

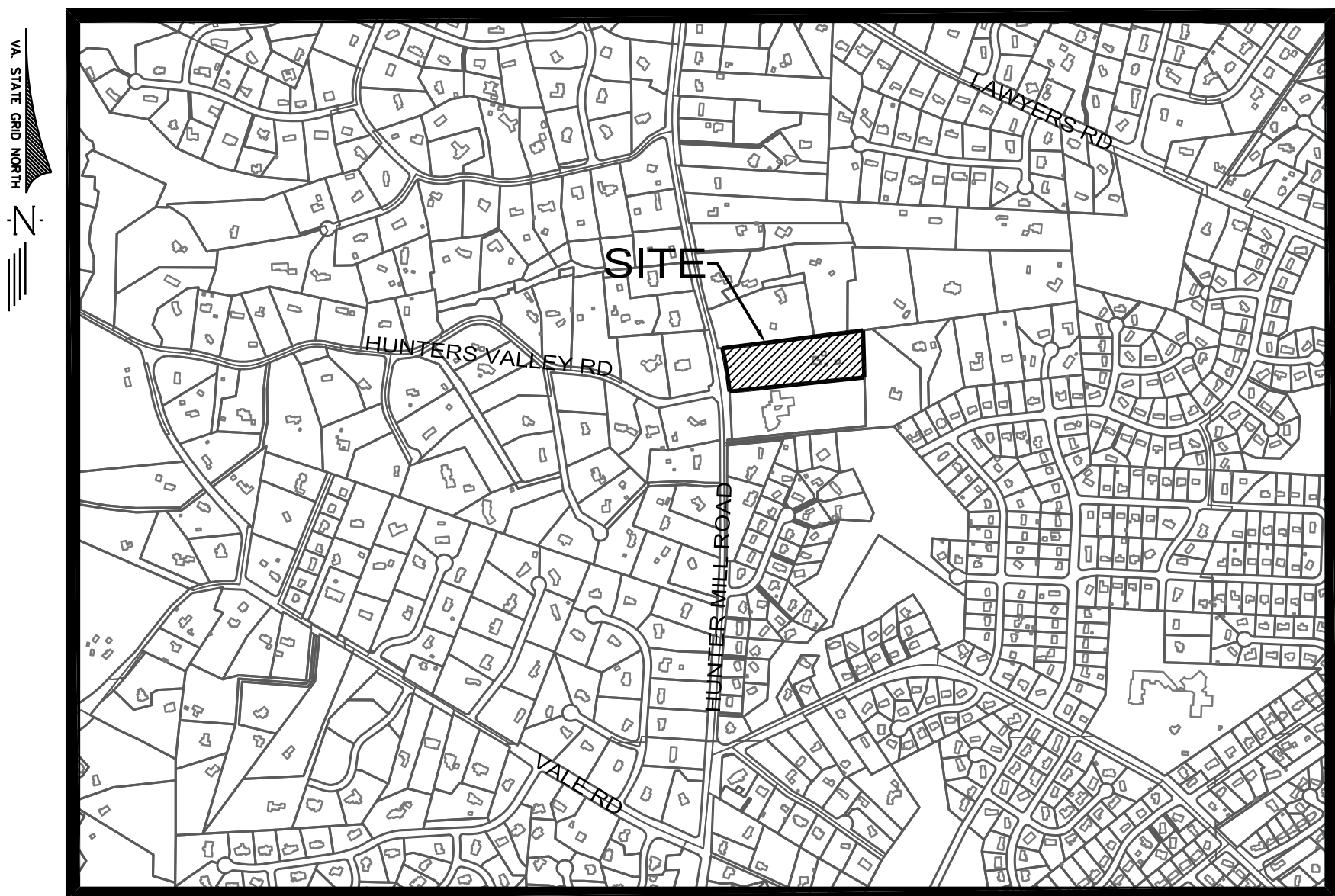
HUNTER MILL ASSISTED LIVING

2347 HUNTER MILL ROAD

SPECIAL EXCEPTION PLAT (SE 2018-HM-024)

Hunter Mill District
Fairfax County, Virginia

OCTOBER 17, 2018
NOVEMBER 9, 2018
NOVEMBER 20, 2018
FEBRUARY 25, 2019
APRIL 19, 2019
JUNE 5, 2019



VICINITY MAP
SCALE 1"=1000'

SHEET INDEX

1	COVER SHEET
2-3	NOTES & DETAILS
4	CONCEPTUAL ELEVATIONS
5	EXISTING CONDITIONS
6	EXISTING VEGETATION MAP
7	SPECIAL EXCEPTION PLAT
7A	TURNAROUND MOVEMENT EXHIBIT
8	FRONTAGE IMPROVEMENTS
9	LANDSCAPE PLAN
10	LANDSCAPE COMPUTATIONS
10A	SITE SECTION
11-12	PRELIMINARY BMP ANALYSIS
13	PRELIMINARY SWM ANALYSIS
14	ADEQUATE OUTFALL ANALYSIS
15	SIGHT DISTANCE ANALYSIS

APPLICANT:

**ORR
PARTNERS**

ORR-BSL HUNTER MILL, LLC
11180 SUNRISE VALLEY DRIVE
SUITE 200
RESTON, VIRGINIA 20191
(703) 289-2100

ARCHITECT:



MOSELEY ARCHITECTS
8001 BRADDOCK ROAD
SUITE 400
SPRINGFIELD, VIRGINIA 22151
(703) 426-9057

ATTORNEY:



WALSH COLUCCI
LUBELEY & WALSH PC

WALSH COLUCCI
LUBELEY & WALSH PC
2200 CLARENDON BLVD, SUITE 1300
ARLINGTON, VIRGINIA 22201-3359
(703) 528-4700 FAX: (703) 525-3197

CIVIL ENGINEER:



urban

Planners-Engineers-Landscape Architects-Land Surveyors

Urban, Ltd.
7712 Little River Turnpike
Arlandale, Virginia 22003
Tel. 703.642.8080
www.urban-llc.com



Urban, Ltd. - Q:\JOBS\Hunter Mill Road Assisted Living Project\RZ and SE\CAD\02-Notes.dwg [02 GENERAL NOTES] June 04, 2019 - 1:59pm cjohnson

GENERAL NOTES

1.

ALL REFERENCES HEREIN TO ZONING ORDINANCE REFER TO THE FAIRFAX COUNTY ZONING ORDINANCE.
2.

THE SUBJECT PROPERTY IS LOCATED IN THE HUNTER MILL DISTRICT, ON FAIRFAX COUNTY TAX MAP 37-2 ((1)) 26. ALL REFERENCES HEREIN TO PROPERTY, PARCEL OR SITE SHALL REFER TO THE SUBJECT PROPERTY.
3.

THE PROPERTY IS LOCATED WITHIN COMPREHENSIVE PLAN AREA II, VIENNA PLANNING DISTRICT, V4 PINEY BRANCH COMMUNITY PLANNING SECTOR.
4.

THE PROPERTY IS CURRENTLY ZONED R-E. A SPECIAL EXCEPTION IS HEREBY REQUESTED TO ALLOW THE PROPOSED ASSISTED LIVING FACILITY, ADMINISTERED PER THE ZONING ORDINANCE AS A USE-6 MEDICAL CARE FACILITY UNDER SPECIAL EXCEPTION CATEGORY 3, AND AS PERMITTED IN THE R-E ZONING DISTRICT.
5.

THE BOUNDARY INFORMATION SHOWN IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY URBAN, LTD. IN AUGUST, 2018.
6.

THE TOPOGRAPHY SHOWN IS AT TWO FOOT CONTOUR INTERVAL, BASED ON A FIELD SURVEY PERFORMED BY URBAN, LTD. IN AUGUST, 2018 (NAD83, NGVD29).
7.

BASED UPON COUNTY MAPPING THERE IS MINOR FLOODPLAIN AND RESOURCE PROTECTION AREA LOCATED ON THE EASTERN PORTION OF THE SITE ALONG ANGELICO BRANCH. THERE ARE NO FEMA MAPPED FLOODPLAINS ON THE PROPERTY.
8.

AN EXISTING "FLOODPLAIN AND STORM DRAINAGE EASEMENT" AS LABELED ON DB 16501, PG 491, OVER 25 FEET WIDE IN VARIOUS LOCATIONS, EXISTS ON THE PROPERTY. THIS EASEMENT IS NOT A FEMA MAPPED FLOODPLAIN. THERE ARE NO OTHER EASEMENTS 25 FEET OR GREATER ON THE PROPERTY.
9.

AN ENVIRONMENTAL QUALITY CORRIDOR IS SHOWN WITH THIS APPLICATION.
10.

THERE ARE EXISTING CONSERVATION AND WATER QUALITY MANAGEMENT AREA EASEMENTS THAT EXIST ON THE PROPERTY AS RECORDED IN DB 16501, PG 491. THESE EASEMENTS ARE ASSOCIATED WITH A DISAPPROVED AND INACTIVE SITE PLAN (7438-SP-001). ANY PROPOSED WATER QUALITY BENEFIT PROVIDED BY THESE EASEMENTS IS NO LONGER VALID SINCE THE ASSOCIATED SITE PLAN WAS NEVER APPROVED. IT IS THE INTENTION TO VACATE AT LEAST A PORTION OF THESE EXISTING EASEMENTS AND RECORD NEW WATER QUALITY MANAGEMENT AREA EASEMENTS AT TIME OF FINAL RECORD PLAT AS MAY BE NECESSARY TO MEET SOME OR ALL OF THE WATER QUALITY REQUIREMENTS FOR THIS SPECIAL EXCEPTION APPLICATION AND THE FINAL SITE PLAN. THE VACATION OF EXISTING EASEMENTS AND THE CREATION OF NEW EASEMENTS WILL OCCUR WITH RECORDATION OF THE EASEMENT PLAT FOR THE PROPERTY SUBSEQUENT TO THE APPROVAL OF THIS SPECIAL EXCEPTION APPLICATION.
11.

