red Maple	9"		62.50
843	*Acer rubrum*	Red Maple	7"		75.00
844	*Acer rubrum*	Red Maple	8"		71.88
845	*Acer rubrum*	Red Maple	10"	Dead	0.00
846	*Quercus alba*	White Oak	24"		78.13
847	*Quercus rubra*	Northern Red Oak	10"		79.00
848	*Quercus alba*	White Oak	6"		59.38
849		Unknown	14"	Dead	0.00
850	*Quercus alba*	White Oak	5"		68.75
851	*Quercus rubra*	Northern Red Oak	16"		56.25
852	*Pinus virginiana*	Virginia Pine	9"	Topped Off	21.88
853	*Carya glabra*	Pignut Hickory	7"		65.63
854	*Pinus virginiana*	Virginia Pine	8"	Topped Off	25.00
855	*Quercus rubra*	Northern Red Oak	22"		75.00
856	*Quercus rubra*	Northern Red Oak	22"		68.75
857	*Quercus rubra*	Northern Red Oak	13"		71.88
858	*Robinia pseudoacacia*	Black Locust	16"	Co-Dom; Dying	31.25
859	*Acer rubrum*	Red Maple	5"		65.63
860	*Acer rubrum*	Red Maple	15"	Co-Dominant	62.50
861	*Liriodendron tulipifera*	Tulip Poplar	17"		68.75
862	*Pinus virginiana*	Virginia Pine	8"	Bent Trunk	31.25
863	*Robinia pseudoacacia*	Black Locust	10"		43.75
864	*Liriodendron tulipifera*	Tulip Poplar	11"		71.88
865	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
866	*Liriodendron tulipifera*	Tulip Poplar	17"		81.25
867	*Prunus serotina*	Black Cherry	15"	Leaning	56.25
868	*Quercus rubra*	Northern Red Oak	7"		62.50
869	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
870	*Acer rubrum*	Red Maple	12"		68.75
871	*Pinus virginiana*	Virginia Pine	6"	Leaning	37.50
872	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
873	*Pinus virginiana*	Virginia Pine	7"		46.88
874	*Pinus virginiana*	Virginia Pine	6"	Leaning	37.50
875	*Acer rubrum*	Red Maple	13"		81.25
876	*Acer rubrum*	Red Maple	7"		68.75
877	*Liriodendron tulipifera*	Tulip Poplar	16"		78.13
878	*Acer rubrum*	Red Maple	9"	Curve in Trunk	59.38
879	*Acer rubrum*	Red Maple	21"	Multi-Stem	62.50
880	*Liriodendron tulipifera*	Tulip Poplar	22"		78.13
881	*Platanus occidentalis*	Sycamore	9"		62.50
882	*Acer rubrum*	Red Maple	13"		62.50
883	*Acer rubrum*	Red Maple	6"		65.63
884	*Acer rubrum*	Red Maple	7"		59.38
885	*Acer rubrum*	Red Maple	12"		78.13
886	*Acer rubrum*	Red Maple	11"		75.00
887	*Liriodendron tulipifera*	Tulip Poplar	16"		65.63
888	*Liriodendron tulipifera*	Tulip Poplar	24"		78.13
889	*Acer rubrum*	Red Maple	25"	Co-Dominant	75.00
890	*Prunus serotina*	Black Cherry	8"		62.50
891	*Liriodendron tulipifera*	Tulip Poplar	17"		75.00
892	*Pinus virginiana*	Virginia Pine	9"		46.88
893	*Acer rubrum*	Red Maple	6"		62.50
894	*Prunus serotina*	Black Cherry	13"		59.38
895	*Sassafras albidum*	Sassafras	5"		50.00
896	*Acer rubrum*	Red Maple	12"		65.63
897	*Prunus serotina*	Black Cherry	10"		59.38
898	*Prunus serotina*	Black Cherry	19"		59.38
899	*Acer rubrum*	Red Maple	22"	Co-Dominant	62.50
900	*Acer rubrum*	Red Maple	7"		62.50

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
901	*Acer rubrum*	Red Maple	21"	Co-Dominant; Vine Growing On	59.38
902	*Acer rubrum*	Red Maple	8"		62.50
903	*Acer rubrum*	Red Maple	15"		68.75
904	*Catalpa speciosa*	Northern Catalpa	20"	Co-Dom; 1 Leader Removed	28.13
905	*Acer rubrum*	Red Maple	28"	Co-Dom; Trunk Leakage	43.75
906	*Acer rubrum*	Red Maple	12"		65.63
907	*Acer rubrum*	Red Maple	26"	Co-Dom; Open Wound In Trunk	53.13
908	*Prunus serotina*	Black Cherry	18"	Canopy Die Back	46.88
909	*Acer rubrum*	Red Maple	13"	Multi-Leader	68.75
910	*Catalpa speciosa*	Northern Catalpa	15"	Die Back	43.75
911	*Acer rubrum*	Red Maple	28"	Co-Dominant	71.88
912	*Sassafras albidum*	Sassafras	13"		56.25
913	*Catalpa speciosa*	Northern Catalpa	13"		53.13
914	*Pinus virginiana*	Virginia Pine	6"		50.00
915	*Prunus serotina*	Black Cherry	6"	Die Back	37.50
916	*Quercus rubra*	Northern Red Oak	11"		56.25
917	*Pinus virginiana*	Virginia Pine	9"		50.00
918	*Quercus rubra*	Northern Red Oak	13"		65.63
919	*Carya glabra*	Pignut Hickory	10"		62.50
920	*Quercus rubra*	Northern Red Oak	15"		65.63
921	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
922	*Pinus virginiana*	Virginia Pine	12"		43.75
923	*Catalpa speciosa*	Northern Catalpa	16"		59.38
924	*Acer rubrum*	Red Maple	14"		78.13
925	*Acer rubrum*	Red Maple	11"		68.75
926	*Liriodendron tulipifera*	Tulip Poplar	18"		71.88
927	*Acer rubrum*	Red Maple	7"	Leaning	56.25
928	*Acer rubrum*	Red Maple	4"		75.00
929	*Acer rubrum*	Red Maple	10"		62.50
930	*Quercus rubra*	Northern Red Oak	7"		68.75
931	*Quercus rubra*	Northern Red Oak	11"	Dead Adjacent Leaning Against	46.88
932	*Quercus alba*	White Oak	7"		62.50
933	*Quercus alba*	White Oak	7"	Multi-Stem; 1 Dead	56.25
934	*Quercus alba*	White Oak	7"		62.50
935	*Quercus rubra*	Northern Red Oak	9"	Die Back; Vine Growing On	46.88
936	*Acer rubrum*	Red Maple	25"	Multi-Stem	65.63
937	*Prunus serotina*	Black Cherry	19"	Multi-Stem	62.50
938	*Acer rubrum*	Red Maple	6"		65.63
939	*Acer rubrum*	Red Maple	8"		62.50
940	*Acer rubrum*	Red Maple	8"		68.75
941	*Acer rubrum*	Red Maple	8"	Twisted Trunk	59.38
942	*Acer rubrum*	Red Maple	10"	Multi-Stem	62.50
943	*Populus grandidentata*	Big Tooth Aspen	12"	Leaning	56.25
944	*Acer rubrum*	Red Maple	7"		71.88
945	*Acer rubrum*	Red Maple	7"		65.63
946	*Quercus rubra*	Northern Red Oak	48"	Co-Dom; 1 Dead	59.38
947	*Carya glabra*	Pignut Hickory	8"		62.50
948	*Acer rubrum*	Red Maple	26"	Multi-Leader	59.38
949	*Acer rubrum*	Red Maple	5"		65.63
950	*Quercus alba*	White Oak	21"	Specimen	78.13
951	*Acer rubrum*	Red Maple	8"		71.88
952	*Prunus serotina*	Black Cherry	20"	Co-Dom; 1 Broken	43.75
953	*Quercus alba*	White Oak	26"	Twisted Trunk; Broken Branches	53.13
954	*Quercus alba*	White Oak	34"	Specimen	81.25
955	*Acer rubrum*	Red Maple	7"		71.88
956	*Acer rubrum*	Red Maple	6"		65.63
957	*Ilex opaca*	American Holly	9"	Co-Dom	71.88
958	*Quercus rubra*	Northern Red Oak	28"	Dead	0.00
959	*Quercus rubra*	Northern Red Oak	29"	Die Back; Swollen Root Floor	59.38
960	*Acer rubrum*	Red Maple	5"	Die Back	56.25
961	*Quercus alba*	White Oak	24"	Specimen	81.25
962	*Prunus serotina*	Black Cherry	6"	Dying	31.25
963	*Quercus rubra*	Northern Red Oak	21"	Specimen	78.13
964	*Acer rubrum*	Red Maple	9"		68.75
965	*Acer rubrum*	Red Maple	10"		68.75
966	*Quercus alba*	White Oak	35"	Specimen	84.38
967	*Carya glabra*	Pignut Hickory	7"		68.75
968	*Acer rubrum*	Red Maple	11"		78.13
969	*Prunus serotina*	Black Cherry	8"		59.38
970	*Quercus rubra*	Northern Red Oak	34"	Die Back; Open Trunk Wound	56.25
971	*Acer rubrum*	Red Maple	9"		71.88
972	*Prunus serotina*	Black Cherry	10"	Die Back	46.88
973	*Quercus rubra*	Northern Red Oak	40"	Co-Dom; 1 Dead	40.63
974	*Carya glabra*	Pignut Hickory	11"		62.50
975	*Acer rubrum*	Red Maple	6"		65.63
976	*Pinus virginiana*	Virginia Pine	7"		50.00
977	*Pinus virginiana*	Virginia Pine	12"		50.00
978	*Pinus virginiana*	Virginia Pine	15"		53.13
979	*Quercus rubra*	Northern Red Oak	10"	Wound in Trunk	56.25
980	*Quercus rubra*	Northern Red Oak	9"		71.88
981	*Prunus serotina*	Black Cherry	7"		62.50
982	*Acer rubrum*	Red Maple	6"		65.63
983	*Acer rubrum*	Red Maple	8"		62.50
984	*Acer rubrum*	Red Maple	5"		68.75
985	*Prunus serotina*	Black Cherry	4"		53.13
986	*Acer rubrum*	Red Maple	6"		68.75
987	*Acer rubrum*	Red Maple	4"		65.63
988	*Acer rubrum*	Red Maple	7"	Co-Dominant; 1 Dying	59.38
989	*Quercus alba*	White Oak	32"	Specimen	71.88
990	*Quercus rubra*	Northern Red Oak	42"	Co-Dom; 1 Dead	50.00
991	*Quercus rubra*	Northern Red Oak	14"	Leaning	56.25
992	*Quercus rubra*	Northern Red Oak	16"		65.63
993	*Quercus rubra*	Northern Red Oak	9"		59.38
994	*Quercus rubra*	Northern Red Oak	7"	Dying	37.50
995	*Liriodendron tulipifera*	Tulip Poplar	20"		62.50
996	*Liriodendron tulipifera*	Tulip Poplar	9"		71.88
997	*Liriodendron tulipifera*	Tulip Poplar	8"	Curve in Leader	59.38
998	*Prunus serotina*	Black Cherry	16"	Co-Dominant; Die Back	56.13
999	*Acer rubrum*	Red Maple	5"		62.50
1000	*Quercus rubra*	Northern Red Oak	16"		65.63

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
1001	*Quercus rubra*	Northern Red Oak	16"		62.50
1002	*Prunus serotina*	Black Cherry	15"	Co-Dominant	65.63
1003	*Quercus alba*	White Oak	5"		59.38
1004	*Nyssa sylvatica*	Sourgum	5"		62.50
1005	*Prunus serotina*	Black Cherry	15"	Co-Dom; 1 Dead	53.13
1006	*Pinus virginiana*	Virginia Pine	21"	Co-Dom; 1 Broken	37.50
1007	*Liriodendron tulipifera*	Tulip Poplar	10"		75.00
1008	*Acer rubrum*	Red Maple	16"	Multi-Stem	59.38
1009	*Populus grandidentata*	Big Tooth Aspen	8"		65.63
1010	*Liriodendron tulipifera*	Tulip Poplar	11"		78.13
1011	*Liriodendron tulipifera*	Tulip Poplar	18"		75.00
1012	*Acer rubrum*	Red Maple	8"		68.75
1013	*Liriodendron tulipifera*	Tulip Poplar	9"		68.75
1014	*Acer rubrum*	Red Maple	25"	Co-Dominant	71.88
1015	*Liriodendron tulipifera*	Tulip Poplar	7"		71.88
1016	*Ailanthus altissima*	Tree of Heaven	5"		56.25
1017	*Catalpa speciosa*	Northern Catalpa	7"		53.13
1018	*Liriodendron tulipifera*	Tulip Poplar	10"		65.63
1019	*Liriodendron tulipifera*	Tulip Poplar	6"		62.50
1020	*Liriodendron tulipifera*	Tulip Poplar	13"		71.88
1021	*Liriodendron tulipifera*	Tulip Poplar	9"		68.75
1022	*Acer rubrum*	Red Maple	13"	Co-Dominant; Open Trunk Wound	46.88
1023	*Prunus serotina*	Black Cherry	27"	Co-Dominant	62.50
1024	*Acer rubrum*	Red Maple	10"		65.65
1025	*Acer rubrum*	Red Maple	31"	Co-Dominant	62.50
1026	*Prunus serotina*	Black Cherry	9"	Trunk Rot	43.75
1027	*Quercus alba*	White Oak	28"	Major Trunk Decay	28.13
1028	*Quercus rubra*	Northern Red Oak	5"		62.50
1029	*Acer rubrum*	Red Maple	14"	Multi-Stem	65.63
1030	*Quercus rubra*	Northern Red Oak	29"	Canopy Die Back	62.50
1031	*Quercus alba*	White Oak	12"	Major Die Back	37.50
1032	*Quercus alba*	White Oak	32"	Specimen	78.13
1033	*Ilex opaca*	American Holly	9"	Multi-Stem	62.50
1034	*Quercus rubra*	Northern Red Oak	15"	Dead	0.00
1035	*Nyssa sylvatica*	Sourgum	13"		59.38
1036	*Prunus serotina*	Black Cherry	8"		53.13
1037	*Pinus virginiana*	Virginia Pine	12"	Dead	0.00
1038	*Prunus serotina*	Black Cherry	12"	Bent Over	37.50
1039	*Liriodendron tulipifera*	Tulip Poplar	14"	Leaning	59.38
1040	*Prunus serotina*	Black Cherry	10"	Canopy Die Back	46.88
1041	*Acer rubrum*	Red Maple	6"		62.50
1042		Unknown	18"	Dead	0.00
1043	*Nyssa sylvatica*	Sourgum	5"		62.50
1044	*Nyssa sylvatica*	Sourgum	5"		59.38
1045	*Prunus serotina*	Black Cherry	13"		65.63
1046	*Nyssa sylvatica*	Sourgum	14"		62.50
1047	*Quercus alba*	White Oak	27"		75.00
1048	*Acer rubrum*	Red Maple	11"		71.88
1049	*Quercus alba*	White Oak	11"		62.50
1050	*Quercus alba*	White Oak	27"	Vines Growing On	75.00
1051		Unknown	14"	Dead	0.00
1052	*Acer rubrum*	Red Maple	14"		71.88
1053	*Prunus serotina*	Black Cherry	13"		62.50
1054	*Acer rubrum*	Red Maple	5"		68.75
1055	*Ilex opaca*	American Holly	12"	Multi-Stem	62.50
1056	*Acer rubrum*	Red Maple	18"		78.13
1057	*Acer rubrum*	Red Maple	8"	Leaning	59.38
1058	*Acer rubrum*	Red Maple	18"	Multi-Stem	62.50
1059	*Acer rubrum*	Red Maple	15"		75.00
1060	*Quercus alba*	White Oak	34"	Specimen	81.25
1061	*Acer rubrum*	Red Maple	16"		71.88
1062	*Quercus alba*	White Oak	19"		65.63
1063	*Quercus rubra*	Northern Red Oak	34"	Specimen	78.13
1064	*Prunus serotina*	Black Cherry	14"		62.50
1065	*Liriodendron tulipifera*	Tulip Poplar	9"	Curve in Trunk	62.50
1066	*Quercus alba*	White Oak	8"		65.63
1067	*Carya glabra*	Pignut Hickory	8"		62.50
1068	*Acer rubrum*	Red Maple	13"		65.63
1069	*Acer rubrum*	Red Maple	6"	Multi-Stem	68.75
1070	*Prunus serotina*	Black Cherry	12"		62.50
1071	*Populus grandidentata*	Big Tooth Aspen	12"		71.88
1072	*Acer rubrum*	Red Maple	5"		59.38
1073	*Prunus serotina*	Black Cherry	7"		53.13
1074	*Catalpa speciosa*	Northern Catalpa	15"		68.75
1075	*Acer rubrum*	Red Maple	7"		65.63
1076	*Catalpa speciosa*	Northern Catalpa	12"	Leaning	59.38
1077	*Populus grandidentata*	Big Tooth Aspen	7"	Dead	0.00
1078	*Acer rubrum*	Red Maple	6"		62.50
1079	*Liriodendron tulipifera*	Tulip Poplar	6"		65.63
1080	*Prunus serotina*	Black Cherry	10"		65.63
1081	*Acer rubrum*	Red Maple	12"		71.88
1082	*Prunus serotina*	Black Cherry	6"		59.38
1083	*Prunus serotina*	Black Cherry	13"	Vines Growing On	56.25
1084	*Acer rubrum*	Red Maple	8"	Vines Growing On	53.13
1085	*Prunus serotina*	Black Cherry	6"	Vines Growing On	46.88
1086	*Prunus serotina*	Black Cherry	17"	Vines Growing On	59.38
1087	*Acer rubrum*	Red Maple	7"		59.38
1088	*Prunus serotina*	Black Cherry	9"	Leaning	56.25
1089	*Prunus serotina*	Black Cherry	27"	Co-Dominant; 1 Dead	53.13
1090	*Acer rubrum*	Red Maple	11"		71.88
1091	*Acer rubrum*	Red Maple	10"	Dead	0.00
1092	*Acer rubrum*	Red Maple	15"	Vines Growing On	56.25
1093	*Liriodendron tulipifera*	Tulip Poplar	29"	Co-Dominant	68.75
1094	*Prunus serotina*	Black Cherry	11"	Vines Growing On	56.25
1095	*Acer rubrum*	Red Maple	7"		65.63
1096	*Acer rubrum*	Red Maple	7"		62.50
1097	*Acer rubrum*	Red Maple	8"		65.63
1098	*Acer rubrum*	Red Maple	10"	Vines Growing On	68.75
1099	*Catalpa speciosa*	Northern Catalpa	11"	Trunk Rot	46.88
1100	*Catalpa speciosa*	Northern Catalpa	11"		59.38

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
1101	*Prunus serotina*	Black Cherry	22"	Canopy Die Back	53.13
1102	*Acer rubrum*	Red Maple	12"		71.88
1103	*Acer rubrum*	Red Maple	8"	Curved Trunk	56.25
1104	*Sassafras albidum*	Sassafras	9"		62.50
1105	*Acer rubrum*	Red Maple	5"	Curve in Trunk	56.25
1106	*Acer rubrum*	Red Maple	6"		62.50
1107	*Prunus serotina*	Black Cherry	7"	Vines Growing On	59.38
1108	*Acer rubrum*	Red Maple	5"		65.63
1109	*Prunus serotina*	Black Cherry	9"		62.50
1110	*Ailanthus altissima*	Tree of Heaven	12"		53.13
1111	*Acer rubrum*	Red Maple	8"	Vines Growing On	59.38
1112	*Acer rubrum*	Red Maple	8"		65.63
1113	*Catalpa speciosa*	Northern Catalpa	8"	Growing Out of Rocks	46.88
1114	*Catalpa speciosa*	Northern Catalpa	12"	Growing Out of Rocks	46.88
1115	*Pinus virginiana*	Virginia Pine	6"	Vine Growing On	37.50
1116	*Pinus virginiana*	Virginia Pine	11"	Vine Growing On	37.50
1117	*Pinus virginiana*	Virginia Pine	8"	Leader Broken Off; Dead	0.00
1118		Unknown	6"	Leader Broken Off; Dead	0.00
1119	*Liriodendron tulipifera*	Tulip Poplar	13"	Very Twisted Trunk	34.38
1120	*Acer rubrum*	Red Maple	15"		75.00
1121	*Pinus virginiana*	Virginia Pine	7"		53.13
1122	*Pinus virginiana*	Virginia Pine	6"		53.13
1123	*Pinus virginiana*	Virginia Pine	11"		50.00
1124	*Acer rubrum*	Red Maple	9"	Multi-Stem	65.63
1125	*Prunus serotina*	Black Cherry	13"	Vines Growing On	59.38
1126	*Acer rubrum*	Red Maple	17"		62.50
1127	*Prunus serotina*	Black Cherry	14"	Canopy Die Back	43.75
1128	*Quercus rubra*	Northern Red Oak	13"	Multi-Leader; 1 Dead	56.25
1129	*Pinus virginiana*	Virginia Pine	11"		46.88
1130	*Acer rubrum*	Red Maple	12"		75.00
1131	*Acer rubrum*	Red Maple	9"		71.88
1132	*Acer rubrum*	Red Maple	5"		65.63
1133	*Pinus virginiana*	Virginia Pine	6"	Leaning	43.75
1134	*Pinus virginiana*	Virginia Pine	9"		46.88
1135	*Acer rubrum*	Red Maple	7"		62.50
1136	*Platanus occidentalis*	Sycamore	17"	Vines Growing On	68.75
1137	*Albizia Julibrissin*	Silk Tree	9"		56.25
1138	*Catalpa speciosa*	Northern Catalpa	15"	Vines Growing On	62.50
1139	*Liriodendron tulipifera*	Tulip Poplar	6"	Vines Growing On	56.25
1140	*Catalpa speciosa*	Northern Catalpa	18"	Vines Growing On	59.38
1141	*Catalpa speciosa*	Northern Catalpa	27"	Co-Dominant	56.25
1142	*Robinia pseudoacacia*	Black Locust	20"	Vines Growing On	50.00
1143	*Liriodendron tulipifera*	Tulip Poplar	7"	Twisted Leader	53.13
1144	*Prunus serotina*	Black Cherry	10"	Vines Growing On	46.88
1145	*Sassafras albidum*	Sassafras	9"	Vines Growing On	37.50
1146	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
1147	*Catalpa speciosa*	Northern Catalpa	19"		65.63
1148	*Prunus serotina*	Black Cherry	11"	Vines Growing On	53.15
1149	*Quercus palustris*	Pin Oak	14"	Vines Growing On	53.15
1150	*Robinia pseudoacacia*	Black Locust	7"	Vines Growing On	34.38
1151	*Catalpa speciosa*	Northern Catalpa	10"	Vines Growing On	37.50
1152	*Liriodendron tulipifera*	Tulip Poplar	5"	Trunk Decay	34.38
1153	*Liriodendron tulipifera*	Tulip Poplar	6"	Vines Growing On	50.00
1154	*Liriodendron tulipifera*	Tulip Poplar	6"	Vines Growing On	59.38
1155	*Catalpa speciosa*	Northern Catalpa	12"	Vines Growing On	59.38
1156	*Catalpa speciosa*	Northern Catalpa	18"	Co-Dominant	62.50
1157	*Catalpa speciosa*	Northern Catalpa	11"		59.38
1158	*Catalpa speciosa*	Northern Catalpa	15"		62.50
1159	*Quercus alba*	White Oak	52"	Vines Growing On	78.13
1160	*Quercus alba*	White Oak	40"	Specimen	75.00
1161	*Nyssa sylvatica*	Sourgum	21"		71.88
1162	*Acer rubrum*	Red Maple	4"		71.88
1163	*Acer rubrum*	Red Maple	13"	Co-Dominant	75.00
1164	*Prunus serotina*	Black Cherry	8"	Vines Growing On	59.38
1165	*Prunus serotina*	Black Cherry	20"	Vines Growing On	65.63
1166	*Juniperus Virginiana*	Eastern Red Cedar	9"	Dead	0.00
1167	*Acer rubrum*	Red Maple	9"	Multi-Leader; Dying	37.50
1168	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
1169	*Acer rubrum*	Red Maple	9"	Multi-Leader	65.63
1170	*Acer rubrum*	Red Maple	6"		62.50
1171	*Acer rubrum*	Red Maple	9"		68.75
1172	*Acer rubrum*	Red Maple	5"	Dead	0.00
1173	*Acer rubrum*	Red Maple	12"		71.88
1174	*Liriodendron tulipifera*	Tulip Poplar	18"		75.00
1175	*Acer rubrum*	Red Maple	9"	Multi-Leader; 1 Dead	46.88
1176	*Acer rubrum*	Red Maple	8"		71.88
1177	*Acer rubrum*	Red Maple	5"		75.00
1178	*Prunus serotina*	Black Cherry	10"		65.63
1179	*Prunus serotina*	Black Cherry	11"	Leaning	59.38
1180		Unknown	9"	Dead	0.00
1181	*Acer rubrum*	Red Maple	10"	Vines Growing On	59.38
1182	*Acer rubrum*	Red Maple	5"		62.50
1183	*Liriodendron tulipifera*	Tulip Poplar	13"		75.00
1184	*Prunus serotina*	Black Cherry	8"		68.75
1185	*Prunus serotina*	Black Cherry	6"	Leaning; Die Back	37.50
1186	*Quercus alba*	White Oak	15"	Vines Growing On	46.88
1187	*Quercus rubra*	Northern Red Oak	39"	Dead	0.00
1188	*Quercus rubra*	Northern Red Oak	33"	Vines Growing On; Speciman	78.13
1189	*Quercus alba*	White Oak	28"	Vines; Die Back	59.38
1190	*Quercus alba*	White Oak	38"	Vines; Die Back	62.50
1191	*Prunus serotina*	Black Cherry	5"		56.25
1192	*Prunus serotina*	Black Cherry	5"		56.25
1193	*Liriodendron tulipifera*	Tulip Poplar	10"		71.88
1194	*Quercus alba*	White Oak	46"	Minor die back; Specimen	78.13
1195	*Quercus rubra*	Northern Red Oak	7"		59.38
1196	*Liriodendron tulipifera*	Tulip Poplar	9"		71.88
1197	*Prunus serotina*	Black Cherry	8"	Twisted Leader	46.88
1198	*Prunus serotina*	Black Cherry	12"		62.50
1199	*Quercus alba*	White Oak	5"		68.75
1200	*Acer rubrum*	Red Maple	12"	Multi-Leader	62.50

REVISIONS

No.	DATE	DESCRIPTION

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
Kevin J. Tankersley
Lic. No. 983
08/22/2016
LANDSCAPE ARCHITECT

TREE ANALYSIS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: N/A
C.I.= N/A
DATE: JAN. 2016

SHEET
28K
OF
36

FILE No.
RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (11)] August 22, 2016 – 2:28pm jreynolds

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
1201	*Prunus serotina*	Black Cherry	10"		62.50
1202	*Acer rubrum*	Red Maple	20"		78.12
1203	*Acer rubrum*	Red Maple	14"	Multi-Leader; Dying	59.38
1204	*Prunus serotina*	Black Cherry	12"		56.25
1205	*Acer rubrum*	Red Maple	16"	Dead Adjacent Leaning Against	65.63
1206	*Acer rubrum*	Red Maple	9"	Die Back	59.38
1207	*Prunus serotina*	Black Cherry	6"		62.50
1208	*Acer rubrum*	Red Maple	8"		75.00
1209	*Prunus serotina*	Black Cherry	12"	Leaning	46.88
1210	*Liriodendron tulipifera*	Tulip Poplar	25"		78.13
1211	*Diospyros Virginiana*	Persimmon	6"	Vines Growing On	37.50
1212	*Prunus serotina*	Black Cherry	15"		62.50
1213	*Acer rubrum*	Red Maple	8"	Die Back	59.38
1214	*Prunus serotina*	Black Cherry	14"	Vines Growing On	56.25
1215	*Acer rubrum*	Red Maple	9"		62.50
1216	*Prunus serotina*	Black Cherry	9"	Die Back	56.25
1217	*Acer rubrum*	Red Maple	7"		65.63
1218	*Acer rubrum*	Red Maple	5"		71.88
1219	*Ulmus americana*	American Elm	15"		59.38
1220	*Quercus alba*	White Oak	12"	Vines Growing On	68.75
1221	*Prunus serotina*	Black Cherry	6"		71.88
1222		Unknown	18"	Dead	0.00
1223	*Liriodendron tulipifera*	Tulip Poplar	21"		75.00
1224	*Acer rubrum*	Red Maple	7"		65.63
1225	*Liriodendron tulipifera*	Tulip Poplar	22"		78.13
1226	*Prunus serotina*	Black Cherry	14"		53.13
1227	*Acer rubrum*	Red Maple	12"		75.00
1228	*Acer rubrum*	Red Maple	8"		75.00
1229	*Prunus serotina*	Black Cherry	35"	Multi-Dominant; 2 Dead	34.38
1230	*Prunus serotina*	Black Cherry	12"	Vines Growing On	53.13
1231	*Nyssa sylvatica*	Sourgum	23"	Open Hole in Root Flare	53.13
1232	*Prunus serotina*	Black Cherry	7"		62.50
1233	*Prunus serotina*	Black Cherry	6"		53.13
1234	*Quercus alba*	White Oak	28"	Minor Die Back	71.88
1235	*Acer rubrum*	Red Maple	8"	Co-Dominant	75.00
1236	*Acer rubrum*	Red Maple	7"		78.13
1237	*Prunus serotina*	Black Cherry	13"		68.75
1238	*Nyssa sylvatica*	Sourgum	5"		62.50
1239	*Prunus serotina*	Black Cherry	12"	Die Back	65.63
1240	*Quercus rubra*	Northern Red Oak	10"	Vines Growing On	62.50
1241	*Quercus alba*	White Oak	47"	Half Of Tree Split Off	56.25
1242	*Carya glabra*	Pignut Hickory	4"		71.88
1243	*Quercus alba*	White Oak	18"	Vines Growing On	65.63
1244	*Pinus virginiana*	Virginia Pine	15"	Dead	0.00
1245	*Prunus serotina*	Black Cherry	8"		62.50
1246	*Acer rubrum*	Red Maple	8"	Co-Dominant	65.63
1247	*Nyssa sylvatica*	Sourgum	12"		71.88
1248	*Acer rubrum*	Red Maple	16"		75.00
1249	*Quercus alba*	White Oak	17"	Moderate Die Back	59.39
1250	*Quercus alba*	White Oak	21"	Swollen Root Flare	62.50
1251	*Liriodendron tulipifera*	Tulip Poplar	8"		78.13
1252	*Quercus alba*	White Oak	29"		75.00
1253	*Quercus alba*	White Oak	26"		71.88
1254	*Acer rubrum*	Red Maple	12"		78.13
1255	*Quercus rubra*	Northern Red Oak	21"	Major Die Back	53.13
1256	*Nyssa sylvatica*	Sourgum	11"		56.25
1257	*Prunus serotina*	Black Cherry	6"		50.00
1258	*Acer rubrum*	Red Maple	7"		78.13
1259	*Quercus alba*	White Oak	22"	Minor Die Back	62.50
1260	*Quercus alba*	White Oak	31"	Curved Trunk	71.88
1261	*Prunus serotina*	Black Cherry	7"		59.38
1262	*Quercus alba*	White Oak	29"		78.13
1263	*Prunus serotina*	Black Cherry	9"	Dying	31.25
1264	*Liriodendron tulipifera*	Tulip Poplar	7"		75.00
1265	*Acer rubrum*	Red Maple	13"		78.13
1266	*Liriodendron tulipifera*	Tulip Poplar	10"	Wound Along Trunk	37.50
1267	*Prunus serotina*	Black Cherry	27"	Multi-Stem	65.63
1268	*Prunus serotina*	Black Cherry	7"		62.50
1269	*Quercus alba*	White Oak	42"	Specimen; Open Wound	68.75
1270	*Acer rubrum*	Red Maple	8"		75.00
1271	*Acer rubrum*	Red Maple	15"	Co-Dominant	71.88
1272	*Prunus serotina*	Black Cherry	7"	Open Trunk Wound	53.18
1273	*Prunus serotina*	Black Cherry	7"	Dying	34.38
1274	*Liriodendron tulipifera*	Tulip Poplar	8"		71.88
1275	*Acer rubrum*	Red Maple	10"	Multi-Leader; Broken	62.50
1276	*Liriodendron tulipifera*	Tulip Poplar	11"		68.75
1277	*Prunus serotina*	Black Cherry	8"		59.38
1278	*Liriodendron tulipifera*	Tulip Poplar	9"	Leaning	62.50
1279	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	37.50
1280	*Prunus serotina*	Black Cherry	17"	Multi-Stem; 1 Broken	59.38
1281	*Pinus virginiana*	Virginia Pine	18"		53.13
1282	*Prunus serotina*	Black Cherry	8"	Vines Growing On	56.75
1283	*Ailanthus altissima*	Tree of Heaven	16"	Multi-Stem	37.50
1284	*Liriodendron tulipifera*	Tulip Poplar	13"		71.88
1285	*Liriodendron tulipifera*	Tulip Poplar	4"		62.50
1286	*Populus grandidentata*	Big Tooth Aspen	10"	Wound in Trunk	68.75
1287	*Populus grandidentata*	Big Tooth Aspen	9"		71.88
1288	*Liriodendron tulipifera*	Tulip Poplar	10"		75.00
1289	*Ilex opaca*	American Holly	4"		78.13
1290	*Liriodendron tulipifera*	Tulip Poplar	5"		65.63
1291	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On; Dead	0.00
1292	*Liriodendron tulipifera*	Tulip Poplar	18"	Vines Growing On	62.50
1293	*Prunus serotina*	Black Cherry	10"	Vines Growing On	59.38
1294	*Prunus serotina*	Black Cherry	4"		56.25
1295	*Liriodendron tulipifera*	Tulip Poplar	38"	Co-Dominant; Vines	59.38
1296	*Prunus serotina*	Black Cherry	8"		59.38
1297	*Acer rubrum*	Red Maple	7"		56.25
1298	*Acer rubrum*	Red Maple	33"	Multi-Stem	62.50
1299	*Liriodendron tulipifera*	Tulip Poplar	8"	Branches Growing On One Side	56.25
1300	*Liriodendron tulipifera*	Tulip Poplar	19"	Multi-Stem	65.63

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
1301	*Liriodendron tulipifera*	Tulip Poplar	11"	Curve in Trunk	56.25
1302	*Liriodendron tulipifera*	Tulip Poplar	11"		59.38
1303	*Liriodendron tulipifera*	Tulip Poplar	13"	Multi-Leader	59.38
1304	*Carya glabra*	Pignut Hickory	10"	Multi-Leader	71.88
1305	*Liriodendron tulipifera*	Tulip Poplar	23"		78.13
1306	*Liriodendron tulipifera*	Tulip Poplar	16"		78.13
1307	*Liriodendron tulipifera*	Tulip Poplar	8"	Twisted Leader	68.75
1308	*Prunus serotina*	Black Cherry	13"	Die Back	59.28
1309	*Nyssa sylvatica*	Sourgum	24"		71.88
1310	*Liriodendron tulipifera*	Tulip Poplar	13"		71.88
1311	*Liriodendron tulipifera*	Tulip Poplar	6"	Twisted Leader	62.50
1312	*Quercus alba*	White Oak	34"	Scar Up Leader	75.00
1313	*Liriodendron tulipifera*	Tulip Poplar	6"	Trunk Wound	65.63
1314	*Liriodendron tulipifera*	Tulip Poplar	39"	Specimen	81.25
1315	*Quercus alba*	White Oak	25"	Scar Up Leader; Die Back	59.39
1316	*Quercus alba*	White Oak	24"	Knotted Root Flare	56.25
1317	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
1318	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
1319	*Acer rubrum*	Red Maple	10"		71.88
1320	*Liriodendron tulipifera*	Tulip Poplar	13"		68.75
1321	*Prunus serotina*	Black Cherry	9"		56.25
1322	*Acer rubrum*	Red Maple	11"		75.00
1323	*Acer rubrum*	Red Maple	6"		68.75
1324	*Liriodendron tulipifera*	Tulip Poplar	5"		71.88
1325	*Liriodendron tulipifera*	Tulip Poplar	22"		78.13
1326	*Liriodendron tulipifera*	Tulip Poplar	21"		75.00
1327	*Liriodendron tulipifera*	Tulip Poplar	19"	Multi-Leader	68.75
1328	*Prunus serotina*	Black Cherry	14"	Vines Growing On	50.00
1329	*Diospyros Virginiana*	Persimmon	12"	Multi-Stem	62.50
1330	*Quercus alba*	White Oak	5"	Vines Growing On	62.50
1331	*Carya glabra*	Pignut Hickory	5"		75.00
1332	*Carya glabra*	Pignut Hickory	10"		68.75
1333	*Liriodendron tulipifera*	Tulip Poplar	18"		78.13
1334	*Carya glabra*	Pignut Hickory	8"		75.00
1335	*Prunus serotina*	Black Cherry	16"	Co-Dominant; 1 Dead; Vines	56.25
1336	*Liriodendron tulipifera*	Tulip Poplar	11"		68.75
1337	*Prunus serotina*	Black Cherry	16"		62.50
1338	*Prunus serotina*	Black Cherry	8"	Dead	0.00
1339	*Acer rubrum*	Red Maple	12"		71.88
1340	*Acer rubrum*	Red Maple	27"	Co-Dominant	68.75
1341	*Acer rubrum*	Red Maple	58"	Multi-Stem	59.38
1342	*Liriodendron tulipifera*	Tulip Poplar	9"		62.50
1343	*Liriodendron tulipifera*	Tulip Poplar	6"	Vines Growing On	56.25
1344	*Liriodendron tulipifera*	Tulip Poplar	7"	Vines Growing On	59.38
1345	*Carya glabra*	Pignut Hickory	11"		65.63
1346	*Liriodendron tulipifera*	Tulip Poplar	7"		71.88
1347	*Acer rubrum*	Red Maple	11"	Vines Growing On	56.25
1348	*Prunus serotina*	Black Cherry	6"	Leaning; Vines	34.38
1349	*Catalpa speciosa*	Northern Catalpa	13"	Multi-Stem; Vines	37.50
1350	*Quercus rubra*	Northern Red Oak	11"	Vines Growing On	56.25
1351	*Quercus rubra*	Northern Red Oak	10"	Vines Growing On	59.38
1352	*Diospyros Virginiana*	Persimmon	9"	Vines Growing On	53.13
1353	*Diospyros Virginiana*	Persimmon	14"	Co-Dominant; Vines	53.13
1354	*Diospyros Virginiana*	Persimmon	7"	Vines Growing On	53.13
1355	*Quercus alba*	White Oak	35"	Vines Growing On	56.25
1356	*Carya glabra*	Pignut Hickory	18"	Vines Growing On	53.13
1357	*Carya glabra*	Pignut Hickory	14"	Vines Growing On	56.25
1358	*Acer rubrum*	Red Maple	35"	Multi-Stem	68.75
1359	*Quercus rubra*	Northern Red Oak	16"	Vines Growing On	65.63
1360	*Quercus alba*	White Oak	6"		68.75
1361	*Carya glabra*	Pignut Hickory	13"		71.88
1362	*Carya glabra*	Pignut Hickory	11"		65.63
1363	*Acer rubrum*	Red Maple	12"		75.00
1364	*Acer rubrum*	Red Maple	9"		62.50
1365	*Carya glabra*	Pignut Hickory	23"	Specimen	78.13
1366	*Acer rubrum*	Red Maple	7"		62.50
1367	*Carya glabra*	Pignut Hickory	7"		65.63
1368	*Carya glabra*	Pignut Hickory	10"		71.88
1369	*Acer rubrum*	Red Maple	7"		68.75
1370		Unknown	11"	Dead	0.00
1371	*Nyssa sylvatica*	Sourgum	31"	Vines Growing On	62.50
1372	*Nyssa sylvatica*	Sourgum	8"		59.38
1373	*Acer rubrum*	Red Maple	10"	Fence Grown In; Root Rot	34.38
1374	*Prunus serotina*	Black Cherry	7"	Vines Growing On	46.88
1375	*Prunus serotina*	Black Cherry	7"	Vines Growing On	46.88
1376	*Nyssa sylvatica*	Sourgum	6"	Exposed Roots; Vines	31.25
1377	*Prunus serotina*	Black Cherry	16"	Vines Growing On	37.50
1378	*Nyssa sylvatica*	Sourgum	7"	Vines Growing On	37.50
1379	*Prunus serotina*	Black Cherry	11"	Leaning Vines	31.25
1380	*Nyssa sylvatica*	Sourgum	38"	Specimen	78.13
1381	*Liriodendron tulipifera*	Tulip Poplar	10"	Vines Growing On	46.88
1382	*Prunus serotina*	Black Cherry	9"	Vines Growing On	34.38
1383	*Carya glabra*	Pignut Hickory	29"		71.88
1384	*Liriodendron tulipifera*	Tulip Poplar	9"	Vines Growing On	43.75
1385	*Catalpa speciosa*	Northern Catalpa	7"	Vines Growing On	31.25
1386	*Juniperus Virginiana*	Eastern Red Cedar	9"		37.50
1387	*Prunus serotina*	Black Cherry	10"	Vines Growing On	43.75
1388	*Prunus serotina*	Black Cherry	10"	Leaning	56.25
1389	*Liriodendron tulipifera*	Tulip Poplar	5"	Vines Growing On	37.50
1390	*Prunus serotina*	Black Cherry	14"		50.00
1391	*Liriodendron tulipifera*	Tulip Poplar	11"		62.50
1392	*Quercus alba*	White Oak	29"	Moderate Die Back	53.13
1393	*Prunus serotina*	Black Cherry	7"	Leaning	46.88
1394	*Prunus serotina*	Black Cherry	8"	Twisted Leader	34.38
1395	*Populus grandidentata*	Big Tooth Aspen	11"		65.63
1396	*Liriodendron tulipifera*	Tulip Poplar	22"		71.88
1397	*Liriodendron tulipifera*	Tulip Poplar	30"	Co-Dom; 1 Dead	71.88
1398	*Quercus rubra*	Northern Red Oak	16"	Dead	0.00
1399	*Liriodendron tulipifera*	Tulip Poplar	21"		78.13
1400	*Liriodendron tulipifera*	Tulip Poplar	21"	Curved Leader	71.88

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
1401A	*Liriodendron tulipifera*	Tulip Poplar	24"	Trunk Wound	62.50
1401	*Acer rubrum*	Red Maple	10"		68.75
1402	*Liriodendron tulipifera*	Tulip Poplar	8"		62.50
1403	*Prunus serotina*	Black Cherry	8"	Dead	0.00
1404	*Carya glabra*	Pignut Hickory	19"	Vines Growing On	59.38
1405	*Quercus alba*	White Oak	31"	Specimen	75.00
1406	*Acer rubrum*	Red Maple	8"		71.88
1407	*Acer rubrum*	Red Maple	6"		68.75
1408	*Acer rubrum*	Red Maple	13"		71.88
1409	*Liriodendron tulipifera*	Tulip Poplar	18"		62.50
1410	*Liriodendron tulipifera*	Tulip Poplar	24"		78.13
1411	*Acer rubrum*	Red Maple	19"	Co-Dominant	62.50
1412	*Liriodendron tulipifera*	Tulip Poplar	18"	Twisted Leader	68.75
1413	*Acer rubrum*	Red Maple	6"		65.63
1414	*Acer rubrum*	Red Maple	8"		68.75
1415	*Acer rubrum*	Red Maple	6"		62.50
1416	*Acer rubrum*	Red Maple	5"		65.63
1417	*Acer rubrum*	Red Maple	7"	Curved Leader	59.38
1418	*Prunus serotina*	Black Cherry	15"	Co-Dominant; Vines	59.38
1419	*Prunus serotina*	Black Cherry	12"	Vines Growing On	56.25
1420	*Liriodendron tulipifera*	Tulip Poplar	7"	Open Wound; Dying	15.63
1421	*Liriodendron tulipifera*	Tulip Poplar	13"	Exposed Roots	65.63
1422	*Liriodendron tulipifera*	Tulip Poplar	27"	Vines Growing On	65.63
1423	*Acer rubrum*	Red Maple	7"		68.75
1424	*Liriodendron tulipifera*	Tulip Poplar	12"		71.88
1425	*Liriodendron tulipifera*	Tulip Poplar	9"		75.00
1426	*Acer rubrum*	Red Maple	7"		71.88
1427	*Quercus alba*	White Oak	29"	Curved Trunk;Vines	62.50
1428	*Liriodendron tulipifera*	Tulip Poplar	11"	Twisted Leader	59.38
1429	*Carya glabra*	Pignut Hickory	16"	Open Hole In Trunk	75.00
1430	*Quercus alba*	White Oak	21"	Dead	0.00
1431	*Liriodendron tulipifera*	Tulip Poplar	15"		78.13
1432	*Liriodendron tulipifera*	Tulip Poplar	5"	Vines Growing On	65.63
1433	*Quercus alba*	White Oak	27"	Vines Growing On	75.00
1434	*Liriodendron tulipifera*	Tulip Poplar	8"		65.63
1435	*Liriodendron tulipifera*	Tulip Poplar	6"		71.88
1436	*Liriodendron tulipifera*	Tulip Poplar	5"	Curved Leader	68.75
1437	*Liriodendron tulipifera*	Tulip Poplar	10"		78.13
1438	*Liriodendron tulipifera*	Tulip Poplar	15"		71.88
1439	*Liriodendron tulipifera*	Tulip Poplar	14"		75.00
1440	*Liriodendron tulipifera*	Tulip Poplar	12"		68.75
1441	*Liriodendron tulipifera*	Tulip Poplar	16"		75.00
1442	*Liriodendron tulipifera*	Tulip Poplar	12"		78.13
1443	*Liriodendron tulipifera*	Tulip Poplar	10"	Curved Leader	62.50
1444	*Liriodendron tulipifera*	Tulip Poplar	18"		78.13
1445	*Liriodendron tulipifera*	Tulip Poplar	17"		68.75
1446	*Liriodendron tulipifera*	Tulip Poplar	16"	Multi-Leader	62.50
1447	*Liriodendron tulipifera*	Tulip Poplar	9"	Curved Leader	59.38
1448	*Liriodendron tulipifera*	Tulip Poplar	8"	Curved Leader	62.50
1449	*Liriodendron tulipifera*	Tulip Poplar	6"		71.88
1450	*Liriodendron tulipifera*	Tulip Poplar	9"		75.00
1451	*Liriodendron tulipifera*	Tulip Poplar	18"	Multi Leader	65.63
1452	*Liriodendron tulipifera*	Tulip Poplar	8"		71.88
1453	*Liriodendron tulipifera*	Tulip Poplar	9"		75.00
1454	*Liriodendron tulipifera*	Tulip Poplar	6"	Open Wound in Trunk	56.75
1455	*Liriodendron tulipifera*	Tulip Poplar	14"		75.00
1456	*Liriodendron tulipifera*	Tulip Poplar	13"		78.13
1457	*Liriodendron tulipifera*	Tulip Poplar	17"		75.00
1458	*Liriodendron tulipifera*	Tulip Poplar	17"		78.13
1459	*Nyssa sylvatica*	Sourgum	19"	Moderate Die Back	59.38
1460	*Liriodendron tulipifera*	Tulip Poplar	9"		71.88
1461	*Liriodendron tulipifera*	Tulip Poplar	7"		65.63
1462	*Quercus alba*	White Oak	29"	Specimen	78.13
1463	*Quercus alba*	White Oak	29"	Specimen	75.00
1464	*Liriodendron tulipifera*	Tulip Poplar	10"		78.13
1465	*Liriodendron tulipifera*	Tulip Poplar	7"	Curved Trunk	62.50
1466	*Liriodendron tulipifera*	Tulip Poplar	6"		75.00
1467	*Liriodendron tulipifera*	Tulip Poplar	5"		71.88
1468	*Liriodendron tulipifera*	Tulip Poplar	7"		75.00
1469	*Liriodendron tulipifera*	Tulip Poplar	19"		78.13
1470	*Liriodendron tulipifera*	Tulip Poplar	8"		75.00
1471	*Liriodendron tulipifera*	Tulip Poplar	16"		75.00
1472	*Liriodendron tulipifera*	Tulip Poplar	13"		71.88
1473	*Liriodendron tulipifera*	Tulip Poplar	19"		75.00
1474	*Acer rubrum*	Red Maple	8"		68.75
1475	*Liriodendron tulipifera*	Tulip Poplar	18"		75.00
1476	*Liriodendron tulipifera*	Tulip Poplar	17"		71.88
1477	*Liriodendron tulipifera*	Tulip Poplar	16"		71.88
1478	*Liriodendron tulipifera*	Tulip Poplar	10"		81.25
1479	*Liriodendron tulipifera*	Tulip Poplar	13"	Multi-Stem	62.50
1480	*Liriodendron tulipifera*	Tulip Poplar	14"		81.25
1481	*Nyssa sylvatica*	Sourgum	5"		65.63
1482	*Pinus virginiana*	Virginia Pine	10"		46.88
1483	*Liriodendron tulipifera*	Tulip Poplar	15"		75.00
1484	*Pinus virginiana*	Virginia Pine	10"		46.88
1485	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
1486	*Liriodendron tulipifera*	Tulip Poplar	13"		71.88
1487	*Acer rubrum*	Red Maple	12"		78.13
1488	*Liriodendron tulipifera*	Tulip Poplar	23"	Co-Dominant	62.50
1489	*Carya glabra*	Pignut Hickory	6"		59.38
1490	*Liriodendron tulipifera*	Tulip Poplar	5"		65.63
1491	*Liriodendron tulipifera*	Tulip Poplar	7"		62.50
1492	*Liriodendron tulipifera*	Tulip Poplar	6"		71.88
1493	*Liriodendron tulipifera*	Tulip Poplar	8"		71.88
1494	*Liriodendron tulipifera*	Tulip Poplar	4"	Vines Growing On	56.75
1495	*Liriodendron tulipifera*	Tulip Poplar	5"		71.88
1496	*Liriodendron tulipifera*	Tulip Poplar	14"	Curved Leader	62.50
1497	*Liriodendron tulipifera*	Tulip Poplar	14"		59.38
1498	*Liriodendron tulipifera*	Tulip Poplar	13"		65.63
1499	*Liriodendron tulipifera*	Tulip Poplar	15"		78.13
1500	*Liriodendron tulipifera*	Tulip Poplar	14"	Minor Die Back	56.25

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
1501	*Liriodendron tulipifera*	Tulip Poplar	10"		65.63
1502	*Liriodendron tulipifera*	Tulip Poplar	15"		62.50
1503	*Liriodendron tulipifera*	Tulip Poplar	21"		78.13
1504	*Liriodendron tulipifera*	Tulip Poplar	15"	Vine Growing On	62.50
1505	*Liriodendron tulipifera*	Tulip Poplar	6"		81.25
1506	*Liriodendron tulipifera*	Tulip Poplar	20"		78.13
1507	*Liriodendron tulipifera*	Tulip Poplar	19"		75.00
1508	*Liriodendron tulipifera*	Tulip Poplar	14"		75.00
1509	*Liriodendron tulipifera*	Tulip Poplar	23"		81.25
1510	*Liriodendron tulipifera*	Tulip Poplar	14"		75.00
1511	*Liriodendron tulipifera*	Tulip Poplar	21"		81.25
1512	*Liriodendron tulipifera*	Tulip Poplar	8"		71.88
1513	*Liriodendron tulipifera*	Tulip Poplar	8"		78.13
1514	*Liriodendron tulipifera*	Tulip Poplar	21"	Multi-leader	71.88
1515	*Liriodendron tulipifera*	Tulip Poplar	8"	Vine Growing On	62.50
1516	*Quercus alba*	White Oak	25"	Vine Growing On	78.13
1517	*Liriodendron tulipifera*	Tulip Poplar	12"	Multi-leader	62.50
1518	*Liriodendron tulipifera*	Tulip Poplar	16"	Curved leader	62.50
1519	*Liriodendron tulipifera*	Tulip Poplar	16"		75.00
1520	*Acer rubrum*	Red Maple	7"		65.63
1521	*Liriodendron tulipifera*	Tulip Poplar	10"	Bent Leader	56.25
1522	*Liriodendron tulipifera*	Tulip Poplar	13"	Twisted Leader	59.38
1523	*Liriodendron tulipifera*	Tulip Poplar	16"		78.13
1524	*Quercus rubra*	Northern Red Oak	10"	Dead	0.00
1525	*Quercus alba*	White Oak	28"		78.13
1526	*Carya glabra*	Pignut Hickory	33"	Specimen	81.25
1527	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
1528	*Liriodendron tulipifera*	Tulip Poplar	7"	Open Trunk Wound	43.75
1529	*Prunus serotina*	Black Cherry	19"	Co-Dom; Vines	75.00
1530	*Quercus alba*	White Oak	39"	Open Hole in Root Flare	71.88
1531	*Quercus alba*	White Oak	35"	Moderate Die Back	71.88
1532	*Carya glabra*	Pignut Hickory	7"		75.00
1533	*Liriodendron tulipifera*	Tulip Poplar	18"	Twisted Leader	71.88
1534	*Acer rubrum*	Red Maple	19"	Multi-leader	68.75
1535	*Acer rubrum*	Red Maple	6"	Bent Over	43.75
1536	*Acer rubrum*	Red Maple	10"	Bent Over	62.50
1537	*Nyssa sylvatica*	Sourgum	6"		65.63
1538	*Acer rubrum*	Red Maple	7"	Vine Growing On	56.25
1539	*Liriodendron tulipifera*	Tulip Poplar	23"		75.00
1540	*Liriodendron tulipifera*	Tulip Poplar	12"		71.88
1541	*Liriodendron tulipifera*	Tulip Poplar	6"		75.00
1542	*Acer rubrum*	Red Maple	13"		71.88
1543	*Acer rubrum*	Red Maple	11"	Vine Growing On	59.38
1544	*Liriodendron tulipifera*	Tulip Poplar	13"		78.13
1545	*Carya glabra*	Pignut Hickory	23"	Vine Growing On	62.50
1546	*Liriodendron tulipifera*	Tulip Poplar	13"	Curved Leader	68.75
1547	*Acer rubrum*	Red Maple	15"	Multi-Stem	65.63
1548	*Liriodendron tulipifera*	Tulip Poplar	22"		78.13
1549	*Liriodendron tulipifera*	Tulip Poplar	7"		71.88
1550	*Liriodendron tulipifera*	Tulip Poplar	6"	Leader Broken	21.88
1551	*Liriodendron tulipifera*	Tulip Poplar	33"	Co-Dominant	62.50
1552	*Liriodendron tulipifera*	Tulip Poplar	15"		71.88
1553	*Liriodendron tulipifera*	Tulip Poplar	19"		75.00
1554	*Liriodendron tulipifera*	Tulip Poplar	14"	Leaning	65.63
1555	*Nyssa sylvatica*	Sourgum	24"		78.13
1556	*Quercus alba*	White Oak	34"	Moderate Die Back	59.38
1557	*Carya glabra*	Pignut Hickory	6"		53.13
1558	*Carya glabra*	Pignut Hickory	7"		62.50
1559	*Carya glabra*	Pignut Hickory	9"		68.75
1560	*Liriodendron tulipifera*	Tulip Poplar	20"	Curve in Trunk	78.13
1561	*Quercus alba*	White Oak	5"	Vine Growing On	56.25
1562	*Quercus rubra*	Northern Red Oak	9"	Vine Growing On	59.38
1563	*Prunus serotina*	Black Cherry	10"		56.25
1564	*Quercus alba*	White Oak	31"	Leaning	65.63
1565	*Liriodendron tulipifera*	Tulip Poplar	17"	Curve in Trunk	71.88
1566	*Liriodendron tulipifera*	Tulip Poplar	21"		75.00
1567	*Diospyros Virginiana*	Persimmon	13"	Multi-Stem	28.13
1568	*Acer rubrum*	Red Maple	8"	Dead	0.00
1569	*Prunus serotina*	Black Cherry	11"		37.50
1570	*Acer rubrum*	Red Maple	10"		50.00
1571	*Acer rubrum*	Red Maple	7"		59.38
1572	*Acer rubrum*	Red Maple	16"		75.00
1573	*Acer rubrum*	Red Maple	5"		68.75
1574	*Acer rubrum*	Red Maple	8"	Vine Growing On	59.38
1575	*Quercus rubra*	Northern Red Oak	20"		71.88
1576	*Quercus rubra*	Northern Red Oak	7"	Minor Die Back	59.38
1577	*Acer rubrum*	Red Maple	12"		78.13
1578	*Catalpa speciosa*	Northern Catalpa	11"	Leaning	46.88
1579	*Acer rubrum*	Red Maple	36"	Canopy Die Back; Vines	62.50
1580	*Acer rubrum*	Red Maple	22"		68.75
1581	*Acer rubrum*	Red Maple	12"		71.88
1582	*Acer rubrum*	Red Maple	13"		71.88
1583	*Acer rubrum*	Red Maple	8"	Dead	0.00
1584	*Acer rubrum*	Red Maple	7"		78.13
1585	*Acer rubrum*	Red Maple	8"		62.50
1586	*Prunus serotina*	Black Cherry	13"	Canopy Die Back	43.75
1587	*Acer rubrum*	Red Maple	16"		68.75
1588	*Acer rubrum*	Red Maple	13"		65.63
1589	*Acer rubrum*	Red Maple	13"	Canopy Die Back	46.88
1590	*Carya glabra*	Pignut Hickory	12"	Leader Broken	18.75
1591	*Acer rubrum*	Red Maple	12"		78.13
1592	*Carya glabra*	Pignut Hickory	10"	Vines Growing On	53.13
1593	*Carya glabra*	Pignut Hickory	16"	Dead	0.00
1594	*Quercus rubra*	Northern Red Oak	29"	Minor Die Back	65.63
1595	*Sassafras albidum*	Sassafras	6"	Dead	0.00
1596	*Carya glabra*	Pignut Hickory	10"		59.48
1597	*Acer rubrum*	Red Maple	10"		68.75
1598	*Acer rubrum*	Red Maple	14"		71.88
1599	*Sassafras albidum*	Sassafras	5"	Curved Leader	43.75
1600	*Sassafras albidum*	Sassafras	6"	Curved Leader	46.88

REVISIONS
No. | DATE | DESCRIPTION

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

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Kevin J. Tankersley
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08/22/2016
LANDSCAPE ARCHITECT

TREE ANALYSIS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016
SCALE: N/A
C.I.= N/A

SHEET 28L OF 36

FILE No. RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (12)] August 22, 2016 – 2:28pm jreynolds

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
1601	*Carya glabra*	Pignut Hickory	11"	Multi-Stem	56.25
1602	*Nyssa sylvatica*	Sourgum	10"	Vines Growing On	62.50
1603	*Acer rubrum*	Red Maple	24"	Multi-Leader; Specimen	81.25
1604	*Acer rubrum*	Red Maple	9"		75.00
1605	*Acer rubrum*	Red Maple	10"		71.88
1606	*Carya glabra*	Pignut Hickory	11"		65.63
1607	*Acer rubrum*	Red Maple	10"	Multi-Stem	62.50
1608	*Carya glabra*	Pignut Hickory	18"	Co-Dominant	65.63
1609	*Quercus alba*	White Oak	19"	Canopy Die Back	62.50
1610	*Liriodendron tulipifera*	Tulip Poplar	20"		71.88
1611	*Carya glabra*	Pignut Hickory	8"		62.50
1612	*Acer rubrum*	Red Maple	9"		62.50
1613	*Pinus virginiana*	Virginia Pine	8"	Dying	18.75
1614	*Acer rubrum*	Red Maple	16"	Multi-Stem; Dying	21.88
1615	*Acer rubrum*	Red Maple	7"		71.88
1616	*Pinus virginiana*	Virginia Pine	8"		43.13
1617	*Pinus virginiana*	Virginia Pine	9"		46.88
1618	*Acer rubrum*	Red Maple	9"		65.63
1619	*Quercus rubra*	Northern Red Oak	23"	Molnor Die back	68.75
1620	*Liriodendron tulipifera*	Tulip Poplar	22"		75.00
1621	*Liriodendron tulipifera*	Tulip Poplar	21"	Specimen	87.50
1622	*Carya glabra*	Pignut Hickory	13"	Vines Growing On	56.25
1623	*Acer rubrum*	Red Maple	19"	Vines Growing On	65.63
1624	*Prunus serotina*	Black Cherry	17"	Co-Dominant; Vines	59.38
1625	*Carya glabra*	Pignut Hickory	8"	Vines Growing On	53.13
1626	*Prunus serotina*	Black Cherry	10"	Dead	0.00
1627	*Acer rubrum*	Red Maple	16"	Vines Growing On	53.13
1628	*Liriodendron tulipifera*	Tulip Poplar	17"		71.88
1629	*Acer rubrum*	Red Maple	10"	Vines Growing On	62.50
1630	*Acer rubrum*	Red Maple	13"	Multi-Leader; Vines	59.38
1631	*Prunus serotina*	Black Cherry	9"		56.25
1632	*Liriodendron tulipifera*	Tulip Poplar	20"		71.88
1633	*Acer rubrum*	Red Maple	13"	Vines Growing On	59.38
1634	*Acer rubrum*	Red Maple	8"	Vines Growing On	56.25
1635	*Acer rubrum*	Red Maple	7"		62.50
1636	*Acer rubrum*	Red Maple	5"		68.75
1637	*Prunus serotina*	Black Cherry	8"	Vines Growing On	53.13
1638	*Acer rubrum*	Red Maple	10"		71.88
1640	*Acer rubrum*	Red Maple	13"	Vines Growing On	59.38
1641	*Prunus serotina*	Black Cherry	17"	Co-Dominant; Vines	53.13
1642	*Prunus serotina*	Black Cherry	28"	Multi-Stem; Two Dead	34.38
1643	*Acer rubrum*	Red Maple	18"	Vines Growing On	71.88
1644	*Acer rubrum*	Red Maple	9"	Curved Trunk	56.25
1645	*Acer rubrum*	Red Maple	12"	Multi-Stem	75.00
1646	*Acer rubrum*	Red Maple	7"		71.88
1647	*Acer rubrum*	Red Maple	15"		75.00
1648	*Prunus serotina*	Black Cherry	28"	Co-Dominant; Die Back	65.63
1649	*Acer rubrum*	Red Maple	11"		62.50
1650	*Acer rubrum*	Red Maple	9"		71.88
1651	*Acer rubrum*	Red Maple	12"		75.00
1652	*Acer rubrum*	Red Maple	13"	Curved Leader	37.50
1653	*Acer rubrum*	Red Maple	6"		62.50
1654	*Acer rubrum*	Red Maple	14"	Co-Dominant	62.50
1655	*Acer rubrum*	Red Maple	8"	Open Trunk Wound	53.13
1656	*Acer rubrum*	Red Maple	8"		65.63
1657	*Acer rubrum*	Red Maple	17"	Vines Growing On; Co Dom	59.38
1658	*Acer rubrum*	Red Maple	6"	Multi-Leader; Vines	46.88
1659	*Prunus serotina*	Black Cherry	14"		68.75
1660	*Acer rubrum*	Red Maple	10"	Vines Growing On	65.63
1661	*Acer rubrum*	Red Maple	11"		68.75
1662	*Acer rubrum*	Red Maple	17"	Co-Dominant; Vines	62.50
1663	*Acer rubrum*	Red Maple	23"	Co-Dominant	75.00
1664	*Acer rubrum*	Red Maple	22"	Co-Dominant	62.50
1665	*Acer rubrum*	Red Maple	11"		71.88
1666	*Acer rubrum*	Red Maple	7"		75.00
1667	*Acer rubrum*	Red Maple	5"		71.88
1668	*Acer rubrum*	Red Maple	6"		68.75
1669	*Acer rubrum*	Red Maple	6"		71.88
1670	*Acer rubrum*	Red Maple	15"	Canopy Die Back	62.50
1671	*Acer rubrum*	Red Maple	11"		68.75
1672	*Acer rubrum*	Red Maple	11"		65.63
1673	*Acer rubrum*	Red Maple	11"		75.00
1674	*Acer rubrum*	Red Maple	9"	Curved Trunk	65.63
1675	*Acer rubrum*	Red Maple	12"		71.88
1676	*Acer rubrum*	Red Maple	7"		62.50
1677	*Acer rubrum*	Red Maple	7"		65.63
1678	*Acer rubrum*	Red Maple	9"	Dying	21.88
1679	*Acer rubrum*	Red Maple	6"		68.75
1680	*Acer rubrum*	Red Maple	9"	Minor Die Back	59.38
1681	*Acer rubrum*	Red Maple	13"		81.25
1682	*Acer rubrum*	Red Maple	9"		68.75
1683	*Pinus virginiana*	Virginia Pine	11"		46.88
1684	*Prunus serotina*	Black Cherry	14"	Co-Dominant; 1 Dead	43.75
1685	*Acer rubrum*	Red Maple	5"		71.88
1686	*Acer rubrum*	Red Maple	14"		78.13
1687	*Acer rubrum*	Red Maple	8"		71.88
1688	*Acer rubrum*	Red Maple	5"	Dying	28.13
1689	*Acer rubrum*	Red Maple	7"		67.50
1690	*Acer rubrum*	Red Maple	9"		71.88
1691	*Prunus serotina*	Black Cherry	8"		62.50
1692	*Acer rubrum*	Red Maple	17"	Open Trunk Wound	53.13
1693	*Acer rubrum*	Red Maple	18"	Multi-Leader	75.00
1694	*Acer rubrum*	Red Maple	15"	Dead	0.00
1695	*Acer rubrum*	Red Maple	12"		65.63
1696	*Acer rubrum*	Red Maple	24"	Co-Dominant	68.75
1697	*Acer rubrum*	Red Maple	14"		65.63
1698	*Acer rubrum*	Red Maple	17"	Multi-Stem	62.50
1699	*Prunus serotina*	Black Cherry	16"	Co-Dominant; 1 Dead	21.88
1700	*Acer rubrum*	Red Maple	12"		65.63

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
1701	*Sassafras albidum*	Sassafras	8"	Dying	18.75
1702	*Prunus serotina*	Black Cherry	13"	Co-Dominant; 1 Dead	25.00
1703	*Prunus serotina*	Black Cherry	8"		53.13
1704	*Prunus serotina*	Black Cherry	7"	Minor Die Back	46.88
1705	*Liriodendron tulipifera*	Tulip Poplar	24"		84.38
1706	*Acer rubrum*	Red Maple	5"		56.25
1707	*Acer rubrum*	Red Maple	9"	Dead	0.00
1708	*Prunus serotina*	Black Cherry	14"	Dead	0.00
1709	*Liriodendron tulipifera*	Tulip Poplar	16"		81.25
1710	*Prunus serotina*	Black Cherry	8"	Curved Trunk; Dying	21.88
1711	*Liriodendron tulipifera*	Tulip Poplar	12"		62.50
1712	*Liriodendron tulipifera*	Tulip Poplar	22"		75.00
1713	*Juniperus Virginiana*	Eastern Red Cedar	9"	Dead	0.00
1714	*Liriodendron tulipifera*	Tulip Poplar	13"		71.88
1715	*Liriodendron tulipifera*	Tulip Poplar	13"		78.13
1716	*Liriodendron tulipifera*	Tulip Poplar	8"		78.13
1717	*Liriodendron tulipifera*	Tulip Poplar	11"	Vines Growing On	65.63
1718	*Acer rubrum*	Red Maple	12"	Minor Die Back	62.50
1719	*Acer rubrum*	Red Maple	10"	Minor Die Back	59.38
1720	*Acer rubrum*	Red Maple	6"	Vines Growing On	56.25
1721	*Acer rubrum*	Red Maple	5"	Vines Growing On	46.88
1722	*Liriodendron tulipifera*	Tulip Poplar	32`	Specimen	87.50
1723	*Liriodendron tulipifera*	Tulip Poplar	6"	Leader Broken	18.75
1724	*Prunus serotina*	Black Cherry	15"	Multi-Stem; 1 Dead; Vines	21.88
1725	*Liriodendron tulipifera*	Tulip Poplar	14"	Curved Leader	65.63
1726	*Carya glabra*	Pignut Hickory	10"	Moderate Die Back	62.50
1727	*Liriodendron tulipifera*	Tulip Poplar	12"	Canopy Die Back	62.50
1728	*Quercus alba*	White Oak	24"		59.38
1729	*Carya glabra*	Pignut Hickory	25"		78.13
1730	*Quercus rubra*	Northern Red Oak	7"		62.50
1731	*Carya glabra*	Pignut Hickory	8"		65.63
1732	*Carya glabra*	Pignut Hickory	7"		71.88
1733	*Liriodendron tulipifera*	Tulip Poplar	21"	Curved Leader	62.50
1734	*Liriodendron tulipifera*	Tulip Poplar	19"		71.88
1735	*Liriodendron tulipifera*	Tulip Poplar	20"		65.63
1736	*Liriodendron tulipifera*	Tulip Poplar	15"		65.63
1737	*Liriodendron tulipifera*	Tulip Poplar	22"		75.00
1738	*Liriodendron tulipifera*	Tulip Poplar	10"		62.50
1739	*Liriodendron tulipifera*	Tulip Poplar	9"	Twisted Leader	56.25
1740	*Liriodendron tulipifera*	Tulip Poplar	5"		65.63
1741	*Liriodendron tulipifera*	Tulip Poplar	17"		78.13
1742	*Liriodendron tulipifera*	Tulip Poplar	9"		65.63
1743	*Liriodendron tulipifera*	Tulip Poplar	18"		71.88
1744	*Liriodendron tulipifera*	Tulip Poplar	6"		65.63
1745	*Liriodendron tulipifera*	Tulip Poplar	16"		71.88
1746	*Liriodendron tulipifera*	Tulip Poplar	13"	Twisted Leader	62.50
1747	*Liriodendron tulipifera*	Tulip Poplar	7"		75.00
1748	*Liriodendron tulipifera*	Tulip Poplar	24"		71.88
1749	*Prunus serotina*	Black Cherry	6"	Dead	0.00
1750	*Prunus serotina*	Black Cherry	8"	Dead	0.00
1751	*Quercus alba*	White Oak	27"	Dying; Vines	43.75
1752	*Liriodendron tulipifera*	Tulip Poplar	8"		71.88
1753	*Liriodendron tulipifera*	Tulip Poplar	27"	Thin Canopy	56.25
1754	*Liriodendron tulipifera*	Tulip Poplar	28"		62.50
1755	*Prunus serotina*	Black Cherry	7"	Ivy; Multi-Stem	53.13
1756	*Liriodendron tulipifera*	Tulip Poplar	23"		71.88
1757	*Prunus serotina*	Black Cherry	6"	Ivy; Leaning	59.38
1758	*Acer rubrum*	Red Maple	9"	Co-Dominant	75.00
1759	*Prunus serotina*	Black Cherry	13"	Co-Dominant	78.13
1760	*Prunus serotina*	Black Cherry	12"	Co-Dominant	78.13
1761	*Prunus serotina*	Black Cherry	9"	Co-Dominant; Leaning Heavily	56.25
1762	*Nyssa sylvatica*	Sourgum	6"	Dead	0.00
1763	*Carya glabra*	Pignut Hickory	5"		81.25
1764	*Liriodendron tulipifera*	Tulip Poplar	23"		81.25
1765	*Pinus virginiana*	Virginia Pine	11"	Leaning	46.88
1766	*Pinus virginiana*	Virginia Pine	13"		50.00
1767	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
1769	*Pinus virginiana*	Virginia Pine	8"	Dead Broken Leader	0.00
1770	*Pinus virginiana*	Virginia Pine	4"	Heavy Ivy	46.88
1771	*Pinus virginiana*	Virginia Pine	8"	Heavy Ivy	59.38
1772	*Prunus serotina*	Black Cherry	7"	Heavy Ivy; Leaning	53.13
1773	*Liriodendron tulipifera*	Tulip Poplar	22"		87.50
1774	*Prunus serotina*	Black Cherry	4"	Ivy; Reduced Crown	50.00
1775	*Prunus serotina*	Black Cherry	5"		75.00
1776	*Prunus serotina*	Black Cherry	5"	Heavy Ivy	46.88
1777	*Prunus serotina*	Black Cherry	5"	Heavy Ivy	37.50
1778	*Pinus virginiana*	Virginia Pine	7"		59.38
1779	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
1780	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
1781	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
1782	*Pinus virginiana*	Virginia Pine	12"	Dead	0.00
1783	*Pinus virginiana*	Virginia Pine	6"		62.50
1785	*Liriodendron tulipifera*	Tulip Poplar	17"		68.75
1786	*Prunus serotina*	Black Cherry	8"	Heavy Ivy	50.00
1787	*Prunus serotina*	Black Cherry	22"	Heavy Ivy; Co- Dominant	43.75
1788	*Prunus serotina*	Black Cherry	9"	Broken Leader; Dead	0.00
1789	*Carya glabra*	Pignut Hickory	7"		71.88
1790	*Liriodendron tulipifera*	Tulip Poplar	12"		71.88
1791	*Prunus serotina*	Black Cherry	5"	Heavy Ivy; Crooked Trunk	43.75
1792	*Pinus virginiana*	Virginia Pine	12"	Heavy Ivy	43.75
1793	*Catalpa speciosa*	Northern Catalpa	13"	Leaning Heavily	59.38
1794	*Prunus serotina*	Black Cherry	6"	Leaning Heavily	56.25
1795	*Liriodendron tulipifera*	Tulip Poplar	26"	Large Cavity in Trunk	53.13
1796	*Liriodendron tulipifera*	Tulip Poplar	22"	Heavy Ivy	68.75
1797	*Prunus serotina*	Black Cherry	12"	Heavy ivy	56.25
1798	*Pinus virginiana*	Virginia Pine	11"	Leader Broken	18.75
1799	*Prunus serotina*	Black Cherry	14"	Co-Dominant; Ivy	59.38
1800	*Pinus virginiana*	Virginia Pine	9"	Heavy ivy	43.79

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
1801	*Prunus serotina*	Black Cherry	8"	Dead	0.00
1802	*Liriodendron tulipifera*	Tulip Poplar	11"		68.75
1803	*Acer rubrum*	Red Maple	5"		78.13
1804	*Liriodendron tulipifera*	Tulip Poplar	12"		75.00
1805	*Pinus virginiana*	Virginia Pine	13"	Dead	0.00
1806	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
1807	*Liriodendron tulipifera*	Tulip Poplar	5"		78.13
1808	*Liriodendron tulipifera*	Tulip Poplar	20"		71.88
1809	*Liriodendron tulipifera*	Tulip Poplar	14"		75.00
1810	*Liriodendron tulipifera*	Tulip Poplar	20"	Curved Leader	65.63
1811	*Liriodendron tulipifera*	Tulip Poplar	13"	Major Decay	46.80
1812	*Liriodendron tulipifera*	Tulip Poplar	17"		78.13
1813	*Liriodendron tulipifera*	Tulip Poplar	18"		68.75
1814	*Liriodendron tulipifera*	Tulip Poplar	22"		86.25
1815	*Liriodendron tulipifera*	Tulip Poplar	15"		75.00
1816	*Pinus virginiana*	Virginia Pine	11"	Dead	0.00
1817	*Liriodendron tulipifera*	Tulip Poplar	8"	Ivy	62.50
1818	*Liriodendron tulipifera*	Tulip Poplar	19"	Leader broken	46.88
1819	*Liriodendron tulipifera*	Tulip Poplar	19"	Crooked Trunk	56.25
1820	*Liriodendron tulipifera*	Tulip Poplar	13"	Decay	53.13
1821	*Liriodendron tulipifera*	Tulip Poplar	8"		78.13
1822	*Liriodendron tulipifera*	Tulip Poplar	8"		75.00
1823	*Liriodendron tulipifera*	Tulip Poplar	14"		71.88
1824	*Liriodendron tulipifera*	Tulip Poplar	17"	Major Decay	43.75
1825	*Prunus serotina*	Black Cherry	9"	In Decline	40.63
1826	*Prunus serotina*	Black Cherry	12"	Co-Dominant	71.88
1827	*Liriodendron tulipifera*	Tulip Poplar	13"		90.63
1828	*Liriodendron tulipifera*	Tulip Poplar	16"		68.75
1829	*Liriodendron tulipifera*	Tulip Poplar	14"		71.88
1830	*Liriodendron tulipifera*	Tulip Poplar	15"		75.00
1831	*Acer rubrum*	Red Maple	7"	Heavy Ivy	46.88
1832	*Acer rubrum*	Red Maple	8"	Leaning	53.13
1833	*Prunus serotina*	Black Cherry	14"	Co-Dominant; Dead	
1834	*Liriodendron tulipifera*	Tulip Poplar	25"		78.13
1835	*Prunus serotina*	Black Cherry	11"	Canopy Dieback	50.00
1836	*Acer rubrum*	Red Maple	5"		84.38
1837	*Acer rubrum*	Red Maple	7"		65.63
1838	*Liriodendron tulipifera*	Tulip Poplar	18"		90.63
1839	*Prunus serotina*	Black Cherry	17"	Dead	0.00
1840	*Acer rubrum*	Red Maple	4"		87.50
1841	*Liriodendron tulipifera*	Tulip Poplar	16"		81.25
1842	*Liriodendron tulipifera*	Tulip Poplar	8"		75.00
1843	*Prunus serotina*	Black Cherry	13"	Dead; Multi-Stem	0.00
1844	*Acer rubrum*	Red Maple	8"		71.88
1845	*Liriodendron tulipifera*	Tulip Poplar	5"		59.38
1846	*Liriodendron tulipifera*	Tulip Poplar	25"		78.13
1847	*Acer rubrum*	Red Maple	5"		75.00
1848	*Quercus alba*	White Oak	5"		71.88
1849	*Liriodendron tulipifera*	Tulip Poplar	6"	Leaning Heavily	43.75
1850	*Liriodendron tulipifera*	Tulip Poplar	10"	Crooked Trunk	75.00
1851	*Liriodendron tulipifera*	Tulip Poplar	8"		68.75
1852	*Acer rubrum*	Red Maple	7"		78.13
1853	*Quercus alba*	White Oak	39"		68.75
1854	*Liriodendron tulipifera*	Tulip Poplar	21"	Co-Dominant; Crooked Trunk	71.88
1855	*Pinus virginiana*	Virginia Pine	11"	Dead	0.00
1856	*Liriodendron tulipifera*	Tulip Poplar	17"	Curved Leader	71.88
1857	*Prunus serotina*	Black Cherry	12"	Multi-Stem; Dead	0.00
1858	*Populus grandidentata*	Big Tooth Aspen	5"	Leaning Over	53.13
1859	*Liriodendron tulipifera*	Tulip Poplar	6"		68.75
1860	*Liriodendron tulipifera*	Tulip Poplar	17"		81.25
1861	*Liriodendron tulipifera*	Tulip Poplar	9"		75.00
1862	*Carya glabra*	Pignut Hickory	9"		78.13
1863	*Pinus virginiana*	Virginia Pine	13"		56.25
1864	*Acer rubrum*	Red Maple	6"		62.50
1865	*Acer rubrum*	Red Maple	5"		65.63
1866	*Pinus virginiana*	Virginia Pine	9"		46.88
1867	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
1868	*Carya glabra*	Pignut Hickory	11"		75.00
1869	*Liriodendron tulipifera*	Tulip Poplar	15"		78.13
1870	*Acer rubrum*	Red Maple	13"	Co-Dominant	71.88
1871	*Liriodendron tulipifera*	Tulip Poplar	30"		90.63
1872	*Pinus virginiana*	Virginia Pine	11"	Dead	0.00
1873	*Liriodendron tulipifera*	Tulip Poplar	23"		78.13
1874	*Acer rubrum*	Red Maple	16"	Co Dominant	59.38
1875	*Acer rubrum*	Red Maple	18"	Co-Dominant	65.63
1876	*Acer rubrum*	Red Maple	21"	Multi-Stem	56.25
1877	*Liriodendron tulipifera*	Tulip Poplar	15"	Leader Broken	43.75
1878	*Prunus serotina*	Black Cherry	7"	Dead	0.00
1879	*Liriodendron tulipifera*	Tulip Poplar	14"		56.25
1880	*Liriodendron tulipifera*	Tulip Poplar	26"		90.63
1881	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
1882	*Prunus serotina*	Black Cherry	4"	In Decline	37.50
1883	*Acer rubrum*	Red Maple	7"		75.00
1884	*Acer rubrum*	Red Maple	5"		71.88
1885	*Liriodendron tulipifera*	Tulip Poplar	24"		81.25
1886	*Acer rubrum*	Red Maple	10"	Co-Dominant	84.38
1887	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
1888	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	40.63
1889	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	37.50
1890	*Pinus virginiana*	Virginia Pine	9"	Dying	21.88
1891	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
1892	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
1893	*Pinus virginiana*	Virginia Pine	14"	Vines Growing On	46.88
1894	*Pinus virginiana*	Virginia Pine	13"		53.13
1895	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
1896	*Pinus virginiana*	Virginia Pine	12"		53.13
1897	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
1898	*Liriodendron tulipifera*	Tulip Poplar	18"		81.25

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
1901	*Acer rubrum*	Red Maple	5"		65.63
1902	*Liriodendron tulipifera*	Tulip Poplar	17"		81.25
1903	*Acer rubrum*	Red Maple	4"		68.75
1904	*Acer rubrum*	Red Maple	8"		75.00
1905	*Acer rubrum*	Red Maple	6"	Dead	0.00
1906	*Pinus virginiana*	Virginia Pine	12"	Dead	0.00
1907	*Liriodendron tulipifera*	Tulip Poplar	20"		78.13
1908	*Liriodendron tulipifera*	Tulip Poplar	21"		75.00
1909	*Liriodendron tulipifera*	Tulip Poplar	15"		78.13
1910	*Pinus virginiana*	Virginia Pine	13"	Dead	0.00
1911	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
1912	*Prunus serotina*	Black Cherry	5"	Dead	0.00
1913	*Liriodendron tulipifera*	Tulip Poplar	8"	Leader Broken	31.25
1914	*Liriodendron tulipifera*	Tulip Poplar	18"		84.38
1915	*Liriodendron tulipifera*	Tulip Poplar	16"		78.13
1916	*Liriodendron tulipifera*	Tulip Poplar	11"		65.63
1917	*Liriodendron tulipifera*	Tulip Poplar	21"		68.75
1918	*Acer rubrum*	Red Maple	4"	Leaning	68.75
1919	*Juniperus Virginiana*	Eastern Red Cedar	7"	Dead	0.00
1920	*Liriodendron tulipifera*	Tulip Poplar	16"		81.25
1921	*Liriodendron tulipifera*	Tulip Poplar	5"		71.88
1922	*Acer rubrum*	Red Maple	11"		68.75
1923	*Liriodendron tulipifera*	Tulip Poplar	12"		81.25
1924	*Liriodendron tulipifera*	Tulip Poplar	13"		71.88
1925	*Liriodendron tulipifera*	Tulip Poplar	12"	Trunk Damage/Decay	50.00
1926	*Prunus serotina*	Black Cherry	5"	Leaning	56.25
1927	*Prunus serotina*	Black Cherry	12"	Heavy Ivy	53.13
1928	*Prunus serotina*	Black Cherry	15"		71.88
1929	*Prunus serotina*	Black Cherry	6"	Vines Growing On	56.25
1930	*Prunus serotina*	Black Cherry	14"	Vines Growing On	59.38
1931	*Prunus serotina*	Black Cherry	7"	Dead	0.00
1932	*Liriodendron tulipifera*	Tulip Poplar	8"	Twisted Leader	62.50
1933	*Prunus serotina*	Black Cherry	5"	Dead	0.00
1934	*Prunus serotina*	Black Cherry	8"	Leaning Over	59.38
1935	*Prunus serotina*	Black Cherry	18"		75.00
1936	*Prunus serotina*	Black Cherry	9"	Dead	0.00
1937	*Prunus serotina*	Black Cherry	17"	Vines Growing On	62.50
1938	*Prunus serotina*	Black Cherry	10"		68.75
1939	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
1940	*Liriodendron tulipifera*	Tulip Poplar	27"		90.63
1941	*Prunus serotina*	Black Cherry	12"	Dead	0.00
1942	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
1943	*Prunus serotina*	Black Cherry	11"	Twisted Leader	40.63
1944	*Prunus serotina*	Black Cherry	21"		78.13
1945	*Juniperus Virginiana*	Eastern Red Cedar	6"	Dead	0.00
1946	*Acer rubrum*	Red Maple	10"		75.00
1947	*Acer rubrum*	Red Maple	13"	Multi-Stem; 1 Dead	65.63
1948	*Prunus serotina*	Black Cherry	14"		71.88
1949	*Prunus serotina*	Black Cherry	12"	Vines Growing On	62.50
1950	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
1951	*Acer rubrum*	Red Maple	6"	Bent Over	37.50
1952	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
1953	*Juniperus Virginiana*	Eastern Red Cedar	7"	Dead; Ivy	0.00
1954	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
1955	*Pinus virginiana*	Virginia Pine	11"	Heavy Ivy	40.63
1956	*Pinus virginiana*	Virginia Pine	14"	Heavy Ivy	43.75
1957	*Acer rubrum*	Red Maple	12"	Heavy Ivy	62.50
1958	*Pinus virginiana*	Virginia Pine	12"		50.00
1959	*Liriodendron tulipifera*	Tulip Poplar	10"		71.88
1960	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
1961	*Pinus virginiana*	Virginia Pine	9"		46.88
1962	*Acer rubrum*	Red Maple	9"	Ivy	59.38
1963	*Pinus virginiana*	Virginia Pine	9"	Ivy	46.88
1964	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
1965	*Pinus virginiana*	Virginia Pine	8"	Ivy	65.63
1966	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	37.50
1967	*Prunus serotina*	Black Cherry	17"		71.88
1968	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	37.50
1969	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	37.50
1970	*Pinus virginiana*	Virginia Pine	6"	Vines Growing On	43.75
1971	*Pinus virginiana*	Virginia Pine	8"	Co-Dominant; Vines	37.50
1972	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
1973	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
1974	*Pinus virginiana*	Virginia Pine	8"		53.13
1975	*Pinus virginiana*	Virginia Pine	6"		46.88
1976	*Juniperus Virginiana*	Eastern Red Cedar	5"		56.25
1977	*Pinus virginiana*	Virginia Pine	14"	Vines Growing On	43.75
1978	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
1979	*Pinus virginiana*	Virginia Pine	11"	Ivy	37.50
1980	*Acer rubrum*	Red Maple	5"		62.50
1981	*Pinus virginiana*	Virginia Pine	8"		50.00
1982	*Pinus virginiana*	Virginia Pine	7"		56.25
1983	*Acer rubrum*	Red Maple	6"		68.75
1984	*Pinus virginiana*	Virginia Pine	8"		53.13
1985	*Pinus virginiana*	Virginia Pine	7"		50.00
1986	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
1987	*Pinus virginiana*	Virginia Pine	6"	Heavy Ivy	50.00
1988	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
1989	*Pinus virginiana*	Virginia Pine	10"	Heavy ivy	43.75
1990	*Liriodendron tulipifera*	Tulip Poplar	15"		78.13
1991	*Pinus virginiana*	Virginia Pine	7"	Leader Broken; Dead	0.00
1992	*Pinus virginiana*	Virginia Pine	10"	Ivy	59.38
1993	*Prunus serotina*	Black Cherry	13"	Co-Dominant; Ivy	40.63
1994	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
1995	*Liriodendron tulipifera*	Tulip Poplar	4"		59.38
1996	*Acer rubrum*	Red Maple	4"		71.88
1997	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
1998	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
1999	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2000	*Pinus virginiana*	Virginia Pine	10"		56.25

REVISIONS

No.	DATE	DESCRIPTION

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
Kevin J. Tankersley
Lic. No. 983
08/22/2016
LANDSCAPE ARCHITECT

TREE ANALYSIS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016
C.I.= N/A
SCALE: N/A

SHEET
28M
OF
36

FILE No.
RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (13)] August 22, 2016 - 2:28pm jreynolds

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
2001	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	46.88
2002	*Pinus virginiana*	Virginia Pine	4"	Dead	0.00
2003	*Prunus serotina*	Black Cherry	9"		78.13
2004	*Acer rubrum*	Red Maple	11"		84.38
2005	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2006	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
2007	*Liriodendron tulipifera*	Tulip Poplar	23"		87.50
2008	*Pinus virginiana*	Virginia Pine	8"		50.00
2009	*Prunus serotina*	Black Cherry	7"	Ivy	59.38
2010	*Acer rubrum*	Red Maple	12"		50.00
2011	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2012	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2013	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2014	*Pinus virginiana*	Virginia Pine	10"	Heavy Ivy	40.63
2015	*Liriodendron tulipifera*	Tulip Poplar	23"		71.88
2016	*Pinus virginiana*	Virginia Pine	6"		50.00
2018	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2019	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2020	*Prunus serotina*	Black Cherry	6"		59.38
2021	*Pinus virginiana*	Virginia Pine	9"		53.13
2022	*Pinus virginiana*	Virginia Pine	11"		56.25
2023	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2024	*Acer rubrum*	Red Maple	5"		78.13
2025	*Liriodendron tulipifera*	Tulip Poplar	14"		84.38
2026	*Liriodendron tulipifera*	Tulip Poplar	13"	Ivy	65.63
2027	*Liriodendron tulipifera*	Tulip Poplar	12"		75.00
2028	*Prunus serotina*	Black Cherry	15"	Heavy Ivy; In Decline	34.38
2029	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
2030	*Prunus serotina*	Black Cherry	12"		78.13
2031	*Acer rubrum*	Red Maple	8"	Leaning; Heavy Ivy	43.75
2032	*Pinus virginiana*	Virginia Pine	8"		53.13
2033	*Prunus serotina*	Black Cherry	9"	Ivy	62.50
2034	*Prunus serotina*	Black Cherry	5"	Dead	0.00
2035	*Pinus virginiana*	Virginia Pine	10"	Ivy	53.13
2036	*Prunus serotina*	Black Cherry	7"	Vines Growing On	59.38
2037	*Prunus serotina*	Black Cherry	10"	Vines Growing On	65.63
2038	*Liriodendron tulipifera*	Tulip Poplar	25"		87.50
2039	*Prunus serotina*	Black Cherry	5"	Vines Growing On	46.88
2040	*Acer rubrum*	Red Maple	6"	Co-Dominant	65.63
2041	*Acer rubrum*	Red Maple	5"		75.00
2042	*Prunus serotina*	Black Cherry	12"	Multi-Stem; Dead	0.00
2043	*Liriodendron tulipifera*	Tulip Poplar	23"		81.25
2044	*Liriodendron tulipifera*	Tulip Poplar	14"	Vines Growing On	59.38
2045	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
2046	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2047	*Acer rubrum*	Red Maple	6"		68.75
2048	*Acer rubrum*	Red Maple	8"	Co-Dominant; Vines	65.63
2049	*Prunus serotina*	Black Cherry	12"	Co-Dominant	59.38
2050	*Acer rubrum*	Red Maple	13"		78.13
2051	*Acer rubrum*	Red Maple	13"		62.50
2052	*Prunus serotina*	Black Cherry	4"	Trunk Bent	37.50
2053	*Prunus serotina*	Black Cherry	13"	Vines Growing On	59.38
2054	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
2055	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2056	*Liriodendron tulipifera*	Tulip Poplar	19"	Multi-Leader	71.88
2057	*Pinus virginiana*	Virginia Pine	4"	Dead	0.00
2058	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	40.63
2059	*Liriodendron tulipifera*	Tulip Poplar	18"		87.50
2060	*Pinus virginiana*	Virginia Pine	15"	Multi-Leader	43.75
2061	*Pinus virginiana*	Virginia Pine	10"		46.88
2062	*Liriodendron tulipifera*	Tulip Poplar	11"		71.88
2063	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
2064	*Prunus serotina*	Black Cherry	11"		78.13
2065	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	68.75
2066	*Prunus serotina*	Black Cherry	10"		75.00
2067	*Pinus virginiana*	Virginia Pine	9"	Dying; Vines	18.75
2068	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2069	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2070	*Liriodendron tulipifera*	Tulip Poplar	10"		78.13
2071	*Liriodendron tulipifera*	Tulip Poplar	18"	Minor Die Back	68.75
2072	*Acer rubrum*	Red Maple	9"		68.75
2073	*Acer rubrum*	Red Maple	13"		75.00
2074	*Liriodendron tulipifera*	Tulip Poplar	20"	Curved Trunk	71.88
2075	*Pinus virginiana*	Virginia Pine	7"		50.00
2076	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	43.75
2077	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	46.88
2078	*Acer rubrum*	Red Maple	5"		68.75
2079	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	40.63
2080	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2081	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2082	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2083	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2084	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2085	*Liriodendron tulipifera*	Tulip Poplar	25"	Vines Growing On	71.88
2086	*Prunus serotina*	Black Cherry	9"	Dead	0.00
2087	*Acer rubrum*	Red Maple	6"	Dead	0.00
2088	*Prunus serotina*	Black Cherry	17"	Co-Dominant; Vines	53.13
2089	*Juniperus Virginiana*	Eastern Red Cedar	8"	Vines Growing On	46.88
2090	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	46.88
2091	*Juniperus Virginiana*	Eastern Red Cedar	8"	Bent Over	37.50
2092	*Prunus serotina*	Black Cherry	12"		75.00
2093	*Acer rubrum*	Red Maple	11"	Dying	21.88
2094	*Pinus virginiana*	Virginia Pine	12"	Dead	0.00
2095	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	46.88
2096	*Pinus virginiana*	Virginia Pine	9"	Dead; Fallen Over	0.00
2097	*Prunus serotina*	Black Cherry	15"		71.88
2098	*Pinus virginiana*	Virginia Pine	14"	Dead	0.00
2099	*Liriodendron tulipifera*	Tulip Poplar	28"	Leaning	65.63
2100	*Prunus serotina*	Black Cherry	16"	Co-Dominant	62.50

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
2101	*Prunus serotina*	Black Cherry	9"		62.50
2102	*Prunus serotina*	Black Cherry	14"	Vines Growing On	56.25
2103	*Prunus serotina*	Black Cherry	5"	Dying	18.75
2104	*Prunus serotina*	Black Cherry	13"		65.63
2105	*Acer rubrum*	Red Maple	7"	Vines Growing On	62.50
2106	*Liriodendron tulipifera*	Tulip Poplar	22"		81.25
2107	*Prunus serotina*	Black Cherry	7"	Curved Trunk	62.50
2108	*Prunus serotina*	Black Cherry	8"		68.75
2109	*Liriodendron tulipifera*	Tulip Poplar	15"		81.25
2110	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2111	*Juniperus Virginiana*	Eastern Red Cedar	8"	Dead	0.00
2112	*Prunus serotina*	Black Cherry	10"		65.63
2113	*Pinus virginiana*	Virginia Pine	11"	Dead	0.00
2114	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2115	*Liriodendron tulipifera*	Tulip Poplar	10"		71.88
2116	*Liriodendron tulipifera*	Tulip Poplar	19"	Broken Bronches	62.50
2117	*Pinus virginiana*	Virginia Pine	10"	Dead; Fallen Over	0.00
2118	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2119	*Liriodendron tulipifera*	Tulip Poplar	18"		84.38
2120	*Prunus serotina*	Black Cherry	7"		62.50
2121	*Acer rubrum*	Red Maple	11"		75.00
2122	*Acer rubrum*	Red Maple	13"		68.75
2123	*Acer rubrum*	Red Maple	8"	Leaning	68.75
2124	*Acer rubrum*	Red Maple	12"		78.13
2125	*Liriodendron tulipifera*	Tulip Poplar	14"		81.25
2126	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
2127	*Liriodendron tulipifera*	Tulip Poplar	19"		87.50
2128	*Liriodendron tulipifera*	Tulip Poplar	12"		75.00
2129	*Pinus virginiana*	Virginia Pine	12"	Dead	0.00
2130	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2131	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
2132	*Pinus virginiana*	Virginia Pine	11"	Dying	18.75
2133	*Liriodendron tulipifera*	Tulip Poplar	13"		81.25
2134	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2135	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2136	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2137	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2138	*Pinus virginiana*	Virginia Pine	12"		46.88
2139	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2140	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
2141	*Pinus virginiana*	Virginia Pine	7"	Dying	18.75
2142	*Pinus virginiana*	Virginia Pine	5"	Dying	21.88
2143	*Pinus virginiana*	Virginia Pine	12"		37.50
2144	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2145	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2146	*Pinus virginiana*	Virginia Pine	11"		50.00
2147	*Pinus virginiana*	Virginia Pine	10"	Multi-Leader	46.88
2148	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2149	*Pinus virginiana*	Virginia Pine	11"	Dead	0.00
2150	*Prunus serotina*	Black Cherry	9"		56.25
2151	*Prunus serotina*	Black Cherry	14"	Vines Growing On	59.38
2152	*Prunus serotina*	Black Cherry	21"	Co-Dominant	59.38
2153	*Liriodendron tulipifera*	Tulip Poplar	12"	Twisted Trunk	56.25
2154	*Prunus serotina*	Black Cherry	30"	Multi-Stem	53.13
2155	*Acer rubrum*	Red Maple	6"		71.88
2156	*Liriodendron tulipifera*	Tulip Poplar	13"		84.38
2157	*Pinus virginiana*	Virginia Pine	9"	Multi-Leader; Vines	43.75
2158	*Pinus virginiana*	Virginia Pine	7"		46.88
2159	*Liriodendron tulipifera*	Tulip Poplar	5"		75.00
2160	*Liriodendron tulipifera*	Tulip Poplar	13"		78.13
2161	*Liriodendron tulipifera*	Tulip Poplar	13"		71.88
2162	*Liriodendron tulipifera*	Tulip Poplar	17"		78.13
2163	*Liriodendron tulipifera*	Tulip Poplar	22"	Multi-Leader; Trunk Wound	62.50
2164	*Acer rubrum*	Red Maple	5"		78.13
2165	*Liriodendron tulipifera*	Tulip Poplar	20"		81.25
2166	*Acer rubrum*	Red Maple	8"		78.13
2167	*Liriodendron tulipifera*	Tulip Poplar	19"		84.38
2168	*Liriodendron tulipifera*	Tulip Poplar	17"		78.13
2169	*Acer rubrum*	Red Maple	6"		71.88
2170	*Liriodendron tulipifera*	Tulip Poplar	17"		81.25
2171	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2172	*Liriodendron tulipifera*	Tulip Poplar	14"		75.00
2173	*Liriodendron tulipifera*	Tulip Poplar	17"		71.88
2174	*Acer rubrum*	Red Maple	13"		81.25
2175	*Pinus virginiana*	Virginia Pine	11"	Dead	0.00
2176	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2177	*Pinus virginiana*	Virginia Pine	8"		50.00
2178	*Liriodendron tulipifera*	Tulip Poplar	14"		81.25
2179	*Liriodendron tulipifera*	Tulip Poplar	11"		75.00
2180	*Liriodendron tulipifera*	Tulip Poplar	16"		75.00
2181	*Prunus serotina*	Black Cherry	16"	Multi-Leader	71.88
2182	*Liriodendron tulipifera*	Tulip Poplar	12"	Wound Along Leader	59.38
2183	*Acer rubrum*	Red Maple	10"	Multi-Stem	65.63
2184	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	40.63
2185	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	43.75
2186	*Pinus virginiana*	Virginia Pine	13"	Dead	0.00
2187	*Pinus virginiana*	Virginia Pine	12"		56.25
2188	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2189	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2190	*Liriodendron tulipifera*	Tulip Poplar	9"		62.50
2191	*Acer rubrum*	Red Maple	18"		81.25
2192	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2193	*Liriodendron tulipifera*	Tulip Poplar	8"	Co-Dominant	62.50
2194	*Liriodendron tulipifera*	Tulip Poplar	14"		78.13
2195	*Pinus virginiana*	Virginia Pine	11"		53.13
2196	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	43.75
2197	*Pinus virginiana*	Virginia Pine	9"		50.00
2198	*Liriodendron tulipifera*	Tulip Poplar	12"	Twisted Leader	65.63
2199	*Pinus virginiana*	Virginia Pine	10"		53.13
2200	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
2201	*Liriodendron tulipifera*	Tulip Poplar	11"		75.00
2202	*Acer rubrum*	Red Maple	14"		81.25
2203	*Liriodendron tulipifera*	Tulip Poplar	17"		84.38
2204	*Liriodendron tulipifera*	Tulip Poplar	12"		78.13
2205	*Acer rubrum*	Red Maple	4"	Vines Growing On	65.63
2206	*Acer rubrum*	Red Maple	8"		75.00
2207	*Pinus virginiana*	Virginia Pine	8"		50.00
2208	*Acer rubrum*	Red Maple	10"		78.13
2209	*Pinus virginiana*	Virginia Pine	13"	Dead	0.00
2210	*Liriodendron tulipifera*	Tulip Poplar	20"		75.00
2211	*Liriodendron tulipifera*	Tulip Poplar	15"	Twisted Leader	71.88
2212	*Liriodendron tulipifera*	Tulip Poplar	8"	Curved Leader	62.50
2213	*Prunus serotina*	Black Cherry	9"	Dead	0.00
2214	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	40.63
2215	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2216	*Liriodendron tulipifera*	Tulip Poplar	26"		87.50
2217	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2218	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2219	*Prunus serotina*	Black Cherry	16"	Co-Dominant; Vines	53.13
2220	*Pinus virginiana*	Virginia Pine	7"		46.88
2221	*Liriodendron tulipifera*	Tulip Poplar	19"		84.38
2222	*Liriodendron tulipifera*	Tulip Poplar	19"	Curved Leader	71.88
2223	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	40.63
2224	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2225	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	43.75
2226	*Juniperus Virginiana*	Eastern Red Cedar	8"	Vines Growing On	37.50
2227	*Pinus virginiana*	Virginia Pine	15"	Multi-Leader; Vines	43.75
2228	*Acer rubrum*	Red Maple	10"		81.25
2229	*Pinus virginiana*	Virginia Pine	10"	Dying	18.75
2230	*Pinus virginiana*	Virginia Pine	8"		50.00
2231	*Pinus virginiana*	Virginia Pine	11"		56.25
2232	*Pinus virginiana*	Virginia Pine	7"		46.88
2233	*Pinus virginiana*	Virginia Pine	12"		50.00
2234	*Pinus virginiana*	Virginia Pine	12"		46.88
2235	*Prunus serotina*	Black Cherry	4"		68.75
2236	*Prunus serotina*	Black Cherry	10"		65.63
2237	*Pinus virginiana*	Virginia Pine	8"	Multi-Stem; Dead	0.00
2238	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2239	*Liriodendron tulipifera*	Tulip Poplar	22"		84.83
2240	*Liriodendron tulipifera*	Tulip Poplar	13"	Vines Growing On	65.63
2241	*Pinus virginiana*	Virginia Pine	13"	Dead	0.00
2242	*Prunus serotina*	Black Cherry	9"	Vines Growing On	59.38
2243	*Pinus virginiana*	Virginia Pine	11"	Dead	0.00
2244	*Pinus virginiana*	Virginia Pine	10"		50.00
2245	*Pinus virginiana*	Virginia Pine	6"		46.88
2246	*Pinus virginiana*	Virginia Pine	5"		50.00
2247	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	43.75
2248	*Pinus virginiana*	Virginia Pine	6"		46.88
2249	*Pinus virginiana*	Virginia Pine	5"		50.00
2250	*Pinus virginiana*	Virginia Pine	10"		53.13
2251	*Pinus virginiana*	Virginia Pine	11"		46.88
2252	*Pinus virginiana*	Virginia Pine	10"		53.13
2253	*Pinus virginiana*	Virginia Pine	14"		53.13
2254	*Pinus virginiana*	Virginia Pine	14"		50.00
2255	*Pinus virginiana*	Virginia Pine	15"		50.00
2256	*Pinus virginiana*	Virginia Pine	7"		50.00
2257	*Pinus virginiana*	Virginia Pine	13"		53.13
2258	*Pinus virginiana*	Virginia Pine	10"	Twisted Trunk	43.75
2259	*Acer rubrum*	Red Maple	24"	Co-Dominant	71.88
2260	*Pinus virginiana*	Virginia Pine	8"		46.88
2261	*Pinus virginiana*	Virginia Pine	7"		46.88
2262	*Prunus serotina*	Black Cherry	10"	Curved Leader	
2263	*Pinus virginiana*	Virginia Pine	8"		46.88
2264	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2265	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2266	*Acer rubrum*	Red Maple	9"		75.00
2267	*Acer rubrum*	Red Maple	10"		78.13
2268	*Prunus serotina*	Black Cherry	8"	Twisted Trunk; Vines	53.13
2269	*Pinus virginiana*	Virginia Pine	14"	Vines Growing On	40.63
2270	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2271	*Prunus serotina*	Black Cherry	16"	Vines Growing On	59.38
2272	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2273	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	50.00
2274	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2275	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2276	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2277	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	46.88
2278	*Liriodendron tulipifera*	Tulip Poplar	5"		75.00
2279	*Pinus virginiana*	Virginia Pine	10"		53.13
2280	*Pinus virginiana*	Virginia Pine	9"		56.25
2281	*Pinus taeda*	LobLolly Pine	7"	Vines Growing On	46.88
2282	*Pinus virginiana*	Virginia Pine	14"	Vines Growing On	46.88
2283	*Prunus serotina*	Black Cherry	5"	Curved Trunk	59.38
2284	*Pinus echinata*	Shortleaf Pine	17"		62.50
2285	*Quercus Marocarpa*	Bur Oak	15"		71.88
2286	*Prunus serotina*	Black Cherry	8"	Trunk Leakage	53.13
2287	*Pinus echinata*	Shortleaf Pine	7"	Dead	0.00
2288	*Pinus echinata*	Shortleaf Pine	8"	Vines Growing On	56.25
2289	*Prunus serotina*	Black Cherry	12"	Vines Growing On	59.38
2290	*Juniperus Virginiana*	Eastern Red Cedar	6"	Dead	0.00
2291	*Pinus virginiana*	Virginia Pine	7"	Leaning;Vines	37.50
2292	*Pinus echinata*	Shortleaf Pine	11"		59.38
2293	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2294	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2295	*Prunus serotina*	Black Cherry	9"	Vines Growing On	59.38
2296	*Prunus serotina*	Black Cherry	11"		78.13
2297	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2298	*Pinus virginiana*	Virginia Pine	9"		53.13
2299	*Pinus virginiana*	Virginia Pine	15"	Vines Growing On	50.00
2300	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	40.63

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
2301	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	37.50
2302	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2303	*Pinus virginiana*	Virginia Pine	14"	Vines Growing On	37.50
2304	*Acer rubrum*	Red Maple	6"	Dying;Vines	21.88
2305	*Acer rubrum*	Red Maple	11"	Vines Growing On	62.50
2306	*Pinus virginiana*	Virginia Pine	14"	Vines Growing On	40.63
2307	*Prunus serotina*	Black Cherry	13"	Curved Leader	65.63
2308	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2309	*Pinus virginiana*	Virginia Pine	13"	Vines Growing On	43.75
2310	*Liriodendron tulipifera*	Tulip Poplar	19"		75.00
2311	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	37.50
2312	*Pinus virginiana*	Virginia Pine	13"	Vines Growing On	40.63
2313	*Pinus virginiana*	Virginia Pine	8"	Leaning; Vines	43.75
2314	*Acer rubrum*	Red Maple	12"	Vines Growing On	62.50
2315	*Liriodendron tulipifera*	Tulip Poplar	15"	Vines; Bent Leader	56.25
2317	*Liriodendron tulipifera*	Tulip Poplar	4"	Twisted Trunk; Vines	53.13
2318	*Acer rubrum*	Red Maple	5"	Dead	0.00
2319	*Acer rubrum*	Red Maple	9"	Twisted Trunk; Vines	56.25
2320	*Acer rubrum*	Red Maple	7"		78.13
2321	*Liriodendron tulipifera*	Tulip Poplar	15"	Multi-Leader	59.38
2322	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2323	*Liriodendron tulipifera*	Tulip Poplar	8"	Multi-Leader;Vines	59.38
2324	*Acer rubrum*	Red Maple	13"		78.13
2325	*Acer rubrum*	Red Maple	9"		81.25
2326	*Prunus serotina*	Black Cherry	9"		71.88
2327	*Acer rubrum*	Red Maple	9"		71.88
2328	*Acer rubrum*	Red Maple	9"	Multi-Stem; Dead	62.50
2329	*Acer rubrum*	Red Maple	7"		75.00
2330	*Acer rubrum*	Red Maple	7"		75.00
2331	*Acer rubrum*	Red Maple	7"	Vines Growing on	62.50
2332	*Acer rubrum*	Red Maple	29"	Co-Dominant	78.13
2333	*Acer rubrum*	Red Maple	8"	Vines Growing on	56.25
2334	*Liriodendron tulipifera*	Tulip Poplar	18"		71.88
2335	*Prunus serotina*	Black Cherry	19"	Co-Dominant; Vines	56.25
2336	*Liriodendron tulipifera*	Tulip Poplar	19"	Vines Growing on	65.63
2337	*Prunus serotina*	Black Cherry	12"	Vines Growing on	59.38
2338	*Prunus serotina*	Black Cherry	5"	Vines Growing on	50.00
2339	*Prunus serotina*	Black Cherry	15"	Leaning; Vines	46.88
2340	*Nyssa sylvatica*	Sourgum	22"		75.00
2341	*Prunus serotina*	Black Cherry	9"	Dead	0.00
2342	*Prunus serotina*	Black Cherry	9"	Vines; Leaning	59.38
2343	*Prunus serotina*	Black Cherry	10"	Vines Growing on	65.63
2344	*Acer rubrum*	Red Maple	5"		75.00
2345	*Pinus virginiana*	Virginia Pine	12"	Vines Growing on	43.75
2346	*Prunus serotina*	Black Cherry	6"	Dead	0.00
2347	*Juniperus Virginiana*	Eastern Red Cedar	17"	Co-Dominant; Vines	46.88
2348	*Liriodendron tulipifera*	Tulip Poplar	18"	Uprooted; Leaning	46.88
2349	*Pinus virginiana*	Virginia Pine	12"	Vines Growing on	46.88
2350	*Acer rubrum*	Red Maple	6"		65.63
2351	*Acer rubrum*	Red Maple	35"	Co-Dominant	75.00
2352	*Prunus serotina*	Black Cherry	7"	Vines Growing on	62.50
2353	*Prunus serotina*	Black Cherry	17"		71.88
2354	*Acer rubrum*	Red Maple	15"		75.00
2355	*Nyssa sylvatica*	Sourgum	10"	Vines Growing on	62.50
2356	*Prunus serotina*	Black Cherry	11"		65.63
2357	*Liriodendron tulipifera*	Tulip Poplar	15"		75.00
2358	*Pinus virginiana*	Virginia Pine	15"	Multi-Leader; Vines	43.75
2359	*Acer rubrum*	Red Maple	5"	Dead	0.00
2360	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2361	*Acer rubrum*	Red Maple	15"	Co-Dominant	78.13
2362	*Acer rubrum*	Red Maple	8"	Roots Exposed From Erosion	53.13
2363	*Acer rubrum*	Red Maple	7"	Dead	0.00
2364	*Acer rubrum*	Red Maple	15"		81.25
2365	*Liriodendron tulipifera*	Tulip Poplar	17"	Dead	0.00
2366	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2367	*Acer rubrum*	Red Maple	10"	Minor Die Back; Vines	
2368	*Acer rubrum*	Red Maple	13"	Dead	0.00
2369	*Acer rubrum*	Red Maple	9"	Vines Growing on	62.50
2370	*Acer rubrum*	Red Maple	8"	Vines Growing on	59.38
2371	*Pinus virginiana*	Virginia Pine	17"		56.25
2372	*Prunus serotina*	Black Cherry	11"	Dead	0.00
2373	*Acer rubrum*	Red Maple	10"		75.00
2374	*Pinus virginiana*	Virginia Pine	6"	Vines Growing on	37.50
2375	*Liriodendron tulipifera*	Tulip Poplar	24"		87.50
2376	*Pinus virginiana*	Virginia Pine	10"	Vines Growing on	43.75
2377	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2378	*Pinus virginiana*	Virginia Pine	9"	Vines Growing on	40.63
2379	*Pinus virginiana*	Virginia Pine	14"	Vines Growing on	43.75
2380	*Pinus virginiana*	Virginia Pine	14"	Vines Growing on	40.63
2381	*Liriodendron tulipifera*	Tulip Poplar	18"	Curve in Leader	71.88
2382	*Pinus virginiana*	Virginia Pine	15"	Multi-Stem; Vines	40.63
2383	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2384	*Pinus virginiana*	Virginia Pine	12"	Vines Growing on	43.75
2385	*Pinus virginiana*	Virginia Pine	10"	Dying; Vines	18.75
2386	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
2387	*Acer rubrum*	Red Maple	15"		84.38
2388	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2389	*Pinus virginiana*	Virginia Pine	11"	Multi-Leader	43.75
2390	*Pinus virginiana*	Virginia Pine	9"	Multi-Leader	43.75
2391	*Pinus virginiana*	Virginia Pine	10"	Dying	21.88
2392	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2393	*Liriodendron tulipifera*	Tulip Poplar	17"		78.13
2394	*Pinus virginiana*	Virginia Pine	10"	Vines Growing on	43.75
2395	*Pinus virginiana*	Virginia Pine	8"	Leaning	46.88
2396	*Pinus virginiana*	Virginia Pine	9"		53.13
2397	*Pinus virginiana*	Virginia Pine	8"		46.88
2398	*Acer rubrum*	Red Maple	7"		78.13
2399	*Pinus virginiana*	Virginia Pine	10"	Vines Growing on	43.75
2400	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00