THERE ARE NO KNOWN GRAVE OR BURIAL SITES ON THIS PROPERTY.
12.

THERE ARE NO KNOWN ENDANGERED OR THREATENED PLANT AND ANIMAL SPECIES IN THE PROJECT AREA.
13.

ACCORDING TO THE COUNTYWIDE TRAILS PLAN, NO TRAILS ARE PROPOSED ON THE PROPERTY OR ALONG THE PROPERTY'S FRONTAGE. A MINOR PAVED TRAIL WITH PARALLEL NATURAL SURFACE OR STONE DUST TRAIL IS REQUIRED BY OTHERS ALONG THE WESTERN (OPPOSITE) SIDE OF HUNTER MILL ROAD, BUT IT SHOULD NOT BE A CONDITION OF DEVELOPMENT OF THIS PROPERTY.
14.

THE PROPOSED DEVELOPMENT WILL NOT POSE ANY ADVERSE EFFECT ON ADJACENT OR NEIGHBORING PROPERTIES.
15.

ALL STRUCTURES ON THE PROPERTY ARE TO BE REMOVED, PER FAIRFAX COUNTY RECORDS THE EXISTING PRINCIPAL STRUCTURE WAS CONSTRUCTED IN 1925, WITH AN ADDITION CONSTRUCTED IN 1957.
16.

THE PROJECT IS ANTICIPATED TO BE DEVELOPED IN A SINGLE PHASE.
17.

SUBJECT TO MARKET CONDITIONS, IT IS ANTICIPATED THAT CONSTRUCTION OF THE PROPOSED DEVELOPMENT WILL COMMENCE AS SOON AS ALL NECESSARY COUNTY APPROVALS AND PERMITS ARE OBTAINED.
18.

BASED UPON PRELIMINARY SITE INVESTIGATION, THERE ARE NO KNOWN HAZARDOUS OR TOXIC SUBSTANCES AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS PARTS 116.4, 302.4 AND 355; ALL HAZARDOUS WASTE AS SET FORTH IN COMMONWEALTH OF VIRGINIA DEPARTMENT OF WASTE MANAGEMENT REGULATIONS VR 672-10-1- VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATIONS; AND/OR PETROLEUM PRODUCTS AS DEFINED IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 280; TO BE GENERATED, UTILIZED, STORED, TREATED AND/OR DISPOSED OF ON SITE.
19.

WETLANDS SHOWN HEREIN WERE DELINEATED BY TNT ENVIRONMENTAL AS SHOWN IN THE "WETLAND DELINEATION REPORT" FOR THE "PROPOSED ORR ASSISTED LIVING FACILITY" DATED MAY 17, 2017. JURISDICTIONAL DETERMINATION BY ACOE HAS NOT YET BEEN PERFORMED AS OF THE DATE OF THIS APPLICATION.
20.

THE PROPOSED DEVELOPMENT WILL CONFORM TO THE PROVISIONS OF ALL APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED STANDARDS EXCEPT AS MAY BE SPECIFIED OTHERWISE.
21.

PUBLIC WATER SHALL BE PROVIDED BY EXTENSION OF EXISTING SERVICE ON THE PROPERTY. SANITARY SEWER WILL BE PROVIDED BY INSTALLATION OF A PROPOSED PRIVATELY OWNED AND MAINTAINED INDIVIDUAL ONSITE SEWAGE DISPOSAL SYSTEM. SOLID WASTE REMOVAL SHALL BE PROVIDED BY PRIVATE CONTRACTORS.
22.

ALL PROPOSED UTILITIES INTERNAL TO THE SITE SERVING THE PROPOSED BUILDING WILL BE PLACED UNDERGROUND.
23.

PARKING WILL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 11 OF THE ZONING ORDINANCE.
24.

THE BUILDING FOOTPRINT SHOWN IS PRELIMINARY AND APPROXIMATE. THE SIZE AND CONFIGURATION MAY BE REVISED PROVIDED THAT THE MINIMUM SETBACKS ARE NOT DIMINISHED.
25.

MINOR MODIFICATIONS IN ACCORDANCE WITH THE ZONING ORDINANCE INCLUDING THE LIMITS OF CLEARING AND GRADING, LANDSCAPED OPEN SPACE AND LOCATIONS OF SIDEWALKS, UTILITIES, DRAINFIELD AND STORMWATER MANAGEMENT FACILITIES MAY OCCUR WITH FINAL SITE ENGINEERING WITHOUT REQUIRING AN AMENDMENT TO THIS PLAT.
26.

LANDSCAPING WILL BE PROVIDED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF ARTICLE 13 AND THIS PLAT.
27.

STORMWATER MANAGEMENT FACILITIES WILL CONFORM TO ALL FAIRFAX COUNTY REQUIREMENTS. WATER QUANTITY, WATER QUALITY AND OUTFALL REQUIREMENTS WILL BE MET WITH A COMBINATION OF UNDERGROUND FACILITIES, MANUFACTURED DEVICES, PRESERVATION OF OPEN SPACE AND/OR THE USE OF ANY OTHER DEVICE(S) THAT ARE APPROVED FOR USE IN FAIRFAX COUNTY TO MEET WATER QUALITY OR WATER QUANTITY REQUIREMENTS. THE STORMWATER FACILITIES SHOWN ON THIS PLAT ARE PRELIMINARY AND SUBJECT TO CHANGE AT TIME OF FINAL ENGINEERING IF APPROVED BY MINOR MODIFICATION IN ACCORDANCE WITH THE ZONING ORDINANCE WITHOUT REQUIRING AN AMENDMENT TO THIS PLAT.
28.

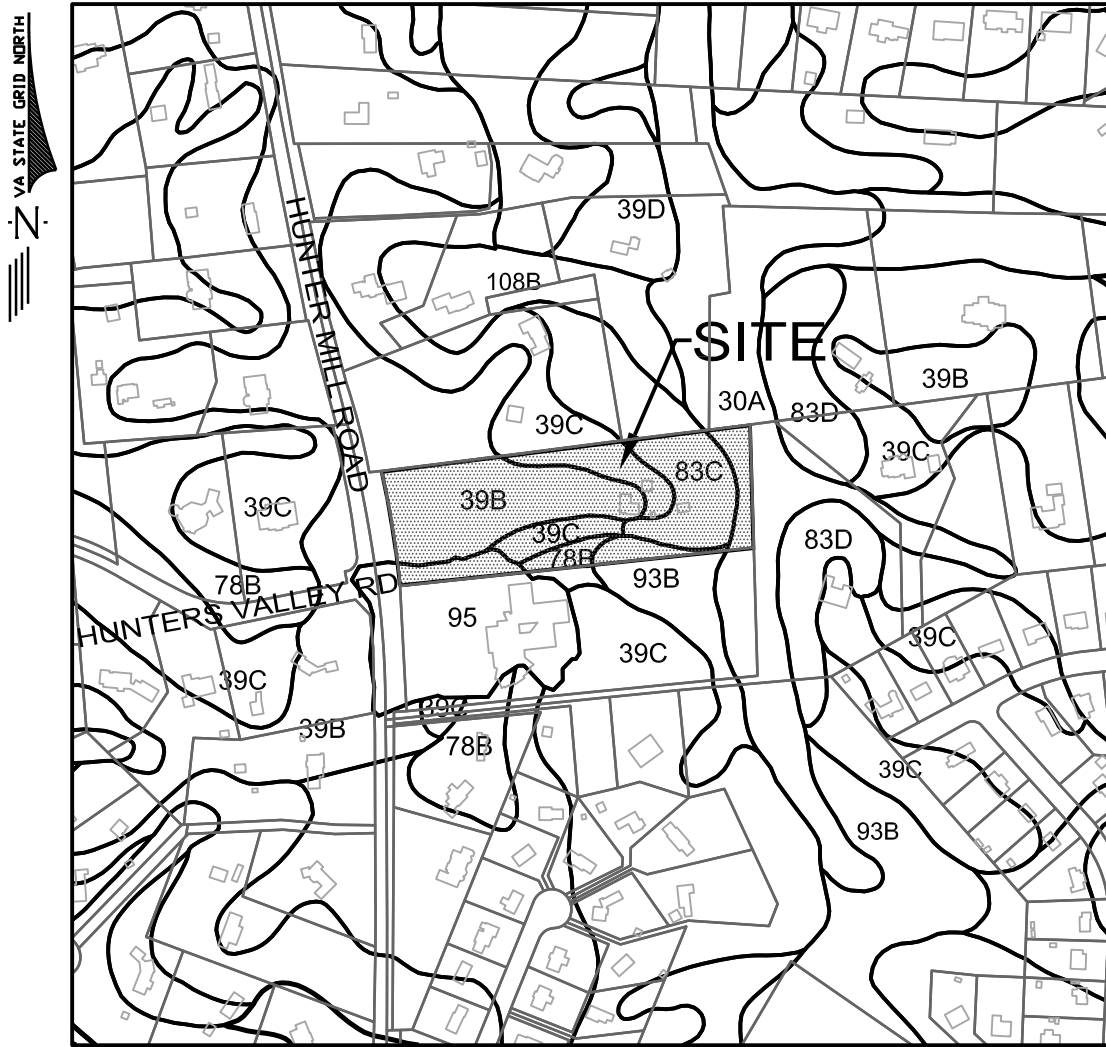
ANY SIGNS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 12 OF THE ZONING ORDINANCE.
29.

FIRE LANES WILL BE INDICATED PER FAIRFAX COUNTY REQUIREMENTS.
30.

ANY PROPOSED OFF-SITE IMPROVEMENTS SHALL BE SUBJECT TO RECEIPT OF PERMISSION FROM THE OFF-SITE PROPERTY OWNER(S).