REVISIONS

No.	DATE	DESCRIPTION

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
Kevin J. Tankersley
Lic. No. 983
08/22/2016
LANDSCAPE ARCHITECT

TREE ANALYSIS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016
SCALE: N/A
C.I.= N/A

SHEET
28N
OF
36

FILE No.
RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (14)] August 22, 2016 – 2:28pm jreynolds

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
2401	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2402	*Pinus virginiana*	Virginia Pine	11"	Vines Growing on	46.88
2403	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
2404	*Pinus virginiana*	Virginia Pine	12"		56.25
2405	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2406	*Prunus serotina*	Black Cherry	10"	Vines Growing on	56.25
2407	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2408	*Catalpa speciosa*	Northern Catalpa	8"	Vines Growing on; Multi Leader	53.13
2409	*Prunus serotina*	Black Cherry	15"	Curved Trunk	56.25
2411	*Liriodendron tulipifera*	Tulip Poplar	21"		81.25
2412	*Prunus serotina*	Black Cherry	10"	Vines Growing On	53.13
2413	*Prunus serotina*	Black Cherry	7"	Leaning; Vines	53.13
2414	*Liriodendron tulipifera*	Tulip Poplar	18"		87.50
2415	*Prunus serotina*	Black Cherry	11"		78.13
2416	*Liriodendron tulipifera*	Tulip Poplar	20"		84.38
2417	*Liriodendron tulipifera*	Tulip Poplar	8"	Broken Leader	15.63
2418	*Acer rubrum*	Red Maple	9"		81.25
2419	*Pinus virginiana*	Virginia Pine	10"	Multi-Leader; Dying	15.63
2420	*Pinus virginiana*	Virginia Pine	8"	Dying	18.75
2421	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	46.88
2422	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2423	*Juniperus Virginiana*	Eastern Red Cedar	8"	Dead	0.00
2424	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.13
2425	*Acer rubrum*	Red Maple	16"		81.75
2426	*Acer rubrum*	Red Maple	5"		84.38
2427	*Liriodendron tulipifera*	Tulip Poplar	21"	Curved Trunk	62.50
2428	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2429	*Pinus virginiana*	Virginia Pine	6"		46.88
2430	*Pinus virginiana*	Virginia Pine	11"		46.88
2431	*Pinus virginiana*	Virginia Pine	9"		50.00
2432	*Pinus virginiana*	Virginia Pine	8"		50.00
2433	*Pinus virginiana*	Virginia Pine	15"		56.25
2434	*Pinus virginiana*	Virginia Pine	16"		56.25
2435	*Pinus virginiana*	Virginia Pine	10"		46.88
2436	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2437	*Acer rubrum*	Red Maple	4"		62.50
2438	*Pinus virginiana*	Virginia Pine	12"	Multi-Leader; Dying	0.00
2439	*Pinus virginiana*	Virginia Pine	7"		46.88
2440	*Pinus virginiana*	Virginia Pine	13"	Vines Growing On	43.75
2441	*Pinus virginiana*	Virginia Pine	6"		53.13
2442	*Pinus virginiana*	Virginia Pine	6"		53.13
2443	*Pinus virginiana*	Virginia Pine	7"		53.13
2444	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	43.75
2445	*Liriodendron tulipifera*	Tulip Poplar	8"		75.00
2446	*Liriodendron tulipifera*	Tulip Poplar	9"	Wound in Trunk	65.63
2447	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	43.75
2448	*Pinus virginiana*	Virginia Pine	11"		46.88
2449	*Pinus virginiana*	Virginia Pine	11"	Dead	0.00
2450	*Pinus virginiana*	Virginia Pine	7"		46.88
2451	*Liriodendron tulipifera*	Tulip Poplar	20"	Multi-Stem	71.88
2452	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2453	*Pinus virginiana*	Virginia Pine	13"		53.13
2454	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2455	*Pinus virginiana*	Virginia Pine	10"		50.00
2456	*Acer rubrum*	Red Maple	13"		84.38
2457	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2458	*Liriodendron tulipifera*	Tulip Poplar	23"		81.25
2459	*Pinus virginiana*	Virginia Pine	6"		46.88
2460	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2461	*Juniperus Virginiana*	Eastern Red Cedar	8"		62.50
2462	*Acer rubrum*	Red Maple	14"		81.25
2463	*Robinia pseudoacacia*	Black Locust	8"		71.88
2464	*Liriodendron tulipifera*	Tulip Poplar	15"		75.00
2465	*Pinus virginiana*	Virginia Pine	12"		56.25
2466	*Pinus virginiana*	Virginia Pine	4"	Dead	0.00
2467	*Pinus virginiana*	Virginia Pine	12"		56.25
2468	*Prunus serotina*	Black Cherry	14"		71.88
2469	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	50.00
2470	*Pinus strobus*	White Pine	23"		75.00
2471	*Liriodendron tulipifera*	Tulip Poplar	17"		71.88
2472	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	46.88
2473	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2474	*Pinus virginiana*	Virginia Pine	4"	Dead	0.00
2475	*Acer rubrum*	Red Maple	16"	Multi-Stem; Die Back	56.25
2477	*Catalpa speciosa*	Northern Catalpa	15"	Dead	0.00
2478	*Catalpa speciosa*	Northern Catalpa	6"		59.38
2479	*Catalpa speciosa*	Northern Catalpa	11"	Dead	0.00
2480	*Catalpa speciosa*	Northern Catalpa	18"	Co-Dominant; Vines	46.88
2481	*Catalpa speciosa*	Northern Catalpa	11"	Vines Growing On	43.75
2482	*Catalpa speciosa*	Northern Catalpa	10"	Vines Growing On	56.25
2483	*Pinus virginiana*	Virginia Pine	14"	Vines Growing On	43.75
2484	*Pinus virginiana*	Virginia Pine	13"	Vines Growing On	43.75
2485	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	40.63
2486	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2487	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2488	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2489	*Pinus virginiana*	Virginia Pine	12"		46.25
2490	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2491	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	40.63
2492	*Acer rubrum*	Red Maple	13"		78.13
2493	*Prunus serotina*	Black Cherry	49"	Multi-Stem	62.50
2494	*Prunus serotina*	Black Cherry	10"	Vines Growing On	53.13
2495	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2496	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2497	*Liriodendron tulipifera*	Tulip Poplar	17"		84.38
2499	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2500	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	40.63

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
2501	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2502	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	40.63
2503	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2504	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2505	*Pinus virginiana*	Virginia Pine	8"		46.88
2506	*Pinus virginiana*	Virginia Pine	6"	Vines Growing On	43.75
2507	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On; Dead	0.00
2508	*Prunus serotina*	Black Cherry	11"		65.63
2509	*Liriodendron tulipifera*	Tulip Poplar	25"	Vines Growing On	68.75
2510	*Prunus serotina*	Black Cherry	12"		71.88
2511	*Prunus serotina*	Black Cherry	11"	Dead	0.00
2512	*Prunus serotina*	Black Cherry	12"		62.50
2513	*Pinus virginiana*	Virginia Pine	11"		46.88
2514	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2515	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2516	*Acer rubrum*	Red Maple	5"	Dying	18.75
2517	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2518	*Liriodendron tulipifera*	Tulip Poplar	26"		87.50
2519	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2520	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	40.63
2521	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2522	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2523	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2524	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	43.75
2525	*Pinus virginiana*	Virginia Pine	13"	Multi-Leader	40.63
2526	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2527	*Prunus serotina*	Black Cherry	15"		71.88
2528	*Pinus virginiana*	Virginia Pine	13"	Vines Growing On	46.88
2529	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2530	*Pinus virginiana*	Virginia Pine	13"	Vines Growing On	43.75
2531	*Catalpa speciosa*	Northern Catalpa	9"	Vines Grwoing On	40.63
2532	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	46.88
2533	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	42.75
2534	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	43.75
2535	*Pinus echinata*	Shortleaf Pine	6"	Vines Growing On	46.88
2536	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	46.88
2537	*Pinus virginiana*	Virginia Pine	6"	Vines Growing On	43.75
2538	*Pinus virginiana*	Virginia Pine	6"	Vines Growing On	43.75
2539	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	43.75
2540	*Pinus virginiana*	Virginia Pine	12"		56.25
2541	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	31.25
2542	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2543	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2544	*Pinus virginiana*	Virginia Pine	12"		56.25
2545	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	43.75
2546	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2547	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	40.63
2548	*Prunus serotina*	Black Cherry	14"		71.88
2549	*Pinus virginiana*	Virginia Pine	13"		56.25
2550	*Liriodendron tulipifera*	Tulip Poplar	5"	Vines Grwoing On	65.63
2551	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2552	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2553	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2554	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2555	*Prunus serotina*	Black Cherry	18"	Vines Growing On	71.88
2556	*Acer rubrum*	Red Maple	12"		78.13
2557	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2558	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2559	*Pinus virginiana*	Virginia Pine	8"	Vines Grwoing On	43.75
2560	*Pinus virginiana*	Virginia Pine	4"	Dead	0.00
2561	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	43.75
2562	*Pinus virginiana*	Virginia Pine	7"	Co-Dominant; Dead	0.00
2563	*Acer rubrum*	Red Maple	11"		75.00
2564	*Prunus serotina*	Black Cherry	14"	Minor Die Back	68.75
2565	*Pinus virginiana*	Virginia Pine	9"		53.13
2566	*Pinus virginiana*	Virginia Pine	15"	Vines Growing On	46.88
2567	*Pinus virginiana*	Virginia Pine	7"	Leaning; Vines	43.75
2568	*Nyssa sylvatica*	Sourgum	7"	Vines Growing On	62.50
2569	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2570	*Pinus virginiana*	Virginia Pine	10"	Dead	0.00
2571	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2572	*Acer rubrum*	Red Maple	11"		81.25
2573	*Acer rubrum*	Red Maple	24"	Co-Dominant	75.00
2574	*Pinus virginiana*	Virginia Pine	9"		46.88
2575	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2576	*Pinus virginiana*	Virginia Pine	10"		59.38
2577	*Liriodendron tulipifera*	Tulip Poplar	19"	Multi-Stem	59.38
2578	*Acer rubrum*	Red Maple	5"		68.75
2579	*Acer rubrum*	Red Maple	12"	Dead	0.00
2580	*Acer rubrum*	Red Maple	11"	Dead	0.00
2581	*Acer rubrum*	Red Maple	24"	Multi-Stem	84.38
2582	*Acer rubrum*	Red Maple	18"		87.50
2583	*Catalpa speciosa*	Northern Catalpa	4"	Dying	31.25
2584	*Liriodendron tulipifera*	Tulip Poplar	4"		75.00
2585	*Liriodendron tulipifera*	Tulip Poplar	17"	Multi-Leader	65.63
2586	*Prunus serotina*	Black Cherry	14"	Vines Growing On	59.38
2587	*Acer rubrum*	Red Maple	13"		84.38
2588	*Acer rubrum*	Red Maple	8"	Dean	0.00
2589	*Acer rubrum*	Red Maple	22"	Co-Dominant	68.75
2590	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2591	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2592	*Pinus virginiana*	Virginia Pine	8"		43.75
2593	*Pinus virginiana*	Virginia Pine	8"		56.25
2594	*Pinus virginiana*	Virginia Pine	11"	Leaning	53.13
2595	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2596	*Acer rubrum*	Red Maple	15"		81.25
2597	*Pinus virginiana*	Virginia Pine	13"	Curved Leader	56.25
2598	*Pinus virginiana*	Virginia Pine	15"	Dead	0.00
2599	*Liriodendron tulipifera*	Tulip Poplar	7"		65.63
2600	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
2601	*Juniperus Virginiana*	Eastern Red Cedar	6"	Broken Leader	21.88
2602	*Pinus virginiana*	Virginia Pine	11"		46.88
2603	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	43.75
2604	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	43.75
2605	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2606		Unknown	6"	Dead	0.00
2607	*Acer rubrum*	Red Maple	13"		84.38
2608	*Liriodendron tulipifera*	Tulip Poplar	12"	Twisted Leader	59.38
2609	*Pinus virginiana*	Virginia Pine	12"	Multi- Leader	46.88
2610	*Pinus virginiana*	Virginia Pine	11"		46.88
2611	*Prunus serotina*	Black Cherry	8"	Vines Growing On	50.00
2612	*Prunus serotina*	Black Cherry	8"	Vines Growing On	50.00
2613	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2614	*Pinus virginiana*	Virginia Pine	13"	Vines Growing On	43.75
2615	*Pinus virginiana*	Virginia Pine	10"	Dying	21.88
2616	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2617	*Pinus virginiana*	Virginia Pine	13"	Multi-Leader; Vines	43.75
2618	*Pinus virginiana*	Virginia Pine	11"		56.25
2619	*Pinus virginiana*	Virginia Pine	9"		56.25
2620	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2621	*Pinus virginiana*	Virginia Pine	9"	Leader Broken; Dead	0.00
2622	*Pinus virginiana*	Virginia Pine	8"	Leaning Vines	40.63
2623	*Pinus virginiana*	Virginia Pine	11"		56.25
2624	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2625	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2626	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2627	*Pinus virginiana*	Virginia Pine	9"	Leaning; Vines	37.50
2628	*Pinus virginiana*	Virginia Pine	13"		53.13
2629	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2630	*Pinus virginiana*	Virginia Pine	8"		50.00
2631	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2632	*Liriodendron tulipifera*	Tulip Poplar	22"		81.25
2633	*Pinus virginiana*	Virginia Pine	6"	Leaning	46.88
2634	*Liriodendron tulipifera*	Tulip Poplar	18"		81.25
2635	*Prunus serotina*	Black Cherry	14"		59.38
2636	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	43.75
2637	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2638	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2639	*Pinus virginiana*	Virginia Pine	11"	Dying	18.75
2640	*Pinus echinata*	Shortleaf Pine	6"	Vines Growing On	43.75
2641	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	46.88
2642	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2643	*Liriodendron tulipifera*	Tulip Poplar	26"		81.25
2644	*Pinus virginiana*	Virginia Pine	7"		50.00
2645	*Acer rubrum*	Red Maple	9"		71.88
2646	*Acer rubrum*	Red Maple	17"	Multi-Leader	65.63
2647	*Prunus serotina*	Black Cherry	12"	Vines Growing On	56.25
2648	*Catalpa speciosa*	Northern Catalpa	13"	Vines Growing On	56.25
2649	*Pinus virginiana*	Virginia Pine	7"		46.88
2650	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	43.75
2651	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	50.00
2652	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	40.63
2653	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	46.88
2654	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2655	*Pinus virginiana*	Virginia Pine	8"		50.00
2656	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	43.75
2657	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	46.35
2658	*Pinus virginiana*	Virginia Pine	10"		56.25
2659	*Pinus virginiana*	Virginia Pine	11"		56.25
2660	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2661	*Pinus virginiana*	Virginia Pine	12"		56.25
2662	*Pinus virginiana*	Virginia Pine	7"		53.13
2663	*Liriodendron tulipifera*	Tulip Poplar	5"		81.25
2664	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2665	*Pinus virginiana*	Virginia Pine	13"		50.00
2666	*Acer rubrum*	Red Maple	7"	Twosted Leader	62.50
2667	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2668	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2669	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2670	*Pinus virginiana*	Virginia Pine	12"	Dead	0.00
2671	*Robinia pseudoacacia*	Black Locust	7"	Trunk Wound	53.13
2672	*Robinia pseudoacacia*	Black Locust	8"		62.50
2673	*Robinia pseudoacacia*	Black Locust	12"	Die Back	53.13
2674	*Acer rubrum*	Red Maple	17"		78.13
2675	*Acer rubrum*	Red Maple	12"	Dead	0.00
2676	*Pinus virginiana*	Virginia Pine	7"	Leaning	37.50
2677	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2678	*Pinus virginiana*	Virginia Pine	12"		53.13
2679	*Pinus virginiana*	Virginia Pine	10"		50.00
2680	*Prunus serotina*	Black Cherry	16"		62.50
2681	*Pinus virginiana*	Virginia Pine	11"		53.13
2682	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2683	*Pinus virginiana*	Virginia Pine	6"	Vines Growing On	43.75
2684	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2685	*Acer rubrum*	Red Maple	7"		65.63
2686	*Prunus serotina*	Black Cherry	9"	Dead	0.00
2687	*Liriodendron tulipifera*	Tulip Poplar	5"	Dead	65.63
2688	*Liriodendron tulipifera*	Tulip Poplar	7"		75.00
2689	*Catalpa speciosa*	Northern Catalpa	5"		34.38
2690	*Pinus virginiana*	Virginia Pine	7"		43.75
2691	*Pinus virginiana*	Virginia Pine	9"		46.88
2692	*Acer rubrum*	Red Maple	9"		68.75
2693	*Pinus virginiana*	Virginia Pine	9"	Dying	37.50
2694	*Liriodendron tulipifera*	Tulip Poplar	20"		75.00
2695	*Pinus virginiana*	Virginia Pine	9"		43.75
2696	*Pinus virginiana*	Virginia Pine	9"		43.75
2697	*Pinus virginiana*	Virginia Pine	7"		46.88
2698	*Acer rubrum*	Red Maple	12"	Multi-Leader	65.63
2699	*Liriodendron tulipifera*	Tulip Poplar	11"	Dead	0.00
2700	*Pinus virginiana*	Virginia Pine	11"		56.25

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE	COMMENTS	CONDITION RATING
			DBH (in)		
2701	*Pinus virginiana*	Virginia Pine	7"		56.25
2702	*Pinus virginiana*	Virginia Pine	9"		53.13
2703	*Pinus virginiana*	Virginia Pine	12"	Multi-Leader	43.75
2704	*Pinus virginiana*	Virginia Pine	6"		46.88
2705	*Pinus virginiana*	Virginia Pine	9"		53.13
2706	*Pinus virginiana*	Virginia Pine	6"		46.88
2707	*Pinus virginiana*	Virginia Pine	6"		46.88
2708	*Pinus virginiana*	Virginia Pine	6"	Vines Growing On	43.75
2709	*Pinus virginiana*	Virginia Pine	12"		50.00
2710	*Pinus virginiana*	Virginia Pine	10"		50.00
2711	*Pinus virginiana*	Virginia Pine	11"		56.25
2712	*Pinus virginiana*	Virginia Pine	14"		56.25
2713	*Liriodendron tulipifera*	Tulip Poplar	7"		78.13
2714	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	46.88
2715	*Pinus virginiana*	Virginia Pine	11"		56.25
2716	*Pinus virginiana*	Virginia Pine	14"	Vines Growing On	46.88
2717	*Pinus virginiana*	Virginia Pine	9"		46.88
2718	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	46.88
2719	*Pinus virginiana*	Virginia Pine	10"		50.00
2720	*Acer rubrum*	Red Maple	6"		71.88
2721	*Pinus virginiana*	Virginia Pine	11"	Multi-Leader; 1 Dead	31.25
2722	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2723	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	46.88
2724	*Pinus virginiana*	Virginia Pine	7"	Dying	31.25
2725	*Pinus virginiana*	Virginia Pine	9"		53.13
2726	*Prunus serotina*	Black Cherry	19"	Die Back; Vines	56.25
2727	*Pinus virginiana*	Virginia Pine	10"	Vines Growing on	43.75
2728	*Pinus virginiana*	Virginia Pine	12"		56.25
2729	*Pinus virginiana*	Virginia Pine	7"	Vines Growing on	43.75
2730	*Pinus virginiana*	Virginia Pine	7"		46.88
2731	*Pinus virginiana*	Virginia Pine	4"	Dying	31.25
2732	*Prunus serotina*	Black Cherry	19	Curved Trunk	62.50
2733	*Pinus virginiana*	Virginia Pine	8	Dead	0.00
2734	*Juniperus Virginiana*	Eastern Red Cedar	12"		56.25
2735	*Prunus serotina*	Black Cherry	13"	Canopy Die Back	56.25
2736	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2737	*Pinus virginiana*	Virginia Pine	8"		50.00
2738	*Pinus virginiana*	Virginia Pine	11"	Vines Growing on	46.88
2739	*Prunus serotina*	Black Cherry	14"		68.75
2740	*Prunus serotina*	Black Cherry	17"	Multi Leader	71.88
2741	*Pinus virginiana*	Virginia Pine	13"	Vines Growing On	46.88
2742	*Acer rubrum*	Red Maple	15"		78.13
2743	*Pinus virginiana*	Virginia Pine	14"		56.25
2744	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2745	*Pinus virginiana*	Virginia Pine	13"		56.25
2746	*Pinus virginiana*	Virginia Pine	10"		53.13
2747	*Pinus virginiana*	Virginia Pine	9"		50.00
2748	*Prunus serotina*	Black Cherry	11"		62.50
2749	*Acer rubrum*	Red Maple	7"		71.88
2750	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	34.38
2751	*Catalpa speciosa*	Northern Catalpa	8"	Vines Growing On	56.25
2752	*Pinus virginiana*	Virginia Pine	14"	Multi-Leader; Vines	46.08
2753	*Acer rubrum*	Red Maple	7"		65.63
2754	*Pinus virginiana*	Virginia Pine	9"		50.00
2755	*Pinus virginiana*	Virginia Pine	8"		46.88
2756	*Pinus virginiana*	Virginia Pine	11"		56.25
2757	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2758	*Liriodendron tulipifera*	Tulip Poplar	9"	Curved Leader	62.50
2759	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	40.63
2760	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	43.75
2761	*Prunus serotina*	Black Cherry	14"		65.63
2762	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2763	*Acer rubrum*	Red Maple	14"	Multi-Stem	56.25
2764	*Acer rubrum*	Red Maple	16"		59.38
2765	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	43.75
2766	*Pinus virginiana*	Virginia Pine	9"		50.00
2767	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	43.75
2768	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	46.88
2769	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	46.88
2770	*Pinus virginiana*	Virginia Pine	10"		43.75
2771	*Pinus virginiana*	Virginia Pine	7"		53.13
2772	*Acer rubrum*	Red Maple	15"	Wound in Trunk	59.38
2773	*Prunus serotina*	Black Cherry	16"	Wound in Trunk; Die Back	59.38
2774	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	40.63
2775	*Pinus virginiana*	Virginia Pine	8"	Leaning; Vines	40.63
2776	*Pinus virginiana*	Virginia Pine	11"		56.25
2777	*Pinus virginiana*	Virginia Pine	7"		53.13
2778	*Pinus virginiana*	Virginia Pine	14"	Multi-Leader	50.00
2779	*Pinus virginiana*	Virginia Pine	11"		43.75
2780	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	40.63
2781	*Liriodendron tulipifera*	Tulip Poplar	7"	Vines Growing On	56.25
2782	*Pinus virginiana*	Virginia Pine	5"	Leaning;Vines	28.13
2783	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2784	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2785	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	34.38
2786	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	46.88
2787	*Pinus virginiana*	Virginia Pine	14"		56.25
2788	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	37.50
2789	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	46.88
2790	*Prunus serotina*	Black Cherry	11"	Multi-Leader; Vines	62.50
2791	*Pinus virginiana*	Virginia Pine	9"		56.25
2792	*Pinus virginiana*	Virginia Pine	11"		53.13
2793	*Pinus virginiana*	Virginia Pine	6"	Vines Growing On	43.75
2794	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	40.63
2795	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2796	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	43.75
2797	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	46.88
2798	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	43.75
2799	*Pinus virginiana*	Virginia Pine	11"		50.00
2800	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	37.50

REVISIONS

No.	DATE	DESCRIPTION

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016

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COMMONWEALTH OF VIRGINIA
Kevin J. Tankersley
Lic. No. 983
08/22/2016
LANDSCAPE ARCHITECT

TREE ANALYSIS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016
SCALE: N/A
C.I.= N/A

SHEET
28O
OF
36

FILE No.
RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (15)] August 22, 2016 – 2:29pm jreynolds

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
2801	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	46.88
2802	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	46.88
2803	*Pinus virginiana*	Virginia Pine	9"	Leaning	43.75
2804	*Pinus virginiana*	Virginia Pine	8"		56.25
2805	*Pinus virginiana*	Virginia Pine	12"	Vines Growing On	43.75
2806	*Pinus virginiana*	Virginia Pine	9"	Multi Leader	40.63
2807	*Pinus virginiana*	Virginia Pine	6"	Vines Growing On	37.50
2808	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2809	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2810	*Liriodendron tulipifera*	Tulip Poplar	13"	Multi-Leader	68.75
2811	*Pinus virginiana*	Virginia Pine	8"		46.88
2812	*Liriodendron tulipifera*	Tulip Poplar	15"		75.00
2813	*Liriodendron tulipifera*	Tulip Poplar	11"	Minor Die Back	65.63
2814	*Acer rubrum*	Red Maple	9"	Co-Dominant; Vines	62.50
2815	*Acer rubrum*	Red Maple	9"		78.13
2816	*Pinus virginiana*	Virginia Pine	11"	Vines	43.75
2817	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2818	*Acer rubrum*	Red Maple	34"	Co-Dominant	78.13
2819	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2820	*Prunus serotina*	Black Cherry	13"	Multi-Leader; Vines	59.38
2821	*Prunus serotina*	Black Cherry	13"	Dead	0.00
2822	*Acer rubrum*	Red Maple	4"		71.88
2823	*Pinus virginiana*	Virginia Pine	11"		53.13
2824	*Pinus virginiana*	Virginia Pine	7"		43.75
2825	*Acer rubrum*	Red Maple	5"		68.75
2826	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2827	*Acer rubrum*	Red Maple	16"	Co-Dominant	62.50
2828	*Acer rubrum*	Red Maple	17"	Vines Growing On	59.38
2829	*Pinus virginiana*	Virginia Pine	6"	Vines Growing On	34.38
2830	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	37.50
2831	*Pinus virginiana*	Virginia Pine	12"		46.88
2832	*Catalpa speciosa*	Northern Catalpa	7"		46.88
2833	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2834	*Pinus virginiana*	Virginia Pine	10"		46.88
2835	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On; Dead	0.00
2836	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	43.75
2837	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	46.88
2838	*Pinus virginiana*	Virginia Pine	8"		50.00
2839	*Pinus virginiana*	Virginia Pine	13"	Vines Growing On	43.75
2840	*Acer rubrum*	Red Maple	14"		71.88
2841	*Pinus virginiana*	Virginia Pine	9"	Dead	0.00
2842	*Pinus virginiana*	Virginia Pine	14"		50.00
2843	*Acer rubrum*	Red Maple	16"		65.63
2844	*Pinus virginiana*	Virginia Pine	14"		53.13
2845	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2846	*Catalpa speciosa*	Northern Catalpa	28"	Co-Dominant;Dead	28.13
2847	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	34.38
2848	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	37.50
2849	*Prunus serotina*	Black Cherry	12"		59.38
2850	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.13
2851	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.13
2852	*Pinus virginiana*	Virginia Pine	8"	Vines; Leaning	31.25
2853	*Prunus serotina*	Black Cherry	12"	Canopy Die Back	53.13
2854	*Pinus virginiana*	Virginia Pine	6"	Vines Grwoing On	37.50
2855	*Pinus virginiana*	Virginia Pine	9"		53.13
2856	*Pinus virginiana*	Virginia Pine	8"		50.00
2857	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	37.50
2858	*Pinus virginiana*	Virginia Pine	12"		56.25
2859	*Pinus virginiana*	Virginia Pine	11"		53.13
2860	*Pinus virginiana*	Virginia Pine	11"		46.88
2861	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2862	*Prunus serotina*	Black Cherry	14"	Multi-Leader; 1 Dead	37.50
2863	*Acer rubrum*	Red Maple	15"	Multi-Stem	62.50
2864	*Juniperus Virginiana*	Eastern Red Cedar	8"		65.63
2865	*Pinus virginiana*	Virginia Pine	8"		46.88
2866	*Pinus virginiana*	Virginia Pine	6"	Dead	0.00
2867	*Liriodendron tulipifera*	Tulip Poplar	26"	Open Wound In Trunk	56.25
2868	*Pinus virginiana*	Virginia Pine	7"	Vines Growing On	43.13
2869	*Acer rubrum*	Red Maple	12"		68.75
2870	*Liriodendron tulipifera*	Tulip Poplar	24"	Wound In Trunk; Die Back	56.25
2871	*Acer rubrum*	Red Maple	13"		71.88
2872	*Acer rubrum*	Red Maple	5"		65.63
2873	*Acer rubrum*	Red Maple	24"	Co-Dominant	62.50
2874	*Pinus virginiana*	Virginia Pine	6"		53.13
2875	*Acer rubrum*	Red Maple	15"		62.50
2876	*Acer rubrum*	Red Maple	13"	Dead	0.00
2877	*Pinus virginiana*	Virginia Pine	10"		53.13
2878	*Pinus virginiana*	Virginia Pine	12"		56.25
2879	*Pinus virginiana*	Virginia Pine	12"		53.13
2880	*Pinus virginiana*	Virginia Pine	11"		53.13
2881	*Pinus virginiana*	Virginia Pine	8"		46.88
2882	*Acer rubrum*	Red Maple	16"	Multi-Stem	71.88
2883	*Acer rubrum*	Red Maple	15"		65.63
2884	*Acer rubrum*	Red Maple	11"		62.50
2885	*Acer rubrum*	Red Maple	16"	Co-Dominant	68.75
2886	*Liriodendron tulipifera*	Tulip Poplar	30"		81.25
2887	*Acer rubrum*	Red Maple	9"	Multi-Leader	68.75
2888	*Acer rubrum*	Red Maple	10"	Co-Dominant	65.63
2889	*Liriodendron tulipifera*	Tulip Poplar	14"	Twist In Leader	62.50
2890	*Pinus strobus*	White Pine	15"		68.75
2891	*Liriodendron tulipifera*	Tulip Poplar	17"	Dying	37.50
2892	*Liriodendron tulipifera*	Tulip Poplar	8"	Vines Growing On	62.50
2893	*Acer rubrum*	Red Maple	14"	Wound Along Leader	37.50
2894	*Acer rubrum*	Red Maple	9"		75.00
2895	*Acer rubrum*	Red Maple	11"		75.00
2896	*Pinus virginiana*	Virginia Pine	8"	Multi-Leader	46.88
2897	*Pinus strobus*	White Pine	24"		71.88
2898	*Juniperus Virginiana*	Eastern Red Cedar	11"	Multi-Stem	56.25
2899	*Liriodendron tulipifera*	Tulip Poplar	17"		62.50
2900	*Liriodendron tulipifera*	Tulip Poplar	23"	Wound In Trunk	68.75

TREE INVENTORY & CONDITION ANALYSIS

TREE NO.	BOTANICAL NAME	SPECIES	SIZE DBH (in)	COMMENTS	CONDITION RATING
2901	*Liriodendron tulipifera*	Tulip Poplar	21"		75.00
2902	*Acer rubrum*	Red Maple	9"		75.00
2903	*Acer rubrum*	Red Maple	25"	Co-Dominant	78.13
2904	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	40.63
2905	*Pinus virginiana*	Virginia Pine	11"		50.00
2906	*Pinus virginiana*	Virginia Pine	8"		46.88
2907	*Pinus virginiana*	Virginia Pine	8"		46.88
2908	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	37.50
2909	*Prunus serotina*	Black Cherry	11"	Dying	37.50
2910	*Liriodendron tulipifera*	Tulip Poplar	15"		78.13
2911	*Pinus virginiana*	Virginia Pine	10"	Vines Growing On	43.75
2912	*Pinus virginiana*	Virginia Pine	10"		53.13
2913	*Pinus virginiana*	Virginia Pine	11"	Vines Growing On	43.75
2914	*Pinus virginiana*	Virginia Pine	13"		53.13
2915	*Acer rubrum*	Red Maple	8"	Co-Dominant	59.38
2916	*Liriodendron tulipifera*	Tulip Poplar	22"		62.50
2917	*Liriodendron tulipifera*	Tulip Poplar	16"	Dead	0.00
2918	*Acer rubrum*	Red Maple	12"		75.00
2919	*Pinus virginiana*	Virginia Pine	11"		56.25
2920	*Acer rubrum*	Red Maple	8"		71.88
2921	*Pinus virginiana*	Virginia Pine	8"	Dead	0.00
2922	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	37.50
2923	*Acer rubrum*	Red Maple	7"		68.75
2924	*Acer rubrum*	Red Maple	12"	Wounds In Trunk	65.63
2925	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On	37.50
2926	*Acer rubrum*	Red Maple	9"	Wound In Trunk	62.50
2927	*Pinus virginiana*	Virginia Pine	9"		46.88
2928	*Acer rubrum*	Red Maple	14"		78.13
2929	*Pinus virginiana*	Virginia Pine	12"		53.13
2930	*Pinus virginiana*	Virginia Pine	13"		53.13
2931	*Pinus virginiana*	Virginia Pine	7"	Dead	0.00
2932	*Pinus virginiana*	Virginia Pine	5"	Dead	0.00
2933	*Pinus virginiana*	Virginia Pine	12"		50.00
2934	*Pinus virginiana*	Virginia Pine	11"		56.25
2935	*Acer rubrum*	Red Maple	8"		75.00
2936	*Acer rubrum*	Red Maple	11"	Canopy DieBack	46.88
2937	*Liriodendron tulipifera*	Tulip Poplar	9"	Dead	0.00
2938	*Liriodendron tulipifera*	Tulip Poplar	7"	Dead	0.00
2939	*Pinus virginiana*	Virginia Pine	13"	Dead	0.00
2940	*Acer rubrum*	Red Maple	18"	Dying	37.50
2941	*Acer rubrum*	Red Maple	16"		62.50
2942	*Pinus virginiana*	Virginia Pine	7"		50.00
2943	*Pinus virginiana*	Virginia Pine	15"		46.88
2944	*Liriodendron tulipifera*	Tulip Poplar	7"	Dead	0.00
2945	*Liriodendron tulipifera*	Tulip Poplar	20"	Moderate Die Back	46.88
2946	*Liriodendron tulipifera*	Tulip Poplar	16"		54.38
2947	*Liriodendron tulipifera*	Tulip Poplar	24"	Minor Die Back; Trunk Decay	53.13
2948	*Acer rubrum*	Red Maple	9"		78.13
2949	*Acer rubrum*	Red Maple	21"	Co-Dominant	78.13
2950	*Acer rubrum*	Red Maple	8"		62.50
2951	*Pinus virginiana*	Virginia Pine	12"	Dead	0.00
2952	*Acer rubrum*	Red Maple	19"	Multi-Leader	59.38
2953	*Pinus virginiana*	Virginia Pine	9"	Vines Growing On	37.50
2954	*Pinus virginiana*	Virginia Pine	10"		56.25
2955	*Liriodendron tulipifera*	Tulip Poplar	10"	Dying	18.75
2956	*Acer rubrum*	Red Maple	9"	Dead	0.00
2957	*Acer rubrum*	Red Maple	9"	Dead	0.00
2958	*Acer rubrum*	Red Maple	9"		78.13
2959	*Acer rubrum*	Red Maple	21"	Bent Trunk; Multi-Stem	40.63
2960	*Pinus virginiana*	Virginia Pine	10"		46.88
2961	*Pinus virginiana*	Virginia Pine	5"		50.00
2962	*Acer rubrum*	Red Maple	7"		78.13
2963	*Pinus virginiana*	Virginia Pine	8"	Vines Growing On; Dead	0.00
2964	*Acer rubrum*	Red Maple	13"		65.63
2965	*Acer rubrum*	Red Maple	12"		75.00
2966	*Acer rubrum*	Red Maple	7"	Multi-Stem	62.50
2967	*Pinus virginiana*	Virginia Pine	9"	Wound In Trunk	56.25
2968	*Liriodendron tulipifera*	Tulip Poplar	12"		71.88
2969	*Acer rubrum*	Red Maple	5"		59.38

REVISIONS

No.	DATE	DESCRIPTION

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/06/2016
06/27/2016
08/01/2016
08/22/2016
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COMMONWEALTH OF VIRGINIA
Kevin J. Tankersley
Lic. No. 983
08/22/2016
LANDSCAPE ARCHITECT

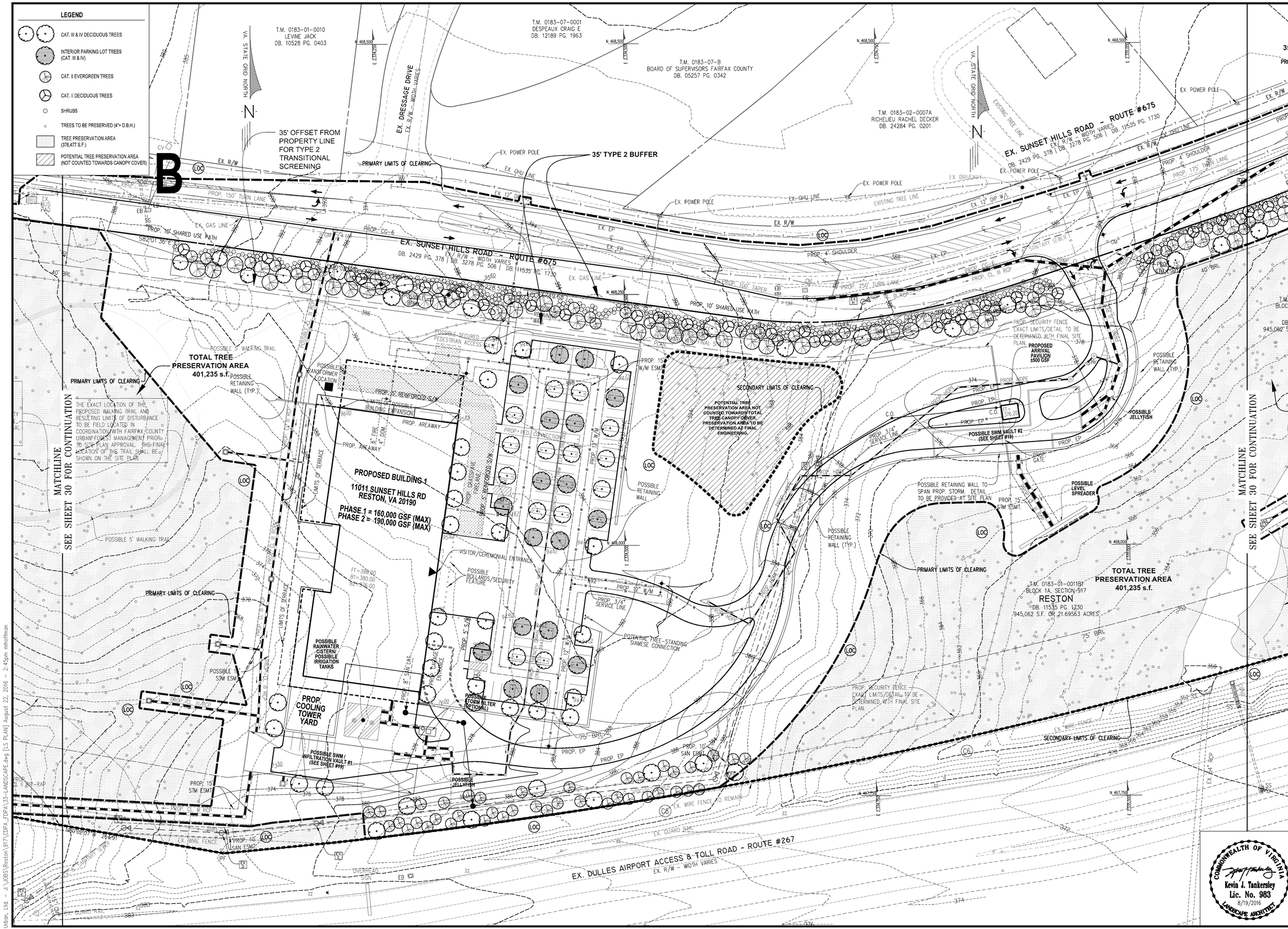
TREE ANALYSIS
RESTON EASTGATE CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: N/A C.I.= N/A DATE: JAN. 2016

SHEET 28P OF 36

FILE No. RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\32-TREE INVENTORY.dwg [LAYOUT (16)] August 22, 2016 – 2:29pm jreynolds



No.	DATE	DESCRIPTION

REVISIONS

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01/04/2016
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ILLUSTRATIVE LANDSCAPE PLAN

RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=40'
C.I.=N/A
DATE: JAN. 2016

COMMONWEALTH OF VIRGINIA
Kevin J. Tankersley
Lic. No. 983
8/19/2016
LANDSCAPE ARCHITECT

SHEET 29 OF 36

FILE No. RZ-12794

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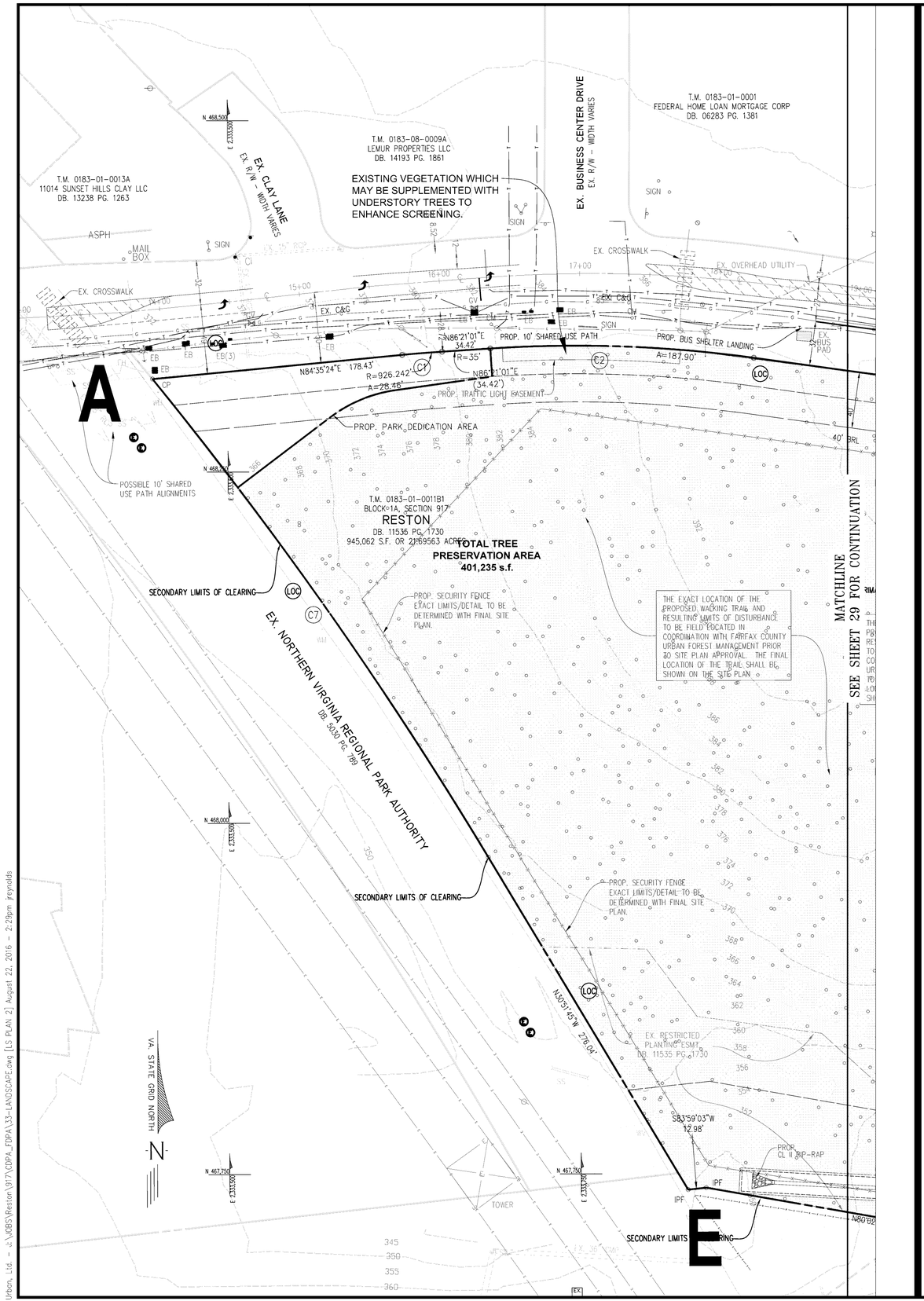

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/20/2016
06/27/2016
08/01/2016
08/22/2016

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ILLUSTRATIVE LANDSCAPE PLAN

RESTON EASTGATE
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HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=40'
C.I.= N/A
DATE: JAN. 2016

COMMONWEALTH OF VIRGINIA
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8/19/2016
LANDSCAPE ARCHITECT

SHEET 30 OF 36

FILE No. RZ-12794

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Table 12.3 Tree Preservation Target Calculations and Statement

Step		Totals	Reference
A. Tree Preservation Target Calculations and Statement			
A	Pre-development area of existing tree canopy (from existing vegetation map)(SF) =	856,932	see § 12-0507.2
B	Percentage of gross site area covered by existing tree canopy =	91%	
C	Percentage of 10-year tree canopy required for site =	10%	see Table 12.4
D	Percentage of the 10-year tree canopy requirement that should be met through tree preservation =	91%	
E	Proposed percentage of canopy requirement that will be met through tree preservation =	584%	
F	Has the Tree Preservation Target minimum been met?	Yes	Provide Yes or No
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 § 12-0508.3 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	Provide sheet number, see § 12-0508.3
H	If step G requires a narrative, it shall be prepared in accordance with § 12-0508.4	N/A	see § 12-0508.4
I	Place this information prior to the 10-year Tree Canopy Calculations as per instructions in Table 12.10.	YES	

Table 12.10 10-Year Tree Canopy Calculation Worksheet

Step		Totals	
A. Tree Preservation Target and Statement			
A 1	Place the Tree Preservation Target calculations and statement here preceeding the 10-year tree canopy		see § 12-0508.2 for list of required elements and worksheet
B. Tree Canopy Requirement			
B 1	Identify gross site area (SF) =	945,062	§ 12-0511.1A
B 2	[1] [2] Subtract area dedicated to parks, road frontage(SF) =	86,351	§ 12-0511.1B
B 3	Subtract area of exemptions(SF) =	0	§ 12-0511.1C(1) through § 12-0511.1C(6)
B 4	Adjusted gross site area (B1-B2,B3)(SF) =	858,711	Square feet
B 5	Identify the site's zoning and/or use	PDC	
B 6	Percentage of 10-year tree canopy required =	10%	§ 12-0510.1 and Table 12.4
B 7	Area of 10-year Tree Canopy Required (B4 x B6)(SF) =	85,871	Square feet
B 8	Modification of 10-year Tree Canopy Requirements requested?	NO	Yes or No
B 9	If B8 is yes, then list plan sheet where modification request is located	N/A	Sheet number
C. Tree Preservation			
C 1	Tree Preservation Target Area(SF) =	77,863	Square Feet
C 2	Total canopy area meeting standards of § 12-0400 (SF) =	401,235	Square Feet
C 3	C 2 x 1.25(SF) =	501,544	§ 12-0510.3B
C 4	Total canopy area provided by unique or valuable forest or woodland communities(SF) =	0	Square Feet
C 5	C 4 x 1.5(SF) =	0	§ 12-0510.3B(1)
C 6	Total of canopy area provided by "Heritage," "Memorial," "Specimen," or "Street" trees (SF) =	0	Square Feet
C 7	C 6 x 1.5 to 3.0 (SF)=	0	§ 12-0510.3B(2)
C 8	Canopy area of trees within resource Protection Areas and 100-year floodplains (SF) =	0	Square Feet
C 9	C 8 x 1.0 (SF) =	0	§ 12-0510.3C(1)
C 10	Total of C 3, C 5, C 7 and C 9 =	501,544	If area of C 10 is less than B 7 remainder of requirement must be met through tree planting - go to D
D. Tree Planting			
D 1	Area of canopy to be met through tree planting (B 7-C10) =	0	Square feet
D 2	Area of canopy planted for air quality benefits =	0	Square feet
D 3	D 2 x 1.5 (SF) =	0	§ 12-0510.4B(1)
D 4	Area of canopy planted for energy conservation =	0	Square feet
D 5	D 4 x 1.5 (SF) =	0	§ 12-0510.4B(2)
D 6	Area of canopy planted for water quality benefits =	0	Square feet
D 7	D 6 x 1.25 (SF) =	0	§ 12-0510.4B(3)
D 8	Area of canopy planted for wildlife benefits =	36,231	Square feet
D 9	D 8 x 1.5 (SF) =	54,347	§ 12-0510.4B(4)
D 10	Area of canopy provided by native trees =	0	Square feet
D 11	D 10 x 1.5 (SF) =	0	§ 12-0510.4B(5)
D 12	Area of canopy provided by improved cultivars and varieties	1,744	Square feet
D 13	D 12 x 1.25 (SF) =	2,180	§ 12-0510.4B(6)
D 14	Area of canopy provided through tree seedlings (SF) =	0	§ 12-0510.4D(1)
	D 14 x 1.0 =	0	Square feet
D 15	Area of canopy provided through native shrubs=	0	
	D15 x 1.0 =	0	
D 16	Percentage of D 14 represented by D 15 =	0.0%	Must not exceed 33% of D 14
	Area of canopy to be planted with no benefit credits =		Square feet
D 17	Total of canopy area provided through tree planting =	56,527	Square feet
D 18	Is an offsite planting relief requested?	NO	Yes or No
D 19	Tree Bank or Tree Fund?	NO	Yes or No § 12-0512
D 20	Canopy area requested to be provided through offsite banking or tree fund =	N/A	Square Feet
D 21	Amount to be deposited into the Tree Preservation and Planting Fund =	N/A	
E. Total of 10-year Tree Canopy Provided			
E 1	Total of canopy area provided through tree preservation (C 10) =	501,544	Square Feet
E 2	Total of canopy area provided through tree planting (D 17) =	56,527	Square Feet
E 3	Total of canopy area provided through offsite mechanism (D 19) =	0	Square Feet
E 4	Total of 10-year Tree Canopy Provided (SF)= (E1+E2+E3)	558,070	Total of E 1 through E 3, area should meet or exceed area in B 7

[1] A TOTAL OF 76,920 S.F. HAS BEEN DEDICATED TO ROAD FRONTAGE PER PREVIOUSLY APPROVED PLAN #206-SP-01.
[2] A TOTAL OF 9,431 S.F. HAS BEEN DEDICATED TO PARKS PER THIS PLAN.

PLANT SCHEDULE

Symbol	Botanical Name	Common Name	Size	Type	10-yr Tree Canopy (ft²)	Multiplier
	Cat. IV Deciduous Trees					
	Acer rubrum 'October Glory'	October Glory Red Maple	2" Cal.	B & B	200	Wildlife Benefits: 1.50
	Carya glabra	Pignut Hickory	2" Cal.	B & B	200	Wildlife Benefits: 1.50
	Liriodendron tulipifera	Tulip Poplar	2" Cal.	B & B	200	Wildlife Benefits: 1.50
	Platanus x acerifolia 'Bloodgood'	Bloodgood London Planetree	2" Cal.	B & B	200	Improved Cultivar: 1.25
	Quercus alba	White Oak	2" Cal.	B & B	200	Wildlife Benefits: 1.50
	Quercus phellos	Willow Oak	2" Cal.	B & B	200	Wildlife Benefits: 1.50
	Quercus rubra	Red Oak	2" Cal.	B & B	200	Wildlife Benefits: 1.50
	Ulmus americana 'Valley Forge'	Valley Forge American Elm	2" Cal.	B & B	200	Improved Cultivar: 1.25
	Cat. III Deciduous Trees					
	Betula nigra	River Birch	2" Cal.	B & B	150	Wildlife Benefits: 1.50
	Gleditsia triacanthos inermis	Thornless Honeylocust	2" Cal.	B & B	150	
	Nyssa sylvatica	Black Gum	2" Cal.	B & B	150	Wildlife Benefits: 1.50
	Cat. II Deciduous Trees					
	Carpinus caroliniana	American Hornbeam	2" Cal.	B & B	100	
	Cercis canadensis	Eastern Redbud	2" Cal.	B & B	100	
	Cornus florida	Flowering Dogwood	2" Cal.	B & B	100	Wildlife Benefits: 1.50
	Prunus serotina	Black Cherry	2" Cal.	B & B	100	
	Prunus x incam 'Okame'	Okame Cherry	2" Cal.	B & B	100	
	Cat. IV Evergreen Trees					
	Pinus taeda	Loblolly Pine	8' Ht.	B & B	200	Wildlife Benefits: 1.50
	Cat. III Evergreen Trees					
	Pinus echinata	Shortleaf Pine	8' Ht.	B & B	150	
	Cat. II Evergreen Trees					
	Cryptomeria japonica	Japanese Cryptomeria	8' Ht.	B & B	100	
	Ilex opaca	American Holly	8' Ht.	B & B	100	Wildlife Benefits: 1.50
	Shrubs					
	Ilex verticillata	Winterberry	30"-36" Ht.	B & B		
	Itea virginica	Henry's Garnet	30"-36" Ht.	B & B		
	Prunus x cistena	Purple-leaf Sand Cherry	30"-36" Ht.	B & B		
	Rhododendron catawbiense	Catawba Rhododendron	30"-36" Ht.	B & B		

NOTES:
1. THE LIST ABOVE REPRESENTS A GENERAL PALETTE OF PROPOSED PLANT MATERIAL FOR THE SITE, THOUGH IS NOT INTENDED TO BE FULLY INCLUSIVE OF ALL VARIETIES THAT MAY BE PLANTED. FINAL PLANT LIST SELECTIONS WILL INCLUDE SPECIES LISTED IN PFM OR OTHERS AS APPROVED BY UFMD AT TIME OF SITE PLAN SUBMITTAL.

2. QUANTITIES OF TREES WITH AND WITHOUT CANOPY MULTIPLIERS MAY BE ADJUSTED WITH FINAL SITE PLAN. TOTAL CANOPY REQUIRED WILL BE PROVIDED WITH FINAL SITE PLAN. INSTALLED SIZES OF TREES MAY VARY TO INCLUDE 2" AND 3" CALIPER PLANTS TO IMPROVE CHANCES OF SURVIVABILITY AND PROVIDE A VARIABLE CANOPY FOR FUTURE GROWTH. GENERAL DENSITY OF TREES SHOWN AND MINIMUM CANOPY COVERAGE REQUIREMENTS WILL BE PROVIDED.

3. THIS PLAN REFLECTS THE GENERAL CHARACTER AND INTENT OF THE PROPOSED DEVELOPMENT BASED ON PRELIMINARY ENGINEERING, ARCHITECTURAL AND LANDSCAPE ARCHITECTURE DESIGN. MINOR VARIATIONS MAY OCCUR WITH FINAL BUILDING DESIGN AND SITE PLAN.

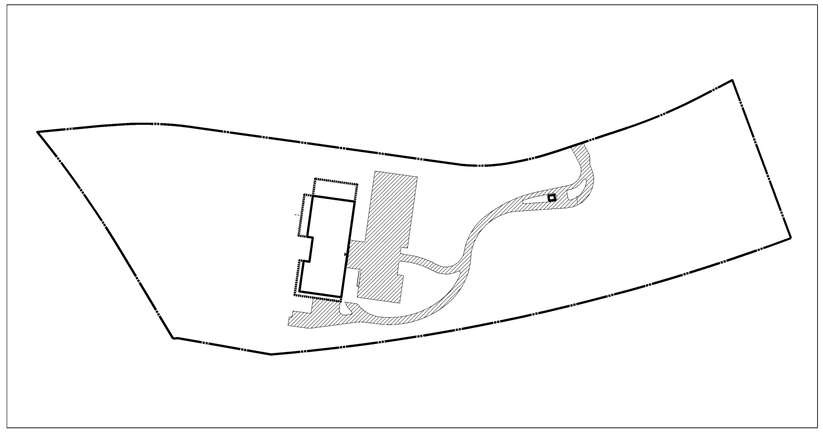
4. A MODIFICATION IS REQUESTED FOR ZONING ORDINANCE SECTION 13-304 TO PERMIT THE USE OF A SECURITY FENCE IN LIEU OF BARRIER REQUIREMENT A, B , C, D, E, F, OR H.

TRANSITIONAL SCREENING AND BARRIER CALCULATIONS

Adjacent Use (Group)	Required Transitional Screening / Barrier	Width (l.f.)	Length (l.f.)	Area (s.f.)	Required 10-Year Canopy Cover (75%)	Required Trees and Shrubs	Provided Trees and Shrubs	Total Canopy
Northwest: Buffer A-B Office to Repair Service Establishment & Office (Group 8)	None Required							
Northeast: Buffer B-C Office to Single Family Detached (Group 1)	Type 2; D, E, or F	35	1,404 Subtotal	49,140	36,855 3 Shrubs /10 l.f.	19 Deciduous Trees @ 300 s.f. 115 Evergreen Trees @ 225 s.f. 37 Understory Trees @ 150 s.f. 422 Shrubs Barrier D, E, or F	19 Deciduous Trees @ 300 s.f. 115 Evergreen Trees @ 225 s.f. 37 Understory Trees @ 150 s.f. 422 Shrubs Barrier: Proposed security fence per modification request	5,700 s.f. 25,875 s.f. 5,550 s.f.
Total								37,125 s.f.
Requirement is met...		**37,125** s.f. is greater than..		**36,855**				
East: Buffer C-D Office to Vehicle Transportation Service Establishment	None Required							
South: Buffer D-E Office to Limited Access Highway	None Required							
West: Buffer E-A Office to Recreational Open Space	None Required							

Table 12.11 Interior Parking Lot Landscaping Calculations

	ft²	Remarks
Area to be counted (SF) =	87,219	S.F.
Interior Landscaping Required (5%) =	4,361	S.F.
Total Tree Canopy Provided:		
(18 trees @ 250 ft² ea.) =	4,500	S.F.
Total Area Required (SF) =	4,361	5%
Total Area Provided (SF)=	4,500	5%



PARKING AREA - KEY PLAN
SCALE: 1"=200'

AREA TO BE COUNTED TOWARDS INTERIOR PARKING LOT LANDSCAPING

COMMONWEALTH OF VIRGINIA
Kevin J. Tankersley
Lic. No. 983
8/19/2016
LANDSCAPE ARCHITECT

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
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01/28/2016
04/01/2016
05/20/2016
06/27/2016
08/01/2016
08/22/2016

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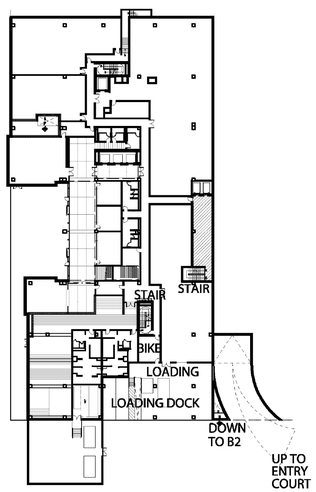
LANDSCAPE CALCULATIONS
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=40'
CI.= N/A
DATE: JAN. 2016

SHEET 31 OF 36

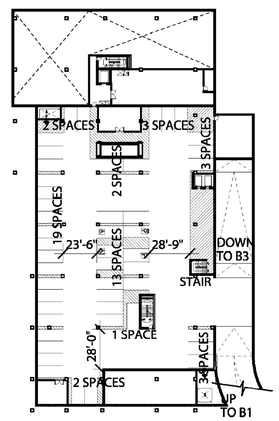
FILE No. RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\33-LANDSCAPE.dwg [LS CALCS] August 22, 2016 - 2:29pm reynolds



P:\Bentley\PROJECT\GD\CAD FILES\CD_BUILDING PLANS\ZONING-PARKING\CD- B1.dgn SCALE: 1:50

LEVEL B1 FLOOR PLAN D



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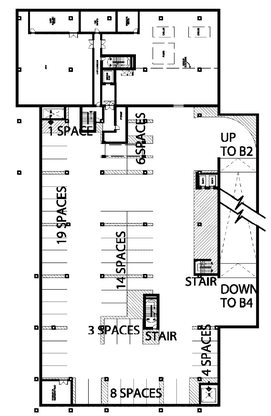
LEVEL B2 FLOOR PLAN C



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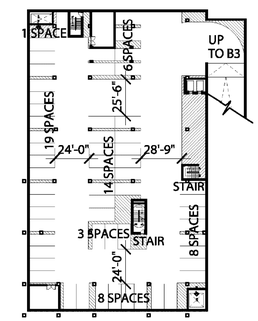
LEVEL B3 FLOOR PLAN B

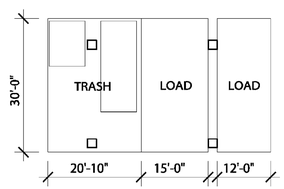


P:\Bentley\PROJECT\GD\CAD FILES\CD_BUILDING PLANS\ZONING-PARKING\CD- B4.dgn SCALE: 1:50

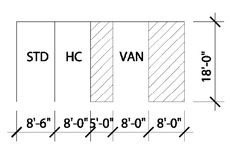
LEVEL B4 FLOOR PLAN A

B1: 0 SPACES
B2: 48 SPACES
B3: 55 SPACES
B4: 59 SPACES

TOTAL : 162 SPACES
STRUCTURED PARKING



TYPICAL LOADING SPACE DIMENSIONS



TYPICAL PARKING SPACE DIMENSIONS

NOTE: TYPICAL DRIVE AISLE WIDTH RANGES FROM 23'-6" TO 28'-9"

**THIS SHEET IS SCHEMATIC IN NATURE AND IS SUBJECT TO CHANGE WITH FINAL DESIGN. THE APPLICANT RESERVES THE RIGHT TO ADJUST THE QUANTITY OF PARKING LEVELS AND OCCUPIED STORIES WITH FINAL DESIGN PROVIDED THAT THE MAXIMUM HEIGHTS ARE HONORED.

No.	DATE	DESCRIPTION

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CLAYTON C. TOCK
Lic. No. 038706
08/22/2016
PROFESSIONAL ENGINEER

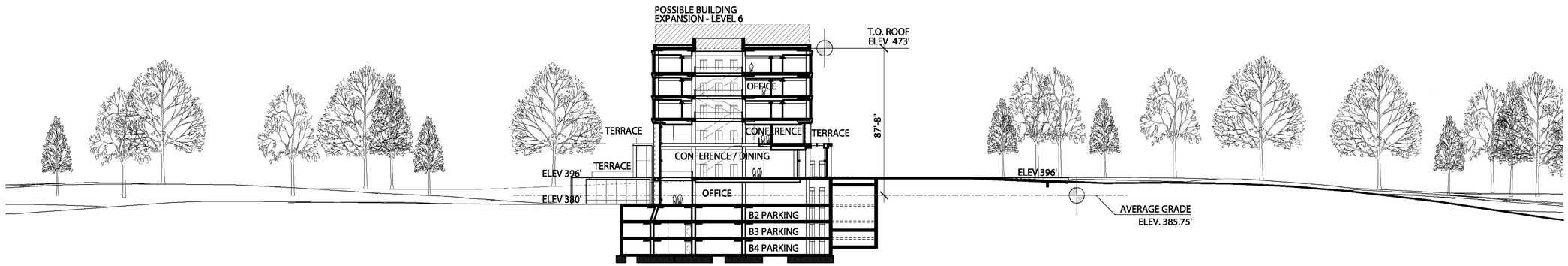
CONCEPTUAL GARAGE PLAN

RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016
SCALE: AS SHOWN
C.I.= N/A

FILE No. RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\04-GARAGE PLAN.dwg [LAYOUT] August 22, 2016 – 2:29pm jreynolds

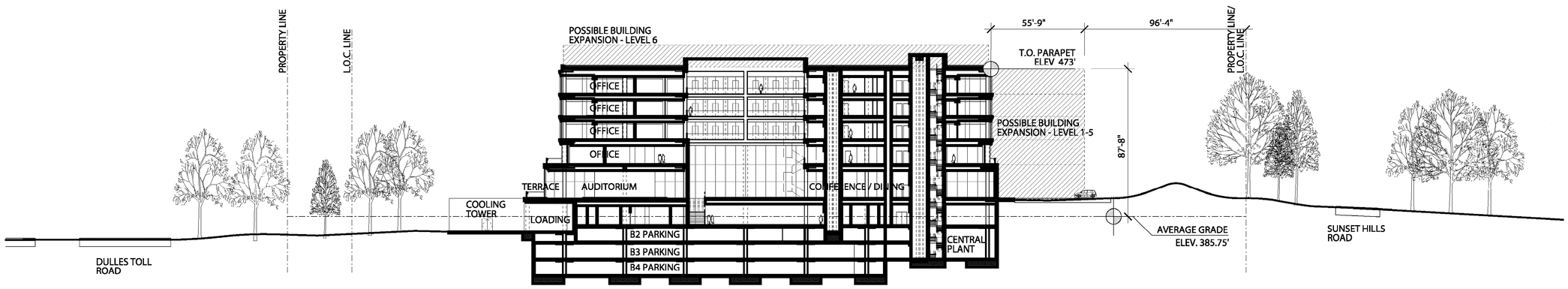


P:\Bentley\PROJECT\GD\CAD FILES\CD\SECTION ZONING RESUBMISSION\CD - EW AUDITORIUM SECTION.dgn

SCALE: 1/32" = 1'-0"

BUILDING SECTION - EAST/WEST

A



P:\Bentley\PROJECT\GD\CAD FILES\CD\SECTION_ZONING RESUBMISSION\CD - NS ATRIUM SECTION.dgn

SCALE: 1/32" = 1'-0"

BUILDING SECTION - NORTH/SOUTH

B

**THIS SHEET IS SCHEMATIC IN NATURE AND IS SUBJECT TO CHANGE WITH FINAL DESIGN

No.	DATE	DESCRIPTION

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CONCEPTUAL BUILDING ELEVATIONS

RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016

SCALE: 1/32"=1'-0"

C.I.= N/A

SHEET
33
OF
36

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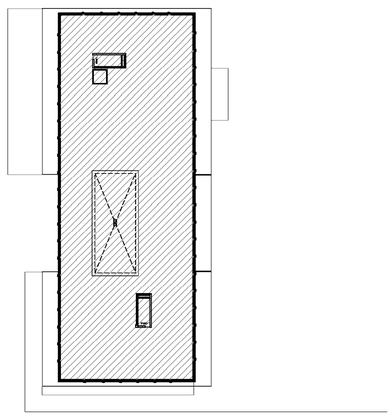
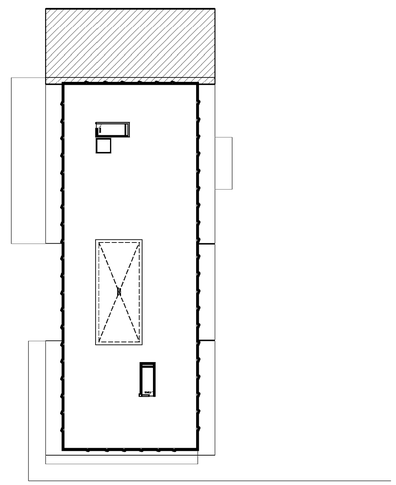


P:\Bentley\PROJECT\GD\CAD FILES\CD_BUILDING PLANS\ZONING - ROOF (EXPANSION)\
ZONING - EXPANSION PLAN OPT 1.dgn

SCALE: 1:50

EXPANSION OPT 1 - ADDITIONAL FLOOR - LEVEL 6 B



P:\Bentley\PROJECT\GD\CAD FILES\CD_BUILDING PLANS\ZONING - ROOF (EXPANSION)\
ZONING - EXPANSION PLAN OPT 2.dgn

SCALE: 1:50

EXPANSION OPT 2 - LEVEL 1 THRU 5 EXPANSION A

PHASE 1 BUILDING SIZE	160,000 GSF
PHASE 2 EXPANSION SIZE	30,000 GSF
TOTAL PHASE 2 BUILDING SIZE	190,000 GSF

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RESTON EASTGATE
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HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

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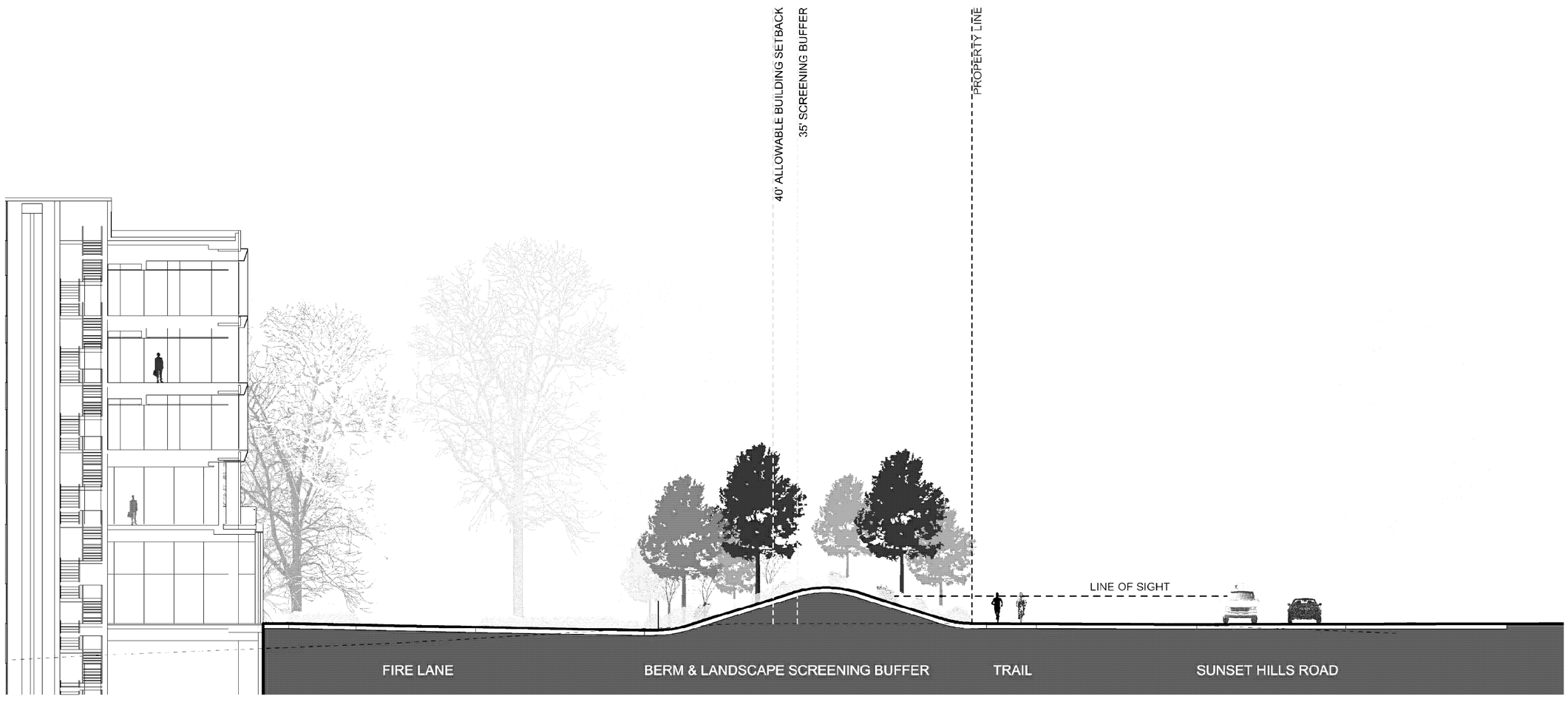

GENERAL DYNAMICS | N-S SECTION AT SUNSET HILLS ROAD

LSM | PWP LANDSCAPE ARCHITECTURE

No.	DATE	DESCRIPTION
–	–	–

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ILLUSTRATIVE BUILDING ELEVATIONS

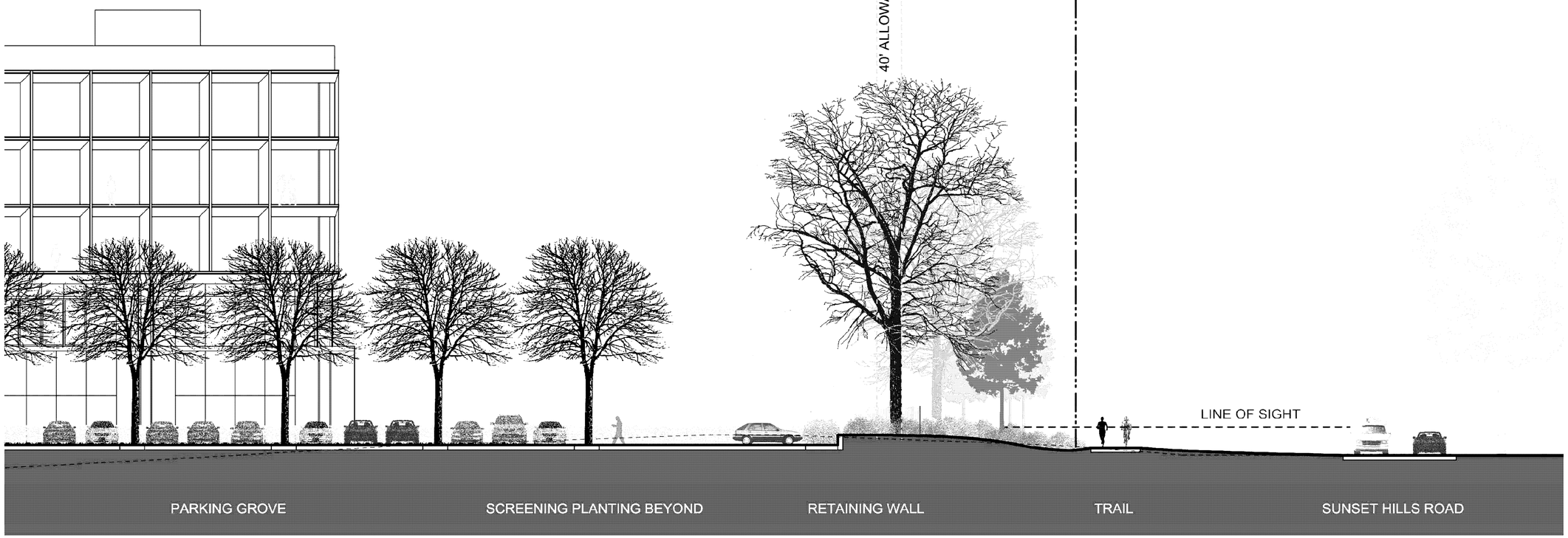
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1/32"=1'-0" C.I.=N/A DATE: JAN. 2016

SHEET 34 OF 36

FILE No. RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\04-GARAGE PLAN.dwg [ILLUSTRATIVE BUILDING ELEVATIONS] August 22, 2016 – 2:29pm fsyoids



GENERAL DYNAMICS | N-S SECTION THROUGH PARKING GROVE

LSM | PWP LANDSCAPE ARCHITECTURE

No.	DATE	DESCRIPTION
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ILLUSTRATIVE BUILDING ELEVATIONS

RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: NTS
C.I.= N/A
DATE: JAN. 2016

SHEET
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FILE No.
RZ-12794

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GENERAL DYNAMICS | ELEVATION FROM DRESSAGE DRIVE

LSM | PWP LANDSCAPE ARCHITECTURE

No.	DATE	DESCRIPTION
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ILLUSTRATIVE BUILDING ELEVATIONS

RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: N/S | C.I.= N/A | DATE: JAN. 2016

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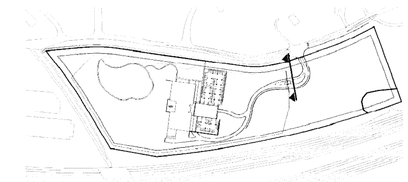
34B
OF
36

FILE No.
RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\04-GARAGE PLAN.dwg [NORTH SOUTH SE] August 22, 2016 – 2:30pm Feynolds



No.	DATE	DESCRIPTION
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NORTH SOUTH SECTION THROUGH ENTRY DRIVE

RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: NTS
C.I.= N/A
DATE: JAN. 2016

SHEET
34C
OF
36

FILE No.
RZ-12794

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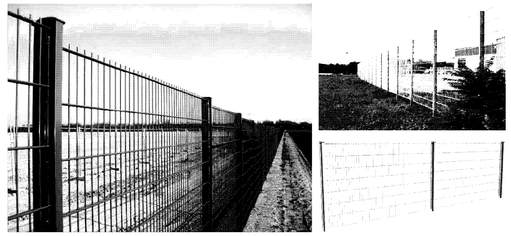
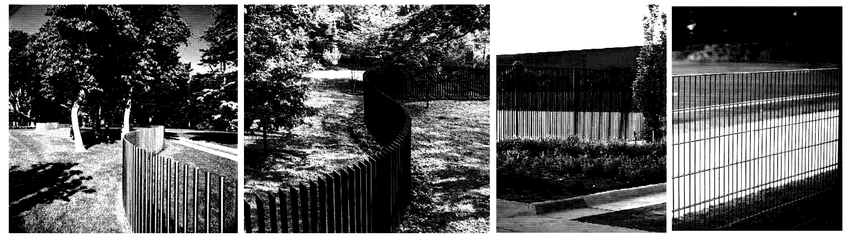
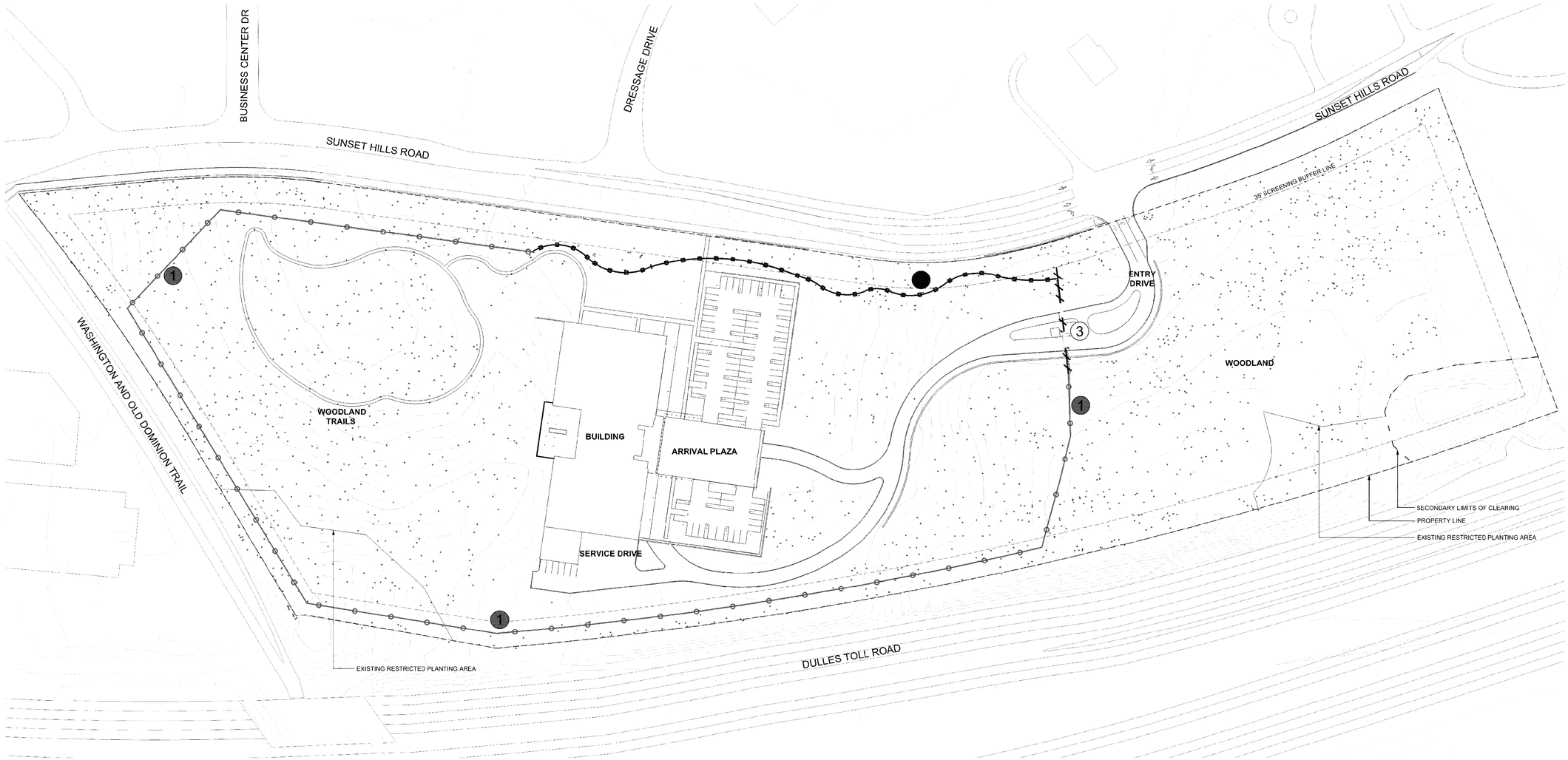


1 LOW-COST FENCE IN THE WOODLANDS



AESTHETIC FENCE WITH VERTICAL PICKETS

3 ENTRY WALL AND GATE



GENERAL DYNAMICS | SITE SECURITY DIAGRAM
LSM | PWP LANDSCAPE ARCHITECTURE

LOW COST FENCE IN WOODLANDS

AESTHETIC FENCE ALONG SUNSET HILLS ROAD

ENTRY WALL

ENTRY GATE

No.	DATE	DESCRIPTION

REVISIONS

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08/22/2016

LANDSCAPE FENCING AND GUARDHOUSE

RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: JAN. 2016

SCALE: NTS

CLI= N/A

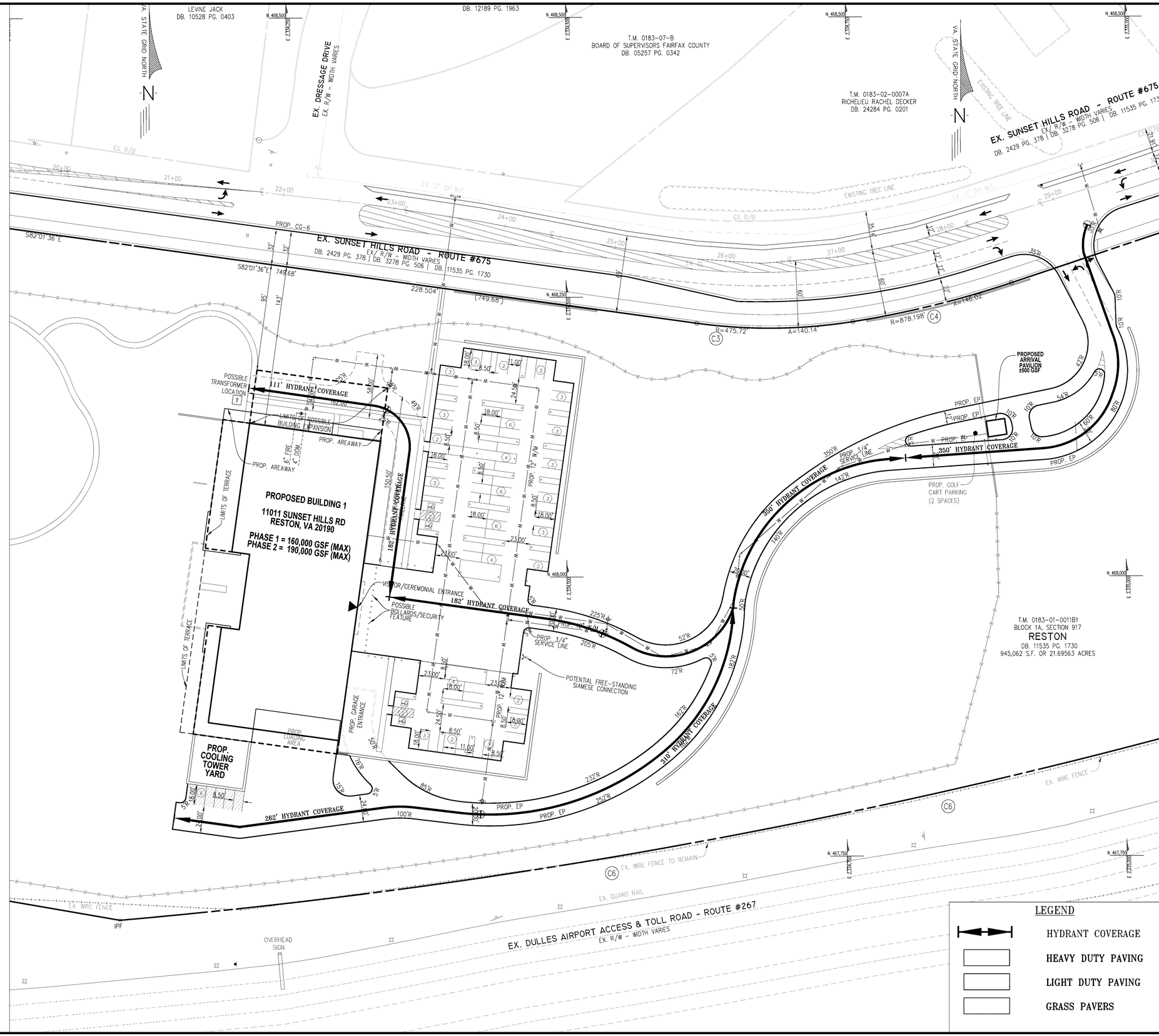
SHEET 34D OF 36

FILE No. RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\04-GARAGE PLAN.dwg [LANDSCAPE FENCING AND GUARDHOUSE] August 22, 2016 – 2:30pm Reynolds

GRASS PAVERS DETAIL

NOTE: USE THIS DETAIL OR APPROVED EQUIVALENT FOR GRASS PAVERS.



No.	DATE	DESCRIPTION
-	-	-

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LICENSE 0387OTC
06/22/2016
PROFESSIONAL ENGINEER

FIRE PROTECTION PLAN
RESTON EASTGATE
CDPA-FDPA
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"= 40'
C.I.= N/A
DATE: JAN. 2016

SHEET
35
OF
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FILE No.
RZ-12794

Urban, Ltd. – J:\JOBS\Reston\917\CDPA_FDPA\30-FIREPAVE.dwg [FIRE PROTECTION PLAN] August 22, 2016 – 2:30pm jreynolds

T.M. 0183-01-0010
LEVINE JACK
DB. 10528 PG. 0403

T.M. 0183-07-0001
DESPEAUX CRAIG E
DB. 12189 PG. 1963

T.M. 0183-07-B
BOARD OF SUPERVISORS FAIRFAX COUNTY
DB. 05257 PG. 0342

T.M. 0183-02-0007A
RICHELIEU RACHEL DECKER
DB. 24284 PG. 0201

VA. STATE GRID NORTH

EX. DRESSAGE DRIVE
EX. R/W - WIDTH VARIES

EX. SUNSET HILLS ROAD ~ ROUTE #675
EX. R/W - WIDTH VARIES
DB. 2429 PG. 378 | DB. 3278 PG. 506 | DB. 11535 PG. 1730

PROP. CG-6

S82°01'36"E 749.68'

228.504'

(749.68')

R=475.72'
A=140.14'
C3

R=878.198'
A=146.62'
C4

N71°34'05"E(207.26')

R=1370.318'

EXISTING TREE LINE

EX. 12" DIP W/L

EX. BUS PAD

POSSIBLE TRANSFORMER LOCATION

LIMITS OF POSSIBLE BUILDING EXPANSION

PROP. AREAWAY

LIMITS OF TERRACE

PROPOSED BUILDING 1
11011 SUNSET HILLS RD
RESTON, VA 20190
PHASE 1 = 160,000 GSF (MAX)
PHASE 2 = 190,000 GSF (MAX)

PROP. GRASSCAPE DRIVE LANE

VISITOR/CEREMONIAL ENTRANCE

POSSIBLE BOLLARDS/SECURITY FEATURE

PROP. 3/4" SERVICE LINE

POTENTIAL FREE-STANDING SIAMESE CONNECTION

PROP. GARAGE ENTRANCE

PROP. LOADING AREA

PROP. COOLING TOWER YARD

PROPOSED ARRIVAL PAVILION ±500 GSF

PROP. EP

PROP. GOLF CART PARKING (2 SPACES)

T.M. 0183-01-0011B1
BLOCK 1A, SECTION 917
RESTON
DB. 11535 PG. 1730
945,062 S.F. OR 21.69563 ACRES

EX. WIRE FENCE

EX. WIRE FENCE TO REMAIN

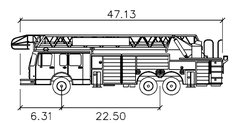
EX. GUARD RAIL

N80°02'07"W 264.91'

IPF

OVERHEAD SIGN

EX. DULLES AIRPORT ACCESS & TOLL ROAD ~ ROUTE #267
EX. R/W - WIDTH VARIES



FFX FIRETRUCK feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 28.6

No.	DATE	DESCRIPTION
-	-	-

REVISIONS

PLAN DATE
01/04/2016
01/28/2016
04/01/2016
05/27/2016
06/27/2016
08/01/2016
08/22/2016

Urban, Ltd.
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Planners-Engineers-Landscape Architects-Land Surveyors

COMMONWEALTH OF VIRGINIA
CLAYTON K. TOOK
No. 038790
06/22/2016
PROFESSIONAL ENGINEER

FIRE TRUCK AUTOTURN EXHIBIT

RESTON EASTGATE
CDPA-FDPA

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"= 40'
C.I.= N/A
DATE: JAN. 2016

SHEET
36
OF
36

FILE No.
RZ-12794

Urban, Ltd. - J:\JOBS\Reston\917\CDPA_FDPA\30-FIREPAVE.dwg [AUTOTURN] August 22, 2016 - 2:30pm reynolds

DESCRIPTION OF THE APPLICATIONS

The applicant, General Dynamics Corporation, requests an amendment of the current zoning approvals to permit a redesign of the site, which previously was approved for an office development. The applications consist of:

- Proffer Condition Amendment PCA 86-C-054-02: to amend previously approved proffered conditions;
- Conceptual Development Plan Amendment CDPA 86-C-054: to permit modifications to a conceptual development plan for an office development; and
- Final Development Plan Amendment FDPA 86-C-054-02-02: to permit modifications to the final development plan for an office development.

The subject property is approved for development of three office buildings containing a total of 357,694 square feet and associated surface and structured parking, none of which have been constructed. The applicant is proposing to replace the three previously approved office buildings with a single office building and associated parking, to be developed in two phases, on a secure site.

Phase 1 includes a 160,000-square foot office building designed as a headquarters facility to accommodate 175 employees. A total of 250 parking spaces will be provided with 162 located in a below-grade parking structure and 96 surface parking spaces. Phase 2 includes two options for future expansion of the office building to accommodate a total of 200 employees. Option 1 would permit a 30,000-square foot addition at the roof level to effectively create a sixth floor. Option 2 would permit a 30,000-square foot expansion of levels one through five on the north side of the building towards Sunset Hills Road. The two options are mutually exclusive; only one of the two options may be constructed.

A parking reduction is requested to reduce the required number of parking spaces from 416 parking spaces in Phase 1 and 494 spaces in Phase 2 to a total of 250 parking spaces, all of which to be provided in Phase 1. Table 1 compares the approved development to the proposed changes.

	Approved	Proposed
Number of buildings and maximum building area	3 office buildings with up to 140,000 square feet per building, 357,694 square feet total	1 office building 160,000 square feet (Phase 1) 190,000 square feet total (Phase 2)
Maximum building height	75 feet	95 feet (Phase 1) 110 feet (Phase 2, Option 1)
Maximum floor area ratio	0.35	0.17 (Phase 1) 0.20 (Phase 2)
Open space	40 percent	84 percent
Total Parking	1,187 spaces	250 spaces (Phases 1 and 2)*

Table 1: Comparison of approved development with proposed
** Based on the parking reduction request*

MODIFICATIONS

The applicant requests the following modifications:

- Modification of Par. 3 of Sect. 10-104 of the Zoning Ordinance to permit an increase in fence height up to 10 feet;
- Modification of Par. 15 of Sect. 11-202 of the Zoning Ordinance to permit a reduction in the number of required loading spaces from five to two spaces; and
- Modification to Sect. 13-304 of the Zoning Ordinance to permit a security fence in lieu of the barrier requirement.

In addition, the applicant requests the Board of Supervisors' approval and concurrence with the Director of the Department of Public Works and Environmental Services' determination that pursuant to Par. 1 of Sect. 11-101 of the Zoning Ordinance 250 parking spaces for both Phases 1 and 2 of the development are adequate, subject to the execution of proffers for the proposed development. The parking provided for Phases 1 and 2 results in a parking reduction of approximately 39.9 percent and 49.4 percent, respectively, from the 416 parking spaces required in Phase 1 and 494 spaces required in Phase 2 for the proposed office use.

The applicant's proffered conditions, staff proposed FDPA development condition, the applicant's statement of justification, and affidavit are contained in Appendices 1-4, respectively.

LOCATION AND CHARACTER

Figure 1: Aerial view of subject property and surrounding area, Source: Fairfax County

The subject property is located on the south side of Sunset Hills Road and is zoned Planned Development Commercial (PDC). The undeveloped property contains 21.69 acres and is characterized with varying slopes. Vegetation on the site primarily consists of Northern Red Oak, Red Maple, Tulip Poplar, and Virginia Pine trees. Understory plantings are found throughout the site and include American Holly and Flowering Dogwood.

To the north and across Sunset Hills Road is Lake Fairfax Business Park, zoned Light and Medium Intensity Industrial (I-3 and I-4), and Equestrian Park, a single family subdivision, zoned Residential-Estate (R-E). To the east is a Virginia Department of Transportation (VDOT) maintenance facility, zoned R-E; to the south is the Dulles Airport Access Road and Toll Road (subsequently referred to as the Dulles Toll Road); and to the west is an office development, zoned I-4. Figure 1 depicts the subject property and surrounding area.

BACKGROUND

On June 17, 1991, the Board of Supervisors approved Rezoning RZ 86-C-054 and associated conceptual development plan (CDP) to rezone 23.46 acres to the PDC District to permit an office development on 15.76 acres. The remaining 7.7 acres was dedicated to the County for an 850 space park and ride facility comprised of a four-level parking structure and a 2,500-square foot building. On the 15.76-acre portion of the site, the CDP depicted the general layout of three office buildings oriented along the southern portion of the site; an internal access road; the general location of plaza areas with conceptual landscaping between the office buildings; a three-level parking structure between the office buildings and Sunset Hills Road; and tree preservation areas depicted along the Sunset Hills Road frontage.

On January 27, 1992, the 7.7-acre park and facility was conveyed to the Board of Supervisors and was later determined that with the construction of the nearby Wiehle Avenue Park and Ride Facility, the park and ride facility on the 7.7-acre parcel was no longer needed.

On December 8, 1997, as part of the Annual Plan Review process, the Board of Supervisors adopted an amendment to the Comprehensive Plan to remove guidance for a park and ride facility on the 7.7-acre parcel, and the site was planned for office use.

On May 5, 1999, the Planning Commission approved FDP 86-C-054-02 and on May 10, 1999, the Board of Supervisors approved PCA 86-C-054, to permit an office development on the combined 23.46-acre site, and limited the gross floor area to the previously approved 357,694 square feet for the entire site.

DESCRIPTION OF THE CONCEPTUAL/FINAL DEVELOPMENT PLAN AMENDMENTS (CDPA/FDPA)

The CDPA/FDPA Plan entitled, “Reston Eastgate,” was submitted by Urban, Ltd., and consists of 61 sheets dated January 4, 2016 and revised through August 22, 2016, and is described below.

Site Topography

The site is undeveloped and heavily wooded; the topography generally slopes to the south with a change in grade from the eastern to western areas of the site. In the eastern area, along Sunset Hills Road, a portion of the area is 388 feet above sea level and slopes to the south to 352 feet. In the western area of the site, along Sunset Hills Road, a portion of the area is 396 feet above sea level and slopes to the south to 368 feet. Due to the changes in grade, a retaining wall is shown along the drive aisle and at the northwest corner of the building.

Site Layout

As depicted in Figure 2A, three 5-story office buildings, surface parking and an optional parking garage previously were approved on the subject property but have not been constructed.

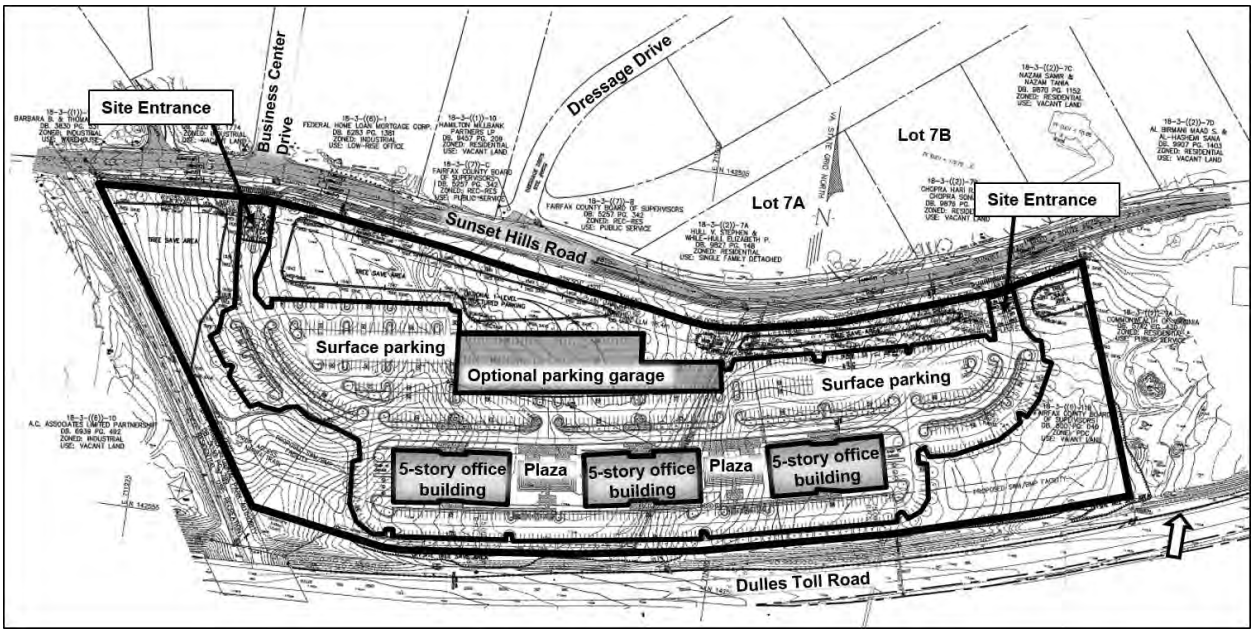

Figure 2A: Approved Conceptual Development Plan/Final Development Plan, Source: Sheet 2 of FDP 86-C-054-02

A single office building and associated parking now are proposed to replace the three office buildings, as shown in Figure 2B.

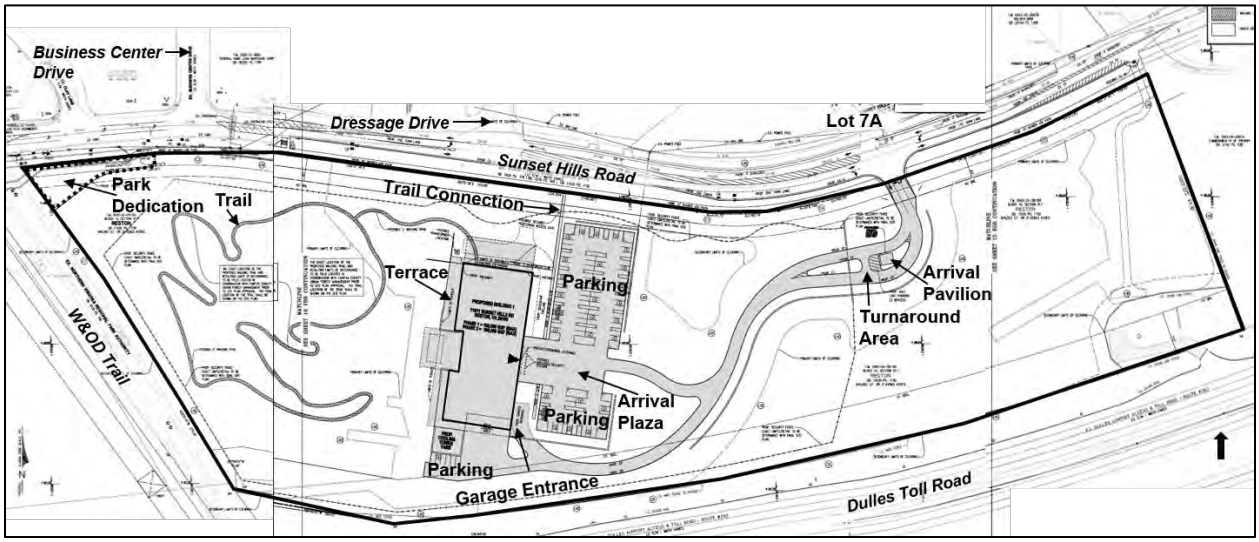

Figure 2B: Proposed site layout, Source: Sheet 15 of CDPA 86-C-054/FDPA 86-C-054-02

The office building is to be developed in two phases. In Phase 1, the office building contains 5 stories, 160,000 square feet, and 95 feet in height and designed to accommodate 175 employees. The building and adjacent surface parking area are setback 143 feet and 50 feet, respectively, from Sunset Hills Road. A terrace space is provided on the west side of the building. An arrival plaza is located on the east side of the building, in front of the main entrance to the building, and contains an area for visitor drop-off and pick-up along with 96 surface parking spaces. A total of 250 parking spaces is provided to accommodate parking for Phases 1 and 2, with 162 spaces in a below-grade parking structure and 96 surface parking spaces located in front of the building and in a small parking area on the south side of the building. Access to the parking garage and the loading area are from the south side of the building, as shown in Figure 2B.

Security fencing is to be placed around the perimeter of the site. Examples of the quality and type of security fencing are provided on Sheet 34D of the CDPA/FDPA. Along the site's Sunset Hills Road frontage, the security fence undulates between existing and proposed tree plantings to minimize its visibility and disturbance to existing vegetation.

Phase 2 proposes two options for future expansion of the office building to accommodate an additional 25 employees, resulting in 200 total employees. Option 1 would permit a 30,000-square foot addition at the roof level to effectively create a sixth floor; the building height increases from 95 feet to 110 feet. Option 2 would permit a 30,000-square foot expansion of levels one through five on the north side of the building towards Sunset Hills Road; the building would be 95 feet from the property line with no change to the building height or to the distance between the surface parking area and the property line. The two expansion options are mutually exclusive; only one would be constructed. Figure 2C depicts the two expansion options.

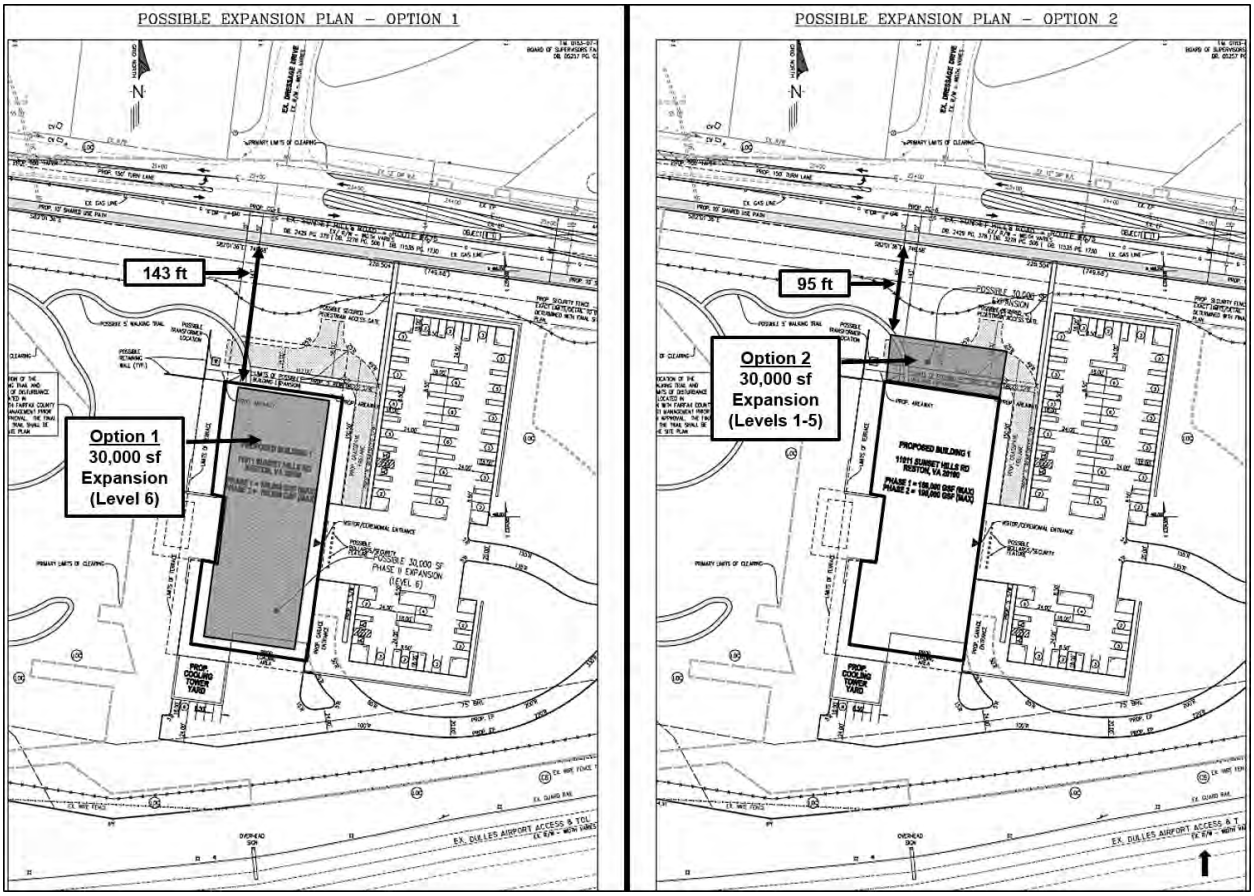

Figure 2C: Phase II Options for future expansion, Source: Sheet 12 of CDPA 86-C-054/FDPA 86-C-054-02

Access and Circulation

Two site entrances along Sunset Hills Road previously were approved, one across from Business Center Drive and another in the eastern area of the site, across from Tax Map parcel 18-3 ((2)) 7B, as shown in Figure 2A. The site now is designed with one access point towards the eastern boundary of the site and aligns with the driveway to Tax Map parcel 18-3 ((2)) 7A, located across Sunset Hills Road, as shown in Figure 2B.

The site entrance is designed with one inbound lane and dedicated left and right turn lanes onto Sunset Hills Road. A 500-square foot arrival pavilion is located approximately 120 feet from the site's entrance where visitors are greeted since access to the site is restricted. A vehicular turnaround area, two parking spaces for security staff, and a security gate are located behind the arrival pavilion, as shown in Figure 2B and on Sheet 13 of the CDPA/FDPA, which also depicts the on-site vehicular and pedestrian circulation plan.

On-site vehicular circulation includes a 20-foot wide private drive aisle that provides access to the arrival pavilion, surface parking areas, parking garage, and loading area. Five-foot wide on-site private pedestrian trails are provided in the western area of the

site with a pedestrian connection from the arrival plaza to the 10-foot wide shared use trail along Sunset Hills Road.

Streetscape

Streetscape along the Sunset Hills Road frontage includes an 8-foot wide landscape amenity panel and a 10-foot wide shared use trail that is adjacent to a 35-foot wide transitional screening yard. The shared use trail is located in its ultimate horizontal location for the future widening of Sunset Hills Road in order to avoid future disturbance to the proposed landscaping.

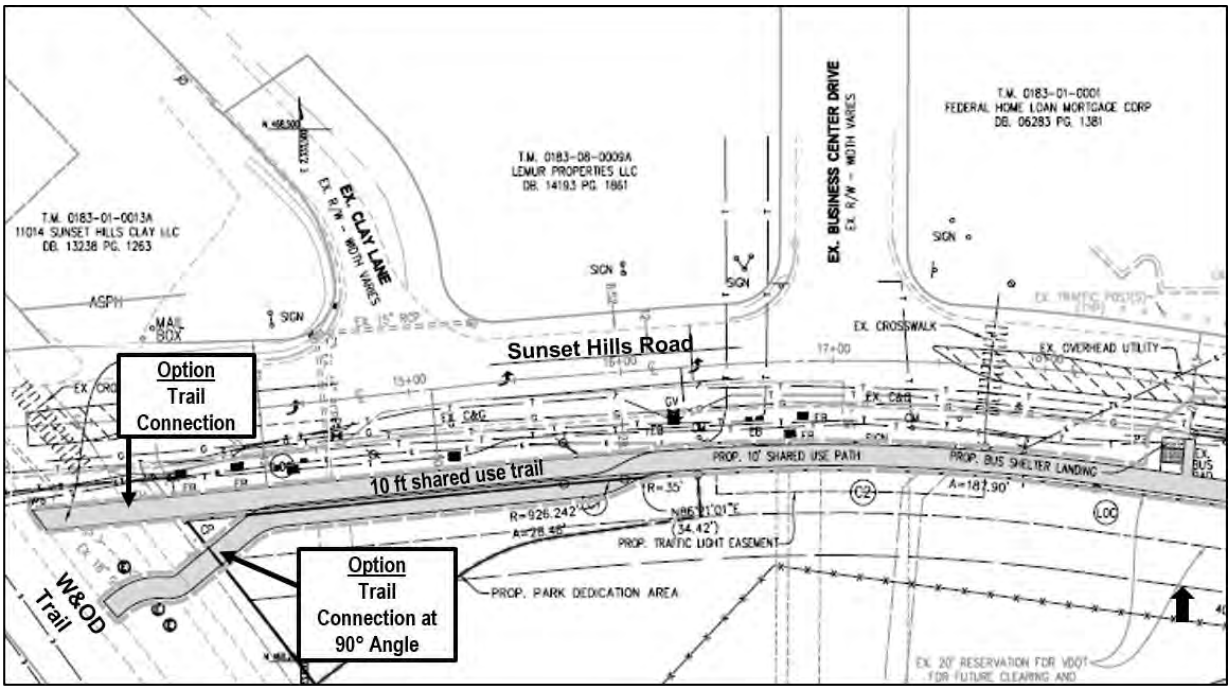

Figure 3: Trail connection to the W&OD Trail, Source: Sheet 16 of CDPA 86-C-054/FDPA 86-C-054-02

Two options are provided for the shared use trail connection with the Washington and Old Dominion (W&OD) Trail, as shown in Figure 3 and in the CDPA/FDPA. One option shows the trail connection at a 90 degree angle with the W&OD Trail, which is in accordance with NOVA Parks' (formerly known as the Northern Virginia Regional Park Authority) policy for trail connections. However, such alignment results in the trail being offset from Sunset Hills Road and to the existing sidewalk to the west. The other option depicts a connection that is parallel to Sunset Hills Road, not at a 90 degree angle, but does provide a direct connection to the existing sidewalk to the west. Whichever trail connection is constructed will be based on approval by the NOVA Parks at the time of site plan.