SOILS MAP

SCALE 1"=500'



SOILS RATINGS¹

SOIL I.D. NUMBER	SERIES NAME	SUBSURFACE DRAINAGE	FOUNDATION SUPPORT	SLOPE STABILITY	ERODIBILITY	DRAINFIELD SUITABILITY	GEOTECHNICAL ² REPORT REQD.
39B	GLENELG SILT LOAM	GOOD	GOOD	HIGH	HIGH	GOOD	NO
39C	GLENELG SILT LOAM	GOOD	GOOD	HIGH	HIGH	GOOD	NO
78B	MEADOWVILLE LOAM	MARGINAL-W	FAIR-W,B	MOD.-HIGH	MEDIUM	MARGINAL-W	NO
83C	ORANGE SILT LOAM VERY STONY	POOR-P,C,R,S	POOR-P,C,B	POOR	HIGH	POOR-P,C,S,R	YES
93B	SUMERDUCK LOAM	POOR-W	MARGINAL-W,B	MOD.-HIGH	MEDIUM	POOR-W,S	NO

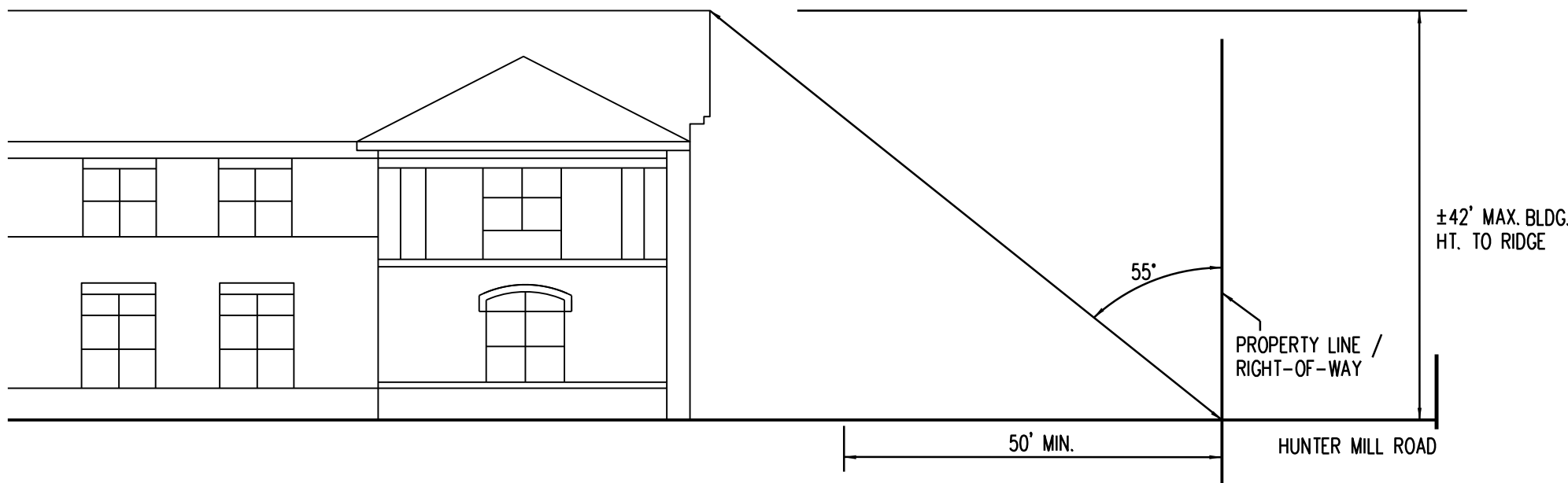
SOILS NOTES:

1. SOILS INFORMATION AND MAPPING PROVIDED BY THE OFFICIAL 2018 FAIRFAX COUNTY SOIL MAPS.
2. GEOTECHNICAL REPORT REQUIRED AT TIME OF SITE PLAN.

ANGLE OF BULK PLANE

FRONT YARD

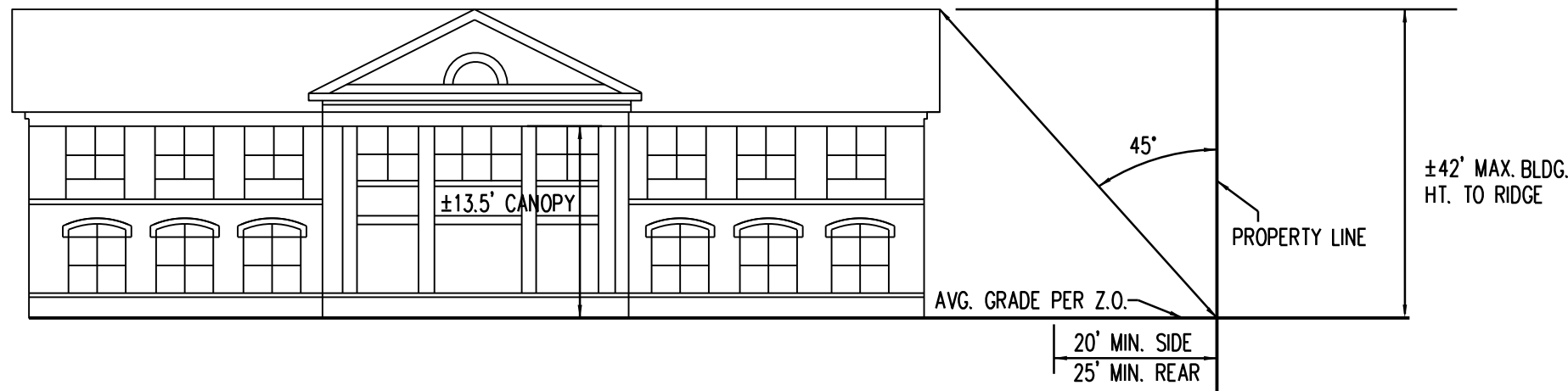
N.T.S.



ANGLE OF BULK PLANE

SIDE/REAR YARD

N.T.S.



REQUESTED WAIVERS/MODIFICATIONS

1. MODIFICATION OF THE BARRIER REQUIREMENT OF Z.O 13-304 IS REQUESTED FOR THE EASTERN PROPERTY LINE AND A PORTION OF THE NORTHERN PROPERTY LINE WHERE DUE TO THE TOPOGRAPHY, THE BARRIER WILL NOT BE EFFECTIVE.

ZONING TABULATIONS

GROSS SITE AREA..... 291,224 SQ. FT. or 6.69 AC.

EXISTING ZONING..... R-E

EXISTING OPEN SPACE..... 6.6 AC

REQUIRED OPEN SPACE..... NONE REQUIRED

PROPOSED OPEN SPACE (INFORMATION ONLY)..... 5.0 AC (75%) OPEN SPACE MAY VARY AT FINAL SITE PLAN

MAXIMUM BUILDING HEIGHT PERMITTED..... 60 FT.

PROPOSED BUILDING HEIGHT..... 35 FT. MAX (AVG. GRADE TO MID-ROOF AS PER Z.O.)

MINIMUM REQUIRED YARDS:

FRONT YARD..... 55° ANGLE BULK PLANE, NOT LESS THAN 50 FT.

SIDE YARD..... 45° ANGLE BULK PLANE, NOT LESS THAN 20 FT.

REAR YARD..... 45° ANGLE BULK PLANE, NOT LESS THAN 25 FT.

MAXIMUM FLOOR AREA RATIO..... 0.15

PROPOSED GROSS FLOOR AREA..... 43,680 SQ. FT.

PROPOSED FLOOR AREA RATIO..... 43,680 / 291,224 SQ. FT. = 0.149

ZONING REQUIREMENTS PER SECTION 9-308
FOR MEDICAL CARE FACILITIES:

MINIMUM LOT SIZE REQUIRED.....5.0 ACRES

ACTUAL LOT SIZE.....6.69 ACRES

MINIMUM LOT WIDTH REQUIRED.....200 FT

ACTUAL LOT WIDTH.....299 FT

BUILDING SETBACKS REQUIRED..... 45' TO ANY STREET LINE
100' TO ANY LOT LINE

BUILDING SETBACKS PROVIDED..... >45' TO STREET LINE
>100' TO ANY LOT LINE

PARCEL FRONTS ON AN EXISTING MINOR ARTERIAL TYPE "B" STREET

PARKING TABULATIONS

PARKING SPACES REQUIRED..... 59 SPACES

(1 SPACE PER 3 RESIDENTS, (86 BEDS / 3 + 30 EMPLOYEES)

PLUS 1 SPACE PER EMPLOYEE)

PARKING SPACES PROVIDED..... 60 SPACES MINIMUM
(54 STANDARD + 1 VAN + 5 ACCESSIBLE)

CHAPTER 527/870 DETERMINATION APPROVAL:

From: Guthrie, Michelle <Michelle.Guthrie@Fairfaxcounty.gov>

Sent: Friday, September 28, 2018 1:10 PM

To: Kevin D. Sitzman <kds@goroveslade.com>

Cc: Steven Dauterman <srd@goroveslade.com>; Chad A. Baird <cab@goroveslade.com>; Abrahamson, Kris <Kris.Abrahamson@fairfaxcounty.gov>; Fuller, Gregory <Gregory.Fuller@fairfaxcounty.gov>; Garcia, Michael W <Michael.Garcia3@fairfaxcounty.gov>; Hermann, Jeffrey C. <Jeffrey.Hermann@fairfaxcounty.gov>; Iannetta, Elizabeth A. <Elizabeth.Iannetta@fairfaxcounty.gov>; Krasner, Brent M. <Brent.Krasner@fairfaxcounty.gov>; Lewis, Catherine E. <Catherine.Lewis@fairfaxcounty.gov>; Mayland, William <William.Mayland@Fairfaxcounty.gov>; O'Donnell, William <William.O'Donnell@fairfaxcounty.gov>; Pemberton, Debbie <Debbie.Pemberton@Fairfaxcounty.gov>; Wright, Suzanne L. <suzanne.wright@fairfaxcounty.gov>

Subject: Ch 870 Determination / Hunter Mill Road Assisted Living

The proposed application to replace a single family dwelling with an 85 bed assisted living facility on 2347 Hunter Mill Rd (tax map 37-2(1)0026) **does not require a Ch 870 TIA.**

Additional review by Fairfax County Transportation (FCDOT) will occur once Zoning distributes the case to county agencies. If additional transportation issues need to be addressed/discussed, Transportation and Zoning will coordinate and contact you.