Sunset Hills Road Improvements

The Transportation Map in the Comprehensive Plan recommends widening Sunset Hills Road to four lanes. To facilitate such widening, 1.76 acres of right-of-way along the

Sunset Hills Road frontage was dedicated for such road widening as part of the previous approvals and is shown on Sheet 7 of the CDPA/FDPA.

On Sunset Hills Road, eastbound improvements include the addition of a 150-foot left turn lane with a 100-foot taper into Dressage Drive and a 250-foot right turn lane with a 100-foot taper into the site. Westbound improvements on Sunset Hills Road include a 175-foot left turn lane with a 100-foot taper into the site. Curb and gutter will be provided along the frontage on the south side of Sunset Hills Road. On the north side of Sunset Hills Road, a 4-foot wide shoulder will be provided to improve the almost non-existent shoulder along the road.

Park Dedication and Open Space

A 9,431-square foot area in the northwest corner of the site, across from Clay Lane and Business Center Drive and adjacent to the W&OD Trail, is provided as a park dedication to the Board of Supervisors, as shown in Figure 2B. A total of 84 percent or 18 acres of the site is provided as landscaped open space in both Phases 1 and 2 of the development.

Tree Preservation, and Landscaping

A total of 19.67 acres, or 91 percent of the site, contains existing tree canopy. A detailed tree inventory plan and corresponding tree condition analysis is provided on Sheets 28A through 28P of the CDPA/FDPA. Ten percent, or 1.97 square feet, of the site is required to meet the 10-year tree canopy requirement. A total of 12.81 acres is provided to meet the 10-year tree canopy requirement consisting of 11.51 acres of tree preservation and 1.29 acres provided through tree plantings.

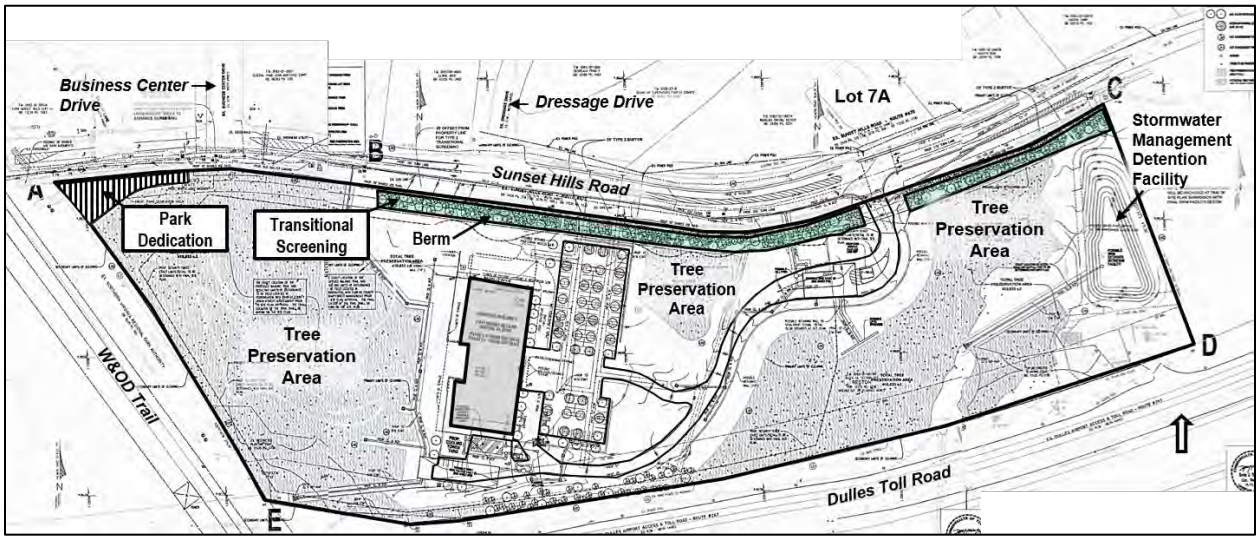

Figure 4: Landscaping Plan, Source: Sheets 29 & 30 of CDPA 86-C-054/FDPA 86-C-054-02

A 35-foot wide transitional screening buffer is required and provided along the Sunset Hills Road frontage to screen the office building from adjacent residential development

located across Sunset Hills Road. Additional screening is provided by a landscaped berm in front of the building and across from Dressage Drive to the north, as shown in Figures 4 and 5.

Stormwater Management

Stormwater Detention

Stormwater management will be provided in the form of two storm vaults located on the west and east sides of the office building and through an extended detention facility located in the eastern area of the site. Stormwater will be conveyed through channels and underground storm drain systems to each vault where the post-development runoff for the 1-, 2-, and 10-year 24-hour storms will be detained and released at rates shown to be below the pre-development peaks. The extended detention facility is necessary to intercept offsite flow from the east, as depicted in Figure 4.

With the ultimate build out and widening of Sunset Hills Road, the preliminary design of each stormwater management facility could accommodate the increase in impervious area associated with the widening to a 124-foot wide right-of-way condition. The post-development peak flows for the 1-, 2-, and 10-year storm events are shown to remain below the pre-development peak flows in the ultimate condition. The stormwater facilities have been sized to accommodate stormwater runoff from the road widening and the facilities would require no additional modifications at the time of the widening of Sunset Hills Road.

Best Management Practices

With the proposed development, there is an increase of approximately 3.27 acres of impervious area and 5.79 acres of managed turf located on the subject property. Phosphorous reduction will be provided through a combination of proposed Best Management Facilities (BMPs), such as storm filters, rainwater cisterns, infiltration systems, and Jellyfish filters.

The BMP facilities are being designed to accommodate the ultimate condition of Sunset Hills Road as a 4-lane roadway to avoid disturbance to the site by VDOT for the future road widening. With the ultimate build-out of Sunset Hills Road, there will be an increase of approximately 4.25 acres of impervious area. Phosphorous reduction will be provided through a combination of BMP facilities similar to those provided for the development.

Outfall

The topography of the site drains to the south and to the southwest to two different culverts. Two study points have been established at locations where stormwater runoff leaves the site. Study Point A is located before an existing culvert that crosses the

W&OD Trail in the southwest area of the site. Study Point B is located south of the site, just north of an existing culvert that crosses the Dulles Toll Road.

The site has been engineered to reduce the post-development peak flows for the 1-, 2-, and 10-year 24-hour storm and has been designed to detain the 1-year 24-hour storm, as shown on Sheets 23 through 25 of the CDPA/FDPA. Stormwater runoff leaves the site through two different culverts, making its way across the Dulles Toll Road and eventually converging in a channel found in a mapped floodplain near Sunrise Valley Drive. Three cross sections have been provided every 50 feet on Sheet 25 of the CDPA/FDPA and verifies that the proposed 10-year water surface elevation does not flood the channel. Compliance with floodplain protection is further based on Chapter 124-4-4.C.6(c) of the County's Stormwater Management Ordinance, which states that "the downstream limits of analysis may extend to a point where the stormwater conveyance system enters a mapped floodplain or other flood prone area, adopted by Ordinance." Point of confluence A is located in Snakeden Branch, which lies inside a mapped floodplain.

ANALYSIS

This section of the report focuses on staff analysis and discussion of applicable Comprehensive Plan guidance from the Reston East District recommendations, Areawide recommendations, and Development Review Performance Objectives.

The Reston East District recommendations provide the Comprehensive Plan guidance for the district in which the subject property is located. The Areawide recommendations are designed to help achieve the future vision for the Reston Transit Station Areas (TSA) and provide guidance on areawide issues that apply to the TSA districts. The Areawide recommendations focus on land use, urban design, transportation, environmental stewardship, parks and recreation facilities, public facilities, and implementation. Development Review Performance Objectives are contained within the Areawide Land Use Recommendations; all development proposals within the TSAs are evaluated for the extent to which they meet or contribute to these objectives. The District and Areawide recommendations and Development Review Performance Objectives are accessible from the link below and summarized in the staff report.
http://www.fairfaxcounty.gov/dpz/comprehensiveplan/area3/reston-restontsas.pdf

Reston East District Recommendations

The Fairfax County Comprehensive Plan, 2013 Edition, Area III, Reston, amended through October 20, 2015, page 158, provides the Reston East District recommendations that are applicable to the subject property.

Reston East District

The Reston East District is generally bounded by Lake Fairfax Park on the north, by the Equestrian Park subdivision on the northeast, by a Virginia Department of Transportation-owned parcel and Hunter Mill Road on the east, by Sunrise Valley Drive on the south and by the Michael Faraday Court and the Campus Commons office park on the west, as shown on Figure 52. It consists of approximately 276 acres and is bisected by the Dulles Airport Access Road (DAAR). Development on the north side of the DAAR includes Lake Fairfax Business Center which houses office uses, a data center and large fitness facility; an ice rink and a U.S. Post Office facility. Most of the office buildings on the south side of Sunset Hills Road were built in the 1990s and 2000s. They are between 2-5 stories and are mostly served by surface parking although a few buildings do have structured parking.

Development on the south side of the DAAR consists of office uses located in 2-5 story buildings with support services, most of which have surface parking lots but a few office buildings built in the 1990s and 2000s are served by structured parking.

This district is planned to retain its employment activity focus, including office, light industrial, institutional and research and development (R&D) uses up to .50 FAR.

Local-serving amenities including plazas, other urban parks, trails, and public art should be provided throughout the subdistrict to serve local leisure and recreation needs. The exact number of urban parks, their sizes and distribution will be determined by the amount and type of new development, in accordance with the Urban Parks Framework in the Policy Plan.

Areawide Recommendation: Land Use *– The Areawide land use recommendations identifies the land use concept for the TSAs; the land use concept, the general character of the mix of uses for a given area; whether an area is in a transit-oriented district (TOD) or non-TOD area; planned development potential for the TSAs; and development review performance objectives.*

The subject property is located in the Wiehle-Reston East Avenue TSA, in the northeastern edge of the Reston East District, on the north side of the DAAR. This District is a non-TOD area and is planned to retain its employment activity focus, which includes office, light industrial, institutional, and research and development uses, up to a 0.50 floor area ratio (FAR). The Areawide Land Use recommendations in the Comprehensive Plan identify the area as remaining as low-density office to serve as a transition from the transit-oriented districts to low-density residential neighborhoods to the south of Sunset Hills Road and west of Lake Fairfax Business Center and Hunter Mill Road. The land use category for this District is office.

The proposed redesign of a previously approved office development is consistent with the Areawide Land Use recommendations for the TSA, which state "employment areas farther away from the stations will continue to provide excellent locations for office development to occur as well as other complementary uses, such as data centers and research and development uses." As stated in the land use analysis memorandum in Appendix 5, the current proposal is an improvement over the previously approved development, since the lower intensity provides much greater open space and tree preservation with significantly lower vehicular traffic along with the accompanying parking reduction request. Such development will reduce the impact on surrounding development compared to the existing approvals.

Development Review Performance Objectives

Included in the Areawide Land Use recommendations for the TSAs is a series of development review performance objectives where all development proposals within the TSAs are evaluated for the extent to which they meet or contribute to the following objectives. The following is staff's analysis of these objectives.

Development Review Performance Objective: Achieve High Quality Site Design and Architecture *– Excellent site design in the TSAs should emphasize community gathering places, integrate access to the natural environment when possible, and provide public art. In addition, there should be an emphasis on environmentally sustainable design and practices with non-residential development achieving U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver certification or the equivalent, at a minimum.*

Access to the site is integrated to the natural environment by using the previously approved eastern entrance as the site's main entrance. Access to the site from this entrance preserves the higher quality trees in the western area of the site, as shown on the Existing Vegetation Map in Figure 5 and on Sheet 28 of the CDPA/FDPA. Further analysis of the eastern entrance is provided in the Transportation section of this report.

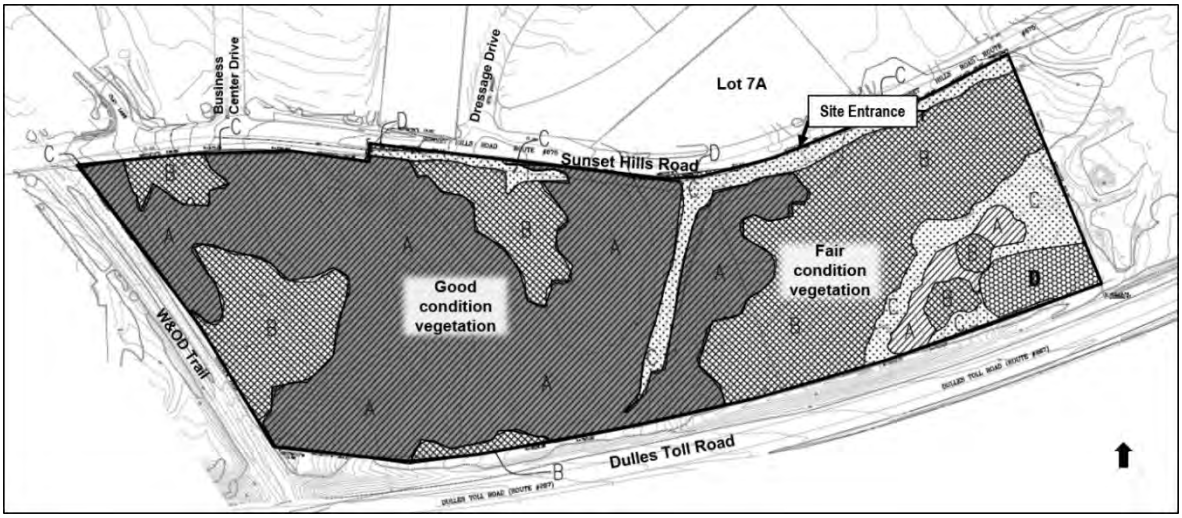

Figure 5: Existing Vegetation Map, Source: Sheet 28 of CDPA 86-C-054/FDPA 86-C-054-02

The proposed single office building also is integrated into the natural environment by using the existing grade in siting the building. The building is oriented perpendicular to Sunset Hills Road to take advantage of the site's topography and existing vegetation. By orienting the shortest building side along Sunset Hills Road, this limits the visibility of the building from the roadway and from adjacent property. A berm is provided between Sunset Hills Road and the building to further screen the building. A cross section and the architectural design of the building are shown in Figure 6 and on Sheet 33 of the CDPA/FDPA. Building materials may include pre-cast concrete or stone, metal, and/or glass.

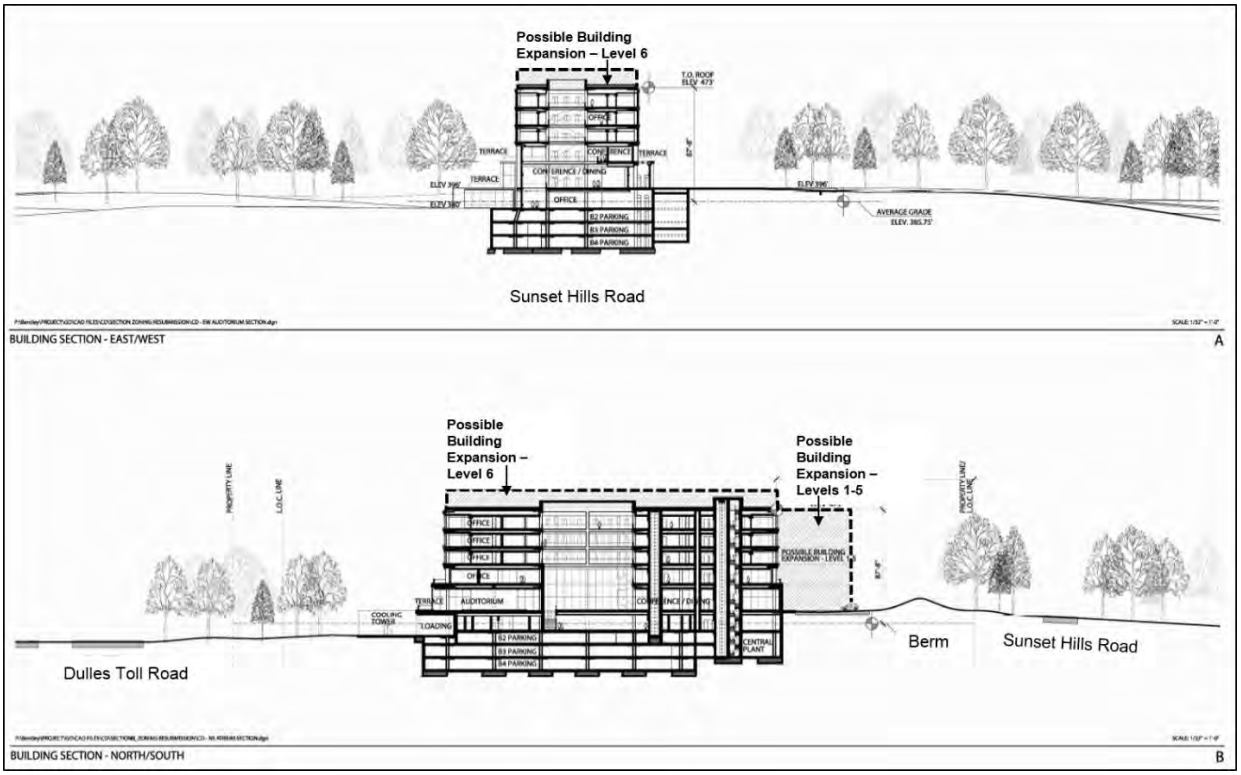

Figure 6: Building elevation, Source: Sheet 33 of CDPA 86-C-054/FDPA 86-C-054-02

The Comprehensive Plan recommends that non-residential development in the Reston TSAs should be planned and designed, at a minimum, to achieve Leadership in Energy and Environmental Design (LEED) Silver or equivalent standards. To address staff's recommendation on the green building escrow discussed in Appendix 6, the applicant has proffered to obtain LEED Silver certification with an escrow of $2 per square foot if the applicant is unable to demonstrate sufficient design and construction-related credits to support attainment of LEED Silver certification.

The Comprehensive Plan also recommends public art as part of a development. It is recommended that public art should be provided in consultation with the Initiative for Public Art – Reston (IPAR) or a monetary contribution towards public art; such contribution has not been addressed. In staff's opinion, there is an opportunity for public art in the 9,431-square foot urban park area.

Development Review Performance Objective: Provide Pedestrian and Bicycle Connectivity throughout the Transit Station Areas *– New pedestrian and bicycle connections should be provided through complete streets within the TSAs and new or extended trails on both sides of the DAAR connecting the three Metrorail stations. Pedestrian and bicycle crossings of existing streets should be improved to increase pedestrian and bicyclists' safety, visibility and convenience.*

Private on-site walking trails are provided in the western area of the site with a connection to the proposed 10-foot wide shared use trail along the Sunset Hills Road frontage, which is buffered by an 8-foot wide landscape amenity panel. The shared use trail provides both pedestrian and bicycle connections to the W&OD Trail and to the Wiehle-Reston East transit station to the west. Bicycle parking is provided in level B1 of the parking garage and includes at least 10 bicycle racks, bike lockers, and/or bicycle storage areas, as proffered.

As previously discussed and as shown in Figure 3, two options are shown for the shared use trail connection with the W&OD Trail, one at a 90 degree angle to meet NOVA Parks' policy and one that more directly intersects with the W&OD Trail and better connects to the sidewalk to the west of the Trail, but is not at a 90 degree angle. Staff notes and recognizes NOVA Park's trail connection policy; however, the trail connection at a 90 degree angle infringes in the park dedication space at the northeast corner of the site and the trail deviates away from Sunset Hills Road to create a dogleg for pedestrians and bicyclists heading westbound to the Wiehle-Reston East transit station. Staff recommends further refinement of this design, in consultation with NOVA Parks and FCDOT, to provide the most efficient design to achieve the multi-purpose intent of the facilities. Staff recognizes that how the shared trail connects with the W&OD Trail ultimately is subject to NOVA Parks approval prior to site plan approval.

Development Review Performance Objective: Provide Urban Parks and other Recreational Amenities throughout the Transit Station Areas *– Local-serving urban parks, recreational and cultural amenities including but not limited to plazas, trails and public art should be provided throughout the TSAs in order to serve local leisure and recreation needs…The exact number of urban parks and other amenities, their sizes and distribution will be determined by the amount and type of new development and provided in accordance with the guidance in the Urban Parks, Recreation Facilities and Cultural Facilities section.*

As discussed in the Park Authority memorandum (Appendix 7), for properties located in the Reston TSAs, the urban parkland standard in the Comprehensive Plan recommends 1.5 acres of urban park space per 10,000 employees that is well integrated into the urban fabric and distinguished from site and public realm landscaping and streetscape features. Applying the urban parkland standard to the proposed development, there is a need for 0.06 acres of urban parkland on-site based on the proposed 190,000-square foot building. In response, the applicant proffered to dedicate 9,431 square feet (0.22 acres) of land in the northwest corner of the site to the Board of Supervisors for use as an urban park.

As previously discussed, the Comprehensive Plan also recommends public art as part of a development. It is recommended that public art should be provided in consultation with the Initiative for Public Art – Reston (IPAR) or a monetary contribution towards public art; such contribution has not been addressed. In staff's opinion, there is an opportunity for public art in the 9,431-square foot urban park area.

Development Review Performance Objective: Achieve Greater Housing Diversity *Future development should ensure that a diversity of housing is available in the TSAs.*

This objective is not applicable since residential development is not proposed.

Development Review Performance Objective: Provide Office Uses in Strategic Locations *– New office uses at higher intensities should be located within approximately ¼ mile of the Metrorail station¸ as shown on the Conceptual Land Use Map, to maximize use of transit by future office workers and it should be demonstrated that proposed site layouts achieve a safe, comfortable and reasonably direct walk for employees. In selected circumstances, increased office intensity may be considered for parcels outside of the ¼ mile radius if it will facilitate the provision of new public infrastructure, such as a new crossing of the DAAR, or other critical public facilities, and a safe, comfortable and reasonably direct walk can be achieved.*

The subject property is located outside of the quarter and half mile radius of the Wiehle-Reston East transit station. As previously discussed, the redesigned office development with an intensity at up to a 0.20 FAR is in conformance with the Comprehensive Plan recommendation and does not exceed the guidance for an office development (up to a 0.50 FAR). The proposal represents a significant reduction in intensity compared to the approved office development, which permits three office buildings up to a combined 0.35 FAR. This proposal presents an improvement over the current approvals with a lower intensity, greater open space and tree preservation provided, and significantly lower vehicular traffic. As previously stated in the Areawide Land Use recommendations for TSAs "[t]he employment areas farther away from the stations will continue to provide excellent locations for office development to occur as well as other complementary uses, such as data centers and research and development uses."

Development Review Performance Objective: Provide Public Uses *– Public uses such as a library, fire station or recreation center, that are integrated into a building may also generate activity in off-peak hours and are encouraged so as to further diversify the type of uses in the TSAs…*

Public uses such as a regional library, fire station, and police station are located nearby. Park and recreational needs are discussed in the Areawide recommendation for TSAs on Urban Parks, Recreational Facilities, and Cultural Facilities.

Development Review Performance Review Objective: Provide Retail, Hotel Uses and Institutional Uses *– Retail uses on the ground floor of mixed-use buildings are*

encouraged in all TSAs to allow employees and residents in each TSA to carry out daily activities with minimal need to use single-occupancy vehicles.

A mixed-use building is not proposed. The site is designed as a secure headquarters facility for up to 200 employees. On-site amenities will be provided for employees, such as accessory eating establishments and fast food restaurants, walking trails, and recreational facilities to minimize the need for employees to leave the property.

Development Review Performance Objective: Encourage Coordinated Development Plans *- For development proposals requesting increased intensity above the base plan recommendation, consolidation or coordinated development plans are encouraged…*

The applicant is proposing a decrease in intensity (0.20 FAR) compared to the intensity of the approved office development (0.35 FAR). As previously discussed, the building area, FAR, parking, and vehicular trips have decreased from the current approvals and provides an increase in open space and tree preservation.

Development Performance Review Objective: Encourage Educational Institution(s) *There is a desire for additional educational institutions (specifically institutions of higher learning) to complement the other uses planned for the TSAs in addition to providing continuing education opportunities for residents and employees.*

An educational institution is not proposed; an institution of higher learning is located in the Wiehle-Reston East TSA.

Development Performance Review Objective: Accommodate Existing Uses and Buildings *- In some instances, existing development may not be consistent with the long-term vision for the TSAs. This Plan is not intended to interfere with the continuation of existing land uses or buildings. If improvements to the open space or road network that are identified in the Plan are not feasible due to an existing building's location on the site, alternative streetscape and other design improvements intended to implement the Plan's vision may be considered.*

As previously discussed, the site is undeveloped, but three office buildings and associated parking are approved for development on the site. The building area, FAR, parking, and vehicular trips have decreased from the current approvals with an increase to the open space and tree preservation areas being provided.

Frontage improvements and streetscape along Sunset Hills Road are being provided. The Comprehensive Plan envisions a widening of Sunset Hills Road from two lanes to four. With the current approvals, the applicant dedicated right-of-way sufficient to construct half of a four-lane divided roadway, which includes a westbound left-turn lane and eastbound right-turn lane on Sunset Hills Road at the site entrance with associated lane tapers. The right-of-way dedication is shown on Sheet 7 of the CDPA/FDPA. In addition, the applicant is providing streetscape consisting of an 8-foot wide landscape

amenity panel to protect and screen pedestrians and bicyclists on the 10-foot wide shared use trail, which will connect to the W&OD Trail in its ultimate horizontal location. Both the shared use trail and site entrance are located in their ultimate locations in order to avoid future disturbance to the property when the future road widening occurs given that the site is designed to be a secure facility.

In addition, the applicant has proffered to design and install a traffic signal at the intersection of Business Center Drive and Sunset Hills Road and dedicate, if necessary, a 10-foot traffic signal easement to VDOT to accommodate the signal pole and equipment.

Development Performance Review Objective: Protect Existing Low Density Residential Areas *– The majority of existing residential communities adjacent to the TSAs are low density neighborhoods comprised of single family detached homes and townhomes. In most instances, these communities are separated from the TSAs by major roadways. Appropriate design measures such as reduced building height and massing for new development closest to these existing neighborhoods should be utilized to help define the limits of the TSAs.*

The subject property is located at the northeastern edge of the Wiehle-Reston East TSA, in the Reston East District, which is planned to retain its employment activity focus, and includes office, light industrial, institutional, and research and development uses up to 0.50 FAR. This District serves as a transition to low-density residential neighborhoods along Sunset Hills Road and west of Lake Fairfax Business Center and Hunter Mill Road. As previously discussed, the redesigned office development up to a 0.20 FAR is a decrease in intensity compared to the approved 0.35 FAR office development.

To mitigate the effects of the proposed development on the surrounding area, the site is designed with the building sited to take advantage of the site's topography and existing vegetation. The building is oriented so the shortest building side perpendicular to Sunset Hills Road and buffered by a 35-foot wide transitional screening area and berm along Sunset Hills Road, as shown in Figure 6.

Additionally, the building and parking area are set back 143 feet and 50 feet, respectively, from the property line in Phase 1, as shown in Figure 2C. In Phase 2, if Option 2 is selected for future expansion, then the building is shown to be 95 feet from the property line with no change to the parking lot setback and would not affect the transitional screening area. The transitional screening area consists of a mixture of large and medium evergreen trees, deciduous trees, and medium evergreen shrubs to screen the development from adjacent residential uses located across Sunset Hills Road. The setback of the building, transitional screening area, and berm mitigate the visual impact of the development on the adjacent low density residential area to the north, as shown in Figure 7.

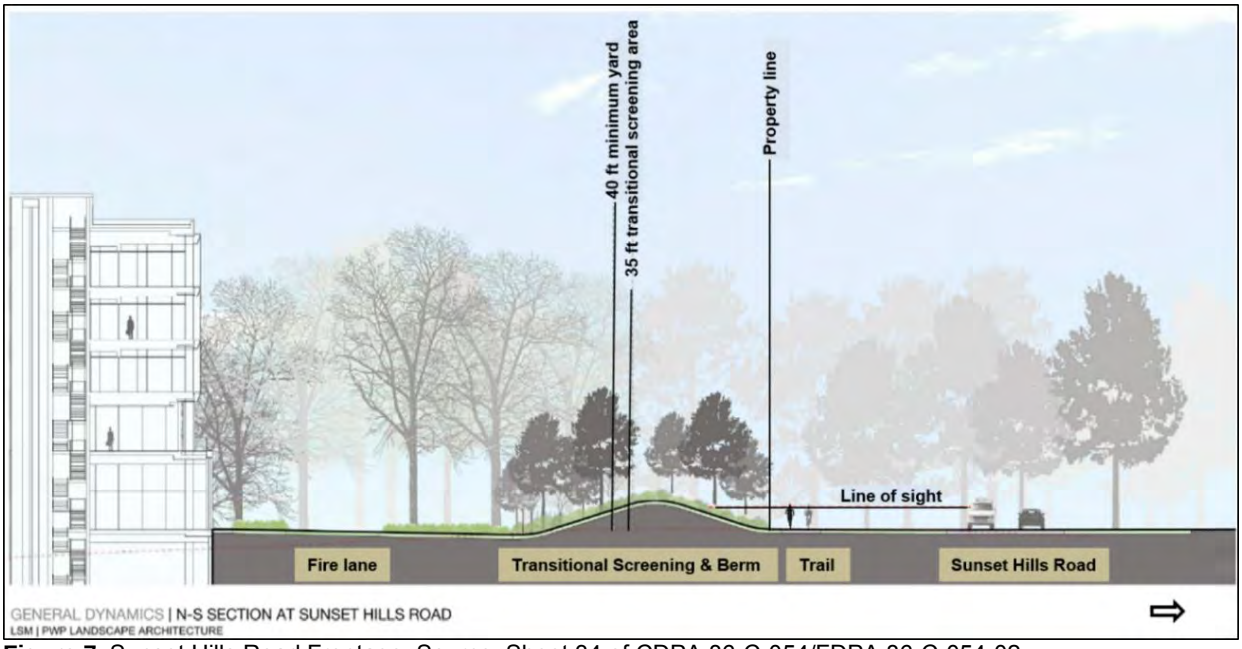

Figure 7: Sunset Hills Road Frontage, Source: Sheet 34 of CDPA 86-C-054/FDPA 86-C-054-02

The site is designed with the previously approved eastern entrance that now aligns with the driveway to Tax Map parcel 18-3 ((2)) 7A, located across Sunset Hills Road. This entrance is intended to better preserve the higher quality trees found in the western area of the site, which screen the building from Sunset Hills Road and surrounding property. To mitigate the impacts of the eastern entrance on residential areas across Sunset Hills Road, the location of the arrival pavilion has been located deeper into the site and is more than 300 feet from the closest residence with additional mitigation through a separate agreement with the owners of Lot 7A. The grade of the area and proposed landscaping are anticipated to mitigate visibility of the arrival pavilion.

In addition, the proposal provides 84 percent of the site as open space, an increase of 44 percent, more than double the open space provided (40 percent) with the current approvals. A total of 12.81 acres (501,544 square feet) of tree canopy preservation is provided compared to the approved applications that preserved two acres (89,340 square feet) of the site as tree canopy. The increase in tree canopy preservation, open space, and site design better screen and buffer the proposed office building from adjacent residential development located across Sunset Hills Road.

In addition, the Comprehensive Plan encourages non-residential uses to reduce their parking supply below the County-wide minimum of 2.6 spaces per 1,000 square feet. The applicant's proposal to reduce the amount of parking spaces by 39.9 percent in Phase 1 and 49.4 percent in Phase 2 would result in a decrease in vehicular trips, which further reduces the impact on the adjacent residential uses. Such reduction is discussed in more detail in the parking reduction section of this report.

In staff's opinion and as stated in the land use analysis (Appendix 5), the proposal provides a lower intensity development, and greater open space and tree preservation

with significantly lower vehicular traffic to reduce the impact of the development on adjacent low density residential uses across Sunset Hills Road compared to the existing approvals.

Areawide Recommendation: Urban Design and Placemaking *– Urban design is the discipline that guides the appearance, arrangement, and functional elements of the physical environment, with a particular emphasis on public spaces. An urban environment is comprised of many elements including streets, blocks, open spaces, pedestrian areas, and buildings.*

The Comprehensive Plan recommends that building and site design must support the pedestrian realm to create a vibrant urban environment. The pedestrian and public realm is framed by buildings and adjacent open spaces, the quality of which determine the quality of the urban form as a whole. In general, the goal of the urban design principles in the Comprehensive Plan would best be met by locating the proposed building at the build-to line on Sunset Hills Road to create a street wall and pedestrian-scale environment. However, the proposed site layout is designed to respect the natural character of Reston by maintaining significant tree canopy and vegetation that enhances the pedestrian experience along Sunset Hills Road in comparison with the approved surface parking, which would dominate the landscape under the current approvals. By preserving the existing tree canopy and vegetation along Sunset Hills Road, the visual impact of the development is mitigated and screened from the road and from surrounding single family dwelling located across the street. In addition, given the applicant's stated need for privacy and security fencing, a defined street wall is not essential. In lieu of street wall frontage, staff recommended that the applicant focus on pedestrian and bicyclist connectivity in the public realm and to the W&OD Trail.

To address this recommendation in the pedestrian realm along the Sunset Hills Road frontage, the proposal provides an 8-foot wide landscape amenity panel and a 10-foot wide shared use trail for bicyclists and pedestrians to connect with W&OD Trail. A 9,431-square foot publicly accessible urban park area at the northwest corner of the site also will serve to provide pedestrian and bicyclist connectivity to the W&OD Trail. A park in this vicinity would bring visual awareness to and encourage a safer crossing at Business Center Drive, where a traffic signal is warranted and proffered to be installed by the applicant, rather than a pedestrian and bicycle crossing from an existing mid-block crosswalk.

Security fencing is proposed around the perimeter of the property. As discussed in the Land Use and OCR memoranda (Appendices 5 and 8), decorative security fencing is recommended along both the Sunset Hills Road and Dulles Toll Road frontages to ensure the locations of maximum visibility are the most attractive. The fence along the Sunset Hills Road frontage should have the highest level of design detail, and while the fence along the Dulles Toll Road frontage may be of a lower level of design, there should still be decorative detail. The fencing along the Sunset Hills Road frontage is shown to be an aesthetic fencing and undulates across the frontage to minimize its visibility while preserving existing vegetation. It is anticipated that the fencing along the

W&OD Trail will blend into the existing tree line to minimize visibility. The fencing along the Dulles Toll Road frontage is shown to be a lower quality fence given that it is not as visible.

With respect to the arrival plaza, additional details on the design were requested to demonstrate that such design would provide comfortable and safe pedestrian movement, minimize the amount of area dedicated for vehicles, utilize both soft landscaping and decorative hardscape materials, and accommodate a central art feature. Sheet 29 of the CDPA/FDPA depicts additional details on the design of the plaza. The arrival plaza is intended to be the ceremonial arrival entrance for visitors. While surface parking is located beside the building entrance, a substantial number of trees and amount of tree canopy are provided and intended to create a grove-like effect to soften and screen the parking area from the ground and from the building, as shown in Figure 8 and on Sheet 34 of the CDPA/FDPA.

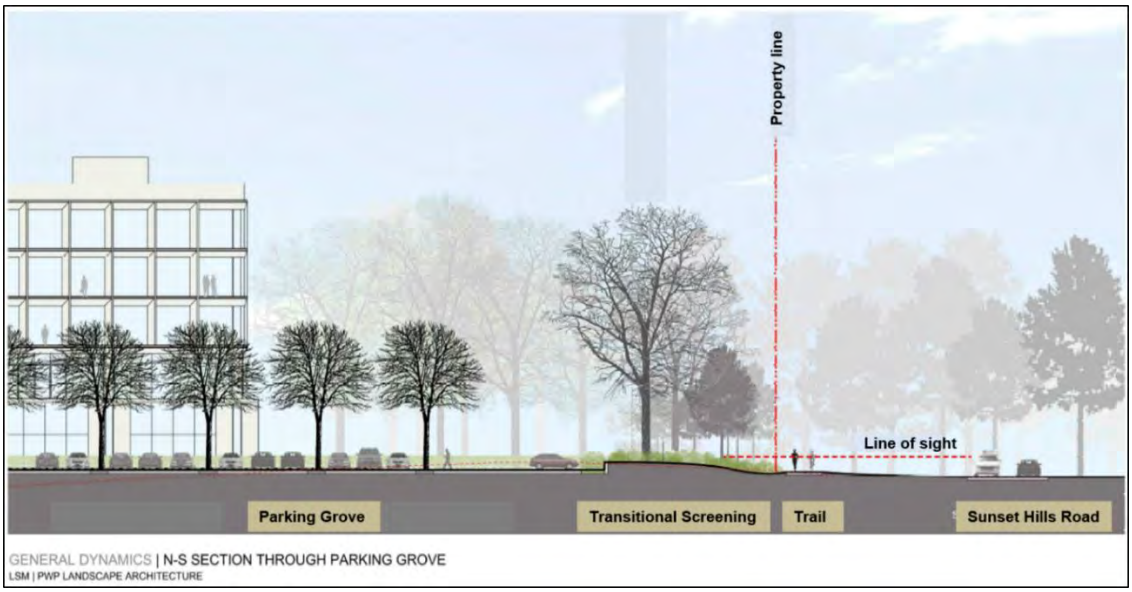

Figure 8: Surface parking area, Source: Sheet 34A of CDPA 86-C-054/FDPA 86-C-054-02

Additionally, staff requested examples of the character of the streetlights to be provided along the Sunset Hills Road frontage. While specific light fixtures can be chosen at the time of site plan, the general character and design intent should be established at this time and should differentiate between pedestrian and vehicular scale lighting. Poles and fixtures are recommended to be of grey metal with a matte or brushed finish and lights could be designed around an arched style fixture with curves and arcs to mimic organic forms. Additional details on the design of the arrival plaza and lighting were not provided.

Areawide Recommendation: Transportation *- The vision for the three Reston TSAs promotes a mix of land uses served by a multi-modal transportation system. Various planned transportation improvements will facilitate this vision, while accommodating current and future commuters and residents within and around the transit stations. The improvements should 1) balance future land uses with supporting transportation*

infrastructure and services; 2) address the long term needs of the area, including significantly improving the infrastructure and facilities for transit, pedestrians and bicycles; and, 3) design a road network that accommodates all modes of transportation and includes a grid of streets in the TSAs to improve connectivity around the transit stations.

Site Access

As previously discussed, two site entrances along Sunset Hills Road previously were approved, one across from Business Center Drive and another in the eastern area of the site, across from Tax Map parcel 18-3 ((2)) 7B. The site now is designed utilizing only the eastern site entrance that now aligns with the driveway to Tax Map parcel 18-3 ((2)) 7A, located across Sunset Hills Road. The applicant maintains that the single access point in the eastern area of the site better maintains the higher quality vegetation in the western area of the site, which buffers and screens the use from adjacent property and from Sunset Hills Road; Urban Forest Management staff concurs that higher quality vegetation is located in the western area of the site.

As discussed in the Department of Transportation (FCDOT) memorandum (Appendix 9), FCDOT staff recommends that the site access occur from the previously approved western entrance at Business Center Drive. A commercial entrance at the previously approved western location is appropriate and would locate the site entrance away from existing residential properties that are further east along Sunset Hills Road. An entrance across from Business Center Drive would establish the fourth leg of the existing T-intersection. Further, a traffic signal warrant study has been completed and a traffic signal is warranted at this intersection. The traffic signal would provide efficient access to and from the site during the P.M. peak hours when delays and queues on Sunset Hills Road are the most intense. In FCDOT staff's opinion, the applicant has not explored the previously approved western entrance location in a way that could provide the access needed, nor explored a site design that could preserve as many mature trees as possible. It is noted that FCDOT and VDOT evaluated the design of the eastern entrance and associated turn lanes and they are designed to meet VDOT's design standards. It is further noted that with any intensification of the site, staff would not support the installation of a traffic signal at the eastern entrance given the proximity and visibility to residential development located across Sunset Hills Road.

As previously discussed, staff recommends that the applicant install the warranted traffic signal at the intersection of Sunset Hills Road and Business Center Drive. Such signal would provide gaps in traffic, which are not provided under the current stop-controlled intersection, to alleviate access issues employees may experience when entering and existing the site from the eastern entrance. FCDOT has collected funds from nearby developments on Business Center Drive for the installation of a signal at this location. These funds can be made available to the applicant in order to help offset the cost of the signal installation. The applicant has proffered to install such traffic signal.

Reston Transportation Fund

On February 11, 2014, the Board of Supervisors approved the Reston Master Plan Special Study Comprehensive Plan Amendment (Phase 1). As part of the Board's approval, the Board adopted the Planning Commission recommendation to conduct an inclusive process to prepare a funding plan for the transportation improvements recommended in the Reston Master Plan. The Planning Commission indicated that the funding plan should include arrangements for financing the public share of the Reston infrastructure improvements and facilitate cooperative funding agreements with the private sector. FCDOT staff has been working with an advisory group to develop a funding plan and formula to present to the Board of Supervisors that would facilitate a cooperative funding approach for public and private transportation investments in Reston. To date, a funding plan has not been established nor endorsed by the Board of Supervisors. However, staff anticipates that a funding plan will be brought to the Board of Supervisors by the end of 2016.

With the proposed redesign of the site with a single office building, there is no change to the use being proposed (office) or to the zoning district (PDC) in which the property is located. The existing approvals in 1999 for the property permit three office buildings containing 357,694 square feet at a 0.35 FAR and were not subject to a transportation fund contribution at the time of approval. The redesign of the site with a single office building containing 190,000 square feet at a 0.20 FAR is a significant decrease in intensity compared to the more intense, approved development. The Comprehensive Plan previously envisioned office uses, and with the Comprehensive Plan amendment, the site still is planned for office uses and no additional density is proposed.

While all applicants with development proposals in the TSA areas are expected to contribute to the Reston Transportation Fund, staff has defined why this site has unique characteristics. Due to these characteristics, and because the applicant has proffered transportation improvements outside of those required by their development, the applicant is not making a contribution to this fund. Staff notes it is not anticipated that a similar situation exists with other sites.

Sunset Hills Road

The Transportation Plan Map in the Comprehensive Plan depicts Sunset Hills Road as a four-lane roadway; it currently is a two-lane roadway. Dedication of right-of-way for the construction of the half section of a four-lane divided roadway previously was proffered and dedicated along with proffers for construction or a waiver and contribution in lieu of construction of the frontage improvements. Staff recommends that the applicant commit to construction of the frontage improvements on Sunset Hills consisting of a through lane and turn lanes in order to address the Comprehensive Plan map and the approved proffers. In lieu of construction, the applicant has carried forward a proffer commitment to be able to request a waiver and to escrow funds in lieu of construction of any remaining frontage improvements and has included a cap to the escrow amount based on the cost to construct the frontage improvements today. Staff

is reviewing the escrow amount to ensure that it would be adequate for the frontage improvements.

With a future widening of Sunset Hills Road, stormwater runoff would need to be addressed. Since runoff flows toward the applicant's property, stormwater management facilities would be needed on the applicant's property to detain and manage future stormwater runoff from the road widening. In an effort to minimize future disturbance to the applicant's property, the applicant proffered to design and construct the on-site stormwater management facilities to accommodate stormwater runoff from a fully improved Sunset Hills Road between the W&OD Trail and Hunter Mill Road. Such stormwater facilities are shown on the CDPA/FDPA and included in the stormwater management and BMP computations.

Transportation Demand Management

The current approval proffered a Transportation System Management (TSM) Program to reduce peak-hour single occupant vehicle traffic demands generated by the development. This type of program is now referred to as a Transportation Demand Management (TDM) Program. As the TDM program has matured, standard language has been developed and proffered by applicants to provide a clear and consistent framework that defines the TDM program and provide a mechanism to hold the applicant accountable for achieving the TDM trip reduction goal. Revisions to the proffers were provided in order for the proffers to be in keeping with the standard TDM proffer.

The applicant's TDM is based on an office building designed for 200 employees and parking provided based on a parking reduction. As such, a reduction in single occupancy vehicle trips is being taken based on the design and parking reduction proffers that would require additional parking to be provided if the number of full-time employees/contractors exceeds 200, which addresses the intent of the TDM Program.

Areawide Recommendation: Environmental Stewardship *– Includes recommendations on stormwater management, natural resources management, tree canopy goals, green buildings, and noise impacts.*

Stormwater management, tree preservation, tree canopy goals, and green building measures previously were discussed in earlier sections of this report. In addition, the applicant has addressed the stormwater and urban forest management comments contained in Appendices 6, 10 and 11, respectively. With respect to stormwater management comments, the sanitary sewer lateral line has been realigned so that it does not conflict with the stormwater infiltration vault; stormwater easements have been added to all outfall areas; the pre-development runoff is now calculated based on a 100 percent forested condition; water quality computations have been incorporated for the ultimate road condition; and a proffer condition addresses the proposed level spreader structure. With regard to the urban forest management comments, the applicant has addressed these comments by revising the proffers to include at least

75 percent tree canopy cover in the area west of the building and inclusion of an invasive vegetation management plan.

As previously discussed, the applicant has committed, at a minimum, to obtaining LEED Silver certification as recommended in the Comprehensive Plan with the appropriate $2 per square foot green building escrow.

Areawide Recommendation: Urban Parks, Recreational Facilities, Cultural Facilities *- The growth and redevelopment planned for the three TSAs will increase the need for parks and open space, recreation facilities, and cultural amenities, all of which are essential components in creating places where residents and employees can live, work and play. The intent of this [Comprehensive Plan] section is to present recommendations to meet the need for urban parks, recreation and cultural facilities created by growth in the TSAs.*

Cultural Resources Impact

As discussed in the Park Authority memorandum (Appendix 7), the subject property contains Virginia Department of Historic Resources (VDHR) Site #44FX1569, a Native American quartz quarry. This site previously was identified at the time of rezoning and a Phase II Archaeological Assessment was undertaken in 1989, and a Phase II Archaeological Evaluation was completed in 2016, as part of the review of the proposed applications. Both studies identified the site as an extremely rare and significant prehistoric resource and recommended additional archaeological study and artifact recovery prior to land disturbance. Site 44FX1569 is within the approved and proposed limits of clearing and grading where extensive ground disturbance is shown.

Staff concurs with the Phase II Archaeological Assessment findings and continues to recommend (1) avoiding land disturbance at the site; and (2) if, after evaluating other development alternatives, avoidance is not possible, conducting Phase III archaeological work and data recovery prior to development. In addition and based on the Phase II findings, staff recommends treating the site as being eligible for both the National Register of Historic Places and the Fairfax County Inventory of Historic Sites. In response and in consultation with the Park Authority, the applicant has proffered to conduct a Phase III data recovery excavation and processing of artifacts recovered prior to grading or land disturbance, along with interpretation and additional analyses of such artifacts. The scope of such work and associated cost still are being worked out between the applicant and the Park Authority.

Athletic Field Contribution

The Comprehensive Plan describes the need for active recreational facilities in the TSAs. However since the office use is not changing and new gross floor area for office is not being proposed, but instead, a decrease in previously approved office square footage is proposed, an athletic field contribution is not being requested.

On-site Urban Parkland

As previously discussed, in applying the urban parkland standard to the proposed development in the Reston TSA, there is a need for 0.06 acres of urban parkland on-site based on the proposed 190,000 square feet building in Phase II of the development. In response, the applicant has proffered to dedicate 9,431 square feet (0.22 acres) of land at the northwestern corner of the property to the Board of Supervisors for use as an urban park with amenities to be provided by others. Staff appreciates the applicant's efforts to provide public park space in its development proposal; however, the applicant should consider providing public art within the park space.

ZONING ORDINANCE PROVISIONS

General Standards for All Planned Developments

A rezoning application or development plan amendment application may only be approved for a planned development under the provisions of Article 6 if the planned development satisfies the following general standards:

General Standard 1: The planned development shall substantially conform to the adopted comprehensive plan with respect to type, character, intensity of use, and public facilities. Planned developments shall not exceed the density or intensity permitted by the adopted comprehensive plan, except as expressly permitted under the applicable density or intensity bonus provisions.

The subject property is in the Reston East District in the Comprehensive Plan, which indicates that such district is “planned to retain its employment activity focus, including office, light industrial, institutional and research and development (R&D) uses up to .50 FAR.” The office development is proposed at up to a 0.20 FAR and is in conformance with the Comprehensive Plan with respect to type, character, intensity of use, and is not anticipated to impact public facilities, as previously discussed.

General Standard 2: The planned development shall be of such design that it will result in a development achieving the stated purpose and intent of the planned development district more than would development under a conventional zoning district.

With the Board of Supervisors’ approval to rezone the subject property to the PDC District in 1991, and subsequent PCA approval in 1999, an office development on the subject property achieves the purpose and intent of the PDC District. With the proposed applications, an office development still is proposed, but with a lesser intensity, greater open space and tree preservation, and a reduction in vehicular trips compared to the approved office development.

General Standard 3: The planned development shall efficiently utilize the available land, and shall protect and preserve to the extent possible all scenic assets and natural features such as trees, streams and topographic features.

The planned development preserves existing trees, as previously discussed.

General Standard 4: The planned development shall be designed to prevent substantial injury to the use and value of existing surrounding development, and shall not hinder, deter or impede development of surrounding undeveloped properties in accordance with the adopted comprehensive plan.

As previously discussed, the planned development is designed to prevent substantial injury to the use and value of existing surrounding development through the site design and landscaped buffer, setback, and frontage improvements along Sunset Hills Road. The office development is proposed at a lower density with greater open space and tree preservation, and significantly lower vehicular traffic to reduce the impact on surrounding development. There are no surrounding undeveloped properties.

General Standard 5: The planned development shall be located in an area in which transportation, police and fire protection, other public facilities and public utilities, including sewerage, are or will be available and adequate for the uses proposed; provided, however, that the applicant may make provision for such facilities or utilities which are not presently available.

The planned development is located in an area in which police, fire protection, and public utilities are available and adequate. As previously discussed, frontage improvements on Sunset Hills Road have been proffered to be constructed or an escrow in lieu of construction may be permitted, subject to approval by DPWES and FCDOT. Additionally, the applicant has proffered design and construct the warrant traffic signal at Business Center Drive and Sunset Hills Road.

General Standard 6: The planned development shall provide coordinated linkages among internal facilities and services as well as connections to major external facilities and services at a scale appropriate to the development.

Private on-site walking paths are provided for employees with a connection to the 10-foot wide shared use trail along the Sunset Hills Road frontage. The shared use trail is intended for use by both pedestrians and bicyclists and provides a connection to the W&OD Trail to the west of the property, which provides a link to other pedestrian and bicycle facilities to connect to the Wiehle-Reston East transit station.

Design Standards for All Planned Developments

Whereas it is the intent to allow flexibility in the design of all planned developments, it is deemed necessary to establish design standards by which to review rezoning applications, development plans, conceptual development plans, final development

plans, PRC plans, site plans and subdivision plats. Therefore, the following design standards apply.

Design Standard 1: In order to complement development on adjacent properties, at all peripheral boundaries of the PDH, PRM, PDC, PRC Districts the bulk regulations and landscaping and screening provisions shall generally conform to the provisions of that conventional zoning district which most closely characterizes the particular type of development under consideration.

The bulk regulations conform to the C-3 Office District, the conventional zoning district that most closely characterizes the development, as shown in Table 2 below.

	C-3	Approved	Proposed
Maximum building height	90 feet, increase may be permitted by Board of Supervisors	75 feet	95 feet (Phase 1) 110 feet (Phase 2, Option 1)
Minimum yard requirement	Front: 25° angle of bulk plane, but not less than 40 feet Side: No requirement Rear: 20° angle of bulk plane, but not less than 25 feet	Front: 246 feet (office building) 82 feet (parking structure) Side: 262 feet Rear: 91 feet	Front: 143 feet (Phase 1) 95 feet (Phase 2) 50 feet (parking area) Side: 125 feet Rear: 138 feet
Maximum FAR	1.00	0.35	0.20
Open space	15 percent	40 percent	84 percent

Table 2: Bulk regulations

Design Standard 2: Other than those regulations specifically set forth in Article 6 for a particular P district, the open space, off-street parking, loading, sign and all other similar regulations set forth in this Ordinance shall have general application in all planned developments.

With the proposed development, 84 percent of the site is provided as open space, which is double the open space (40 percent) provided with the approved applications. A total of 416 parking spaces are required in Phase 1 and 494 are required in Phase 2. However, a parking reduction has been requested to reduce the number of provided parking spaces to 250, all to be provided in Phase 1, and is discussed in more detail in the parking reduction section of this report. Five loading spaces are required and the applicant is requesting a modification to permit two spaces, which is discussed in more detail in the Modifications section of this report.

Design Standard 3: Streets and driveways shall be designed to generally conform to the provisions set forth in this Ordinance and all other County ordinances and regulations controlling same, and where applicable, street systems shall be designed to afford convenient access to mass transportation facilities. In addition, a network of trails and sidewalks shall be coordinated to provide access to recreational amenities, open space, public facilities, vehicular access routes, and mass transportation facilities.

No new streets are proposed; however, frontage improvements are being provided along Sunset Hills Road, as previously discussed. In addition and as previously discussed, on-site walking paths are provided and connect to the shared use trail along Sunset Hills Road. The shared use trail provides access to recreational amenities, such as the W&OD Trail, open space, public facilities, and mass transit.

MODIFICATIONS

The applicant requests the following modifications.

Modification of Par. 3 of Sect. 10-104 of the Zoning Ordinance to permit an increase in fence height up to 10 feet

Par. 3 of Sect. 10-104 of the Zoning Ordinance indicates that a fence in a front yard on any lot can be up to four feet in height and located in any side or rear yard on any lot up to seven feet in height. The applicant requests a modification to permit a security fence up to 10 feet in height around the perimeter of the property. The applicant indicates that such height is a more appropriate height for a security fence.

Par. 3H of Sect. 10-104 of the Zoning Ordinance permits the Board of Supervisors, in conjunction with a proffered rezoning, to approve an increase in fence height. The height, location, color, and materials were provided to show the visual impact of the security fence on nearby properties and the applicant demonstrated to staff that the fence is harmonious with the surrounding development, as shown on Sheets 8 and 34D of the CDPA/FDPA. Staff supports the modification request.

Modification of Par. 15 of Sect. 11-202 of the Zoning Ordinance to permit a reduction in the number of required loading spaces from five to 2 spaces

Par. 14 of Sect. 11-203 of the Zoning Ordinance provides the minimum loading space requirement for an office use, which equates to a total of 10 spaces. However, Par. 15 of Sect. 11-202 states that “in no instance shall more than five off-street loading spaces be required for a given use or building except as may be determined by the Director [of the Department of Public Works and Environmental Services].”
The applicant requests a modification to permit two loading spaces. Given that the office building ultimately will contain 200 employees, the applicant indicates that five loading spaces are not needed to support an headquarters building for an office use and two spaces is more appropriate for the use. Staff supports the modification request.

Modification to Sect. 13-304 of the Zoning Ordinance to permit a security fence in lieu of the barrier requirement

Sect. 13-304 of the Zoning Ordinance provides the barrier requirements. A barrier is required along the Sunset Hills Road frontage since the office use is across from

residential uses. Barrier D, E, or F are required. Barrier D consists of a 42 to 48-inch chain link fence, Barrier E consists of a 6-foot wall, brick or architectural block, and Barrier F consists of a 6-foot high solid wood or otherwise architecturally solid fence.

The applicant requests a modification of the barrier requirement in favor of a security fence. The site is intended to be developed as a secure site with limited public access. Examples of the type of security fence are provided on Sheet 34D of the CDPA/FDPA. The majority of the security fence is located outside of the 35-foot wide transitional screening yard along the Sunset Hills Road frontage and undulates between existing vegetation to screen the fence. Staff does not object to the modification request.

Parking Reduction Request

As part of the applications, the applicant submitted Parking Study 0826-PKS-003-1 to reduce the number of required parking spaces based on Par. 1 of Sect. 11-101 of the Zoning Ordinance, which states in relevant part, “in the PDH, PDC, PRC and PRM Districts, the provisions of this Part shall have general application as determined by the Director [of Public Works and Environmental Services or duly authorized agent].”

As previously discussed, the applicant is proposing a five to six-story office building to be constructed in two phases. The office building in Phase I would contain 160,000 gross square feet (GSF) with 175 employees and in Phase II the building could expand to a maximum of 190,000 GSF with 200 employees. The applicant is proposing to provide 250 parking spaces with the Phase I in a parking garage beneath the building and surface parking. No additional parking will be provided with the Phase II construction. Under the Zoning Ordinance, the parking rate for this office use is 2.6 parking spaces per 1,000 GSF resulting in a requirement of 416 spaces for Phase I and 494 spaces for Phase II. This information is summarized in the table below.

	Total Square Feet	Required Parking (2.6 Spaces per 1,000 GSF)	Provided Parking	Provided Parking Space per 1,000 GSF	Percent Reduction
Phase 1	160,000	416	250 all in Phase 1	1.56	39.9
Phase 2	190,000	494		1.32	49.4

Table 3: Parking reduction - comparison of required and proposed parking

The applicant’s justification for the proposed parking supply is that individual office sizes will be larger than those found in a typical office building of comparable size; consequently, the number of employees will be fewer. The office size for the proposed development was indicted to be in the range of 800 to 950 rentable square feet (RSF). According to a report by the U.S. Government Services Administration, entitled *Workspace Allocation and Utilization Benchmark*, published in July 2011 (revised July 2012), and cited by the applicant, the average office space allocation per person was 230 RSF for the offices surveyed. In staff’s opinion for the proposed development, the most direct way to assess the adequacy of the proposed parking is by the number of spaces provided per employee. According to The Institute of Transportation Engineers’

(ITE) publication entitled, *Parking Generation*, 4th edition, the average and 85th percentile peak parking demand for office buildings is 0.83 spaces per employee and 0.98 spaces per employee, respectively, with a range of 0.52 to 1.35 spaces per employee. In comparison, the number of spaces provided per employee would be 1.43 in Phase I and 1.25 in Phase II for the proposed development. This information is summarized in the table below.

		Ratio of Peak Parking Demand per Employee		
General Dynamics Office	**Number of employees**	**ITE Average**	**ITE 85th percentile**	**Proposed**
Phase I (160,000 GSF)	175	0.83	0.98	1.43
Phase II (190,000 GSF)	200	0.83	0.98	1.25

Table 4: Comparison of ITE Parking Demand per Employee and Proposed Parking Study

In staff's opinion, the parking ratios per employee for the proposed development provide an adequate working margin above the ITE values. Therefore, the proposed parking supply is considered adequate, assuming the number of employees does not increase over time. Staff recommends that the applicant provide additional parking if the number of employees increases above 200 and such parking should be constructed in blocks rather than incrementally by one space at a time in order to reduce need to construct parking spaces with every marginal increase in the number of employees. To staff's satisfaction, the applicant has proffered to provide 20 additional parking spaces for every 25 additional employees above the 200 projected employees. A copy of the memorandum on the parking reduction is provided as Appendix 12. Staff notes that DPWES reviewed the proffers dated August 1, 2016, and the revised proffers contain no revisions to the parking reduction proffers.

Therefore, based on the review of the submitted parking study, the Director of DPWES determined that the requested parking reduction is acceptable, subject to the Board of Supervisors' approval and acceptance of the proffered conditions.

CONCLUSIONS AND RECOMMENDATIONS

Staff Conclusions

The applicant proposes to redesign the site, which is approved for three office buildings and associated parking, with a single office building that is intended as a secure headquarters facility. With such proposal, the applicant also requests a parking reduction based on the design and intended function of the building. The applicant has worked diligently with staff and continues to work with staff to address transportation and Park Authority related issues.

The redesign of the site at a lower intensity provides for a significant increase in open space and tree preservation with a decrease in vehicular traffic through the accompanying parking reduction request. In staff's opinion, such proposal is an improvement over the current approvals by better mitigating the impact of an office

development on the surrounding area compared to the approved development. Staff finds the proposal in conformance with the Comprehensive Plan and applicable Zoning Ordinance provisions.

Staff Recommendations

Staff recommends approval of PCA 86-C-054-02 and CDPA 86-C-054, subject to the execution of proffered conditions consistent with those contained in Appendix 1.

Staff recommends approval of FDPA 86-C-054-02-02, subject to the development condition contained in Appendix 2.

Staff recommends that the Board of Supervisors' approve and concur with the Director of the Department of Public Works and Environmental Services' determination that pursuant to Par. 1 of Sect. 11-101 of the Zoning Ordinance 250 parking spaces for both Phases 1 and 2 of the development are adequate, subject to the execution of proffers contained in Appendix 3.

Staff recommends approval of a modification of Par. 3 of Sect. 10-104 of the Zoning Ordinance to permit an increase in fence height up to 10 feet.

Staff recommends approval of a modification of Par. 15 of Sect. 11-202 of the Zoning Ordinance to permit a reduction in the number of required loading spaces from five to two spaces.

Staff recommends approval of a modification to Sect. 13-304 of the Zoning Ordinance to permit a security fence in lieu of the barrier requirement.

It should be noted that it is not the intent of staff to recommend that the Board of Supervisors, 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.

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

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

APPENDICES

1. Draft Proffered Conditions
2. Proposed Final Development Plan Amendment Conditions
3. Statement of Justification

4. Affidavit
5. Land Use Analysis Memorandum
6. Environmental Analysis Memorandum
7. Park Authority Memorandum
8. Office of Community Revitalization Memorandum
9. Transportation Memoranda
10. Stormwater Management Memorandum
11. Urban Forest Management Memorandum
12. Parking Reduction Memorandum
13. Fire and Rescue Preemption Device Memorandum
14. Glossary of Terms

General Dynamics Corporation
PCA 86-C-054-02
CDPA 86-C-054
FDPA 86-C-054-02-01

Proffer Statement
April 5, 2016
Revised June 16, 2016
Revised August 1, 2016
Revised August 22, 2016
Revised August 30, 2016

Pursuant to Section 15.2-2303(A) of the Code of Virginia (1950, as amended) and Sect. 18-204 of the Zoning Ordinance of Fairfax County (1978, as amended) (the "Zoning Ordinance"), the property owner and applicant, for themselves and their successors and assigns (collectively, the "Applicant"), hereby proffer that the development of the parcel under consideration and shown on the Fairfax County Tax Map as 18-3 ((1)) 11B1 (the "Property") shall be in accordance with the following conditions ("Proffers") if, and only if, PCA 86-C-054-02, CDPA 86-C-054, and FDPA 86-C-054-02-01 (collectively, the "Application") is granted. If approved, these Proffers supersede all previous proffers approved for the Property. In the event that this Application is denied, these Proffers shall be immediately null and void and of no further force or effect, and the Existing Proffers shall remain in effect.

GENERAL

1. Conceptual Development Plan Amendment/Final Development Plan Amendment. The Property shall be developed in substantial conformance with the Conceptual Development Plan Amendment/Final Development Plan Amendment for Reston Eastgate (collectively, the "CDPA/FDPA") dated January 4, 2016, and revised through August 22, 2016 prepared by Urban, Ltd., and consisting of 61 sheets, as further described below.

2. CDPA Elements. Notwithstanding that the Conceptual Development Plan Amendment and the Final Development Plan Amendment are presented on the same sheets and collectively defined as the CDPA/FDPA in Proffer 1, it shall be understood that the CDPA consists of (i) the maximum square footage of permitted development on the Property; (ii) the general location and arrangement of the buildings on the Property as shown on the CDPA/FDPA; and (iii) the points of access to the Property and general pedestrian and vehicular circulation routes through the Property (collectively, the "CDPA Elements"). The CDPA elements do not include the architectural design elements of the proposed buildings. The Applicant reserves the right, as may be necessary or required, to request approval from the Planning Commission of a further FDPA pursuant to Section 16-402 of the Zoning Ordinance for elements other than the CDPA Elements related to all or a portion of the Property and the CDPA/FDPA, provided such FDPA is in substantial conformance with these Proffers.

3. Minor Modifications. Minor modifications to the Proposed Development may be permitted pursuant to Sections 16-402 and 18-204 of the Zoning Ordinance as determined by the

Zoning Administrator and when necessitated by sound engineering or as necessary as part of final site design or engineering.

4. Future Applications. Any portion of the Property may be the subject of a CDPA, FDPA, Proffered Condition Amendment ("PCA"), Rezoning, Special Exception ("SE"), Comprehensive Sign Plan, Special Permit ("SP"), Variance or other zoning action without the joinder and/or consent of the owner(s) of the other land area(s) comprising the Property. Previously approved proffered conditions or development conditions applicable to a particular portion of the Property that are not the subject of such an application shall remain in full force and effect.

PROPOSED DEVELOPMENT

5. Proposed Development. The Applicant may develop the Property in phases with up to a maximum 190,000 gross square feet of development, along with surface and structured parking and other accessory uses and structures (collectively, the "Proposed Development"), generally as shown on Sheets 8-9 of the CDPA/FDPA. The first phase of the Proposed Development may contain up to 160,000 gross square feet of development ("Phase I"), with the option to add up to 30,000 square feet of additional development in a second phase ("Phase II") as more particularly shown on Sheet 12 of the CDPA/FDPA. Irrespective of the uses permitted under the Planned Development Commercial ("PDC") provisions of the Zoning Ordinance, the permitted uses on the Property shall be restricted to the following:

A. Offices;

B. Conference facilities, provided that such facility shall be restricted for the exclusive use of employees and/or contractors of and visitors to the office building comprising the Proposed Development;

C. Accessory eating establishments and fast food restaurants, provided that such facility shall be restricted for the exclusive use of employees and/or contractors of and visitors to the office building comprising the Proposed Development;

D. Accessory health clubs, provided that such facility shall be restricted for the exclusive use of employees and/or contractors of and visitors to the office building comprising the Proposed Development;

E. Accessory child care center and any associated outdoor play area, provided that such facility shall be restricted for the exclusive use of children of employees and/or contractors of the office building comprising the Proposed Development;

F. Accessory financial institutions; and

G. Accessory uses and accessory service uses as permitted by Article 10.

6. Future Development Options. Prior to this Application, the Property was permitted to develop with up to 357,694 square feet of office and associated uses, while the Proposed Development shown on the CDPA/FDPA would permit no more than 190,000 square feet to be developed on the Property without first amending the CDPA/FDPA and these Proffers to reflect

the proposed location and configuration of any additional structures or uses. The Applicant reserves the right to pursue approval of one or more CDPA/FDPA/PCA by the Board of Supervisors and the Planning Commission, respectively, to increase the total allowable development on the Property beyond the Proposed Development shown on the CDPA/FDPA. The Applicant acknowledges that the County's review of any such application(s) will be based, among other things, on an analysis of the Comprehensive Plan recommendations in effect at the time of such application(s). Modifications to these Proffers (including required transportation improvements, stormwater management, etc.) also may be necessary to mitigate the impacts of any future development beyond the Proposed Development.

7. Maximum Building Height. The Proposed Development shall not exceed the maximum building height of one hundred and ten feet (110') as shown on Sheet 2 of the CDPA/FDPA. Building height shall be measured in accordance with the provisions of the Zoning Ordinance and shall be exclusive of those structures that are excluded from the maximum height regulations as set forth in Section 2-506 of the Zoning Ordinance. Notwithstanding the foregoing, however, nothing shall preclude the Applicant from constructing the Proposed Development to a lesser building height than that which is represented on the CDPA/FDPA.

8. Pedestrian Facilities. The Applicant may construct in phases a series of onsite pathways and sidewalks through and around the Property, generally as shown on Sheets 8-9 of the CDPA/FDPA, provided that the Applicant reserves the right, in consultation with the Urban Forest Management Division ("UFMD") of the Fairfax County Department of Public Works and Environmental Services ("DPWES") and prior to site plan approval for each development phase(s) when such facilities are to be constructed, to modify the location and dimensions of such facilities from that shown on the CDPA/FDPA as part of the Applicant's efforts to preserve existing trees and vegetation.

9. Parking Reduction. Subject to the Board of Supervisors' approval and concurrence with the DPWES determination, in recognition of the Applicant's unique requirements and expected occupancy of the Property and pursuant to Section 11-101(1) of the Zoning Ordinance, and except as set forth below, the Applicant shall provide parking for the Proposed Development in general accordance with the tabulations shown on Sheet 2 of the CDPA/FDPA, which represents an approximately 40% reduction for Phase I and a 49.5% reduction for Phase II in the required number of parking spaces the Applicant otherwise would be required to provide under Section 11-104 of the Zoning Ordinance. In particular, the Applicant shall provide parking on the Property in accordance with subsections A, B, and C.

A. Phase I and Phase II Parking. The Applicant shall provide a minimum of 250 parking spaces on the Property at all times to support the Proposed Development and up to 200 Fulltime Employees (hereinafter defined) except that the required parking may be temporarily reduced during construction of Phase II in accordance Section 11-101(1) of the Zoning Ordinance.

B. Supplementary Parking Requirements. In the event the number of fulltime employees and contractors permanently assigned to or working at the Property ("Fulltime Employees") exceeds 200 during the hours of peak parking demand, then the Applicant shall provide twenty (20) additional parking spaces for every twenty-five (25) or fraction thereof

additional Fulltime Employees above 200 (the "Supplementary Parking"), provided that the Applicant shall have no obligation to provide more than the minimum parking spaces required under the Zoning Ordinance for office uses based on the size of the building actually constructed on the Property. The number of Fulltime Employees shall be determined using employee surveys and/or the issuance of parking/access passes (or such other measure as DPWES and the Applicant may agree to use from time to time). As necessary, the location of the Supplementary Parking shall be shown on a FDPA, subject to approval by the Planning Commission, but without the need to amend the CDPA or these Proffers. The Applicant shall, concurrent with parking surveys/counts described below, submit to DPWES a tabulation of the total number of Fulltime Employees for that calendar year.

C. Parking Surveys. In an effort to validate the effectiveness of the reduced parking set forth in this Proffer 9, the Applicant shall, beginning with the first September following the issuance of the first tenant Non-Residential Use Permit ("Non-RUP") for Phase I of the Proposed Development, and each September thereafter, conduct annual parking surveys (utilization study) to determine the peak parking demand (the "Parking Surveys") for the Property during the survey period. The Parking Surveys shall be conducted during peak parking periods (typically 10:00 am to 2:00 pm) Monday through Friday during a non-holiday week and outside the summer months (or at such other time as the Applicant and DPWES may agree) and shall document the average and peak percentage of parking spaces occupied over the course of the survey period. In the event two consecutive annual Parking Surveys demonstrate that the peak occupancy of the parking spaces established to serve the Property exceeds ninety percent (90%) during the survey period, then the Applicant shall increase the available parking on the Property by providing an additional twenty (20) or more surface or structured parking spaces or such greater amount as may be required by DPWES in consultation with the Applicant. Prior to installing any such spaces, the Applicant shall file and have approved by the County any required site plan revisions and/or building permits necessary to permit such installation, unless already approved as part of a site plan. In the event two (2) consecutive annual Parking Surveys demonstrate that the peak occupancy of the parking spaces established to serve the Property is below eighty-five percent (85%), then the Applicant shall only be required to conduct the Parking Surveys biennially to demonstrate continued compliance with the parking reduction granted with this Application, provided that the Director of DPWES may require the Applicant to conduct an additional parking utilization study at any time to verify compliance with this proffer. Such additional parking as may be required by this subsection is independent of any Supplementary Parking that may be required by subsection B above.

10. Architecture and Building Materials. The architectural design of the Proposed Development shall be in general conformance with the illustrative elevations shown on Sheets 34, 34A and 34B of the CDPA/FDPA. Building materials for the Proposed Development shall be selected from among the following: precast concrete or stone, metal, and/or glass, provided that final architectural details and accents may include other similar materials.

11. Rooftop Telecommunications Equipment and Mechanical Units. Telecommunications equipment, mechanical units, and all appurtenant facilities may be placed on the rooftop of the Proposed Development, shall comply with the applicable requirements of the Zoning Ordinance, and shall be visually screened and/or set back sufficiently from the perimeter of the roof so that

such equipment and facilities generally are not visible at street level when viewed at the property line of the Property.

12. Secure Campus. The Applicant reserves the right to develop the Property in accordance with the Interagency Security Committee Standards and/or the Unified Facilities Criteria established by the General Services Administration or Department of Defense, respectively. Adherence to these standards may include such things as the provision of a secure perimeter fence, guard house, car inspection facility and security gates, as generally shown on Sheets 8-9 of the CDPA/FDPA.

A. Security Fence. The design of the security fence shall be in general conformance with the illustrative designs shown on Sheet 34D of the CDPA/FDPA. Building materials for the portion of the security fence along the building's frontage, as shown on Sheet 34D, shall be selected from the following: masonry block, steel, stone, and/or painted metal, provided that final details and accents may include other materials. The Applicant reserves the right to use lesser materials for areas of the security fence that are not along the building's frontage. The final location of the security fence will be field located in conjunction with UFMD prior to site plan submission for the Proposed Development.

ENVIRONMENTAL

13. Stormwater Management Program. The Applicant shall provide the stormwater management ("SWM") and Best Management Practices ("BMP") measures as generally depicted on Sheets 17-25 of the CDPA/FDPA (the "SWM Facilities") sufficient to meet the requirements of the PFM and as set forth in this Proffer 13. The SWM Facilities may include, but are not limited to, the following: underground infiltration and/or detention vaults, urban bio-retention, bio-retention facility conservation and reforestation, compost amended managed turf/landscaped areas, downstream regional pond system, vegetated swales, Filterra, structural BMP devices and/or cisterns. The Applicant shall select and identify the specific SWM Facilities to be provided with the Proposed Development as part of the first site plan submission and shall provide as part of such site plan computations demonstrating conformance with applicable State and County SWM requirements, including 9VAC25-870, Fairfax County Code Chapter 124, and the PFM (Chapter 6).

A. Stormwater Monitoring Responsibilities. The Applicant may include in its SWM Facilities a level spreader as generally depicted on Sheet 20C of the CDPA/FDPA to disperse the release from the SWM vault, which controls runoff from the Proposed Development and subsequent improvements to Sunset Hills Road (as described in more detail in subparagraph 13(B) below). In the event the Applicant installs the level spreader as part of its SWM Facilities, then the Applicant shall, following issuance of the first Non-RUP for Phase I of the Proposed Development but prior to final bond release for Phase I, conduct periodic analyses (not less than once every three (3) months) of the effectiveness of the level spreader as a stormwater management tool and monitor for any signs of channelization or erosion on the Property and shall provide copies each analysis to the Stormwater Management Division of DPWES for review and comment. Should one or more such analyses indicate the presence of channelization or erosion resulting from the use of a level spreader, then the Applicant shall, following consultation with DPWES, modify the downstream condition from the level spreader (such as

installing rip rap armoring in the location of the erosion), to mitigate the channelization or erosion to the satisfaction of the Director of DPWES. Any such modifications or adjustments to the SWM Facilities or the Proposed Development may be completed without the need to amend the CDPA/FDPA or these Proffers, provided that the modifications are in substantial conformance with the CDPA/FDPA.

B. Accommodation of Storm Runoff From Sunset Hills Road Widening. In anticipation of the eventual widening of Sunset Hills Road to a four-lane undivided section across the Property's frontage (as shown on Sheets 20A – 20B of the CDPA/FDPA), the Applicant shall construct the SWM Facilities to sufficient capacity to accommodate, in addition to the storm runoff from the Proposed Development, storm runoff from a fully-improved Sunset Hills Road between the Washington and Old Dominion ("W&OD") Trail and Hunter Mill Road (the "Sunset Hills Road SWM Facilities"). As part of site plan approval for the Proposed Development, the Applicant shall (as necessary or appropriate) provide computations or other evidence satisfactory to the Virginia Department of Transportation ("VDOT") and the Director of DPWES demonstrating the effectiveness of the Sunset Hills Road SWM Facilities.

14. Stormwater Maintenance Responsibilities. Prior to site plan approval for the Proposed Development, the Applicant shall execute an agreement with Fairfax County (the "County") in a form satisfactory to the County Attorney (the "SWM Agreement") providing for the perpetual maintenance of all of the SWM Facilities, including the Sunset Hills Road SWM Facilities, as applicable. The SWM Agreement shall require the Applicant (and its successors/assigns) to contract with one or more maintenance/management companies to perform regular routine maintenance of the SWM Facilities (and, as necessary, the Sunset Hills Road SWM Facilities) and to provide a maintenance report annually to the Fairfax County Site Development and Inspections Division of DPWES. The SWM Agreement also shall provide, as applicable, easements for County inspection and emergency maintenance of the SWM Facilities (and, as necessary, the Sunset Hills Road SWM Facilities) to ensure that the facilities are maintained by the Applicant in good working order.

15. Landscaping. The Applicant shall implement the landscape design for the Proposed Development shown on Sheets 29-30 of the CDPA/FDPA (the "Conceptual Landscape Plan"), which illustrate the plantings and other features to be provided with the Proposed Development. The Conceptual Landscape Plan is conceptual in nature, and the tree species and planting locations may be modified by the Applicant as part of final engineering and building design, provided such modifications provide a similar quality and quantity of landscape plantings and materials as shown on the Conceptual Landscape Plan. The Applicant shall install the landscaping in phases based on the Applicant's order of construction and staging requirements, provided that the Applicant may, due to weather or other conditions and with the concurrence of UFMD, defer installation of all or portions of the required landscaping to the next available planting season so as to provide a better chance for its long term survival.

A. Native/Acclimated and Regionally Appropriate Species. The Applicant shall use native or acclimated, regionally appropriate species that are considered non-invasive as determined by the Virginia Department of Conservation and Recreation Native Plant Finder for plantings and landscaping materials throughout the Proposed Development, provided that the Applicant reserves the

right, in consultation with and approval by UFMD, to modify as part of site plan approval the exact species to be used, such as where some plant materials are not available or have been deemed by UFMD to no longer be appropriate.

B. Site Plan(s). As part of site plan approval for the Proposed Development, the Applicant shall submit to UFMD for review and approval a detailed landscape and tree cover plan (the "Landscape Plan"), which shall include, among other things:

i. Design details for typical planting areas above structures and along streets, as appropriate;

ii. Composition of the planting materials and/or structural soils used for street trees or where plantings are to be located within or on top of structures and other methods to be used to ensure the viability of the proposed plantings; and

iii. Information demonstrating that the Landscape Plans are consistent with and are part of the implementation of the SWM Facilities defined above.

C. Planting Quality. The Landscape Plan shall be consistent with the quality and quantity of plantings and materials shown on the Conceptual Landscape Plan, as may be modified by the Applicant as described above, and may include the use of additional shade trees and other plant materials as determined by the Applicant. The Applicant may adjust the type and location of vegetation and the design of the open spaces, courtyard areas and other improvements and plantings as approved by the Zoning Administrator and UFMD, provided such adjustments otherwise are in substantial conformance with the CDPA/FDPA. Nothing herein shall prevent the Applicant from installing more landscaping on the Property than is shown on the CDPA/FDPA.

D. Pre-Installation Meeting. Prior to the installation of plants to meet the requirements of the approved Landscape Plan and these Proffers, the Applicant shall coordinate a pre-installation meeting on site with the landscape contractor and a representative of UFMD to review the landscape requirements of the approved Landscape Plan. Any proposed changes to the location of planting, size of trees/shrubs, and any proposed plant substitutions of species specified on the approved Landscape Plan shall be reviewed at this time and must be approved by UFMD prior to planting. The Applicant shall provide notice to UFMD not less than 72 hours prior to the Applicant's implementation of the tree planting.

E. Fire Marshal and Sight Distance Coordination. If it is determined during site plan review that elements of the streetscape improvements, plantings, tree preservation areas, and/or open space designs conflict with comments from either the Fire Marshal, the Fairfax County Department of Transportation ("FCDOT") or VDOT (related to sight distance), the Applicant may relocate, remove, or modify such conflicting elements in response to such comments without the need for a PCA,

CDPA, or FDPA, provided any such modifications: (i) are made in consultation with, and subject to the approval of the Zoning Administrator, (ii) with the intent to provide the streetscape improvements, plantings, tree preservation areas, and open space designs shown on the CDPA/FDPA to the extent possible given the Fire Marshal's and/or FCDOT/VDOT's comments, and (iii) the overall tree canopy shown on the CDPA/FDPA is not reduced.

i. Fire Lane Relocation. In the event the Applicant elects to expand the building north towards Sunset Hills Road under Phase II of the Proposed Development, as shown on Sheet 12 of the CDPA/FDPA, the Applicant shall be permitted to relocate the displaced fire lane in consultation with DPWES and without the need for a PCA, CDPA, or FDPA.

16. Limits of Clearing and Grading. Except as set forth in this Proffer 16 and Proffer 17 below, the Applicant shall strictly adhere to the primary and secondary Limits of Clearing and Grading ("LOC") as shown on Sheet 10-11 of the CDPA/FDPA. However, minor adjustment of the LOC may be made as part of final design and engineering to accommodate the location of and maintenance for the proposed internal pathways, security fence and proposed utilities, as permitted pursuant to Section 18-204 of the Zoning Ordinance and approved by UFMD and DPWES. If such adjustments are needed for the proposed utilities, the utilities shall be located in the least disruptive manner possible as determined by UFMD. The Applicant shall develop and implement a replanting plan, subject to UFMD approval, for any areas outside the primary limits of clearing and grading that must be disturbed to accommodate utilities.

17. Forest Management Plan. In recognition of the Applicant's intent to incorporate a significant portion of the Property's existing tree cover and vegetation as an amenity of the Proposed Development, the Applicant shall develop, prior to site plan approval for the Proposed Development and in consultation with the UFMD of DPWES, a forest management plan (the "Forest Management Plan" or "FMP") to govern the means and methods by which the Applicant may preserve, modify and use the areas located within the LOC (as defined in Proffer 16 and identified on the CDPA/FDPA). The Forest Management Plan shall, among other things, establish designated (i) "Tree Save Area(s)" on the Property that generally are to remain in their forested condition and not be disturbed during construction of the Proposed Development (the "Tree Preservation Plan"), along with (ii) "Amenity Areas" where the Applicant will or expects to (a) remove trees that are dead, dying or diseased and/or unlikely to survive, as determined in coordination with UFMD, and/or (b) remove trees and/or conduct grading activities in order to install elements such as walking trails, fencing, lighting, supplemental landscaping, exercise stations, gazebos, picnic tables and benches, fire pits, passive recreation areas, elevated pedestrian pathways or bridges, or other similar facilities (collectively, the "Site Amenities"). The Applicant, however, reserves the right, in consultation with the UFMD of DPWES, to adjust the boundaries of the Tree Save Areas and the Amenity Areas without need to amend the CDPA/FDPA or these Proffers, provided it is in substantial conformance with the CDPA/FDPA.

A. Implementation of Tree Save Areas and Amenity Areas.

i. Tree Preservation/Pre-construction Meeting: Prior to the commencement of grading work on the Property, the Applicant shall retain the services of a certified arborist or

registered consulting arborist (also known as the "Project Arborist") and conduct a pre-construction meeting with an UFMD representative to review the LOC, the Tree Preservation Plan and the Site Amenities to be installed by the Applicant as part of the initial construction of the Proposed Development. Prior to such pre-construction meeting, the Applicant shall flag or cause to have flagged the LOC for the Proposed Development and the designated Tree Save Area with a continuous line of flagging representing the approved limits of clearing and grading for areas to be disturbed and the Tree Save Area(s) areas that are to remain in their forested condition; accordingly, the Amenity Areas will be the areas between the LOC and the Tree Save Area(s). The Applicant shall adhere to any adjustments in the LOC approved with UFMD as part of such pre-construction meeting.

ii. Root Pruning. The Applicant shall root prune as needed to comply with the Tree Preservation Plan and to install the Site Amenities in the Amenity Area(s). All tree preservation measures for the Tree Save Areas shall be clearly identified, labeled, and detailed on the erosion and sediment control plan sheets and Tree Preservation Plan.

iii. Site Monitoring. The Project Arborist shall be present on site and monitor clearing, root pruning, tree protection fence installation, and any other work conducted within or adjacent to the boundaries of Tree Save Area(s) during implementation of the Phase 1 erosion and sediment control plan approved with the site plan for the Proposed Development. In addition, the Project Arborist shall be present to monitor tree preservation measures throughout construction of the Proposed Development and the installation of Site Amenities to ensure tree protection is maintained and activities are conducted as identified in the Tree Preservation Plan as approved by UFMD.

iv. On-Site Invasive Species Management Plan. At the time of the first site plan submission for the Proposed Development, the Applicant shall provide to UFMD for review and approval an invasive species management plan for the Amenity Area west of the building, to include the following information:

(1) Identify targeted species to be suppressed or managed;

(2) Identify targeted area of invasive management or suppression;

(3) Method of management or suppression;

(4) Timing of treatments; and

(5) Duration of invasive management program.

v. Installation of Site Amenities in Site Amenity Areas. The Applicant reserves the right to remove existing trees and other vegetation and to conduct grading activities within Amenity Area(s) to permit installation, modification and replacement of Site Amenities that the Applicant may, from time to time, deem necessary or appropriate to serve the Proposed Development, provided, however, that any such activities shall be conducted in accordance with the following limitations and conditions:

(1) The Site Amenity(ies) shall be designed and implemented with input from the Project Arborist to minimize impacts to trees to be retained and enhance the potential for trees to contribute to and enhance the user's experience of the features;

(2) Not less than seventy-five (75) percent tree canopy shall be maintained within the Amenity Area west of the building;

(3) Grading shall be minimized to the extent possible to avoid impacts to trees that are to be retained;

(4) The Site Amenity(ies) shall not be attached to trees to be preserved or retained;

(5) Supplemental plantings within the Amenity Area(s) shall be limited to native or acclimated, regionally appropriate species of trees, shrubs and ground covers, exclusive of turf; and

(6) Trees with crowns overhanging one or more Site Amenity(ies) shall be pruned and/or reinforced to reduce the risk of injury due to dead limbs and structural defects.

18. Transformer Locations. As part of site plan approval for the Proposed Development, the Applicant shall identify on such site plan the location of transformers and/or switchgear to serve the Property. The Applicant reserves the right to expand the LOC and/or shift any landscaping and site features to accommodate the transformers and/or switchgear, provided that such an expansion and/or shift does not result in a reduction in the total amount of open space for the Property. The final location and installation of such transformers and/or switchgear shall not require approval of a PCA, CDPA or FDPA, provided the location shown is in substantial conformance with the CDPA/FDPA.

19. Utility Locations. Utilities, including, but not limited to, water, electric, gas, cable, telephone, telecommunication, sanitary sewer and storm sewer lines, as applicable, shall be installed within the street network to the maximum extent feasible, as determined by DPWES, or shall be placed in locations that do not conflict with the plantings, tree preservation areas, and open space areas shown on the CDPA/FDPA and Landscape Plan. If there is no other option, as determined by the Applicant, the utilities may be placed within the plantings, tree preservation areas, and open space areas, provided that the long-term health of trees and other plantings within such areas is ensured by the provision of sufficient soil volume, as verified by UFMD. The Applicant reserves the right to shift proposed landscaping to avoid proposed utility easements. The Applicant shall be permitted to relocate, remove, or modify the plantings, tree preservation areas, and/or open space areas to avoid conflicts with utilities without the need for a PCA, CDPA, or FDPA, provided: (i) any such modifications are made with the intent to provide the plantings, tree preservation areas, and open space areas shown on the CDPA/FDPA to the extent possible given the utility needs, and (ii) the overall tree canopy shown on the CDPA/FDPA is not reduced.

ARCHEOLOGY

20. Phase III Recovery. The Applicant has completed a Phase II Archeological Evaluation of the Property (Site #44FX1569) to evaluate/update previous investigations of the Property. Based on the results of that evaluation, the Applicant agrees, in consultation with the Cultural Resources Division of the Fairfax County Park Authority ("FCPA"), to retain the services of a third-party historical or cultural resources firm and conduct a Phase III data recovery excavation and processing of artifacts recovered from the Property, along with interpretation and additional analyses of such artifacts (the "Phase III Recovery"). Field work for the Phase III Recovery shall be completed prior to the commencement of grading or land disturbance within the identified boundaries of Site #44FX1569, but not later than April 1, 2017, unless deferred by the Applicant in consultation with FCPA. The final scope of the Phase III Recovery shall be determined in consultation with FCPA and may include, as appropriate, the placement of a historical marker or interpretative feature installed on the Gateway Parcel (as defined in Proffer 37 below) at the intersection of Sunset Hills Road and the W&OD Trail to commemorate the location and significance of artifacts recovered from the Property, as appropriate. The Applicant's cost to complete the Phase III Recovery, including any commemorative feature or marker, shall not exceed $375,000, with any additional costs to be borne by the FCPA based on the final scope of work agreed to by the Applicant and FCPA. Any artifacts recovered from the Property shall be conveyed to and become the property of FCPA or the County in accordance with procedures and standards established by FCPA.

GREEN BUILDING CERTIFICATION

21. LEED Silver. The Applicant shall seek LEED Silver certification under the U.S. Green Building Council's ("USGBC") Leadership in Energy and Environmental Design (LEED) certification (or other comparable rating system as agreed upon by the Applicant and the Environmental Review Branch ("EDRB") of the Department of Planning and Zoning ("DPZ")) for the office building constructed on the Property. If the Applicant elects the LEED certification process, then certification shall be under LEED Version 3 or higher for New Construction (LEED-NC) or Core and Shell (LEED-CS).

A. Project Checklist. The Applicant will include, as part of the site plan submission and building plan submission, a list of specific credits that the Applicant anticipates attaining for the Proposed Development under the applicable LEED rating system. A LEED-accredited professional ("LEED-AP") who is also a professional engineer or licensed architect will provide certification statements at both the time of site plan review and the time of building plan review for the building(s) for which certification is sought confirming that the items on the list will meet at least the minimum number of credits necessary to attain LEED Silver certification of the project.

B. County Team Member. The Applicant will designate the Chief of the EDRB as a team member in the USGBC's LEED Online system. This team member will have privileges to review the project status and monitor the progress of all documents submitted by the project team, as applicable, but will not be assigned responsibility for any LEED credits and will not be provided with the authority to modify any documentation or paperwork.

C. Design-Related Credit Review. Prior to building plan approval, the Applicant will submit documentation to the EDRB regarding the USGBC's preliminary review of design-oriented credits in the LEED program (as applicable or available, depending on the form of LEED pursued) for the building(s) for which certification is sought. This documentation will demonstrate that such building is anticipated to attain a sufficient number of design-related credits that, along with the anticipated construction-related credits, will be sufficient to attain LEED Silver certification.

D. Green Building Escrow. If the Applicant is unable, prior to building plan approval, to provide documentation of the USGBC's preliminary review of the design-oriented credits demonstrating that such building for which certification is sought is anticipated to attain a sufficient number of design-related credits that, along with the anticipated construction-related credits, will be sufficient to support the attainment of LEED Silver certification, the Applicant will, prior to building plan approval for such building(s), post a "Green Building Escrow" in the form of cash or a letter of credit from a financial institution authorized to do business in the Commonwealth of Virginia in the amount of $2 per gross square foot for such office building. This escrow will be in addition to, and separate from, other bond requirements and will be released upon demonstration of attainment of LEED Silver certification, or a higher level of certification, by the USGBC under the applicable version of the LEED rating system. The provision to the EDRB of documentation from the USGBC that such building has attained LEED Silver certification will be sufficient to satisfy this commitment.

E. Release of Green Building Escrow. The Green Building Escrow for building, as applicable, shall be released in accordance with the following:

i. If the Applicant is able, subsequent to building plan approval, to provide documentation of the USGBC's preliminary review of the design-oriented credits demonstrating that the building subject to such building plan approval is anticipated to attain a sufficient number of design-oriented credits that, along with the anticipated construction-related credits, will be sufficient to support the attainment of LEED Silver certification, the County shall release the entirety of the Green Building Escrow for such building(s) to the Applicant. Prior to the release of the bond for such building(s), the Applicant shall provide documentation to the EDRB demonstrating the status of attainment of LEED certification from the USGBC for the building.

ii. At the time the Applicant provides to the EDRB documentation from the USGBC demonstrating that LEED Silver certification has been attained, the entirety of the Green Building Escrow for such building(s) shall be released to the Applicant.

iii. If prior to final bond release for the Proposed Development, the Applicant provides to the EDRB documentation demonstrating that LEED Silver certification for the building has not been attained but that the building has been determined by the USGBC to fall within three (3) points of attainment of LEED certification, fifty percent (50%) of the Green Building Escrow will be released to the Applicant; the other fifty percent (50%) will be released to Fairfax County and will be posted to a fund within the County budget supporting implementation of County environmental initiatives.

iv. If prior to final bond release for the Proposed Development, the Applicant fails to provide documentation to the EDRB demonstrating attainment of LEED Silver certification or demonstrating that the building has fallen short of LEED Silver certification by three (3) points or more, the entirety of the escrow for that building will be released to Fairfax County and will be posted to a fund within the County budget supporting implementation of County environmental initiatives.

F. Extension of Time. If the Applicant provides documentation from the USGBC demonstrating, to the satisfaction of the EDRB, that USGBC completion of the review of the LEED Silver certification application has been delayed through no fault of the Applicant, the Applicant's contractors or subcontractors, the time frame may be extended as determined appropriate by the Zoning Administrator, and no release of escrowed funds shall be made to the Applicant or to the County during the extension.

SITE DESIGN

22. Lighting. All on-site outdoor and parking garage lighting provided with the Proposed Development shall comply with the Outdoor Lighting Standards of Section 14-900 of the Zoning Ordinance. All proposed parking lot and building mounted security lighting shall utilize full cut-off fixtures. When measured outside the building, interior lighting of the building shall not exceed the Outdoor Lighting Standards of Part 9 of Article 14 of the Zoning Ordinance.

23. Signage. All signage established on the Property shall comply with the requirements of Article 12 of the Zoning Ordinance, except that the Applicant reserves the right to request approval by the Planning Commission of a comprehensive sign plan in accordance with Section 12-210 of the Zoning Ordinance.

24. Generators, Dumpsters, Cooling Towers. The locations and numbers of generators and associated fuel storage and cooling towers shown on the CDPA/FDPA are preliminary and may vary or change (location, size and quantity) as a result of final engineering, architectural design and final user/occupant requirements, provided the amount of impervious surface is not increased and the amount of open space is not decreased. Exterior dumpsters and generators shall be visually screened using landscaping, enclosures or similar treatments, as determined by the Applicant.

TRANSPORTATION IMPROVEMENTS

25. Sunset Hills Road. Subject to FCDOT and VDOT approval, the Applicant shall construct within the existing, dedicated public right-of-way the improvements shown on the CDPA/FDPA (the "Sunset Hills Road Improvements") and open them to traffic (but not necessarily have them accepted by VDOT for maintenance) no later than the issuance of the first Non-RUP for the Proposed Development. The Sunset Hills Road Improvements will result in one through travel lane in each direction plus turn lanes into the Property. In the event VDOT and/or FCDOT approves a different roadway or pedestrian facility configuration than that shown on the CDPA/FDPA, then the Applicant may be permitted to construct such alternate designs without approval of a CDPA/FDPA or PCA. Any additional right-of-way needed to accommodate the Sunset Hills Road Improvements shall be dedicated at no cost and conveyance, in fee simple, to

the Board of Supervisors at the time of site plan approval for the Proposed Development. Any such additional right-of-way shall only be required to the extent necessary to accommodate the Sunset Hills Road Improvements.

26. Escrow in Lieu of Frontage Improvements. In recognition of the Applicant's commitment to construct the Sunset Hills Road Improvements outlined in Proffer 25 above, the Applicant may request from DPWES and FCDOT a waiver of any remaining improvements along the Property's frontage on Sunset Hills Road. Should the waiver be approved, the Applicant shall, in lieu of such construction and prior to site plan approval for the Proposed Development, escrow funds in the amount of $1,500,000 with the County for future improvements to Sunset Hills Road or for other road improvements in the vicinity of the Property, as determined by the Board of Supervisors. The Applicant will cooperate with FCDOT, VDOT and the Hunter Mill District Supervisor's Office on the future alignment of Sunset Hills Road and completion by others of the associated improvements along the Property's frontage.

27. Sunset Hills Road Traffic Signal. Subject to the acquisition of all necessary off-site right-of-way and/or temporary/permanent easements, the Applicant shall design and install a traffic signal, if warranted and approved by FCDOT and VDOT, at the intersection of Business Center Drive and Sunset Hills Road. The Applicant agrees to dedicate to VDOT, if necessary, additional easements within the Property to accommodate the signal pole and equipment, as well as to work in good faith with FCDOT and VDOT to acquire, at no additional cost to the Applicant, any off-site right-of-way or easements necessary to accommodate the traffic signal. The Applicant shall be entitled to receive from FCDOT and/or VDOT, prior to the commencement of construction for installation of the traffic signal, all funds previously collected by the County from other developments and/or reserved by the County for the installation of a traffic signal at this location. The traffic signal shall be installed prior to issuance of the first Non-RUP for the Proposed Development, provided that the timing for completion of the traffic signal may be deferred by the Applicant, with concurrence of the Zoning Administrator. In the event installation of the signal is delayed due to the inability to acquire off-site right-of-way or easements, such that the signal will not be installed prior to final bond release for the Proposed Development, then the Applicant shall be relieved of the obligation to install the signal and, instead, shall assign to the County and/or VDOT all plans and permits obtained by the Applicant in furtherance of the traffic signal installation and shall contribute up to $275,000 to the County, less all hard and soft costs expended to date by the Applicant in pursuit of the signal (as evidenced by receipts provided to FCDOT), for use by the County to install the signal.

MULTIMODAL IMPROVEMENTS

28. Bus Shelter. The Applicant shall construct a concrete pad and walkway to connect pedestrians from the proposed multipurpose trail to the existing bus shelter located along the Property's frontage on Sunset Hills Road (the "Bus Shelter"). The Applicant also shall, if requested by FCDOT prior to site plan approval, relocate the Bus Shelter to another location along the Property's frontage. The final location and timing of placement of the Bus Shelter shall be determined in consultation with FCDOT at site plan.

29. Bicycle Parking. The Applicant shall install bicycle racks, bike lockers, and/or bike storage areas in the Proposed Development that provide a total of at least ten (10) bicycle

parking spaces ("Bicycle Parking"). Locations for the Bicycle Parking shall be provided generally as shown on Sheet 32. The final design, location and amount of Bicycle Parking shall be determined at site plan in consultation with FCDOT. The Applicant shall install the Bicycle Parking prior to the issuance of the first Non-RUP for the portion of the building in which such facilities are to be provided.

30. Electric Vehicle Charging Facilities. Prior to issuance of the first Non-RUP, the Applicant shall provide a minimum of one (1) recharging station that serves two (2) parking spaces for electric cars within the parking garage on the Property. The Applicant also shall provide space and infrastructure to accommodate additional electric vehicle-ready parking spaces in the parking garage on the Property. "Electric vehicle-ready" means the provision of space, conduit banks, conduits, and access points allowing for the easy installation of vehicle charging stations in the future, and does not include the installation of transformers, switches, wiring, or charging stations.

31. Pedestrian Connection to Sunset Hills Road. Subject to FCDOT and/or VDOT approval, the Applicant shall construct a pedestrian connection from the Proposed Development to the sidewalk/trail to be located on Sunset Hills Road, generally as shown on Sheet 8 of the CDPA/FDPA, provided that such connection shall be considered part of the Applicant's secured campus and subject to the same security requirements and standards as the balance of the Property, thereby permitting the Applicant to use electronic or other means to restrict access to employees and authorized visitors of the Proposed Development.

32. Pedestrian Connection to the Washington & Old Dominion Trail. The Applicant shall request from the Northern Virginia Regional Park Authority ("NVRPA") permission to connect and, if approved, construct the 10-foot multipurpose trail fronting the Property along Sunset Hills Road (the "Multipurpose Trail") to the Washington and Old Dominion trail ("W&OD") at an angle linking the existing sidewalk along Sunset Hills Road west of the Property to provide pedestrians a direct connection between these facilities. In the event NVRPA does not grant permission for a direct connection, the Applicant shall coordinate with FCDOT, DPWES and NVRPA to determine an alignment that is acceptable to these reviewing agencies and construct the agreed-upon alignment. The configuration of the Multipurpose Trail shall be determined prior to site plan approval and shall be constructed prior to the issuance of a Non-RUP for the Proposed Development.

TRANSPORTATION DEMAND MANAGEMENT

33. TDM Goal, Performance and Monitoring. The Applicant shall implement a Transportation Demand Management ("TDM") program that reduces the AM and PM peak hour trips associated with the Proposed Developed by a minimum of twenty-five percent (25%) (the "TDM Goal") from the total number of vehicle trips that would be expected from a fully-leased, commercial office building as estimated by ITE's *Trip Generation Manual*, 9th Edition based on gross floor area (the "Baseline Trips"). The Applicant agrees to periodically monitor its conformance with the TDM Goal and to implement additional TDM measures as may be required to accomplish the stated objective.

A. TDM Monitoring Plan. Between September and December beginning with the first calendar year following the issuance of the first Non-RUP for each of Phase I and Phase II of the Proposed Development and then again every three (3) years thereafter (as limited by this paragraph), the Applicant shall evaluate the total number of vehicle trips to and from the site using surveys and/or traffic counts prepared by the Applicant and as reviewed by FCDOT (the "TDM Monitoring Plan"). Neither the Applicant's employees/tenants nor adjacent property owners shall be notified of the date and time of the surveys and/or traffic counts. All costs, such as the employment of a traffic consultant, associated with undertaking the traffic study shall be funded by the Applicant. The Applicant shall use the results of the surveys and/or traffic counts to determine if the TDM Goal has been met and shall submit this information in a Report to FCDOT for review and approval no later than March 1st of the year it is due. The Applicant thereafter shall repeat the surveys/traffic counts triennially until such time as two consecutive triennial traffic counts following completion of Phase I and, as applicable, Phase II of the Proposed Development show that the trip reduction objective has been met, after which the Applicant shall provide supplemental surveys as may be requested by FCDOT, but not more often than once every five (5) years. Nothing herein shall preclude the Applicant, in consultation with and as approved by FCDOT, from modifying the TDM Monitoring Plan based on the results of one or more surveys and/or traffic counts, or tolling the surveys and counts, of which all such modifications can be implemented without the requirement for approval of a PCA by the Board of Supervisors.

34. Alternative TDM Plan. In the event that (i) a traffic count or survey performed in accordance with Proffer 33(A) above shows the TDM Goal has not been met or (ii) a survey or tabulation performed in accordance with Proffer 9(B) above shows the number of Fulltime Employees exceeds 250, the Applicant will implement the following (the "Alternative TDM Plan"):

A. No later than ninety (90) days after the Applicant is notified that a traffic count or survey evidenced a failure to meet the TDM Goal, the Applicant shall designate an individual to act as the Program Manager ("PM") for the Property, whose responsibility will be to implement the TDM strategies outlined below. The PM duties may be a part of other duties assigned to the individual(s). The Applicant shall notify FCDOT within ten (10) days of the designation and thereafter shall do the same within ten (10) days of any change in such appointment.

B. The following is a list of potential TDM strategies that may be implemented under the Alternative TDM Plan:

i. Requirement that the Applicant disseminate information about transit services available to the Property, including Metro/Fairfax Connector maps, schedules and forms, as well as ride-sharing and other relevant transit options, to employees, and on-site independent contractors;

ii. Membership in Reston LINK or the Dulles Area Transportation Association (DATA), a recognized public-private transportation management association;

iii. SmarTrip cards and/or other fare media shall be provided to new employees at the time of initial hire in the amount of $50;

iv. Preferential parking spaces for carpools/vanpools and electric/hybrid vehicles shall be provided throughout the Property; and/or

v. Amenities for bicyclists and walkers including conveniently located bike racks, showers and lockers.

C. Following implementation of the Alternative TDM Plan, the Applicant shall repeat the surveys/traffic counts triennially until such time as two consecutive triennial traffic counts following completion of Phase I and, as applicable, Phase II of the Proposed Development show that the trip reduction objective has been met, after which the Applicant shall provide supplemental surveys as may be requested by FCDOT, but not more often than once every five (5) years.

RESTON COMMUNITY

35. Reston Planning and Zoning Committee and Equestrian Park. Copies of the Landscape Plan for the Property shall be submitted to the Reston Planning & Zoning Committee ("P&Z") and Equestrian Park Homeowners' Association for review and comment prior to site plan approval by DPWES.

36. P&Z Architectural Review and Comment. Prior to the submission of building permit application(s) to the County for the Proposed Development, the Applicant shall submit architectural elevations for Phase I of the office building to the P&Z for review and comment. A copy of the submission also shall be provided to the Hunter Mill District Supervisor and the Zoning Evaluation Division of DPZ.

37. Gateway Parcel. Prior to site plan approval for the Proposed Development, the Applicant shall dedicate to the Board of Supervisors approximately .22 acres of land at the northwest corner of the Proposed Development, as more particularly shown on Sheet 7 of the CDPA/FDPA, to be used by Fairfax County or the FCPA for a publicly-accessible pocket park, wayside, public art installation or other amenity provided by others that will serve as a gateway into the Wiehle-Reston East TSA west of the Property (the "Gateway Parcel"). The Applicant shall have no obligation to construct any uses or facilities within the dedicated area, aside from portions of the 10-foot multipurpose asphalt trail, as shown on the Sheet 9 of the CDPA/FDPA, that fall within the dedicated area.

FIRE SAFETY

38. Traffic Signal Preemption Equipment. Prior to site plan approval, the Applicant shall contribute $20,000 to the Capital Project titled Traffic Light Signals – FRD Proffers in Fund 300-C30070, Public Safety Construction for use in the installation of emergency vehicle preemption equipment on traffic signals within the Hunter Mill District as determined by the Fire and Rescue Department. The Applicant shall have no responsibility for installation or maintenance of the preemptive signal devices.

MISCELLANEOUS

39. Advanced Density Credit. Advanced 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 pursuant to the PFM, at the time of the site plan approval for the Property.

40. Inflationary Adjustment of Contributed Funds. Any funds contributed for transportation improvements shall escalate on a yearly basis from the base year of 2016 and change effective each January 1 thereafter until tender of payment, based on changes in the Consumer Price Index for all urban consumers (not seasonally adjusted) ("CPI-U"), both as permitted by Virginia State Code Section 15.2-2303.3(B).

41. Extension of Time. The Applicant reserves the right to request from the Zoning Administrator an extension of the time within which specific proffers may be fulfilled or completed to reflect challenges or limitations beyond the Applicant's control or for such other reason as the Zoning Administrator may agree.

42. Successors and Assigns. These Proffers will bind and inure to the benefit of the Applicant and its successors and assigns. Each reference to "Applicant" in this proffer statement shall include within its meaning and shall be binding upon Applicant's successor(s) in interest and/or developer(s) of the site or any portion of the site.

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

GENERAL DYNAMICS CORPORATION,
a Delaware corporation

By: _____
Name: M. Amy Gilliland

Title: Senior Vice President, Human Resources and Administration

BP RESTON EASTGATE, LLC,
a Delaware limited liability company

By: Boston Properties Limited Partnership,
a Delaware limited partnership, its sole member

By: Boston Properties, Inc.,
a Delaware corporation, its general partners

By: _____

Name: _____

Title: _____

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PROPOSED FINAL DEVELOPMENT PLAN AMENDMENT CONDITION

FDPA 86-C-054-02-01

August 31, 2016

If it is the intent of the Planning Commission to approve Final Development Plan Amendment FDPA 86-C-054-02-01 for Tax Map 18-3 ((1)) 11B1, staff recommends conditioning the approval by requiring conformance with the following development condition:

1. Development of the property shall be in substantial conformance with the CDPA/FDPA Plan entitled, “Reston Eastgate,” submitted by Urban, Ltd., and consists of 61 sheets dated January 4, 2016 and revised through August 22, 2016.

The above proposed development condition is a staff recommendation and does not reflect the position of the Planning Commission unless and until adopted by the Planning Commission.

General Dynamics Corporation
CDPA 86-C-054
FDPA 86-C-054-02-01
PCA 86-C-054-02
Statement of Justification
January 5, 2016
Revised January 28, 2016
Revised April 1, 2016
Revised May 6, 2016
Revised June 27, 2016
Revised August 23, 2016

Introduction

General Dynamics Corporation (the "Applicant") has identified 21.69 acres of land along Sunset Hills Road in Reston as the site to construct its new headquarters building (the "Proposed Development"). The property is located on the south side of Sunset Hills Road, north of the Dulles Airport Access Road and west of Hunter Mill Road. The site is more specifically identified as Fairfax County Tax Map 18-3 ((1)) 11-B1 (the "Property"). The Property is zoned Planned Development Commercial ("PDC") and is currently vacant.

Currently, the Property is owned by BP Reston Eastgate, Inc., an affiliate of Boston Properties, Inc. The Applicant is the contract purchaser of the Property.

The Applicant seeks approval of a Conceptual Development Plan Amendment ("CDPA") and Final Development Plan Amendment ("FDPA") to permit construction of the new headquarters building. The Proposed Development will replace previous approvals for three office buildings and extensive surface parking with an understated building nestled in the woods with a high-quality, LEED site design that minimizes disturbance of the existing environment.

Prior Zoning Approvals and Existing Conditions

In May 1999, the Planning Commission and Board of Supervisors approved FDP/PCA/CDP 86-C-054 to permit development of up to 357,694 square feet (.35 FAR) of office use in three buildings (the "Prior Zoning Approvals"). Each building with a maximum of 140,000 square gross feet, five stories and a 75' height limit. As part of these approvals, the then-applicant agreed to a set of proffered conditions and development conditions that regulate the use, intensity and development of the Property, including a .35 maximum FAR, 40% minimum open space and 1,187 parking spaces.

Proposed Development

General Dynamics' corporate headquarters currently is leasing 175,000 square feet of space in the Fairview Park area of Fairfax County in a multi-tenant office building it shares with other companies and a ground-floor, public restaurant. The company has multiple business units that

occupy office spaces all over the world, including over 1,000 employees in Fairfax and 8,000 employees throughout Virginia.

The Applicant considered hundreds of sites across the United States, the Washington, DC, region and Fairfax County before settling on the Property in Reston. The Applicant chose this location and the Property because the natural features of the site afford privacy and allow the Proposed Development to integrate harmoniously with the surrounding property uses.

Building and Site Design: The Proposed Development includes a single office building of five (5) stories above grade with approximately 160,000 square feet of office space in an initial phase to accommodate approximately 175 full time employees and independent contractors when the facility opens. The basement level will contain office and conference space, as well as a small garden deck extending out into the western portion of the Property to allow employees to walk out into the woodlands adjacent to the building. The first two floors of the building are a two story lobby/atrium that overlooks the western portion of the Property's natural landscape, which the Applicant intends to preserve to the extent possible.

The remaining three floors would be occupied by additional conference and office space. The building height will be generally flush with the heights of the abutting tree line, thereby limiting visibility to and from the Dulles Airport Access Road and Sunset Hills Road. Parking will be accommodated through a combination of at least 250 surface and structured parking spaces. 170 parking spaces will be provided beneath the building in below-grade structured parking to accommodate the Applicant's employees. Adjacent to the arrival plaza, additional parking spaces will be placed throughout a thoroughly treed and landscaped surface parking lot in an effort to mitigate any negative visual effects to surrounding residents and to create a park-like experience for employees and visitors who park there. A second surface lot on the south side of the building will accommodate a very small number of additional surface spaces for use by employees who require access to the loading area.