Please include this email correspondence with your application submittal. I am including Zoning staff for notification purposes.

Thanks and have a good day!

Michelle Guthrie
Fairfax County Transportation

From: Kevin D. Sitzman [mailto:kds@goroveslade.com]

Sent: Tuesday, September 25, 2018 11:39 AM

To: Guthrie, Michelle <Michelle.Guthrie@Fairfaxcounty.gov>

Cc: Steven Dauterman <srd@goroveslade.com>; Chad A. Baird <cab@goroveslade.com>

Subject: Hunter Mill Road Assisted Living

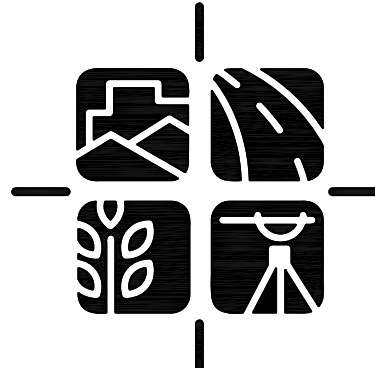
Michelle,

I have attached our Chapter 527/870 Determination Memo for the Hunter Mill Assisted Living site. The proposal would replace the current single-family home with an 85-bed facility. As the attached memo shows, the use would generate about 221 trips per day, well below the 5,000 trips per day threshold to require a Chapter 870 TIA.

Please let us know if Fairfax County concurs with our conclusion in the attached memo.

Kevin D. Sitzman, P.E.
Project Manager

Gorove/Slade Associates, Inc.
Transportation, Traffic, and Parking
p: 571-248-0992 | d: 571-261-9718 | c: 571-318-1285 | f: 703-787-9905
15125 Washington Street, Suite 212 | Haymarket, VA 20169
kevin.sitzman@goroveslade.com | www.goroveslade.com



urban

7712 Little River Turnpike
Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
www.urban-lltd.com

Seal



Client

ORR PARTNERS
11180 SUNRISE VALLEY DR
RESTON, VIRGINIA 20191
(703) 289-2100

Revision / Issue

No.	Description	Date
1.	1ST SUBMISSION	10/19/2018
2.	1ST SUBMISSION (REV)	11/09/2018
3.	1ST SUBMISSION (REV)	11/20/2018
4.	2ND SUBMISSION	02/25/2019
5.	3RD SUBMISSION	04/19/2019
6.	4TH SUBMISSION	06/05/2019

Issue

Date Description

Project Name

HUNTER MILL
ASSISTED LIVING

SPECIAL EXCEPTION PLAT

Hunter Mill District
Fairfax County, Virginia

Drawn By

JE

Checked By

CM

Project No.

MISC-2381

Date

JUNE 5, 2019

Drawing Title

NOTES AND
DETAILS

Scale: AS SHOWN

Drawing Number

2
Sheet 2 of 15

MISC-2381

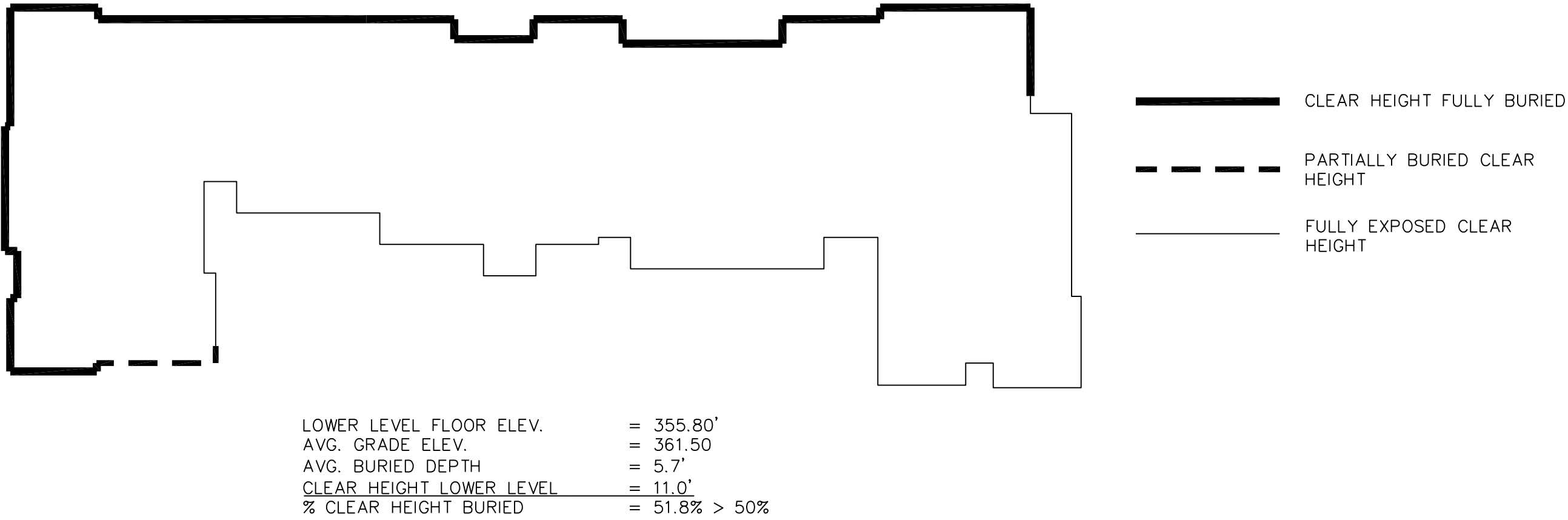
Urban, Ltd. - 0:\JOBS\Hunter Mill Road Assisted Living Project\REV and SE\CAD\02-Notes.dwg [03 GENERAL NOTES] June 04, 2019 -- 5:13pm cmyers

OUTDOOR AMENITY DETAILS:

THESE RENDERINGS AND IMAGES ARE CONCEPTUAL AND REPRESENT THE GENERAL APPEARANCE, QUALITY OF DESIGN AND MATERIALS PROPOSED. REFINEMENT AND REVISION MAY OCCUR WITH FINAL DESIGN DEVELOPMENT AND ENGINEERING. FINAL SIZE AND LOCATION OF ELEMENTS INCLUDING MATERIAL AND SITE FURNITURE MAY BE ADJUSTED SUBJECT TO TOPOGRAPHY, LOCATION OF UTILITIES AND OTHER ENGINEERING CONSTRAINTS.



CELLAR DETAIL



NOTE: DUE TO CLEAR HEIGHT BEING BURIED MORE THAN 50%, LOWER LEVEL SHALL BE CONSIDERED A CELLAR.

EXHIBIT AND COMPUTATIONS ARE ILLUSTRATIVE TO DEMONSTRATE THAT LOWER LEVEL MAY BE CONSIDERED A CELLAR PER DEFINITION OF THE ZONING ORDINANCE. ALL GRADING, BUILDING ELEVATIONS AND COMPUTATIONS SHOWN HEREON ARE APPROXIMATE AND SUBJECT TO CHANGE WITH FINAL ENGINEERING.

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7712 Little River Turnpike
Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
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Hunter Mill District
Fairfax County, Virginia

Drawn By

JE

Checked By

CM

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JUNE 5, 2019

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3

Sheet 3 of 15

MISC-2381

FOR ILLUSTRATIVE PURPOSES ONLY.

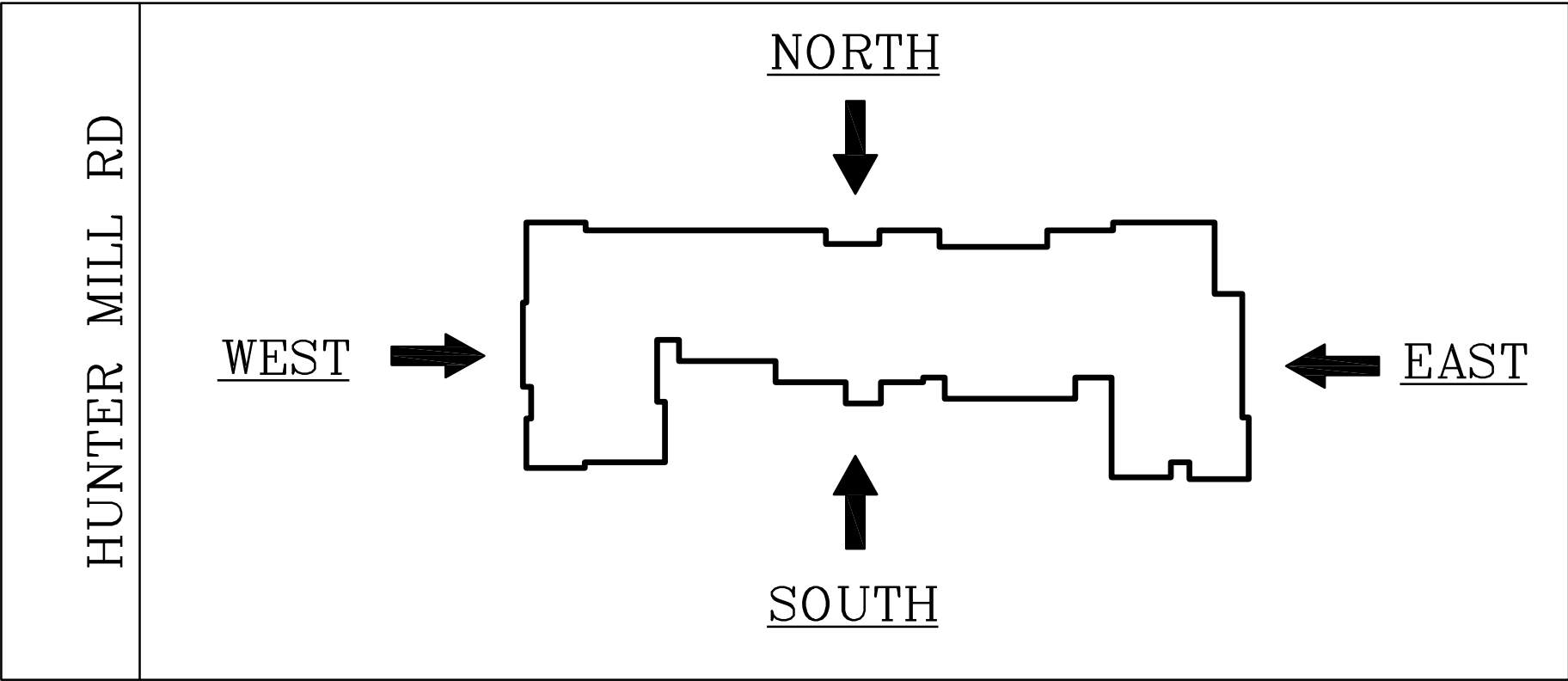
NOTE: CONCEPTUAL ELEVATIONS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ILLUSTRATIONS HEREIN SHOW GENERAL INTENT OF BUILDING CHARACTER. DIMENSIONS, BUILDING MATERIALS AND COLORS MAY VARY AT TIME OF FINAL DESIGN.