The Applicant is also proposing two options for future expansion; Option 1 is an up to 30,000 square foot addition at the roof level, effectively creating a sixth floor. Option 2 is an up to 30,000 square foot expansion of building floors one through five on the north side of the building towards Sunset Hills Road, bringing the total possible square footage of the Proposed Development to 190,000 square feet. These options are mutually exclusive and could not be implemented at the same time. In conjunction with the building expansion, the Applicant also could accommodate additional parking spaces in an extension of the surface lot adjacent to the arrival plaza. Construction of the additional parking spaces is not necessarily tied to the building expansion should the Applicant later determine that it requires more parking than was initially constructed, however unlikely that may be given the Applicant's expected occupancy.

In order to address necessary security needs of the Applicant, a security fence will encircle a portion of the Property to ensure only badged-employees and approved visitors enter the site. To this end, a small arrival pavilion will be situated near the entrance to the Property to badge-in employees and check the identification of any visitors. This security facility has intentionally been positioned as to not be visible from Sunset Hills Road, furthering the design concept of understated development.

The building footprint efficiently uses the land area and present topography of the Property to provide an inventive site design that allows the building to nestle into the Property's existing grade and look out over the landscape of the western side of the parcel. This is particularly important to the Applicant considering the quality of existing vegetation and trees on the western portion of the site versus the lower quality vegetation and trees on the eastern portion of the site. The site layout also provides the opportunity for supplemental planting and landscaping between the right-of-way and the edge of the surface parking lot to further screen the Proposed Development from surrounding properties along Sunset Hills Road.

Vehicular and Pedestrian Access: The main vehicular access point will be at the eastern end of the Property off Sunset Hills Road. Privacy and security are paramount to the Applicant, and the eastern entrance provides the Applicant the opportunity to avoid a more well-traveled intersection and have a lengthier driveway. The entrance will consist of three merged lanes: one lane for entering the site and two lanes to exit the site (left and right turn lanes). In order to mitigate any potential impacts of the eastern entrance on the residence opposite it, the Applicant placed the arrival pavilion deep enough into the site to ensure it is approximately 300 feet from this residence and is hidden behind and below proposed and existing landscaping.

This entrance point was also chosen in part because of the quality of vegetation on the western portion of the site, referenced above. The Applicant's goal is to do as little clearing as possible of quality vegetation in order to accommodate the necessary security entrance and driveway. By having an eastern entrance and preserving the western half of the Property the amount of quality trees removed from the site is significantly lower and the scenic views over the western portion can be utilized by the Applicant. Any clearing that would be necessary to accommodate a western access point would also eliminate trees that currently help screen area residents from the DAAR.

The Proposed Development includes an internal exercise trail that explores the tree preservation area on the western portion of the Property and is available for use by all employees and approved visitors. Pedestrians will access the site from the proposed multi-purpose trail along Sunset Hills Road through a secured gate that will only allow badged-employees access to the Property. This access point is located east of the building adjacent to the surface parking lot, in order to provide pedestrians direct access to the front of the building.

Open Space and Internal Amenities: The Proposed Development contains approximately 84.12% open space. This is *significantly* higher than the only 15% required under the Zoning Ordinance in the PDC district and the 40% required under the Prior Zoning Approvals.

In regards to internal amenities, the Proposed Development includes an indoor fitness center for use by the Applicant's employees and an internal exercise trail that employees can access directly from the building.

Stormwater Management: The Applicant will use a variety of tools to manage and treat stormwater on the Property, including possible jelly fish filters, vaults, and cisterns. The CDPA/FDPA sheets provide additional details on these facilities.

Conformance with the Fairfax County Comprehensive Plan

The Fairfax County Board of Supervisors adopted the Reston Transit Station Areas Comprehensive Plan Amendment on February 11, 2014 to plan for the arrival of the Silver Line and the construction of three Metro stations in Reston. Phase 1 of the Silver Line began passenger service of July 26, 2014, terminating at the Wiehle-Reston East Station, which has exceeded ridership projections since its opening. The Reston Town Center and Herndon Metro stations will be served by Phase 2 of the Silver Line.

The Property is located in the Reston East, Non-Transit Oriented Development District within the Transit Station Area (the "Reston East District") and is currently developed and planned for low-density office uses with intensities up to .50 FAR. This district is also planned to serve as a transition to the low-density residential neighborhoods in the surrounding area. The Proposed Development supports the Plan's recommendations by keeping an employment activity focus and committing to a minimalistic impact in order to truly serve as a transition to adjacent residential neighborhoods.

Standards for Planned Developments

Pursuant to Section 16-101 of the Zoning Ordinance, the Proposed Development will comply with the following standards for planned developments:

1. *The planned development shall substantially conform to the adopted comprehensive plan with respect to type, character, intensity of use and public facilities. Planned developments shall not exceed the density or intensity permitted by the adopted comprehensive plan, except as expressly permitted under the applicable density or intensity bonus provisions.*

As indicated above, the Proposed Development conforms to the use and intensity recommendations in the Plan. The proposed use will result in a maximum FAR of .20 comprised of only office uses, which is well below the maximum density. Additionally, the low-density of the Proposed Development is in conformance with the recommendation that the Reston East District serve as a transition to nearby neighborhoods.

2. *The planned development shall be of such design that it will result in a development achieving the stated purpose and intent of the planned development district more than would development under a conventional zoning district.*

The PDC district "is established to encourage innovative and creative design of commercial development" that will not result in detrimental effects to the neighboring residential properties. With an original, high-quality design, the Proposed Development will achieve the stated purpose for the PDC district. The creative design of the building and site minimize the impact of the Proposed Development on the surrounding properties. Also, an understated impact is the *goal* of the Applicant.

3. *The planned development shall efficiently utilize the available land, and shall protect and preserve to the extent possible all scenic assets and natural features such as trees, streams and topographic features.*

The layout of the building maximizes the shape of the parcel, in order to save the largest amount of the Property's natural environment. The building and entrance will be placed on the Property facing the more expansive western portion of the Property to take advantage of the natural vegetation and scenic views. By utilizing structured parking under the building the Applicant is able to further minimize the impact of the Proposed Development on the natural features of the Property.

4. *The planned development shall be designed to prevent substantial injury to the use and value of existing surrounding development, and shall not hinder, deter or impede development of surrounding undeveloped properties in accordance with the adopted comprehensive plan.*

The Proposed Development's low occupancy results in minimal impact to existing traffic patterns in the area, especially when compared to the Prior Zoning Approvals. The vision for the Proposed Development will maintain and enhance existing landscape features along Sunset Hills Road as not to disturb residential property owners on the north side of Sunset Hills Road.

5. *The planned development shall be located in an area in which transportation, police and fire protection, other public facilities and public utilities, including sewerage, are or will be available and adequate for the uses proposed; provided, however, that the applicant may make provision for such facilities or utilities which are not presently available.*

These public facilities and utilities are available at the Property.

6. *The planned development shall provide coordinated linkages among internal facilities and services as well as connections to major external facilities and services at a scale appropriate to the development.*

The Proposed Development includes an indoor fitness center and internal exercise/walking trail for use by employees. Employees will have direct, convenient access to both amenities from inside the building. External connections are not appropriate for the Proposed Development considering the security needs of the Applicant. Accordingly, any connection to off-site sidewalks or trails will include a small security access gate where employees must badge onto the Property.

Requested Modifications

Zoning Ordinance Modifications Requested

1. Section 11-203: Off-Street Loading: The Applicant seeks to reduce the number of loading spaces required from five spaces to two spaces. The Applicant believes two loading spaces are sufficient to serve a building of this size and occupancy. The location of the loading spaces will adequately and conveniently serve the Proposed Development.

2. Section 13-304: Barrier Requirement: The Applicant seeks a modification to allow a security fence in lieu of one of the required barriers. The Applicant's security needs require this modification and provide justification for this request.

3. Section 10-104: Accessory Uses Regulations: The Applicant seeks a modification to increase the maximum fence height to 10 feet to allow for an adequate security fence.

4. Section 11-104: Minimum Required Spaces for Commercial Uses: The Applicant seeks to reduce the number of required parking spaces from 494 to 250. The next section below provides additional details and justification for this request.

Parking Reduction

The Applicant requests a reduction in the required number of parking spaces to fit its unique needs and building design. According to Section 11-104 (14) (C) of the Zoning Ordinance the Proposed Development is required to have 2.6 parking spaces per 1,000 square feet from gross floor area. As referenced above, the Proposed Development's initial phase includes a single building totaling 160,000 square feet, with at least 250 structured and surface parking spaces and capability, if warranted, to stripe additional surface spaces in an area extended east towards the entry drive from the proposed surface lot adjacent to the arrival plaza. This brings the total to at least 250 parking spaces for 190,000 square feet of office space. This development potential equates to a requirement of 494 parking spaces for the Proposed Development. For the reasons set forth below, the Applicant requests that the parking requirement be reduced from 494 spaces to 250 spaces.

As noted above, the Proposed Development will be a headquarters facility, unique in its design and utilization. As with the current headquarters facility in Falls Church, none of the employees of any of the Applicant's business units will be located at this new facility. Only employees who are assigned to the headquarters will be housed in this facility. These headquarters employees are those involved in central management of the corporation, which includes accounting, legal, central human resources and the executive team. With a projected occupancy of only 175 employees, that is approximately 915 square feet per employee, a ratio that is more than five times less dense than current office utilization trends. With 250 parking spaces, the facility will have 1.42 parking spaces per employee. Assuming the extra 30,000 square feet of space is built in the future, the likely maximum utilization would be 200 employees, or 950 square feet per employee. This ratio is still over four times less intense than current market demand.

	Square Feet ("SF")	**Parking Spaces**	**Employees**	**SF per Employee**	**Parking Spaces per Employee**
Phase 1	160,000	250	175	915	1.42
Phase 2	190,000	250	200	950	1.25

These occupancy levels are unlikely to change significantly absent a change in the Applicant's overall business model and direction. The ability to secure a significant parking reduction was a large part of the Applicant's decision to remain in Fairfax County, and the design of the parking facilities to be constructed with the Proposed Development is a critical part of the overall design plan. A separate parking study based on these occupancy levels has been performed by Wells & Associates and provided to the County under separate cover.

Conclusion

The Proposed Development provides an exciting economic development opportunity for Fairfax County and more than fulfills the Comprehensive Plan's recommendations for the Reston East District by developing low-density office space that is both innovate and cohesive with surrounding uses. Additionally, the Property is currently vacant and under-utilized.

The Applicant has been proactive in sharing its plans with the County, and the Proposed Development will be a positive contribution to Sunset Hills Road, surrounding property owners and the Reston East District as a whole.

REZONING AFFIDAVIT

133421a

DATE: August 12, 2016
(enter date affidavit is notarized)

I, Amanda R. Williams, do hereby state that I am an
(enter name of applicant or authorized agent)

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

in Application No.(s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number(s), e.g. RZ 88-V-001)

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

==========

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

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

NAME (enter first name, middle initial, and last name)	**ADDRESS** (enter number, street, city, state, and zip code)	**RELATIONSHIP(S)** (enter applicable relationships listed in **BOLD** above)
General Dynamics Corporation Agents: M. Amy Gilliland Jason W. Aiken Kenneth R. Hayduk Scott A. Hoffman Megan D. Hawk	2941 Fairview Park Drive Falls Church, VA 22042	Applicant/Contract Purchaser
BP Reston Eastgate, LLC Agents: Jake J. Stroman Kenneth F. Simmons Peter D. Johnston	C/O Boston Properties 2200 Pennsylvania Ave NW Suite 200W Washington DC 20037	Title Owner

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

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

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

133421a

Rezoning Attachment to Par. 1(a)

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number (s))

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

NAME (enter first name, middle initial, and last name)	**ADDRESS** (enter number, street, city, state, and zip code)	**RELATIONSHIP(S)** (enter applicable relationships listed in **BOLD** above)
Urban Engineering & Associates, LLC Agents: Clayton C. Tock, PE Eric S. Siegel, PE Lheep (nmi) Kim, PE	7712 Little River Turnpike Annandale, VA 22003	Engineer/Agent
M.J. Wells & Associates, Inc. Agents: Robin L. Antonucci Terence J. Miller William F. Johnson Kevin R. Fellin Jamie L. Milanovich John F. Cavan, IV Christopher L. Kabatt Courtney J. Menjivar Brian J. Horan Justin B. Schor	1420 Spring Hill Road Suite 610 McLean, VA 22101	Transportation Consulant/Agent
Lehman Smith McLeish, PLLC Agents: Debra A. Lehman Smith James Black McLeish III Robert C. Grabarz Donald L. Morphy Michael D. Meizen	1212 Bank St NW Washington, DC 20007	Architect/Agent
Peter Walker and Partners Landscape Architecture, Inc. Agents: Peter E. Walker Douglas R. Findlay Julie D. Canter David E. Walker Adam (nmi) Greenspan Conrad W. Lindgren Jay A. Swaintek Michael C. Dellis Todd T. Mead Steve J. Tycz Eustacia L. Brossart Martin Keith Poirier	739 Allston Way Berkeley, California 94710	Landscape Architect/Agent

(check if applicable) [✓] There are more relationships to be listed and Par. 1(a) is continued further on a "Rezoning Attachment to Par. 1(a)" form.

Rezoning Attachment to Par. 1(a)

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DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number (s))

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

NAME (enter first name, middle initial, and last name)	**ADDRESS** (enter number, street, city, state, and zip code)	**RELATIONSHIP(S)** (enter applicable relationships listed in **BOLD** above)
Cooley, LLP Agents: Antonio J. Calabrese, Esq. Mark C. Looney, Esq. Colleen P. Gillis, Esq. Jill S. Parks, Esq. Brian J. Winterhalter, Esq. Amanda R. Williams, Esq. Jeffrey A. Nein, Planner Ben I. Wales, Planner Molly M. Novotny, Planner Katherine P. Humphrey, Planner (former) Matthew S. Diana, Planner Jason L. Beske, Planner Samantha R. Steketee, Planner	11951 Freedom Drive Reston, VA 20190	Attorney/Agent

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

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for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number(s))

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

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

CORPORATION INFORMATION

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
General Dynamics Corporation
2941 Fairview Park Drive
Falls Church, Virginia 22042-4513

DESCRIPTION OF CORPORATION: (check one statement)

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

NAMES OF SHAREHOLDERS: (enter first name, middle initial, and last name)
General Dynamics Corporation is a publicly traded company listed as GD on the NYSE.

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name & title, e.g. **President, Vice President, Secretary, Treasurer,** etc.)
Phebe N. Novakovic, Chairman, Chief Exec. Officer
Mary T. Barra, Dir. & Chairman, Finance & Benefit Plans Comm.
Nicholas D. Chabraja, Director
James S. Crown, Lead Dir. & Chairman, Nominating & Corp. Gov. Comm.

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

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

Rezoning Attachment to Par. 1(b)

133421a

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number (s))

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

General Dynamics Corporation (continued)
2941 Fairview Park Drive
Falls Church,Virginia 22042-4513

DESCRIPTION OF CORPORATION: (check one statement)

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

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

General Dynamics Corporation is a publicly traded company listed as GD on the NYSE.

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)

Rudy F. deLeon, Director

William P. Fricks, Dir. & Chairman, Audit Comm.

John M. Keane, Director

Lester L. Lyles, Director

Mark M. Malcolm, Director

James N. Mattis, Director

William A. Osborn, Dir. & Chairman, Compensation Comm.

Laura J. Schumacher, Director

John P. Casey, Exec. VP

S. Daniel Johnson, Exec. VP

Mark C. Roualet, Exec. VP

Robert W. Helm, Senior VP, Planning & Dev.

M. Amy Gilliland, Senior VP, HR & Admin.

Jason W. Aiken, Senior VP, CFO

Gregory S. Gallopoulos, Senior VP, GC & Secretary

Ira P. Berman, VP

Mark L. Burns, VP

Daniel G. Clare, VP

David H. Fogg, VP & Treasurer

Jeffrey S. Geiger, VP

Frederick J. Harris, VP

Kenneth R. Hayduk, VP & Asst. Treasurer

Thomas W. Kirchmaier, VP

Kimberly A. Kuryea, VP & Controller

Christopher (nmi) Marzilli, VP

Alfonso J. Ramonet, VP

Robert E. Smith, VP

Gary L. Whited, VP

Michael S. Wilson, VP (former)

Julie P. Aslaksen, Asst. Secretary

John F. Wethern, Asst. Treasurer

Roberto (nmi) Zornoza, Asst. Treasurer

Additions:

Peter A. Wall, Dir.

Firat (nmi) Gezen, VP

Yetunde A. Otitoju, Asst. Treasurer

(check if applicable) ☑ There is more corporation information and Par. 1(b) is continued further on a "Rezoning Attachment to Par. 1(b)" form.

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Rezoning Attachment to Par. 1(b)

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for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number (s))

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
BP Reston Eastgate, LLC
C/O Boston Properties
2200 Pennsylvania Ave NW, Suite 200W
Washington, DC 20037

DESCRIPTION OF CORPORATION: (check one statement)

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

NAMES OF THE SHAREHOLDER: (enter first name, middle initial, and last name)
Boston Properties Limited Partnership, Sole Member

==========

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)
None

==========

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

DESCRIPTION OF CORPORATION: (check one statement)

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

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

==========

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)

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

Rezoning Attachment to Par. 1(b)

133421a

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number (s))

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

Boston Properties, Inc.
800 Boylston Street, Suite 1900
Boston, MA 02199

DESCRIPTION OF CORPORATION: (check one statement)

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

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

Boston Properties, Inc. is a publicly traded company listed as BXP on the NYSE.

==========

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)

Peter G. Back, VP Construction
Stacey A. Baker, VP Leasing
Robert A. Barrasso, VP Property Acctng
John K. Brandbergh, Sen VP Leasing
Helene R. Bryks, VP, Counsel
Frank D. Burt, Sen VP, General Counsel, Sec.
Gregory A. Butler, VP, Reg. Controller
Michael A. Cantalupa, Sen VP Dev.
Bruce L. Christman, Sen VP, Reg GC & Ass. Sec.
Keli (nmi) Colby, VP, Counsel, Ass. Sec.
Steven R. Colvin, Sen VP, Prop Manager
Lynne P. Coville, VP Const
Frederick J. DeAngelis, Sen VP, Sen Couns
Mark J. Denman, VP Const
Mark D. Denny, VP, Regional Controller
Rodney C. Diehl, Sen VP Leasing
Kelli A. DiLuglio, Ass Sec
Anne B. DuMont, VP Leasing
Carol B. Einiger, Director
Richard H. Ellis, VP Development
Jacob A. Frenkel, Director
Donna (nmi) Garesche, VP, HR
Jeffrey (nmi) Garner, VP Engineering
Amy C. Gindel, Sen VP Finance & Planning
Robert S. Hamilton, VP, Reg. Controller
James A. Hart, VP Development
Thomas L. Hill, Sen VP Prop Management
Mark E. Hockenjos, VP Prop Management
J. Michael Holland, VP Construction
Franklin S. Hyre, III, VP Leasing
Peter D. Johnston, Exec. VP, Washington DC Region
Jonathan L. Kaylor, Sen VP Leasing
Janet (nmi) Kerr, VP Risk Management
Eric G. Kevorkian, Sen VP, Sen Corporate Couns, Ass. Sec.
Joel I. Klein, Director
Bryan J. Koop, Exec. VP, Boston Region
Jonathan B. Kurtis, Sen VP Construction
Michael E. LaBelle, Exec. VP, CFO & Treas
Andrew D. Levin, Sen VP, Leasing
Douglas T. Linde, Pres., Dir.
Matthew J. Lustig, Dir.
Jeanne (nmi) Madden, VP, Reg. Controller
James J. Magaldi, Sen. VP, Finance & Capital Markets
Matthew W. Mayer, Sen VP, Reg GC & Ass. Sec.
Laura D. McNulty, Sen VP Prop
David E. Miller, VP Construction
Richard T. Monopoli, VP Development
Steven P. Morken, VP Construction
Thomas J. O'Connor, VP Acquisitions
Jonathan (nmi) Olson, VP Construction
Peter V. Otteni, Sen. VP Construction
Alan J. Patricof, Director
Edward D. Penn, VP, Reg. Couns, Ass Sec.
Robert E. Pester, Exec. VP, SF Region
Jeffrey S. Phaneuf, VP Finance & Planning
David (nmi) Pigott, VP, Application Dev.
John F. Powers, Exec. VP, NY Region
David C. Provost, Sen VP Leasing
Jonathan S. Randall, Sen VP Construction
Raymond A. Ritchey, Sen. Exec. VP
Michael J. Rowe, VP Financial Reporting
Robert A. Schubert, Sen VP Construction
Michael J. Schumacher, VP Construction
Peter V. See, Sen VP, Property Mgmt.
Ivan G. Seidenberg, Director
Kevin T. Sheehan, VP Development
Christine (nmi) Shen, VP Reg Coun Ass. Sec
Barney H. Silver, VP, Construction
Lori W. Silverstein, Sen. VP, Controller
Kenneth F. Simmons, Sen VP Dev.
Carl W. Slagle, VP Construction
R. David Stewart, VP Development
Gregory M. Storrs, VP Leasing
John J. Stroman, VP Development
Owen D. Thomas, CEO, Director
Madeleine C. Timin, Sen VP, Reg. GC & Ass. Sec.
Martin (nmi) Turchin, Director
David A. Twardock, Director
Melanie J. Waldron, VP, Regional Prop. Man.
James J. Whalen, Sen VP and CIO
Maura L. Wheet, VP Tax
Kathleen (nmi) Yuergens, VP Counsel
Mortimer B. Zuckerman, Exec. Chairman

(check if applicable) ☑ There is more corporation information and Par. 1(b) is continued further on a "Rezoning Attachment to Par. 1(b)" form.

FORM RZA-1 Updated (7/1/06)

133421a

Rezoning Attachment to Par. 1(b)

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number (s))

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
Boston Properties, Inc. (continued)
800 Boylston Street, Suite 1900
Boston, MA 02199

DESCRIPTION OF CORPORATION: (check one statement)

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

NAMES OF THE SHAREHOLDER: (enter first name, middle initial, and last name)
Boston Properties, Inc. is a publicly traded company listed as BXP on the NYSE.

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)
Additions:
W. Tod McGrath, VP, Finance
Daniel G. Murtagh, VP, Engineering
Patrick (nmi) Mulvihill, VP, Leasing

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

DESCRIPTION OF CORPORATION: (check one statement)

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

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

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)

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

Rezoning Attachment to Par. 1(b)

133421a

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number (s))

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
Urban Engineering & Associates, LLC
7712 Little River Turnpike
Annandale, VA 22003

DESCRIPTION OF CORPORATION: (check one statement)

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

NAMES OF THE SHAREHOLDER: (enter first name, middle initial, and last name)
J. Edgar Sears, Jr.
Brian A. Sears

==========

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)
None

==========

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
M.J. Wells & Associates, Inc.
1420 Spring Hill Road, Suite 610
Tysons, VA 22102

DESCRIPTION OF CORPORATION: (check one statement)

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

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)
M.J. Wells & Associates, Inc. Employee Stock Ownership Trust. All employees are eligible plan participants; however, no one employee owns 10% or more of any class of stock.

==========

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)
None

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

Rezoning Attachment to Par. 1(b)

133421a

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number (s))

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
Lehman Smith & McLeish, PLLC
1212 Bank Street NW
Washington, DC 20007

DESCRIPTION OF CORPORATION: (check one statement)

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

NAMES OF THE SHAREHOLDER: (enter first name, middle initial, and last name)
Debra A. Lehman Smith
James Black McLeish III

==========

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)
None

==========

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
Peter Walker and Partners Landscape Architecture, Incorporated
739 Allston Way
Berkley, California 94710

DESCRIPTION OF CORPORATION: (check one statement)

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

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)
Peter E. Walker
Douglas R. Findlay
David E. Walker
PWP Employee Stock Ownership Plan (ESOP)

==========

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name, and title, e.g. **President, Vice-President, Secretary, Treasurer**, etc.)
Peter E. Walker, Officer
Douglas R. Findlay, Officer
Sandra (nmi) Harris, Officer

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

REZONING AFFIDAVIT

133421a

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number(s))

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

PARTNERSHIP INFORMATION

PARTNERSHIP NAME & ADDRESS: (enter complete name, number, street, city, state and zip code)
.Boston Properties Limited Partnership
800 Boylston Street, Suite 1900
Boston, MA 02199

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

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

Boston Properties, Inc. - General Partner

There are over 200 limited partners in this real estate investment fund, none of whom own 10% or more of BP Reston Eastgate, LLC

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

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

133421a

Rezoning Attachment to Par. 1(c)

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number (s))

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

Cooley LLP
11951 Freedom Drive
Reston, VA 20190

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

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

Gian-Michele a Marca
Jane K. Adams
Peter M. Adams
Maureen P. Alger
DeAnna D. Allen
Mazda K. Antia
Orion (nmi) Armon
Gordon C. Atkinson
Michael A. Attanasio
Jonathan P. Bach
Charles J. Bair
Ryan E. Blair
Celia Goldwag Barenholtz
Frederick D. Baron
Matthew S. Bartus
Michael D. Basile
Keith J. Berets
Ann (nmi) Bevitt
Laura Grossfield Birger
Thomas A. Blinka
Nicholas (nmi) Bolter
Barbara L. Borden
Jodie M. Bourdet
Wendy J. Brenner
David (nmi) Bresnick
Matthew J. Brigham
James P. Brogan
Nicole C. Brookshire
Matthew D. Brown
Alfred L. Browne III
Matthew T. Browne
Peter F. Bums
Blain B. Butner
John T. Byrnes
Robert T. Cahill
Antonio J. Calabrese
Christopher C. Campbell
William Lesse Castleberry
Lynda K. Chandler
Adam C. Chase
Reuben H. Chen
Dennis (nmi) Childs
William T. Christiansen, II
Sean M. Clayton
John A. Clendenin
Samuel S. Coates (Former)
Jeffrey L. Cohen
Thomas A. Coll
Joseph W. Conroy
Christopher (nrni) Coulter
James R. Crabtree
Carolyn L. Craig
John W. Crittenden
Janet L. Cullum
Nathan K. Cummings
John A. Dado
Scott D. Dailard
Benjamin G. Damstedt
Craig E. Dauchy
Mark J. Deem
Renee R. Deming
Karen E. Deschaine
Darren K. DeStefano
Eric W. Doherty
William P. Donovan, Jr.
Michelle C. Doolin
Joseph M. Drayton
Matthew P. Dubofsky
Christopher B. Durbin
John C. Dwyer
Shannon M. Eagan
Eric S. Edwards
Ivor R. Elrifi
Gordon H. Empey
Sonya F. Erickson
Heidi A. Erlacher
Mark C. Everiss
Michael R. Faber
Lester J. Fagen
Jesse D. Farmer
Brent D. Fassett
John R. Feore, Jr.
Christopher M. Finney
M. Wainwright Fishburn, Jr.
Jennifer Fonner Fitchen (Former)
Thomas J. Friel, Jr.
Francis M. Fryscak
Koji F. Fukumura
James F. Fulton, Jr.
William S. Galliani
W. Andrew H. Gantt III
Eamann J. Gardner
Jon E. Gavenrnan
Colleen P. Gillis
Jonathan C. Glass
Todd J. Gluth
Michael B. Goldstein (former)
Wendy C. Goldstein
Kathleen A. Goodhart
Lawrence C. Gottlieb (former)
Shane L. Goudey
William E. Grauer (former)
Jonathan G. Graves
Jacqueline I. Grise
Kenneth L. Guernsey
Patrick P. Gunn
Divakar (nmi) Gupta
Sarah J. Guske (former)
Jeffrey M. Gutkin
William N. Haddad

(check if applicable) [✓] There is more partnership information and Par. 1(c) is continued further on a "Rezoning Attachment to Par. 1(c)" form.

133421a

Rezoning Attachment to Par. 1(c)

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number (s))

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

Cooley LLP (continued)
11951 Freedom Drive
Reston, VA 20190

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

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

John B. Hale
Danish (nmi) Hamid
Laurence M. Harris
M.R. Hartman III
Bernard L. Hatcher
Matthew B. Hemington
Cathy Rae Hershcopf
Gordon K. Ho
Nicholas A. Hobson
Lila W. Hope
C. Thomas Hopkins
Richard M. Hopley
Mark M. Hrenya
Brendan J. Hughes
Christopher R. Hutter
Jay R. Indyke
Craig D. Jacoby
Eric C. Jensen
Robert L. Jones
Jeffrey M. Kaban
Barclay J. Kamb
Richard S. Kanowitz
Kimberly J. Kaplan-Gross
Matthew A. Karlyn (Former)
Jeffrey S. Karr
Sally A. Kay
Heidi M. Keefe
David R. Kendall
Jason L. Kent
Mehdi (nmi) Khodadad
Charles S. Kim
Kevin M. King
Benjamin H. Kleine
Michael J, Klisch
Jason M. Koral
Barbara A. Kosacz
Kenneth J. Krisko
Carol Denise Laherty
Mark F. Lambert
Matthew E. Langer
Samantha M. LaPine
John G. Lavoie
Brian F. Leaf
Pang (nmi) Lee
Robin J. Lee
Louis (nmi) Lehot (former)
Jamie K. Leigh
Natasha V. Leskovsek
Shira Nadich Levin
Alan (nmi) Levine
Michael S. Levinson
Stephanie (nmi) Levy
Elizabeth L. Lewis
Michael R. Lincoln
James C. T. Linfield
Samuel M. Livermore
Douglas P. Lobel
J. Patrick Loofbourrow
J. Kevin Mills
Mark C. Looney
Robert B. Lovett
Haibo J. Lu
Edward J. Lukins
Andrew P. Lustig
Nicola A. Maguire
Thomas 0. Mason
Jennifer (nmi) Massey
Joshua 0. Mates
James J. Maton
Michael J. McGrail
Becket (nmi) McGrath
John T. McKenna
Bonnie Weiss McLeod
Mark A. Medearis
Laura M. Medina
Beatriz (nmi) Mejia
Craig A. Menden
Erik B. Milch
Chadwick L. Mills
David E. Mills
Patrick J. Mitchell
Ali M.M. Mojdehi
Ann M. Mooney
Timothy J. Moore
M. Howard Morse
Phillip E. Morton
Frederick T. Muto
Danielle E. Naftulin
Ryan E. Naftulin
Jeremy M. Naylor
Stephen C. Neal
Edward J. O'Connell (former)
Ian (nmi) O'Donnell
Rama (nmi) Padmanabhan
Kathleen M. Pakenham
Timothy G. Patterson
Matthew (nmi) Pavao
Sarah E. Pearce
Anne H. Peck
D. Bradley Peck (former)
David G. Peinsipp
Nicole K. Peppe
Kevin J. Perry
Robert W. Phillips
Susan Cooper Philpot
Frank V. Pietrantonio
Mark B. Pitchford
Michael L. Platt
Christian E. Plaza
Aaron M. Pomeroy
Marya A. Postner
Steve M. Przesmicki
Seth A. Rafkin
Frank F. Rahmani
Marc A. Recht
Michael G. Rhodes
Michelle S. Rhyu

(check if applicable) [✓] There is more partnership information and Par. 1(c) is continued further on a "Rezoning Attachment to Par. 1(c)" form.

133421a

Rezoning Attachment to Par. 1(c)

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number (s))

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

Cooley LLP (continued)
11951 Freedom Drive
Reston, VA 20190

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

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

Lyle D. Roberts
John W. Robertson
Ricardo (nmi) Rodriguez
Kenneth J. Rollins
Kevin K. Rooney
Adam J. Ruttenberg
Akash (nmi) Sachdeva
Thomas R. Salley III
Glen Y. Sato
Jessica I. Valenzuela Santamaria
Martin S. Schenker
Joseph A. Scherer (former)
Marc G. Schildkraut
Michelle G. Schulman
Williams J. Schwartz
Ellen A. Scordino
Audrey K. Scott
Tali (nmi) Sealman
John H. Sellers
Ian R. Shapiro
Michael N. Sheetz
C. Christopher Shoff
Jordan A. Silber
Brent B. Siler
Ian D. Smith
Stephen R. Smith
Whitty (nmi) Somvichian
Wayne 0. Stacy (former)
Anthony M. Steigler
Justin M. Stock
Steven M. Strauss
James N. Strawbridge (Former)
M. Anne Swanson
C. Scott Talbot
Mark P. Tanoury
Joseph (nmi) Teja, Jr.
Gregory C. Tenhoff
Michael E. Tenta
Timothy S. Teter
Michael R. Tollini
Steven J. Tonsfeldt
Michael S. Tuscan
Seth (nmi) Van Aalten
Joseph J. Vaughan
Miguel J. Vega
Erich E. Veitenheimer III
Aaron J. Velli
David A. Walsh
Mark B. Weeks
Mark R. Weinstein
Thomas S. Welk
Peter H. Werner
Scott B. Weston
Francis R. Wheeler
John N. Wilkinson
Geoffrey T. Willard
Andrew S. "Drew" Williamson
Peter J. Willsey
Mark Windfeld-Hansen
David J. Wittenstein
Nancy H. Wojtas
Amy M. Wood
J. Peyton Worley
Nan (nmi) Wu
Summer J.Wynn
Babak (nmi) Yaghmaie
Jonathan (nmi) Yorke
David R. Young
Christina (nmi) Zhang
Kevin J. Zimmer

Additions:

Laura A. Berezin
Luke T. Cadigan
John A. Clark
Louise M. Delahunty
Bobby A. Ghajar
Patrick E. Gibbs
Daniel I. Goldberg
Paula E. Holland
Reginald Ronald Hopkinson
Joshua A. Kaufman
Natasha E. Kaye
Mika Reiner Mayer
Barbara R. Mirza
Colm D. Murphy
Garth A. Osterman
Yvan-Claude J. Pierre
Stephen H. Rosen
Andrew E. Roth
Eric J. Schwartzman
Walter (nmi) Wu

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

REZONING AFFIDAVIT

133421a

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number(s))

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

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

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

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

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

NONE

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

REZONING AFFIDAVIT

133421a

DATE: August 12, 2016
(enter date affidavit is notarized)

for Application No. (s): PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01
(enter County-assigned application number(s))

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

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

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

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

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

WITNESS the following signature:

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

Amanda R. Williams, Esq.
(type or print first name, middle initial, last name, and title of signee)

Subscribed and sworn to before me this 12th day of August 2016, in the ~~State~~/Comm. of Virginia, County~~/City~~ of Fairfax.

Betty C. Leyshion
Notary Public

My commission expires: 10/31/2018

Betty C. Leyshion
NOTARY PUBLIC
Commonwealth of Virginia
Reg. #322548
Commission Exp. 10/31/2018

FORM RZA-1 Updated (7/1/06)

County of Fairfax, Virginia

MEMORANDUM

DATE: April 27, 2016

TO: Barbara Berlin, Director
Zoning Evaluation Division, DPZ

FROM: Denise M. James, Chief
Environment and Development Review Branch, DPZ

SUBJECT: **Land Use Analysis:**
PCA 86-C-054-02/CDPA 86-C-054/FDPA 86-C-054-02-01
General Dynamics Corporation

This memorandum, prepared by Jennifer R. Bonnette, includes citations from the Comprehensive Plan that provide guidance for the evaluation of the development plans dated January 4, 2016 as revised through April 1, 2016; and proffers dated April 5, 2016. 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 also compatible with Plan policies.

DESCRIPTION OF THE APPLICATION

The applicant, General Dynamics Corporation, is requesting a conceptual development plan amendment (CDPA)/final development plan amendment (FDPA) and a proffer condition amendment (PCA). The requested amendments are for an approximately 21.69 acre site located on tax map parcel 18-3 ((1)) 11B1 and zoned PDC (Planned Development Commercial District). The application proposes to amend an existing approval for three 5-story (up to 75 foot tall) office buildings at up to 358,000 square feet (0.35 floor area ratio [FAR]) and 1,187 surface parking spaces to develop one 5-6 story, maximum 220,000 square foot (0.23 FAR) office headquarters building with three levels of below grade structured parking designed for 297 spaces and the option for surface parking spaces (if warranted) on the south side of the building. The building will be constructed in two phases. The new proposal expands the amount of open space under the current zoning approval from a minimum of 40 percent to 83 percent in both phases. The property will be designed as a secure facility with fencing around the entire perimeter of the site and contain a 500 square foot arrival pavilion located internally to the site. The office building will be sited to preserve existing trees on the western portion of the property. A walking trail will allow secure access to Sunset Hills Drive along the property's northwestern

frontage near a bus stop.

Phase 1 includes 190,000 square feet (0.20 FAR) of office use with an indoor fitness center, outdoor terrace and five foot wide internal walking trail on the western portion of the site. Phase 2 includes an up to 30,000 square foot expansion of either building floors 2 – 5 on the northern side of the building or an up to 30,000 square foot addition at the roof level, increasing the building height from a maximum of 88 feet to 110 feet (from 5 to 6 stories).

The applicant has requested a parking reduction from the required 572 spaces to 347 spaces for Phases 1 and 2 combined. The parking ratio would be reduced from 2.6 spaces per 1,000 square feet to 1.7 spaces per 1,000 square feet, or a 39 percent reduction.

Approximately 11.86 acres of the 21.69 acre site are proposed to be set aside as tree preservation areas. These areas are located on the western and eastern portions of the site with the proposed office building and other infrastructure located in between. An additional tree preservation area in front of the building may be provided.

LOCATION AND CHARACTER OF THE AREA

The proposed development is located in Reston within the Wiehle-Reston East Transit Station Area on the northeastern edge of the Reston East District in an area planned for office use. The site has significant frontage along the south side of Sunset Hills Drive. To the north are existing low density residential uses zoned R-E and an office park, the Lake Fairfax Business Center, zoned I-3. To the south is the Dulles Airport Access Road (DAAR), to the west is a Virginia Department of Transportation (VDOT) facility, and to the east is the Washington and Old Dominion (W&OD) Trail and beyond that, low density office development zoned I-4.

COMPREHENSIVE PLAN CITATIONS:

The Comprehensive Plan Areawide Recommendations for the Reston Transit Station Areas may be accessed at:

http://www.fairfaxcounty.gov/dpz/comprehensiveplan/area3/reston-restontsas.pdf

In the Fairfax County Comprehensive Plan, 2013 Edition, Area III, Reston, as amended through October 20, 2015, on Pages 158 - 161, the Plan, as applied to the application area, states the following:

"**Reston East District**

The Reston East District is generally bounded by Lake Fairfax Park on the north, by the Equestrian Park subdivision on the northeast, by a Virginia Department of Transportation-owned parcel and Hunter Mill Road on the east, by Sunrise Valley Drive on the south and by the Michael Faraday Court and the Campus Commons office park on the west, as shown on Figure

52. It consists of approximately 276 acres and is bisected by the DAAR. Development on the north side of the DAAR includes Lake Fairfax Business Center which houses office uses, a data center and large fitness facility; an ice rink and a U.S. Post Office facility. Most of the office buildings on the south side of Sunset Hills Road were built in the 1990s and 2000s. They are between 2-5 stories and are mostly served by surface parking although a few buildings do have structured parking. . .

This district is planned to retain its employment activity focus, including office, light industrial, institutional and research and development (R&D) uses up to .50 FAR.

Local-serving amenities including plazas, other urban parks, trails, and public art should be provided throughout the subdistrict to serve local leisure and recreation needs. The exact number of urban parks, their sizes and distribution will be determined by the amount and type of new development, in accordance with the Urban Parks Framework in the Policy Plan. . ."

COMPREHENSIVE PLAN MAP: Office

LAND USE ANALYSIS

Use and Intensity
The proposed office use and intensity of up to a 0.23 FAR is in conformance with the Comprehensive Plan recommendation for office use at up to a 0.50 FAR. The proposal is a significant reduction in intensity and land use impact from the existing approval for an office development at a 0.35 FAR. This current proposal is an improvement as the lower intensity, much greater open space and tree preservation, site design and significantly lower vehicular traffic will reduce the impact on the adjacent low density residential uses at the northeastern edge of the Wiehle-Reston East Transit Station Area.

Streetscaping/Connectivity
The Comprehensive Plan development performance objectives call for new pedestrian and bicycle connections to be provided through complete streets within the TSAs. The applicant is proposing pedestrian and bicycle improvements to the Sunset Hills Drive streetscape, with a pedestrian and bicycle connection to the W&OD Trail. The existing frontage along Sunset Hills Drive does not have pedestrian or bicycle facilities. A 10 foot wide multi-purpose trail will be installed along with a minimum 8 foot wide landscape amenity panel and a 35 foot wide landscape screening area consisting of existing trees and new tree and shrub plantings.

It is requested that the applicant connect the proposed trail to the existing sidewalk on the west side of the W&OD Trail.

Site Design/Architectural Design/Open Space
All development proposals in the Reston TSAs are expected to achieve high quality site and architectural design. The applicant has provided architectural elevations and landscape sections that detail the proposed site design. The building will be built into the grade, with a

three level below grade parking garage. Over half of the site will be designated as tree preservation areas. The northern edge of the building will have a 131 feet setback from the property line. A berm will be constructed between Sunset Hills Drive and the building to further shield the existing low density residential neighborhood located directly to the north from the proposed office development.

The applicant has not provided design details for the landscaped entry plaza that the development plans indicate will include both hardscape and landscape areas. To ensure that this plaza area meets the plan guidance for the provision of high quality design, it is recommended that the applicant provide additional details for this area at this time and not wait until site plan as it is stated on the development plans.

Extensive retaining walls are shown on the development plan along most of the three drive aisles leading from the vehicular entrance to the office building. The drive aisle leading to the below grade parking garage depicts retaining walls ranging up to approximately 8 feet in height. The drive aisle leading to the northern side of the building that contains the loading and utility areas depicts retaining walls which range from approximately 8.5 to 21.5 feet in height. The retaining walls in this area won't be seen from Sunset Hills Drive. However, the applicant has verbally indicated that some of these retaining wall may not be constructed and instead the site will be graded further, thus impacting more of the existing vegetation. While some flexibility may be appropriate, staff is concerned about the potential lack of commitment to maintain the limits of clearing and grading as provided on the development plan which could result in loss of trees and vegetation on the site.

The applicant has provided examples of the "aesthetic" fencing that is proposed along the Sunset Hills Drive frontage, with lower cost fencing to be constructed along the other three sides of the property. Examples or descriptions of the lower cost fencing should be provided. Additionally, it is recommended that a higher quality fencing, similar if not the same as the Sunset Hills Drive fencing be constructed along the W&OD Trail.

While the site is being designed as a secure facility and thus will have security fencing and restricted access to the site, there is an opportunity to provide a wayside or pocket park on the northwest corner of the property at the junction of the proposed multi-purpose trail and the W&OD Trail. The provision of a wayside or park in coordination with the Northern Virginia Regional Park Authority (NVRPA) will help to meet the Comprehensive Plan guidance for development applications to provide publically accessible open space either on-site or off-site. Additionally, a park space would provide the opportunity to meet the Plan recommendation to include public art as part of the development. It is recommended that public art should be provided in consultation with the Initiative for Public Art – Reston (IPAR).

Parking

The Comprehensive Plan encourages non-residential uses to reduce their parking supply below the countywide minimum of 2.6 spaces per 1,000 square feet. The applicant's proposal to reduce the amount of parking spaces by 39 percent is based on the office building's function as a corporate headquarters, with a significantly higher square footage than typically allotted per employee. It is not clear how the parking reduction is to be modified, once implemented,

should the parking prove to be insufficient. The parking reduction request is under review by staff in the Department of Public Works and Environmental Services.

CONCLUSION

Although the application is in conformance with the Comprehensive Plan land use and intensity guidance, several issues outstanding have been identified related to trail connections, public open space and the requested parking reduction. Staff strongly encourages the applicant to coordinate with NVRPA to provide a wayside or pocket park on the northwestern corner of the subject property. Staff further recommends that additional site design details and commitments should be provided as noted above and the details related to the proposed parking reduction should be resolved.

DMJ/JRB

County of Fairfax, Virginia

MEMORANDUM

DATE: April 29, 2016

TO: Barbara C. Berlin, Director
Zoning Evaluation Division, DPZ

FROM: Denise M. James, Chief
Environment and Development Review Branch, DPZ

SUBJECT: **ENVIRONMENTAL ASSESSMENT** for: **PCA 86-C-054-2**
CDPA 86-C-054
FDPA 86-C-054-2-1
General Dynamics

This memorandum, prepared by John R. Bell, includes citations from Comprehensive Plan that provide guidance for the evaluation of the subject Proffered Condition Amendment (PCA), Conceptual Design Plan Amendment (CDPA) and Final Development Plan Amendment (FDPA), application and development plan dated April 1, 2016. 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 conformance with Plan policies.

Note: The applicable Comprehensive Plan citations may be found at the end of this report.

ENVIRONMENTAL ANALYSIS

This section characterizes the environmental concerns raised by an evaluation of this site and the proposed land use. Particular emphasis is given to opportunities provided by this application to conserve the County's remaining natural amenities. Analysis for this application addresses the overall general development plan and proffered commitments for the subject property.

Green Building Practices

The applicant has provided a commitment to attain either LEED-Silver NC or CS in a manner consistent with the guidance of the Comprehensive Plan for the Reston Transit Station Area (TSA). While the text of the proffers for this commitment is generally consistent with standard practices to ensure consistency, some editorial and substantive changes were suggested by staff

in order to ensure that the proffer is fully consistent with the manner in which it is applied in other similar applications. Staff continues to work with the applicant to modify the green building proffers as needed. This issue remains unresolved at this time.

Stormwater Management

The plans depict a variety of proposed stormwater management facilities for the development. It appears that the proposed measures will meet the requirements for water quality and quantity controls for the proposed development. However, the applicant is proposing the use of a level spreader in one area of the site which may not comply with current standards as the proposed location appears to result in potential channelization and erosion downhill of its proposed location. The applicant has also been made aware of the planned future improvements and widening for Sunset Hills Road. This project is likely to result in the need for offsite stormwater management measures, which could impact the subject property. At the present time, it does not appear that the facilities proposed by the applicant would account for this additional runoff. Staff have encouraged the applicant to continue to coordinate with staff from the Virginia Department of Transportation (VDOT) and the Department of Public Works and Environmental Services (DPWES) regarding this issue. Any final determination regarding the adequacy of the proposed facilities will be made by DPWES.

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.

Environment

In the Fairfax County Comprehensive Plan, 2013 Edition, Policy Plan, Environment, as amended through July 1, 2014, on pages 7-9, the Plan states:

"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. . . .

Development proposals should implement best management practices to reduce runoff pollution and other impacts. Preferred practices include: those which recharge groundwater when such recharge will not degrade groundwater quality; those which preserve as much undisturbed open space as possible; and, those which contribute to ecological diversity by the creation of wetlands or other habitat enhancing BMPs, consistent with State guidelines and regulations."

In the Fairfax County Comprehensive Plan, 2013 Edition, Policy Plan, Environment, as amended through July 1, 2014, on pages 19 -21, the Plan states:

"Objective 13: Design and construct buildings and associated landscapes to use energy 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 identify building/energy efficiency measures that identifies both the benefits of these measures and their associated maintenance needs. …

Policy b. Within the Tysons Corner Urban Center, Suburban Centers, Community Business Centers, Industrial Areas and Transit Station Areas as identified on the Concept Map for Future Development, unless otherwise recommended in the applicable area plan, ensure that zoning proposals for nonresidential development or zoning proposals for multifamily residential development incorporate green building practices sufficient to attain certification through the LEED-NC or LEED-CS program or an equivalent program specifically incorporating multiple green building concepts, where applicable, where these zoning proposals seek at least one of the following:

- Development in accordance with Comprehensive Plan Options;

- Development involving a change in use from what would be allowed as a permitted use under existing zoning;

- Development at the Overlay Level; or

- Development at the high end of planned density/intensity ranges. For nonresidential development, consider the upper 40% of the range between by-right development potential and the maximum Plan intensity to constitute the high end of the range.

Where developments with exceptional intensity or density are proposed (e.g. at 90 percent or more of the maximum planned density or intensity), ensure that higher than basic levels of green building certification are attained.

In the Fairfax County Comprehensive Plan, 2013 Edition, Area III, Reston, as amended through October 20, 2015, on page 6, the Plan states:

The Policy Plan provides guidance for establishing green neighborhood and building practices. The planning and design of development within Reston should be guided by green neighborhood principles on place making, creating pedestrian oriented connections, energy conservation, and preservation of natural resources. Non-residential development should be planned and designed to achieve LEED silver or equivalent standards, at a minimum, in light of the level of redevelopment proposed for the TSAs. Residential development should also be guided by the Policy Plan objectives for natural resource conservation, green building, and green neighborhood practices. A broad range of practices can be pursued in support of and in addition to green neighborhood and building certification.

DMJ:JRB

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: August 5, 2016

SUBJECT: PCA 86-C-054-02, CDPA 86-C-054, and FDPA 86-C-054-02-01: General Dynamics Corporation (**REVISED**)
Tax Map Number: 18-3 ((1)) 11-B1

Park Authority staff has reviewed the referenced development plan, draft proffers, and the applicant's response to County comments, each dated August 1, 2016. This memo **replaces** the Park Authority's prior recommendations dated July 18, 2016.

BACKGROUND

The applicant has revised the conceptual development plan to construct its new headquarters on a vacant 21.69-acre parcel of land located on the south side of Sunset Hills Road and west of Hunter Mill Road. In this latest revision, the applicant proposes a single office building of five stories above grade containing approximately 160,000 square feet of office space to accommodate 175 employees. Below-grade and surface structured parking and other onsite amenities will be provided. In addition, the applicant proposes two expansion options: (1) an up to 30,000 square foot addition at the roof level; or (2) an up to 30,000 square foot expansion of building floors two through 5 on the north side of the building. Exercising either option would result in a 190,000 square feet GFA building.

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). The Parks and Recreation element of the Policy Plan includes an Urban Parks Framework that provides an urban parkland standard and detailed guidance on urban park development.

Reston Transit Station Area (TSA) recommendations in the Area III Plan describe the importance of urban parks, trails, and other recreational amenities. Recommendations regarding provision of parks are described in Areawide recommendations (Land Use; Development Review Performance Objectives; and Urban Parks, Recreation Facilities and Cultural Facilities) as well as in individual Transit Station Areas. The subject site is located within the Reston East

subdistrict of the Wiehle-Reston East TSA, along Sunset Hills Road on the north side of the Dulles Toll Road.

Recommendations for the TSA include provision of local-serving parks and amenities in accordance with the Urban Parks Framework, offsetting recreational impacts onsite or at nearby parks, and contributing toward land and improvements to meet athletic field goals set out in the Areawide text (Reston Plan, Wiehle-Reston East Transit Station Area, p. 155).

The Heritage Resources element of the Policy Plan describes, as a goal of the Board of Supervisors, the need to identify, protect, and study the County's historical structures, landscapes, cemeteries, and its historic and Native American archaeological sites. The preservation of these sites serves a public purpose by enhancing the quality of life through aesthetic diversity in the landscape and providing a sense of continuity with the County's historic and prehistoric past. This goal also recognizes that heritage resource preservation requires a commitment from the public and private sectors and from the community. Specific Plan objectives and policies regarding heritage resources include protecting significant sites from degradation or damage and destruction by public or private action; and avoiding adverse impacts to significant heritage resources unless there is no prudent and feasible alternative, in which case, plan and carry out appropriate mitigation activities to minimize the adverse effect (Heritage Resources element, Policy Plan, pages 3-5).

The Upper Potomac Planning District guidance in the Area III Plan provides additional direction. A major objective of the Planning District is to "identify, preserve, and promote awareness of heritage resources through research, survey, and community involvement" (Area III Plan, page 4). Similarly, "in those areas where significant heritage resources have been recorded, an effort should be made to preserve them for the benefit of present and future generations. If preservation is not feasible then the threatened resources should be thoroughly recorded and, in the case of archaeological resources, the data recovered in accordance with countywide policies. Prior to any zoning action, heritage resource staff from the Department of Planning and Zoning should be consulted as to what architectural surveys are necessary to document any on-site cultural resources. Staff from the Cultural Resource Management and Protection Branch of the Park Authority should be consulted to develop a scope of work for any on-site archaeological surveys prior to any development or ground disturbing activity. Should architectural or archaeological resources be discovered that are potentially eligible for inclusion in the National Register [of Historic Places], further survey and testing should occur to evaluate these resources as to their eligibility. If such resources are found to be eligible, mitigation measures should be developed that may include avoidance, documentation, data recovery excavation, and interpretation" (Area III Plan, page 23).

ANALYSIS AND RECOMMENDATIONS

Onsite Urban Parks

The Plan for the Reston Transit Station Area calls for an urban park system to serve residents, visitors and workers. This system should contain a complement of urban park types (pocket parks, civic plazas, common greens, recreation-focused parks, linear parks/trails, and natural resource areas) to serve local leisure needs; support environmental and sustainability goals; and contribute to the area's sense of culture, liveliness, and identity. As described in the Comprehensive Plan, "creation of an urban park network is fundamental to the vision for the

TSAs and to the successful redevelopment efforts around the transit stations" (Area III, Reston Plan, Reston Transit Station Areas, Areawide Recommendations, Urban Parks, Recreational Facilities and Cultural Facilities, p. 147).

Reston Transit Station Area Areawide Recommendations state the following:

> "The urban parkland standard calls for 1.5 acres of urban park space per 1,000 residents and 1.0 acre of urban park space per 10,000 employees that is well integrated into the urban fabric and distinguished from site and public realm landscaping and streetscape features. A range of recreation facilities and park amenities should be incorporated into the urban park spaces to serve the recreation and leisure needs of nearby residents, workers and visitors." (Area III, Reston Plan, Reston Transit Station Areas, Areawide Recommendations, Urban Parks, Recreational Facilities and Cultural Facilities, p. 143).

Applying the above urban parkland standard to the proposed development in the Reston TSA, there is a need for 0.06 acres of urban parkland onsite if 190,000 square feet GFA is assumed. The Plan for the Reston Transit Station Area calls for an urban park system to serve residents, visitors and workers. This system should contain a complement of urban park types (pocket parks, civic plazas, common greens, recreation-focused parks, linear parks/trails, and natural resource areas) to serve local leisure needs; support environmental and sustainability goals; and contribute to the area's sense of culture, liveliness, and identity. As described in the Comprehensive Plan, "creation of an urban park network is fundamental to the vision for the TSAs and to the successful redevelopment efforts around the transit stations" (Area III, Reston Plan, Reston Transit Station Areas, Areawide Recommendations, Urban Parks, Recreational Facilities and Cultural Facilities, p. 147).

The applicant has proffered 0.22-acres of land at the northwestern corner of the property to serve as a public onsite "gateway parcel" (draft proffer #34). This amount is in excess of the generated 0.06-acre need. The applicant has offered to dedicate this park to the Fairfax County Board of Supervisors, with appropriate urban park amenities to be constructed by others. Staff appreciates the applicant's efforts to provide public park space in its development proposal.

Athletic Field Needs

Plan recommendations describe the need for provision of active recreation facilities in the TSAs. The Plan states:

> "A goal of adding capacity equivalent to twelve athletic fields serving Reston should be achieved through development contributions of land and/or facilities. At a minimum, three new full-service athletic fields should be provided within the corridor…Based on the projected redevelopment, the need for 12 fields is equitably fulfilled using a measure of 2.2 million GFA of development per field within the TSA corridor. Implementation of this metric and achievement of active recreation facilities, as well as all other park and recreation facility types, will primarily occur through the development review process." (Area III, Reston Plan, Reston Transit Station Area, Areawide Recommendations, Urban Parks, Recreation Facilities, and Cultural Facilities, Active Recreation Facilities, p. 146)

The parcel was previously approved for three office buildings of up to 140,000 square feet per building – a total of 357,694 square feet. The applicant proposes a reduction to approximately 190,000 square feet; thus no additional athletic field capacity is required.

Natural Resources Impact
The applicant's commitment to preserving the natural resources on site is commendable. Where applicable, all landscaping to be installed should be of non-invasive species to protect the environmental health of the resources. There is an opportunity in this application to provide landscaping that is attractive, filters pollutants and serves an ecosystem function simultaneously. Species should ideally be native to Fairfax County to provide the greatest ecosystem benefit to the county. It is appreciated that the applicant has addressed this concern in draft proffer 15. Additional resources that may be helpful include:

- A listing of common invasive plant species in Northern Virginia: http://alexandriava.gov/uploadedFiles/recreation/parks/InvasiveExoticPlantsThatThreatenParksinAlexandria.pdf

- The Invasive Plant Atlas of the United States which may include less common species that are not on the above list: http://www.invasiveplantatlas.org/ (search by type).

- Native alternatives can be found in Native Plants for Conservation, Restoration, and Landscaping, Virginia Piedmont Region (VA DCR): http://www.dcr.virginia.gov/natural_heritage/documents/pied_nat_plants.pdf

- If there is a question as to whether a species is native to Fairfax County, the applicant should check the Digital Atlas of Virginia Flora at http://vaplantatlas.org.

Cultural Resources Impact
The parcel includes Virginia Department of Historic Resources (VDHR) Site #44FX1569, a Native American quartz quarry. The site was subjected to two Phase II archaeological assessments in 1989 and 2016. Both studies identified the site as a significant prehistoric resource and recommended additional archaeological study and artifact recovery prior to disturbance.

Staff concurs with the Phase II findings and recommends (1) avoiding land disturbance at the site; and (2) if, after evaluating other development alternatives, avoidance is not possible, conducting Phase III archaeological work and data recovery prior to development, as per current Comprehensive Plan guidance. Current plans show extensive land disturbance that would result in the loss of Site #44FX1569 if not properly treated.

Based on the Phase II findings, staff recommends treating the site as eligible for both the National Register of Historic Places and the Fairfax County Inventory of Historic Sites.

The site's existing proffers acknowledge the 1989 Phase II findings (see PCA 86-C-054 approved by the Board of Supervisors on May 10, 1999) and grants the County limited access to the property for archaeological survey and excavation.

Staff appreciates the applicant's willingness to work with the County to address Site #44FX1569. Staff is currently evaluating the timing and resources required, and looks forward to future discussion with the applicant.

SUMMARY OF RECOMMENDATIONS

This section summarizes the recommendations included in the preceding analysis section.

- Site #44FX1569 should be treated as eligible for both the National Register of Historic Places and the Fairfax County Inventory of Historic Sites. Accordingly, avoidance is the preferred treatment option.

- If avoidance of Site #44FX1569 is not possible, staff recommends Phase III treatment activity prior to development and looks forward to working with the applicant toward a positive outcome.

FCPA Reviewer: Ryan J. Stewart
DPZ Coordinator: Mary Ann Tsai

Copy: Cindy Walsh, Director, Resource Management Division
David Bowden, Director, Planning & Development Division
Liz Crowell, Manager, Cultural Resource Management & Protection Branch
Christopher Sperling, Senior Archaeologist, CRMPB
John Rutherford, Archaeologist, CRMPB
Mary Ann Tsai, Staff Coordinator, DPZ
Ryan J. Stewart, Senior Planner, Park Planning Branch
Chron File
File Copy

County of Fairfax, Virginia

MEMORANDUM

DATE: April 20, 2016

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

FROM: Barbara A. Byron, Director
Office of Community Revitalization

SUBJECT: General Dynamics Corporation
PCA 86-C-054-02
CDPA 86-C-054
FDPA 86-C-054-02-01

The Office of Community Revitalization (OCR) has reviewed the plan set, dated April 1, 2016, and draft proffered conditions, dated April 5, 2016, for the above referenced case. The application is for a proffer condition amendment, and CDP/FDP amendments to a prior approval in order to develop (1) 5-story office building to serve as the headquarters for General Dynamics Corporation. The proposed site design takes advantage of much of the existing tree cover and minimizes the development's visual impact on the surrounding area.

The following recommendations are offered for consideration:

1. Streetscape and W&OD Trail Connection:
    a. The applicant has accommodated staff's request for a 10' shared-use path for bicyclists and pedestrians on Sunset Hills Road, and demonstrates a connection to the W&OD trail at the northwest corner of the property. Staff requests that, in addition to the diagonal connection to the W&OD trail across the corner of the subject property (see Figure 1 attached), the shared-use-path also connect to the existing sidewalk on the west side of the trail in order to facilitate efficient movement of pedestrians and bicyclists in both directions (as shown in Figure 2, attached). Should a traffic light be installed at Business Center Drive, and/or a pocket park or wayside area be accommodated on the northwest corner of the applicant's property, a safe and highly visible pedestrian connection to pedestrian facilities west of the W&OD trail could easily be achieved.
    b. Staff strongly encourages the applicant to provide a wayside or pocket park at the northwest corner of the property in order to facilitate the transition from the shared-use path on Sunset Hills Road to the W&OD trail and points farther west. While staff recognizes there is an existing rest area located further south along the W&OD trail, this

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new wayside area would serve a different purpose. The subject property is located at the easternmost edge of the TSA, and therefore this corner provides an opportunity to create a tangible transition from the more suburban edge of the TSA to the more urban center. The applicant should consider incorporating public art, a nod to the history of Reston, and/or wayfinding elements in the design.

c. Staff requests that the applicant provide examples of the character of the streetlights to be provided on Sunset Hills Road. Although specific lights can be chosen at the time of Site Plan submission, the general character and design intent should be established at this time. The streetlights should differentiate between pedestrian and vehicular scale lighting, and staff recommends that the poles and fixtures be of grey metal with a matte or brushed finish, and lights be designed around an arched style fixture with curves and arcs to mimic organic forms.

2. Security Fencing:
   a. The proposed decorative security fencing should be provided along both the Sunset Hills Road and Toll Road frontages to ensure the locations of maximum visibility are the most attractive. The fence along the Sunset Hills Road frontage should have the highest level of design detail, and while the fence along the Toll Road frontage may be of a lower level of design detail, should still be decorative.
   b. The applicant should provide examples of what the non-decorative fencing will look like along the eastern and western property lines. While staff is comfortable with a lower level of design detail in these areas, the fencing will still be visible from the W&OD trail and should blend into the existing tree line.

3. Arrival Court:
   a. The applicant has not provided any details of the arrival court and plaza area, which is meant to serve as an amenity for visitors. For this reason, staff cannot fully evaluate the space. The applicant should provide details of this area for review and comment, or at minimum proffer to ensure the space prioritizes comfortable and safe pedestrian movement, minimizes the amount of area dedicated for vehicles, utilizes both soft landscaping and decorative hardscape materials, and accommodates a central art feature.

Cc. Mary Ann Tsai, AICP, Staff Coordinator, DPZ
Maggie Soffel, AICP, Revitalization Program Manager, OCR
OCR Files

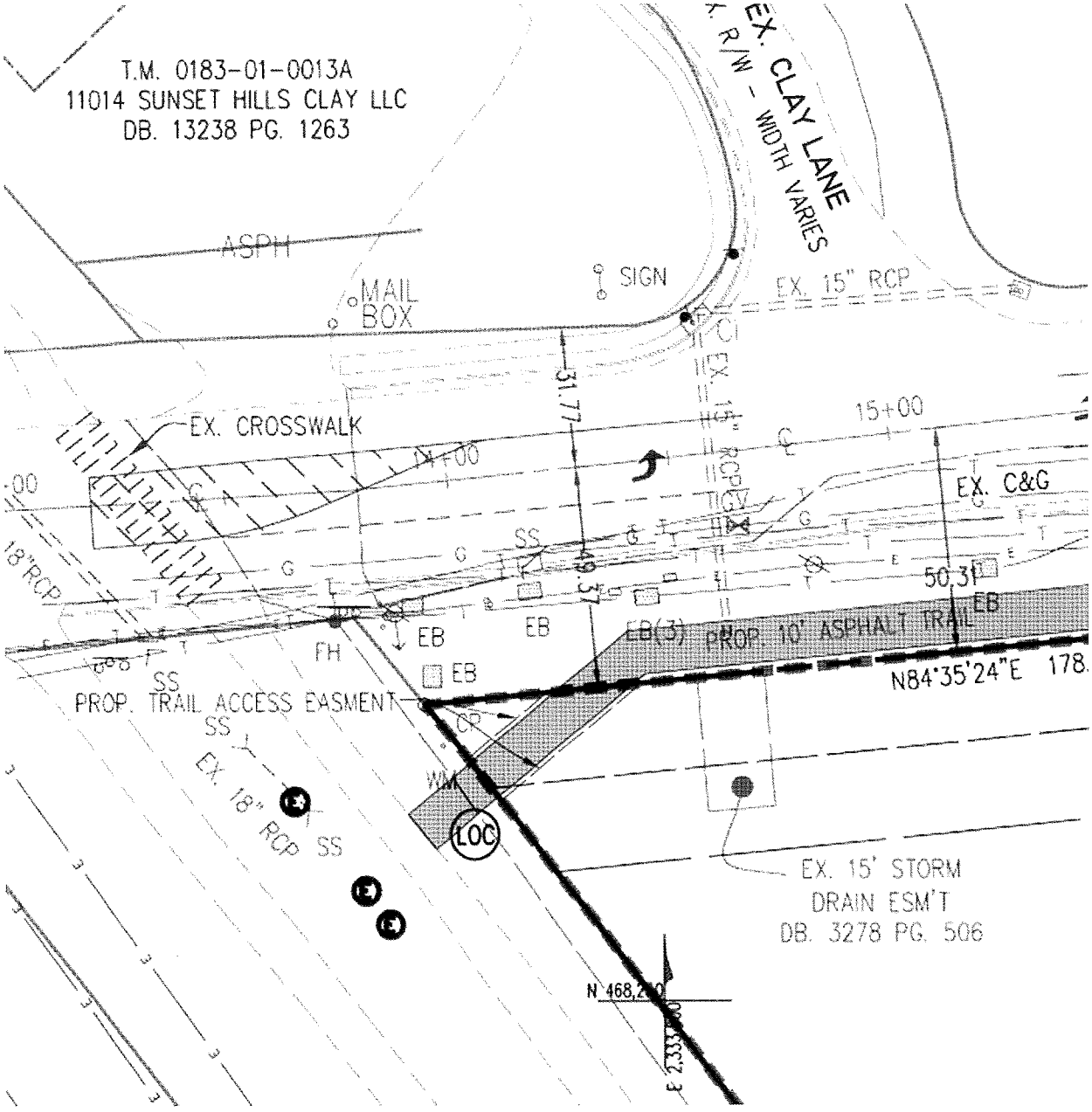

Figure 1: Applicant's proposal

Figure 2: Suggested connection

County of Fairfax, Virginia

MEMORANDUM

DATE: August 18, 2016

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

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

FILE: RZ 86-C-054

SUBJECT: PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01

General Dynamics (Reston Eastgate)
11011 Sunset Hills Road, Reston VA 20190
Tax Map: #18-3 ((1)) 11B1

This department has reviewed the subject application including the Conceptual Development Plan Amendment and Final Development Plan Amendment dated January 4, 2016, as revised through August 1, 2016, and the Proffer Condition Amendment proffers dated August 1, 2016.

The previously approved proffer condition amendment, PCA 86-C-054, included several transportation items encompassing the right-of-way dedication and construction of frontage improvements for a half section of a four lane roadway on Sunset Hills Road, the ability to escrow funds in lieu of construction of the frontage improvements, a traffic signal contribution, identification of site entrance locations, pedestrian improvements, bus shelter improvements, TDM commitments (previously referred to as TSM program), parking, and coordination on a future Sunset Hills Road alignment. The following comments relate to these items, how the current application addresses the previous commitments, and any other items that may be pertinent to the application:

Sunset Hills Road:

- Frontage Improvements & Right-of-Way Dedication- The Comprehensive Plan calls for Sunset Hills Road to be widened to a four-lane roadway. The previous proffers called for the construction of ½ section of a four-lane divided roadway with turn lanes along the frontage of the property. That proffer package also included subsequent proffers that related to the dedication of right-of-way for the construction of the ½ section of a four lane divided roadway. Based on Sheets 5 and 6 of the CPDA/FDPA the right-of-way dedication has been completed during the previously submitted and approved

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site plan. Staff recommends the applicant commit to construct the frontage improvements for a ½ section of the planned four-lane roadway on Sunset Hills in order to comply with the Comprehensive Plan and with the previously approved proffers.

- Waiver of Frontage Improvements & Escrow in Lieu of Construction- The previous proffers allowed the applicant to seek a waiver and escrow funds for Sunset Hills Road frontage improvements. This proffer commitment should be carried forward with an assurance that the escrow will reflect current costs for the project. The escrow should include the costs for materials, construction, utility relocation and stormwater modifications necessary to complete the improvement. The final escrow should be subject to FCDOT approval.

- Future Sunset Hills Road Alignment- The previous proffer to cooperate with FCDOT, VDOT and others on the future alignment of Sunset Hills Road in order to minimize the effect to the residential properties to the north should be carried over in the new proffers.

- Entrance Locations - The applicant had previous approval for the installation of two entrances along Sunrise Valley Drive, referred to as a western and an eastern entrance respectively. Since the submission of the current CDPA/FDPA, staff has preferred a western entrance over the applicant's proposed eastern entrance. Since the previous PCA approval, the Reston Transit Station Areas have been defined and this parcel is located within the TSA boundary. Furthermore, the TSA boundary runs down the middle of Sunset Hills Road which places the residential properties and neighborhoods to the north outside of the TSA district. In staff's opinion, the more appropriate location for an entrance to a commercial property would be a western entrance located away from the residential properties, driveways and neighborhoods. A western entrance would also become the fourth leg of the existing T-intersection of Sunset Hills Road and Business Center Drive. Since the time of the previous PCA approval, a traffic signal has been deemed warranted at Sunset Hills Road and Business Center Drive.

  In their justification for the elimination of the western entrance, the applicant has cited a need for tree preservation on the western portion of the property. Staff understands this initiative however we have requested the applicant consider and design a site sensitive western entrance that would preserve as much of the mature trees as possible. This design discussion never came to fruition.

  It should be noted for the record that any intensification to the property in the future may create issues between the established residential area to the north and a

single point of entry to the property on the eastern part of the site. Staff does not support the installation of a traffic signal at the eastern entrance located directly across and in full view of a residential property if a request was submitted. The previous PCA proffers included language to provide supplemental landscaping on the residential properties in order to minimize the effect the entrance would have on the parcels to the north. Staff recommends this commitment be carried over if supported by the impacted property owners and it does not negatively impact sight distance from the driveways and roadways along Sunset Hills Road.

- Traffic Signal - In relation to the site entrance discussion above, staff recommends the applicant install a traffic signal at the intersection of Sunset Hills Road and Business Center Drive. This would help alleviate any access issues the applicants may face entering and existing the site from the applicant's preferred eastern entrance by providing gaps in the traffic that are not provided under the current stop-controlled intersection. Since the previous approval, a signal at this location has been deemed warranted by VDOT. FCDOT has also collected funds from nearby developments within Business Center Drive for the installation of a signal at this location. These funds can be made available to the applicant in order to help offset the cost of the signal installation.

Pedestrian, Bicycle and Transit Facilities:

- Sunset Hills Road Shared Use Path - The applicant has included a 10-foot shared use path located along the entire property frontage on Sunset Hills Road. Per staff's recommendation, it has been located in its ultimate alignment in order to allow a ½ section of Sunset Hills widening envisioned in the Comprehensive Plan. The applicant has also included the ability to adjust the right-of-way line if the design needs to be modified. This would allow any adjustments at site plan to keep the pedestrian facility within the right-of-way and eligible for state maintenance.

- Connection to the W&OD Trail- The proposed bicycle and pedestrian facilities need to provide connectivity to both the W&OD Trail and to the existing pedestrian network west of the W&OD Trail. The applicant attempted to design a connection to the W&OD Trail that would be in keeping with the Northern Virginia Regional Park Authority (NVRPA) policy regarding 90-degree connections to the Trail. However that design starts to infringe into the proposed park dedication area located in the northeast corner of the site and it deviates away from Sunset Hills Road preventing pedestrians and bicyclists headed westbound to the Wiehle- Reston East Metro Station from continuing across the W&OD trail intersection with Sunset Hills Road. Staff recommends further refinement of this design, in conjunction with NVRPA and

FCDOT input, to provide the most efficient design to achieve the multi-purpose intent of the facilities.

Transportation Demand Management:

- The previously approved PCA included a Transportation System Management (TSM) Program proffer in order to reduce peak-hour single occupant vehicle traffic demands generated by the development. This type of program is now referred to as a Transportation Demand Management (TDM) Program. As the TDM program has matured, standard proffer language has been developed in order to provide clear and consistent framework that defines the TDM program and provided a mechanism to hold the applicant accountable for achieving the TDM trip reduction goal. Staff has several concerns with the proposed TDM language provided by the applicant and we recommend further revision in order to be in keeping with the standard TDM program proffers.

Transportation Fund Contribution:

- On February 11, 2014, the Board of Supervisors approved the Reston Master Plan Special Study (Phase I) Plan Amendment. As part of that approval, Supervisor Hudgins moved that the Board adopt the Planning Commission recommendation to direct staff and "the Planning Commission to develop an inclusive process to prepare a funding plan for the transportation improvements recommended in the Reston Master Plan and report with its recommendations. The funding plan should include arrangements for financing the public share of Reston infrastructure improvements and facilitate co-operative funding agreements with the private sector. The Planning Commission strongly believes that public and private investment in Reston is both critical and responsible for ensuring Reston's future success". We believe the applicant should commit to contribute to the Reston Fund currently being established to in order to address the Reston Master Plan guidance.

cc: Mary Ann Tsai, DPZ-ZED

MAD/EAI

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
4975 Alliance Drive
Fairfax, VA 22030

Charlie Kilpatrick
COMMISSIONER

July 8, 2016

To: Ms. Barbara Berlin
Director, Zoning Evaluation Division

From: Noreen H. Maloney
Virginia Department of Transportation – Land Development Section

Subject: **PCA 86-C-054-02; CDPA 86-C-054 and FDPA 86-C-054-02-01**
Reston Eastgate

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.

A revised plan has been submitted. The below previous comments have been adequately addressed.

- The lane transitions along Sunset Hills Road to and from existing should be shifted further from the property to reduce the curve and offer a smoother transition.
- Curb and gutter should be provided along Sunset Hills Road (property's frontage).
- Paved shoulder should be provided along the opposing side of Sunset Hills Road. The shoulder width of 4' is acceptable.
- Right and left turn lane(s) along Sunset Hills Road should reflect the taper and turn lane length associated with the analysis provided.
- The applicant should provide an easement(s) opposing Business Center Drive for the future installation of a traffic signal.
- The proposed Shared Use Path along Sunset Hills Road will qualify for State maintenance.

County of Fairfax, Virginia

MEMORANDUM

DATE:

TO: Mary Ann Tsai
Zoning Evaluation Division
Department of Planning and Zoning

FROM: Clinton Abernathy, Commercial Revitalization Coordinator
Site Development and Inspections Division
Department of Public Works and Environmental Services

SUBJECT: Reston Eastgate; PCA 86-C-054-02, CDPA 86-C-054, FDPA 86-C-054-02-01; 2016 PCA, CDPA,FDPA Plan Dated January 2016, Revised June 27, 2016; LDS Project #826-ZONA-011-1, Tax Map #018-3-01-011-B1, Hunter Mill District

We have reviewed the subject application, dated June 27, 2016, and offer the following stormwater management comments.

Chesapeake Bay Preservation Ordinance (CBPO)

There is no Resource Protection Area (RPA) on the property.

Floodplain

There no is regulated floodplain on the property.

Water Quality Control Requirements (124-4-2)
The applicant provided computations for the proposed site to show that the water quality requirements of 124-4-2 for new development could be met with combination of DEQ Clearing House approved methods including Jellyfish structures, infiltration and Rainwater Harvesting. The complete BMP design will be reviewed with the site plan. The applicant has shown a possible stormwater management facility that may be constructed at the applicant's option to provide stormwater management for the future ultimate construction of Sunset Hills Road. There are no water quality computations shown within this development plan that shows how water quality control would be achieve for this drainage area.

Department of Public Works and Environmental Services
Land Development Services
12055 Government Center Parkway, Suite 444
Fairfax, Virginia 22035-5503
Phone: 703-324-1780 • TTY: 711 • FAX: 703-653-6678

Water Quantity and Adequacy of Outfall Requirements 124-4-4.

- The applicant provided an outfall analysis to indicate that the requirements of 124-4-4 could be met by the Energy Balance Method from Chapter 124-4-4B3(c). This methods requires that the pre-development runoff based on the site being 100 percent forested in good condition and not the existing condition.

- There is insufficient information in the plan to show how the adequacy of the outfall directly below the outlet pipe of the possible stormwater management facility for the ultimate Sunset Hills Road construction will be met.

Possible Level Spreader Comments

The conditions in Proffer 13 A states the applicant's responsibilities of ensuring the adequate function of level spreader during the construction of site prior to bond release; however, a maintenance agreement for the level spreader structure and onsite drainage way immediately below should be recorded to ensure the long term function of this facility.

Additional Comments from Sheet 8 Plan

1. The location of the sanitary sewer lateral from the proposed building conflicts with the to location of Stormwater infiltration Vault #1.

2. Since the stormsewer pipe flow from Vault #2 is carrying runoff from offsite, then it should be located within a stormsewer easement. In that case, the retaining wall structure should not be located over the pipe.

CAA

cc: Fred Rose, Chief, Watershed Planning & Assessment Branch, Stormwater Planning Division, DPWES
Shahab Baig, P.E., Chief, North Branch, SDID, LDS, DPWES
Zoning Application File

County of Fairfax, Virginia

MEMORANDUM

DATE: July 5, 2016

TO: Mary Ann Tsai, Staff Coordinator
Zoning Evaluation Division, DPZ

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

SUBJECT: Reston Eastgate, PCA 86-C-054-02

I have reviewed the CDPA/FDPA for the above referenced PCA application, stamped as received by the Zoning Evaluation Division on June 27, 2016; and draft proffers, dated June 16, 2016. The following comments are based on this review.

1. **Comment:** Draft proffers address previous comments and recommendations made in the Forest Conservation Branch memo dated May 3, 2016, with the exception of the recommendation for a commitment to maintain 75 percent tree canopy in the Site Amenities Area which is described in draft proffer 17: Forest Management Plan. Commitment to a minimum percentage of tree canopy in the Amenities Area would provide some assurance that significant tree canopy will be retained while giving greater flexibility and freedom for amenity installation than a more prescriptive proffer specifying locations and mitigating impacts of individual amenities.

   Recommendation: Obtain a commitment to maintain 75 percent tree canopy within the Site Amenities Area west of the proposed building.

2. **Comment:** There are significant areas of invasive vegetation, primarily Amur honeysuckle and Japanese stiltgrass within the Site Amenities Area. This vegetation is at a level now that is controllable. If allow to persist these invasive species could become a much great problem in the future.

   Recommendation: Obtain a commitment to provide an invasive vegetation management plan to be implemented with the site plan. Recommended proffer language is as follows:
   "The first and all subsequent submissions of the site plan shall provide for the management and treatment of harmful or invasive plants that may occur in the areas to be left undisturbed that are likely to pose human health problems, or are likely to disrupt or suppress native plants and plant communities. Any work impacting vegetation, leaf litter or soil conditions not specifically addressed in the approved plan shall be subject to the review and written approval of UFMD."

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www.fairfaxcounty.gov/dpwes

3. **Comment:** Several species proposed in the Plant Schedule are not appropriate to the site as they are likely to be the target of pests/disease, have invasive tendencies, or are not typically available as nursery stock. Noted species are as follows:

Pignut hickory	- Not typically available as nursery stock
Black cherry	- tent caterpillar, weedy aggressive nature
Purple-leaf sand cherry	- more suited to northern climates

Recommendation: Require the noted species to be deleted from the Planting Schedule. More appropriate species include the following:

Fagus grandifolia	American beech
Tilia americana	American linden
Amelanchier arborea	serviceberry
Magnolia virginiana	sweetbay magnolia
Clethra alnifolia	summersweet clethra

If there are any questions, please contact me at (703)324-1770.

HCW/
UFMDID #: 210020

cc: DPZ File

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County of Fairfax, Virginia

MEMORANDUM

DATE: AUG 19 2016

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

FROM: William D. Hicks, P.E., Director
Land Development Services
Department of Public Works and Environmental Services

SUBJECT: Parking Requirements for PCA 86-C-054-02/CDPA 86-C-054/FDPA 86-C-054-02-01 Reston Eastgate; Tax Map No. 18-3 ((1)) 11-B1; Hunter Mill District

The applicant, General Dynamics Corporation, is requesting a determination from the Director of the Department of Public Works and Environmental Services (DPWES) under Paragraph 1 of Section 11-101 of the Zoning Ordinance that the amount of parking required under a strict application of the Zoning Ordinance is not applicable to this development in a PDC district because of its unique characteristics and that the number of parking spaces proposed is adequate to serve the proposed use. A parking study (0826-PKS-003-1) for the proposed headquarters office building was submitted in support of the applicant's request. The unique characteristics cited in the study are that, as a corporate headquarters, the office sizes will be larger and consequently the number of employees fewer than a typical office building of comparable size. Based on a review of the submitted parking study, provided herein, staff finds the applicant's underlying argument to be reasonable.

The applicant's request and proposed number of parking spaces are hereby approved under Paragraph 1 of Section 11-101 of the Zoning Ordinance subject to the following conditions and concurrence by the Board of Supervisors with approval of the subject Zoning Application:

- A minimum of 250 parking spaces will be provided at all times for the office development of up to 190,000 gross square feet (GSF) and a maximum of 200 employees except that the required parking may be reduced during construction of Phase II of the development in accordance with Paragraph 1 of Section 11-101 of the Zoning Ordinance.
- The applicant proffers to provide additional parking at a ratio of 0.8 spaces for each additional employee above 200.
- The applicant proffers to perform periodic parking utilization studies and a parking utilization study at any time upon request of the Director of DPWES. All parking utilization studies shall be performed by methods acceptable to the Director of DPWES.
- The applicant proffers to provide additional parking as determined by the Director of DPWES if peak parking utilization exceeds ninety percent (90%) of available supply.

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- Proffers shall be acceptable to the Director of DPWES.

Staff has reviewed the parking proffer (attached), dated August 1, 2016, and determined that it meets the conditions set forth above. Any substantive changes from the draft proffer language in the final proffer will need to be reviewed by staff.

Analysis of Parking Study: The applicant is proposing to develop the 21.7 acre site, zoned PDC, with a five to six story office building constructed in two phases to be used for their corporate headquarters. Phase I would be 160,000 gross square feet (GSF) with 175 employees and Phase II would expand the building up to a maximum of 190,000 GSF with 200 employees. The applicant is proposing to provide 250 parking spaces with the Phase I construction in a three level parking garage beneath the building with additional surface parking. No additional parking will be provided with the Phase II construction. Under the Zoning Ordinance, the parking rate for this office use is 2.6 parking spaces per 1,000 GSF resulting in a requirement of 416 spaces for Phase I and 494 spaces for Phase II. This information is summarized in the table below.

General Dynamics Office	Parking Spaces Required	Parking Spaces Proposed	Reduction
Phase I (160,000 GSF)	416	250	39.9%
Phase II (190,000 GSF)	494	250	49.4%

The underlying argument for the proposed parking supply is that the office sizes will be larger and consequently the number of employees fewer than a typical office building of comparable size. The office size for the proposed development will be in the range of 800 to 950 rentable square feet (RSF). According to a report by the U.S. Government Services Administration titled *Workspace Allocation and Utilization Benchmark*, published in July 2011 (revised July 2012) cited by the applicant, the average office space allocation per person was 230 RSF for the offices surveyed. For this proposed development, the most direct way to assess the adequacy of the proposed parking is the number of spaces provided per employee. The Institute of Transportation Engineers (ITE) publication *Parking Generation, 4th Edition* lists the average and 85th percentile peak parking demand for office buildings as 0.83 spaces per employee and 0.98 spaces per employee respectively with a range of 0.52 to 1.35 spaces per employee. Note that visitors. The number of spaces provided per employee would be 1.43 (Phase I) and 1.25 (Phase II) for the proposed development. This information is summarized in the table below.

		Ratio of Peak Parking Demand per Employee		
General Dynamics Office	Number of employees	ITE Average	ITE 85th percentile	Proposed
Phase I (160,000 GSF)	175	0.83	0.98	1.43
Phase II (190,000 GSF)	200	0.83	0.98	1.25

The parking ratios per employee for the proposed development provide an adequate working margin above the ITE values. Therefore, the proposed parking supply is considered adequate assuming the number of employees does not increase over time. The applicant should provide additional parking if the number of employees increases above that listed in the parking study and be constructed in groups large enough to eliminate the need to construct parking spaces with every marginal increase in the number of employees.

Attachment: Parking Proffer dated August 1, 2016

General Dynamics Corporation
PCA 86-C-054-02
CDPA 86-C-054
FDPA 86-C-054-02-01

Proffer Statement: Parking
April 5, 2016
Revised June 16, 2016
Revised August 1, 2016

9. Parking Reduction. In recognition of the Applicant's unique requirements and expected occupancy of the Property and pursuant to Section 11-101(1) of the Zoning Ordinance, and except as set forth below, the Applicant shall provide parking for the Proposed Development in general accordance with the tabulations shown on Sheet 2 of the CDPA/FDPA, which represents an approximately 40% reduction for Phase I and a 49.5% reduction for Phase II in the required number of parking spaces the Applicant otherwise would be required to provide under Section 11-104 of the Zoning Ordinance. In particular, the Applicant shall provide parking on the Property in accordance with subsections A, B, and C.

A. Phase I and Phase II Parking. The Applicant shall provide a minimum of 250 parking spaces on the Property at all times to support the Proposed Development and up to 200 Fulltime Employees (hereinafter defined) except that the required parking may be temporarily reduced during construction of Phase II in accordance Section 11-101(1) of the Zoning Ordinance.

B. Supplementary Parking Requirements. In the event the number of fulltime employees and contractors permanently assigned to or working at the Property ("Fulltime Employees") exceeds 200 during the hours of peak parking demand, then the Applicant shall provide twenty (20) additional parking spaces for every twenty-five (25) or fraction thereof additional Fulltime Employees above 200 (the "Supplementary Parking"), provided that the Applicant shall have no obligation to provide more than the minimum parking spaces required under the Zoning Ordinance for office uses based on the size of the building actually constructed on the Property. The number of Fulltime Employees shall be determined using employee surveys and/or the issuance of parking/access passes (or such other measure as Land Development Services ("LDS") and the Applicant may agree to use from time to time). As necessary, the location of the Supplementary Parking shall be shown on a FDPA and be approved by the Planning Commission, but without the need to amend the CDPA or these Proffers. The Applicant shall, concurrent with parking surveys/counts described below, submit to LDS a tabulation of the total number of Fulltime Employees for that calendar year.

C. Parking Surveys. In an effort to validate the effectiveness of the reduced parking set forth in this Proffer 9, the Applicant shall, beginning with the first September following the issuance of the first tenant Non-Residential Use Permit ("Non-RUP") for Phase I of the Proposed

Development, and each September thereafter, conduct annual parking surveys (utilization study) to determine the peak parking demand (the "Parking Surveys") for the Property during the survey period. The Parking Surveys shall be conducted during peak parking periods (typically 10:00 am to 2:00 pm) Monday through Friday during a non-holiday week and outside the summer months (or at such other time as the Applicant and LDS may agree) and shall document the average and peak percentage of parking spaces occupied over the course of the survey period. In the event two consecutive annual Parking Surveys demonstrate that the peak occupancy of the parking spaces established to serve the Property exceeds ninety percent (90%) during the survey period, then the Applicant shall increase the available parking on the Property by providing an additional twenty (20) or more surface or structured parking spaces or such greater amount as may be required by LDS in consultation with the Applicant. Prior to installing any such spaces, the Applicant shall file and have approved by the County any required site plan revisions and/or building permits necessary to permit such installation, unless already approved as part of a site plan. In the event two (2) consecutive annual Parking Surveys demonstrate that the peak occupancy of the parking spaces established to serve the Property is below eighty-five percent (85%), then the Applicant shall only be required to conduct the Parking Surveys biennially to demonstrate continued compliance with the parking reduction granted with this Application, provided that the Director of LDS may require the Applicant to conduct an additional parking utilization study at any time to verify compliance with this proffer. Such additional parking as may be required by this subsection is independent of any Supplementary Parking that may be required by subsection B above.

County of Fairfax, Virginia

MEMORANDUM

DATE: March 16, 2016

TO: Mary Ann Tsai
Staff Coordinator, Zoning Evaluation Division
Department of Planning and Zoning

FROM: Laurie Stone
Strategic Planner
Fire and Rescue Department

SUBJECT: General Dynamics Corporation

REFERENCE: PCA 86-C-054-02, CDPA 86-C-054, and FDPA 86-C-054-02-01

The Fire and Rescue Department (FRD) has the following comments on the referenced application.

Current Fire and Rescue Service Delivery
The proposed General Dynamics office building is located in the emergency response area of the Reston Fire and Rescue Station 25 located on Wiehle Avenue. The next closest fire station is the Wolftrap Fire and Rescue Station 42 located in Vienna, Virginia.

Emergency Response Impact of Proposed Development
The proposed 190,000 square foot, 5 story office building with below-grade parking will result in approximately 200 employees and contractors when the facility opens. Two options are also being proposed for future expansion of up to 30,000 square feet.

The Reston Fire and Rescue Station 25 is an extremely busy station. In CY2015, the station responded to 3,337 incidents, an average of nine per day. In addition, Wiehle Avenue and Sunset Hills Road are highly travelled roadways with very heavy traffic congestion at peak travel times which is a challenge for emergency responders. Although a projected increase in call volume from <u>one</u> rezoning case may <u>not</u> exceed a fire station's workload capacity, multiple rezoning cases in a station's response area could significantly impact that station's availability and response times to all emergency incidents.

Traffic Signal Preemption Equipment for Emergency Responders:
As Fairfax County increases in population density and roadways become more congested, it is a challenge for the FRD to meet emergency response time goals. Therefore, the FRD is aggressively pursuing installation of preemption equipment on traffic signals throughout the county to improve response times to emergency incidents. Traffic preemption also improves civilian and firefighter safety by reducing the potential for accidents at intersections.

Fire and Rescue Department
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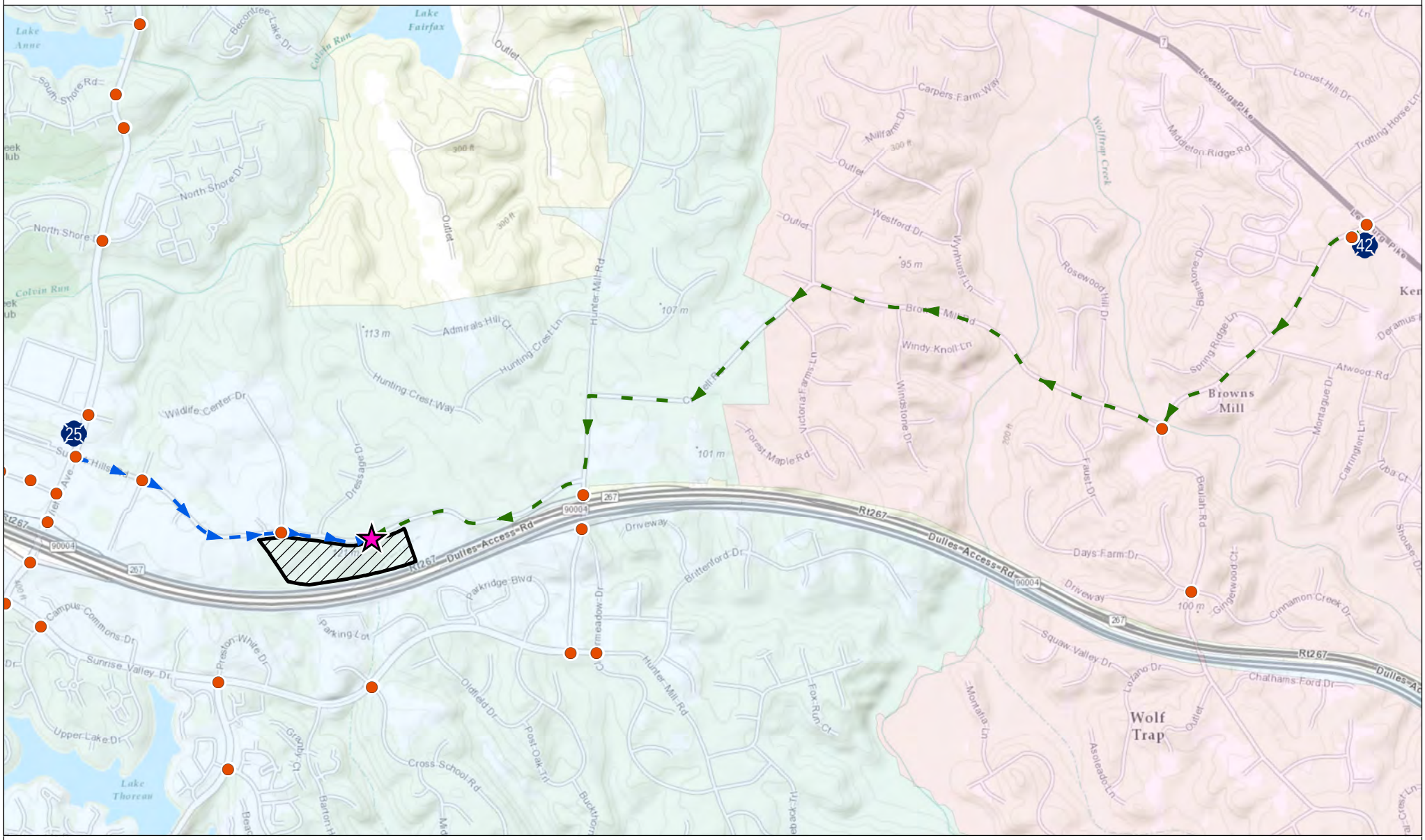
www.fairfaxcounty.gov/fire

In summary, the proposed General Dynamics office building with 200+employees and contractors is anticipated to impact the number of emergency calls for service. Although the existing fire stations can absorb this higher call volume, there could be a significant impact to response times to all emergency incidents. Therefore, the FRD requests the developer proffer the cost of preemption devices for two traffic signals (about $10K each) located along the travel routes from the closest fire stations to the proposed office building. The attached map identifies the traffic signals needing preemption equipment.

Please contact me at 703-246-3889 if you have any questions regarding the comments.

FRD General Dynamics Study



Access Point

Property Boundary

Fire Stations

VDOT Traffic Signals

Route: Station 25 to Access Point

Route: Station 42 to Access Point

First Due Boundaries

425	442

FRD-GIS. Current as of: 2/16/2016

N

0 0.25 0.5 Miles

Routing based on June 2015 street network.

G:\projects\frd\hq\projects\2016\Planning Maps - Rezoning\General Dynamics - Reston\General_Dynamics.mxd

GLOSSARY

This Glossary is provided to assist the public in understanding
the staff evaluation and analysis of development proposals.
It should not be construed as representing legal definitions.
Refer to the Fairfax County Zoning Ordinance, Comprehensive Plan
or Public Facilities Manual for additional information.

ABANDONMENT: Refers to road or street abandonment, an action taken by the Board of Supervisors, usually through the public hearing process, to abolish the public's right-of-passage over a road or road right-of way. Upon abandonment, the right-of-way automatically reverts to the underlying fee owners. If the fee to the owner is unknown, Virginia law presumes that fee to the roadbed rests with the adjacent property owners if there is no evidence to the contrary.

ACCESSORY DWELLING UNIT (OR APARTMENT): A secondary dwelling unit established in conjunction with and clearly subordinate to a single family detached dwelling unit. An accessory dwelling unit may be allowed if a special permit is granted by the Board of Zoning Appeals (BZA). Refer to Sect. 8-918 of the Zoning Ordinance.

AFFORDABLE DWELLING UNIT (ADU) DEVELOPMENT: Residential development to assist in the provision of affordable housing for persons of low and moderate income in accordance with the affordable dwelling unit program and in accordance with Zoning Ordinance regulations. Residential development which provides affordable dwelling units may result in a density bonus (see below) permitting the construction of additional housing units. See Part 8 of Article 2 of the Zoning Ordinance.

AGRICULTURAL AND FORESTAL DISTRICTS: A land use classification created under Chapter 114 or 115 of the Fairfax County Code for the purpose of qualifying landowners who wish to retain their property for agricultural or forestal use for use/value taxation pursuant to Chapter 58 of the Fairfax County Code.

BARRIER: A wall, fence, earthen berm, or plant materials which may be used to provide a physical separation between land uses. Refer to Article 13 of the Zoning Ordinance for specific barrier requirements.

BEST MANAGEMENT PRACTICES (BMPs): Stormwater management techniques or land use practices that are determined to be the most effective, practicable means of preventing and/or reducing the amount of pollution generated by nonpoint sources in order to improve water quality.

BUFFER: Graduated mix of land uses, building heights or intensities designed to mitigate potential conflicts between different types or intensities of land uses; may also provide for a transition between uses. A landscaped buffer may be an area of open, undeveloped land and may include a combination of fences, walls, berms, open space and/or landscape plantings. A buffer is not necessarily coincident with transitional screening.

CHESAPEAKE BAY PRESERVATION ORDINANCE: Regulations which the State has mandated must be adopted to protect the Chesapeake Bay and its tributaries. These regulations must be incorporated into the comprehensive plans, zoning ordinances and subdivision ordinances of the affected localities. Refer to Chesapeake Bay Preservation Act, Va. Code Section 10.1-2100 et seq and VR 173-02-01, Chesapeake Bay Preservation Area Designation and Management Regulations.

CLUSTER DEVELOPMENT: Residential development in which the lots are clustered on a portion of a site so that significant environmental/historical/cultural resources may be preserved or recreational amenities provided. While smaller lot sizes are permitted in a cluster subdivision to preserve open space, the overall density cannot exceed that permitted by the applicable zoning district. See Sect. 2-421 and Sect. 9-615 of the Zoning Ordinance.

COUNTY 2232 REVIEW PROCESS: A public hearing process pursuant to Sect. 15.2-2232 (Formerly Sect. 15.1-456) of the Virginia Code which is used to determine if a proposed public facility not shown on the adopted Comprehensive Plan is in substantial accord with the plan. Specifically, this process is used to determine if the general or approximate location, character and extent of a proposed facility is in substantial accord with the Plan.

dBA: The momentary magnitude of sound weighted to approximate the sensitivity of the human ear to certain frequencies; the dBA value describes a sound at a given instant, a maximum sound level or a steady state value. See also Ldn.

DENSITY: Number of dwelling units (du) divided by the gross acreage (ac) of a site being developed in residential use; or, the number of dwelling units per acre (du/ac) except in the PRC District when density refers to the number of persons per acre.

DENSITY BONUS: An increase in the density otherwise allowed in a given zoning district which may be granted under specific provisions of the Zoning Ordinance when a developer provides excess open space, recreation facilities, or affordable dwelling units (ADUs), etc.

DEVELOPMENT CONDITIONS: Terms or conditions imposed on a development by the Board of Supervisors (BOS) or the Board of Zoning Appeals (BZA) in connection with approval of a special exception, special permit or variance application or rezoning application in a "P" district. Conditions may be imposed to mitigate adverse impacts associated with a development as well as secure compliance with the Zoning Ordinance and/or conformance with the Comprehensive Plan. For example, development conditions may regulate hours of operation, number of employees, height of buildings, and intensity of development.

DEVELOPMENT PLAN: A graphic representation which depicts the nature and character of the development proposed for a specific land area: information such as topography, location and size of proposed structures, location of streets trails, utilities, and storm drainage are generally included on a development plan. A development plan is s submission requirement for rezoning to the PRC District. A GENERALIZED DEVELOPMENT PLAN (GDP) is a submission requirement for a rezoning application for all conventional zoning districts other than a P District. A development plan submitted in connection with a special exception (SE) or special permit (SP) is generally referred to as an SE or SP plat. A CONCEPTUAL DEVELOPMENT PLAN (CDP) is a submission requirement when filing a rezoning application for a P District other than the PRC District; a CDP characterizes in a general way the planned development of the site. A FINAL DEVELOPMENT PLAN (FDP) is a submission requirement following the approval of a conceptual development plan and rezoning application for a P District other than the PRC District; an FDP further details the planned development of the site. See Article 16 of the Zoning Ordinance.

EASEMENT: A right to or interest in property owned by another for a specific and limited purpose. Examples: access easement, utility easement, construction easement, etc. Easements may be for public or private purposes.

ENVIRONMENTAL QUALITY CORRIDORS (EQCs): An open space system designed to link and preserve natural resource areas, provide passive recreation and protect wildlife habitat. The system includes stream valleys, steep slopes and wetlands. For a complete definition of EQCs, refer to the Environmental section of the Policy Plan for Fairfax County contained in Vol. 1 of the Comprehensive Plan.

ERODIBLE SOILS: Soils that wash away easily, especially under conditions where stormwater runoff is inadequately controlled. Silt and sediment are washed into nearby streams, thereby degrading water quality.

FLOODPLAIN: Those land areas in and adjacent to streams and watercourses subject to periodic flooding; usually associated with environmental quality corridors. The 100 year floodplain drains 70 acres or more of land and has a one percent chance of flood occurrence in any given year.

FLOOR AREA RATIO (FAR): An expression of the amount of development intensity (typically, non-residential uses) on a specific parcel of land. FAR is determined by dividing the total square footage of gross floor area of buildings on a site by the total square footage of the site itself.

FUNCTIONAL CLASSIFICATION: A system for classifying roads in terms of the character of service that individual facilities are providing or are intended to provide, ranging from travel mobility to land access. Roadway system functional classification elements include Freeways or Expressways which are limited access highways, Other Principal (or Major) Arterials, Minor Arterials, Collector Streets, and Local Streets. Principal arterials are designed to accommodate travel; access to adjacent properties is discouraged. Minor arterials are designed to serve both through traffic and local trips. Collector roads and streets link local streets and properties with the arterial network. Local streets provide access to adjacent properties.

GEOTECHNICAL REVIEW: An engineering study of the geology and soils of a site which is submitted to determine the suitability of a site for development and recommends construction techniques designed to overcome development on problem soils, e.g., marine clay soils.

HYDROCARBON RUNOFF: Petroleum products, such as motor oil, gasoline or transmission fluid deposited by motor vehicles which are carried into the local storm sewer system with the stormwater runoff, and ultimately, into receiving streams; a major source of non-point source pollution. An oil-grit separator is a common hydrocarbon runoff reduction method.

IMPERVIOUS SURFACE: Any land area covered by buildings or paved with a hard surface such that water cannot seep through the surface into the ground.

INFILL: Development on vacant or underutilized sites within an area which is already mostly developed in an established development pattern or neighborhood.

INTENSITY: The magnitude of development usually measured in such terms as density, floor area ratio, building height, percentage of impervious surface, traffic generation, etc. Intensity is also based on a comparison of the development proposal against environmental constraints or other conditions which determine the carrying capacity of a specific land area to accommodate development without adverse impacts.

Ldn: Day night average sound level. It is the twenty-four hour average sound level expressed in A-weighted decibels; the measurement assigns a "penalty" to night time noise to account for night time sensitivity. Ldn represents the total noise environment which varies over time and correlates with the effects of noise on the public health, safety and welfare.

LEVEL OF SERVICE (LOS): An estimate of the effectiveness of a roadway to carry traffic, usually under anticipated peak traffic conditions. Level of Service efficiency is generally characterized by the letters A through F, with LOS-A describing free flow traffic conditions and LOS-F describing jammed or grid-lock conditions.

MARINE CLAY SOILS: Soils that occur in widespread areas of the County generally east of Interstate 95. Because of the abundance of shrink-swell clays in these soils, they tend to be highly unstable. Many areas of slope failure are evident on natural slopes. Construction on these soils may initiate or accelerate slope movement or slope failure. The shrink-swell soils can cause movement in structures, even in areas of flat topography, from dry to wet seasons resulting in cracked foundations, etc. Also known as slippage soils.

OPEN SPACE: That portion of a site which generally is not covered by buildings, streets, or parking areas. Open space is intended to provide light and air; open space may be function as a buffer between land uses or for scenic, environmental, or recreational purposes.

OPEN SPACE EASEMENT: An easement usually granted to the Board of Supervisors which preserves a tract of land in open space for some public benefit in perpetuity or for a specified period of time. Open space easements may be accepted by the Board of Supervisors, upon request of the land owner, after evaluation under criteria established by the Board. See Open Space Land Act, Code of Virginia, Sections 10.1-1700, et seq.

P DISTRICT: A "P" district refers to land that is planned and/or developed as a Planned Development Housing (PDH) District, a Planned Development Commercial (PDC) District or a Planned Residential Community (PRC) District. The PDH, PDC and PRC Zoning Districts are established to encourage innovative and creative design for land development; to provide ample and efficient use of open space; to promote a balance in the mix of land uses, housing types, and intensity of development; and to allow maximum flexibility in order to achieve excellence in physical, social and economic planning and development of a site. Refer to Articles 6 and 16 of the Zoning Ordinance.

PROFFER: A written condition, which, when offered voluntarily by a property owner and accepted by the Board of Supervisors in a rezoning action, becomes a legally binding condition which is in addition to the zoning district regulations applicable to a specific property. Proffers are submitted and signed by an owner prior to the Board of Supervisors public hearing on a rezoning application and run with the land. Once accepted by the Board, proffers may be modified only by a proffered condition amendment (PCA) application or other zoning action of the Board and the hearing process required for a rezoning application applies. See Sect. 15.2-2303 (formerly 15.1-491) of the Code of Virginia.

PUBLIC FACILITIES MANUAL (PFM): A technical text approved by the Board of Supervisors containing guidelines and standards which govern the design and construction of site improvements incorporating applicable Federal, State and County Codes, specific standards of the Virginia Department of Transportation and the County's Department of Public Works and Environmental Services.

RESOURCE MANAGEMENT AREA (RMA): That component of the Chesapeake Bay Preservation Area comprised of lands that, if improperly used or developed, have a potential for causing significant water quality degradation or for diminishing the functional value of the Resource Protection Area. See Fairfax County Code, Ch. 118, Chesapeake Bay Preservation Ordinance.

RESOURCE PROTECTION AREA (RPA): That component of the Chesapeake Bay Preservation Area comprised of lands at or near the shoreline or water's edge that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may result in significant degradation of the quality of state waters. In their natural condition, these lands provide for the removal, reduction or assimilation of sediments from runoff entering the Bay and its tributaries, and minimize the adverse effects of human activities on state waters and aquatic resources. New development is generally discouraged in an RPA. See Fairfax County Code, Ch. 118, Chesapeake Bay Preservation Ordinance.

SITE PLAN: A detailed engineering plan, to scale, depicting the development of a parcel of land and containing all information required by Article 17 of the Zoning Ordinance. Generally, submission of a site plan to DPWES for review and approval is required for all residential, commercial and industrial development except for development of single family detached dwellings. The site plan is required to assure that development complies with the Zoning Ordinance.

SPECIAL EXCEPTION (SE) / SPECIAL PERMIT (SP): Uses, which by their nature, can have an undue impact upon or can be incompatible with other land uses and therefore need a site specific review. After review, such uses may be allowed to locate within given designated zoning districts if appropriate and only under special controls, limitations, and regulations. A special exception is subject to public hearings by the Planning Commission and Board of Supervisors with approval by the Board of Supervisors; a special permit requires a public hearing and approval by the Board of Zoning Appeals. Unlike proffers which are voluntary, the Board of Supervisors or BZA may impose reasonable conditions to assure, for example, compatibility and safety. See Article 8, Special Permits and Article 9, Special Exceptions, of the Zoning Ordinance.

STORMWATER MANAGEMENT: Engineering practices that are incorporated into the design of a development in order to mitigate or abate adverse water quantity and water quality impacts resulting from development. Stormwater management systems are designed to slow down or retain runoff to re-create, as nearly as possible, the pre-development flow conditions.

SUBDIVISION PLAT: The engineering plan for a subdivision of land submitted to DPWES for review and approved pursuant to Chapter 101 of the County Code.

TRANSPORTATION DEMAND MANAGEMENT (TDM): Actions taken to reduce single occupant vehicle automobile trips or actions taken to manage or reduce overall transportation demand in a particular area.

TRANSPORTATION SYSTEM MANAGEMENT (TSM) PROGRAMS: This term is used to describe a full spectrum of actions that may be applied to improve the overall efficiency of the transportation network. TSM programs usually consist of low-cost alternatives to major capital expenditures, and may include parking management measures, ridesharing programs, flexible or staggared work hours, transit promotion or operational improvements to the existing roadway system. TSM includes Transportation Demand Management (TDM) measures as well as H.O.V. use and other strategies associated with the operation of the street and transit systems.

URBAN DESIGN: An aspect of urban or suburban planning that focuses on creating a desirable environment in which to live, work and play. A well-designed urban or suburban environment demonstrates the four generally accepted principles of design: clearly identifiable function for the area; easily understood order; distinctive identity; and visual appeal.

VACATION: Refers to vacation of street or road as an action taken by the Board of Supervisors in order to abolish the public's right-of-passage over a road or road right-of-way dedicated by a plat of subdivision. Upon vacation, title to the road right-of-way transfers by operation of law to the owner(s) of the adjacent properties within the subdivision from whence the road/road right-of-way originated.

VARIANCE: An application to the Board of Zoning Appeals which seeks relief from a specific zoning regulation such as lot width, building height, or minimum yard requirements, among others. A variance may only be granted by the Board of Zoning Appeals through the public hearing process and upon a finding by the BZA that the variance application meets the required Standards for a Variance set forth in Sect. 18-404 of the Zoning Ordinance.

WETLANDS: Land characterized by wetness for a portion of the growing season. Wetlands are generally delineated on the basis of physical characteristics such as soil properties indicative of wetness, the presence of vegetation with an affinity for water, and the presence or evidence of surface wetness or soil saturation. Wetland environments provide water quality improvement benefits and are ecologically valuable. Development activity in wetlands is subject to permitting processes administered by the U.S. Army Corps of Engineers

TIDAL WETLANDS: Vegetated and nonvegetated wetlands as defined in Chapter 116 Wetlands Ordinance of the Fairfax County Code: includes tidal shores and tidally influenced embayments, creeks, and tributaries to the Occoquan and Potomac Rivers. Development activity in tidal wetlands may require approval from the Fairfax County Wetlands Board.

Abbreviations Commonly Used in Staff Reports

A&F	Agricultural & Forestal District
ADU	Affordable Dwelling Unit
ARB	Architectural Review Board
BMP	Best Management Practices
BOS	Board of Supervisors
BZA	Board of Zoning Appeals
COG	Council of Governments
CBC	Community Business Center
CDP	Conceptual Development Plan
CRD	Commercial Revitalization District
DOT	Department of Transportation
DP	Development Plan
DPWES	Department of Public Works and Environmental Services
DPZ	Department of Planning and Zoning
DU/AC	Dwelling Units Per Acre
EQC	Environmental Quality Corridor
FAR	Floor Area Ratio
FDP	Final Development Plan
GDP	Generalized Development Plan
GFA	Gross Floor Area
HC	Highway Corridor Overlay District
HCD	Housing and Community Development
LOS	Level of Service
Non-RUP	Non-Residential Use Permit
OSDS	Office of Site Development Services, DPWES
PCA	Proffered Condition Amendment
PD	Planning Division
PDC	Planned Development Commercial
PDH	Planned Development Housing
PFM	Public Facilities Manual
PRC	Planned Residential Community
RC	Residential-Conservation
RE	Residential Estate
RMA	Resource Management Area
RPA	Resource Protection Area
RUP	Residential Use Permit
RZ	Rezoning
SE	Special Exception
SEA	Special Exception Amendment
SP	Special Permit
TDM	Transportation Demand Management
TMA	Transportation Management Association
TSA	Transit Station Area
TSM	Transportation System Management
UP & DD	Utilities Planning and Design Division, DPWES
VC	Variance
VDOT	Virginia Dept. of Transportation
VPD	Vehicles Per Day
VPH	Vehicles per Hour
WMATA	Washington Metropolitan Area Transit Authority
WS	Water Supply Protection Overlay District
ZAD	Zoning Administration Division, DPZ
ZED	Zoning Evaluation Division, DPZ
ZPRB	Zoning Permit Review Branch