WEST ELEVATION



SOUTH ELEVATION



MOSELEYARCHITECTS
8001 BRADDOCK ROAD, SUITE 400, SPRINGFIELD, VA 22151
PHONE (703) 426-9057 FAX (703) 426-9280
MOSELEYARCHITECTS.COM

HUNTER MILL ROAD, VIRGINIA

580038

FEBRUARY 6, 2019



EAST ELEVATION



NORTH ELEVATION

MOSELEYARCHITECTS
8001 BRADDOCK ROAD, SUITE 400, SPRINGFIELD, VA 22151
PHONE (703) 426-9057 FAX (703) 426-9280
MOSELEYARCHITECTS.COM

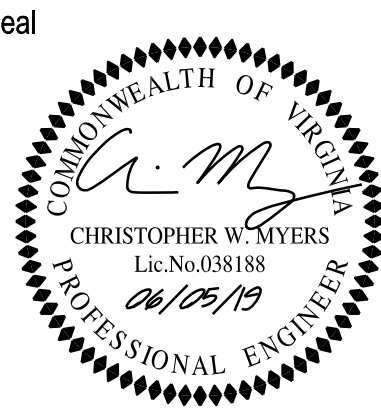
HUNTER MILL ROAD, VIRGINIA

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FEBRUARY 6, 2019



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Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
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ORR PARTNERS
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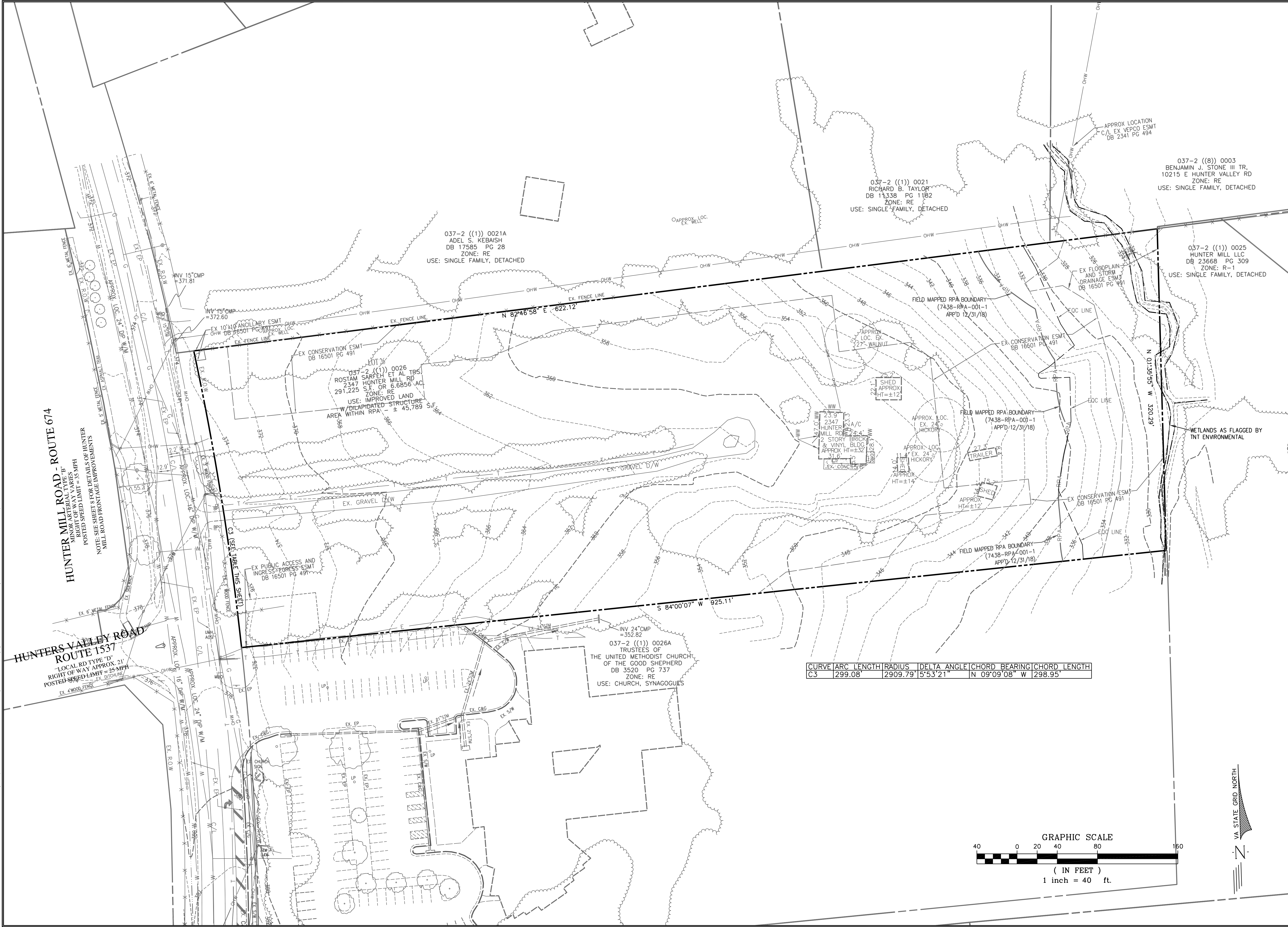
CONCEPTUAL
ELEVATIONS

Scale: AS SHOWN

Drawing Number

4
Sheet 4 of 15

Urban, Ltd. - 0: \JOBS\Hunter Mill Road Assisted Living Project\RZ and SE\CAD\03-Existing Conditions.dwg [05 EXISTING CONDITIONS] June 04, 2019 - 2:06pm cjohnson



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Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
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Fairfax County, Virginia

Drawn By JE	Checked By CM
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CONDITIONS

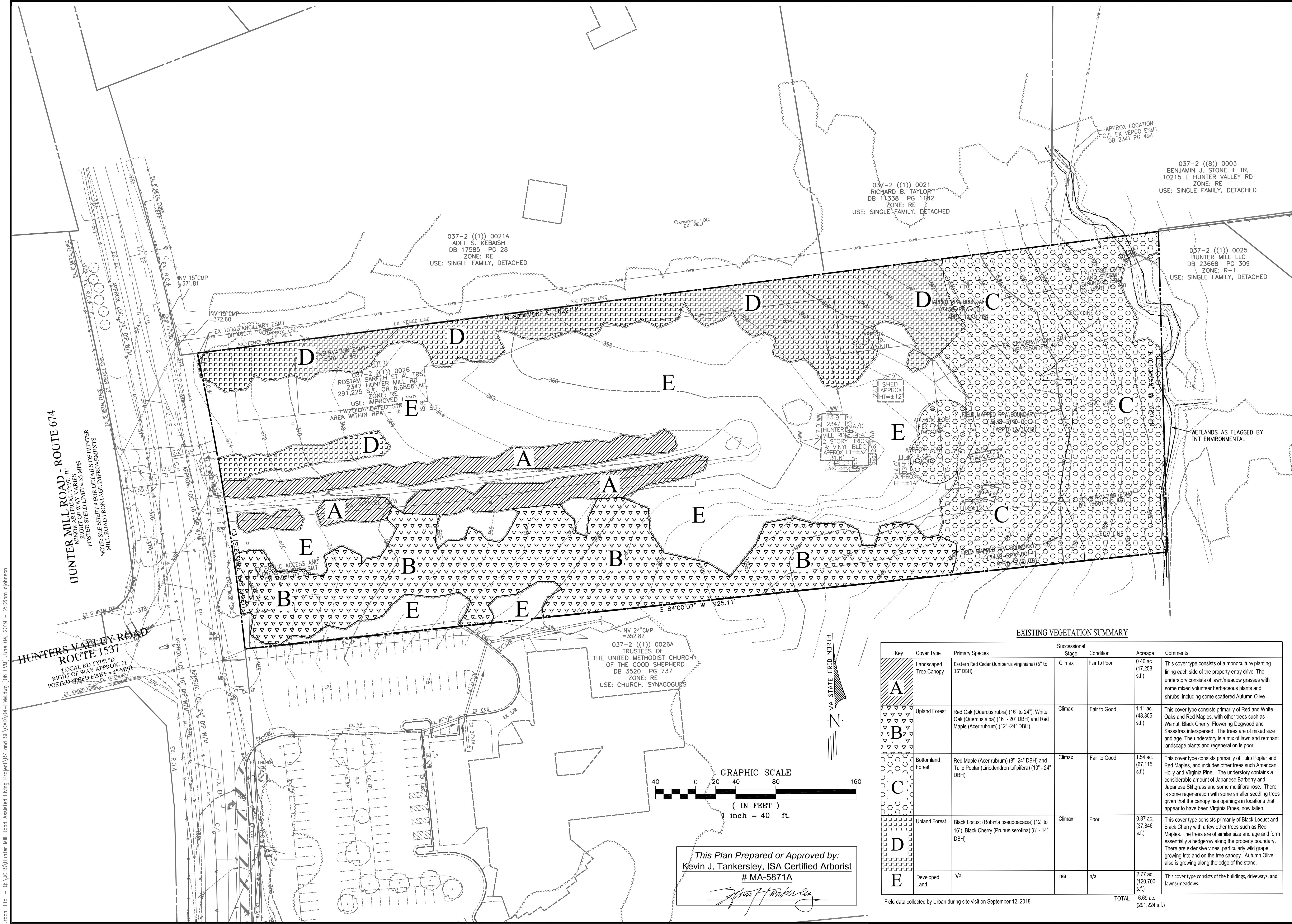
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Drawing Number

5

Sheet 5 of 15

MISC-2381



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Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
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SPECIAL EXCEPTION PLAT

Hunter Mill District
Fairfax County, Virginia

Drawn By JE	Checked By CM
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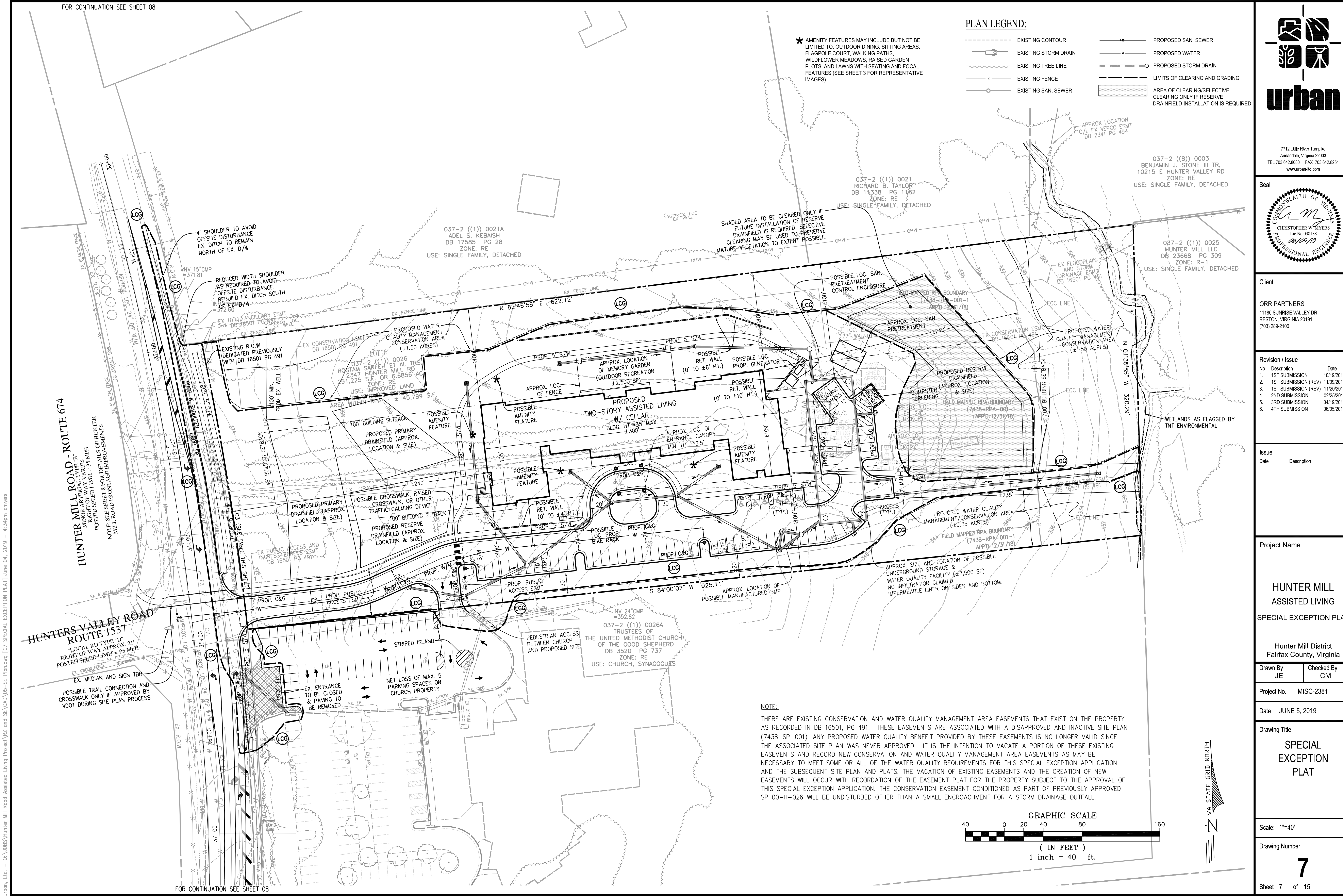
EXISTING
VEGETATION MAP

Scale: 1"=40'

Drawing Number

6

Sheet 6 of 15



PLAN LEGEND:

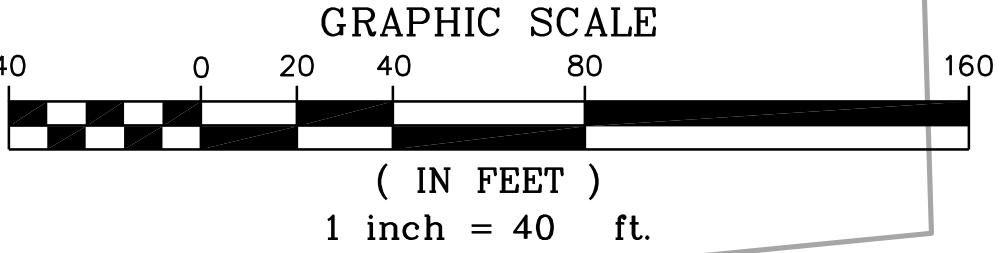
- EXISTING CONTOUR
- EXISTING STORM DRAIN
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING SAN. SEWER
- PROPOSED SAN. SEWER
- PROPOSED WATER
- PROPOSED STORM DRAIN
- LIMITS OF CLEARING AND GRADING
- AREA OF CLEARING/SELECTIVE CLEARING ONLY IF RESERVE DRAINFIELD INSTALLATION IS REQUIRED

* AMENITY FEATURES MAY INCLUDE BUT NOT BE LIMITED TO: OUTDOOR DINING, SITTING AREAS, FLAGPOLE COURT, WALKING PATHS, WILDFLOWER MEADOWS, RAISED GARDEN PLOTS, AND LAWNS WITH SEATING AND FOCAL FEATURES (SEE SHEET 3 FOR REPRESENTATIVE IMAGES).

SHADE AREA TO BE CLEARED ONLY IF FUTURE INSTALLATION OF RESERVE DRAINFIELD IS REQUIRED. SELECTIVE CLEARING MAY BE USED TO PRESERVE MATURE VEGETATION TO EXTENT POSSIBLE.

NOTE:

THERE ARE EXISTING CONSERVATION AND WATER QUALITY MANAGEMENT AREA EASEMENTS THAT EXIST ON THE PROPERTY AS RECORDED IN DB 16501, PG 491. THESE EASEMENTS ARE ASSOCIATED WITH A DISAPPROVED AND INACTIVE SITE PLAN (7438-SP-001). ANY PROPOSED WATER QUALITY BENEFIT PROVIDED BY THESE EASEMENTS IS NO LONGER VALID SINCE THE ASSOCIATED SITE PLAN WAS NEVER APPROVED. IT IS THE INTENTION TO VACATE A PORTION OF THESE EXISTING EASEMENTS AND RECORD NEW CONSERVATION AND WATER QUALITY MANAGEMENT AREA EASEMENTS AS MAY BE NECESSARY TO MEET SOME OR ALL OF THE WATER QUALITY REQUIREMENTS FOR THIS SPECIAL EXCEPTION APPLICATION AND THE SUBSEQUENT SITE PLAN AND PLATS. THE VACATION OF EXISTING EASEMENTS AND THE CREATION OF NEW EASEMENTS WILL OCCUR WITH RECORDED OF THE EASEMENT PLAT FOR THE PROPERTY SUBJECT TO THE APPROVAL OF THIS SPECIAL EXCEPTION APPLICATION. THE CONSERVATION EASEMENT CONDITIONED AS PART OF PREVIOUSLY APPROVED SP 00-H-026 WILL BE UNDISTURBED OTHER THAN A SMALL ENCROACHMENT FOR A STORM DRAINAGE OUTFALL.



urban

7712 Little River Turnpike
Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
www.urban-llc.com

Seal



Client

ORR PARTNERS
11180 SUNRISE VALLEY DR
RESTON, VIRGINIA 20191
(703) 289-2100

Revision / Issue

No.	Description	Date
1.	1ST SUBMISSION	10/19/2018
2.	1ST SUBMISSION (REV)	11/09/2018
3.	1ST SUBMISSION (REV)	11/20/2018
4.	2ND SUBMISSION	02/25/2019
5.	3RD SUBMISSION	04/19/2019
6.	4TH SUBMISSION	06/05/2019

Issue

Date	Description
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Project Name

HUNTER MILL
ASSISTED LIVING

SPECIAL EXCEPTION PLAT

Hunter Mill District
Fairfax County, Virginia

Drawn By JE

Checked By CM

Project No. MISC-2381

Date JUNE 5, 2019

Drawing Title

SPECIAL
EXCEPTION
PLAT

Scale: 1"=40'

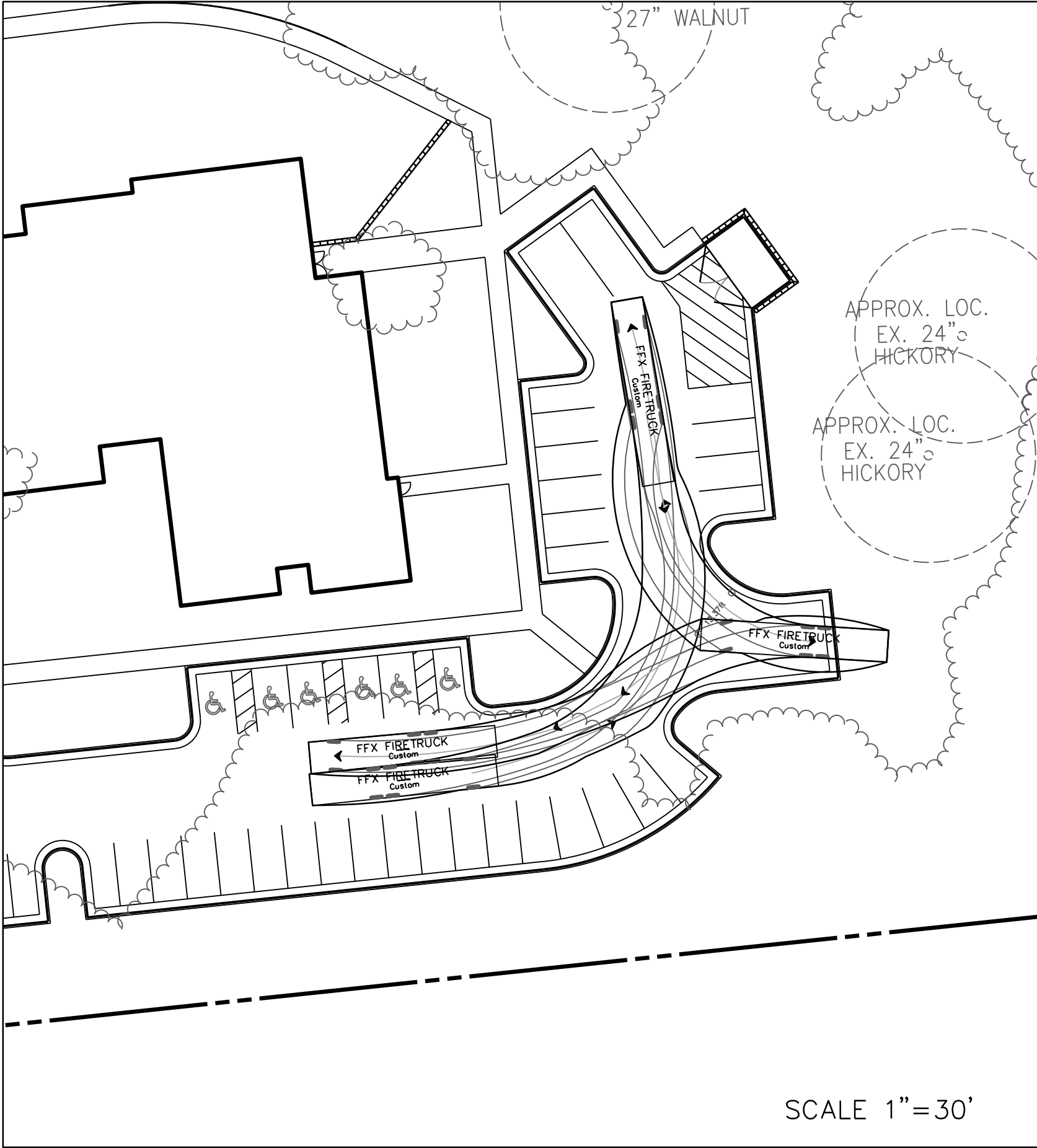
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7
Sheet 7 of 15

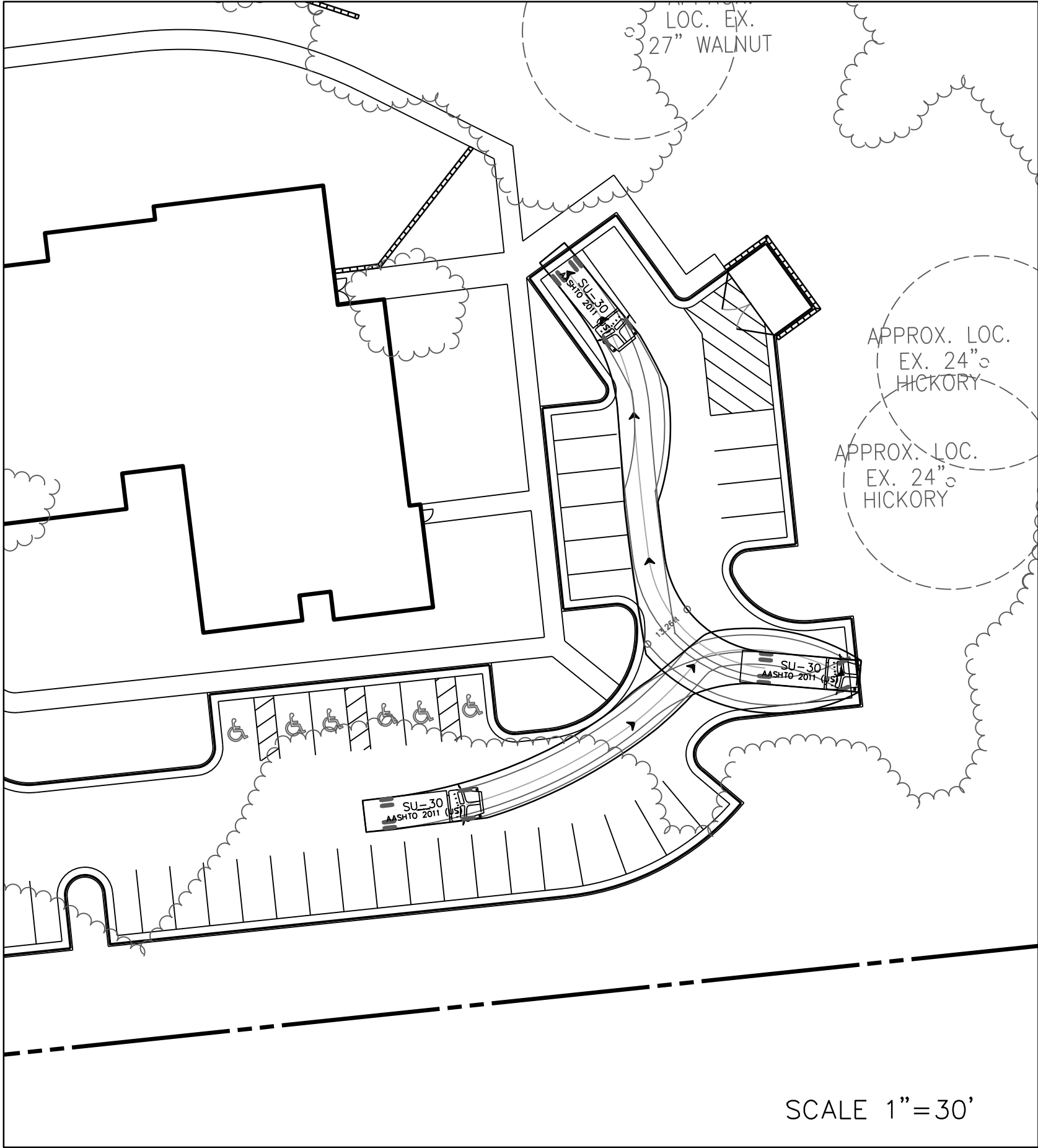
MISC-2381

Urban, Ltd. - Q:\JOBS\Hunter Mill Road Assisted Living Project\RZ and SE\CAD\USA-Autoturn Exhibits.dwg [7A AUTOTURN EXHIBIT] June 04, 2019 - 2:07pm cplinson

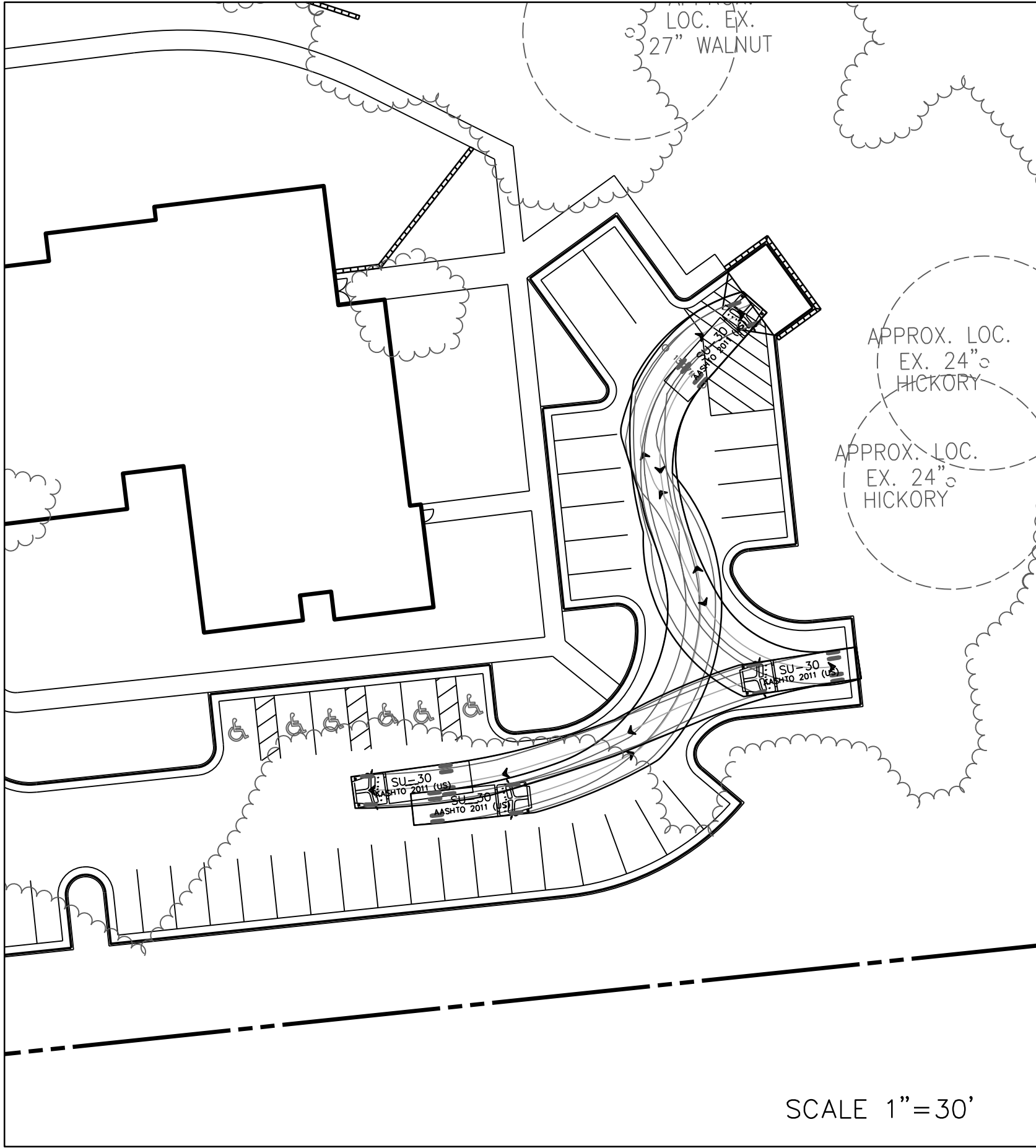
FIRE TRUCK ACCESS
FAIRFAX COUNTY 47.5' UNIBODY TRUCK



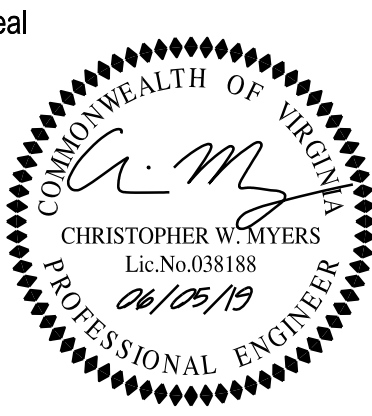
SERVICE VEHICLE ACCESS
SU-30



DUMPSTER VEHICLE ACCESS
SU-30



7712 Little River Turnpike
Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
www.urban-ld.com



Client

ORR PARTNERS
11180 SUNRISE VALLEY DR
RESTON, VIRGINIA 20191
(703) 289-2100

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Issue	
Date	Description

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HUNTER MILL
ASSISTED LIVING

SPECIAL EXCEPTION PLAT

Hunter Mill District
Fairfax County, Virginia

Drawn By
JE

Checked By
CM

Project No. MISC-2381

Date JUNE 5, 2019

Drawing Title

TURNAROUND
MOVEMENT
EXHIBIT

Scale: AS SHOWN

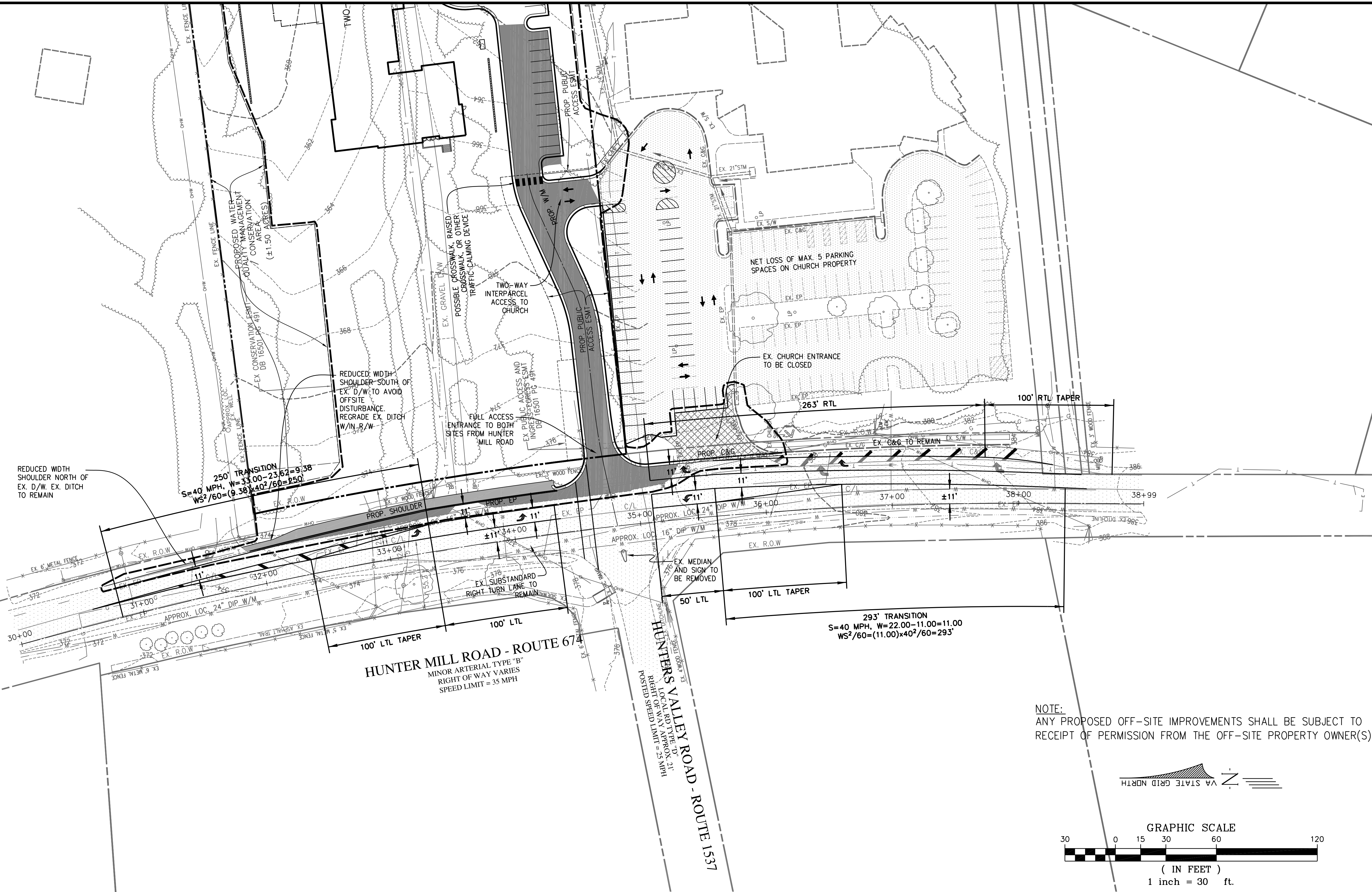
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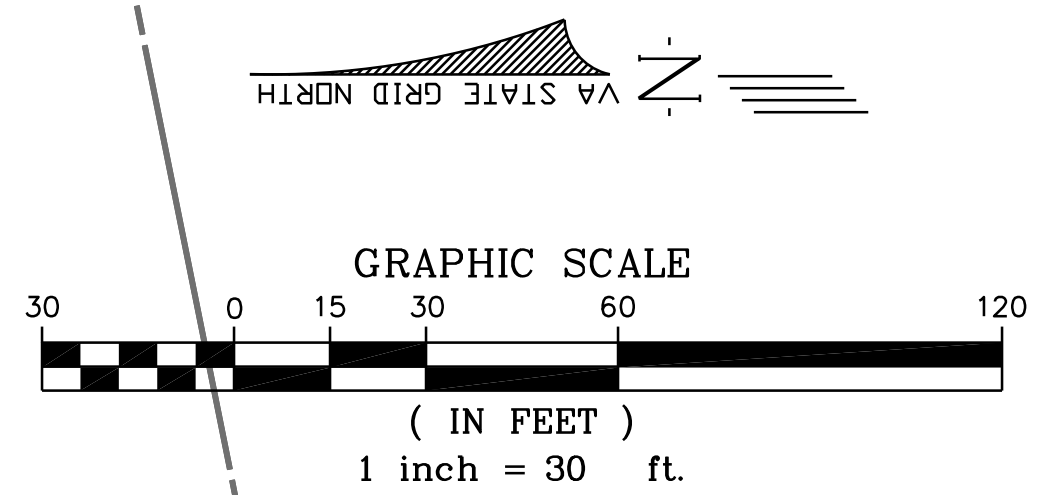
Sheet 7A of 15

MISC-2381

Urban, Ltd. - Q:\JOBS\Hunter Mill Road Assisted Living Project\RZ and SE\CAD\06A-FRONTAGE IMPROVEMENTS.dwg [08 FRONTAGE IMPROVEMENTS] June 04, 2019 - 2:10pm cplmson



NOTE:
ANY PROPOSED OFF-SITE IMPROVEMENTS SHALL BE SUBJECT TO
RECEIPT OF PERMISSION FROM THE OFF-SITE PROPERTY OWNER(S)



- ASSUMPTIONS / DESIGN PARAMETERS
- 35 MPH POSTED SPEED --> 40 MPH DESIGN SPEED
 - HUNTER MILL ROAD IS CLASS B MINOR ARTERIAL (VDOT GS-6)
 - 11' LANES WITH 8' SHOULDER IN GENERAL CONFORMANCE WITH THE NORTHERN VIRGINIA REGIONAL COMMISSION'S "HUNTER MILL ROAD TRAFFIC CALMING STUDY" AS IDENTIFIED IN FAIRFAX COUNTY COMPREHENSIVE PLAN TEXT.
 - 100' STORAGE LENGTH WITH 100' TURN LANE TAPERS PER VDOT STANDARD AND GOROVE SLADE MEMO OF APRIL 2017.
 - LANE TRANSITIONS PER VDOT STANDARDS.

LEGEND

- EX. PAVEMENT TO REMAIN
- EX. PAVEMENT TO BE REMOVED
- PROP. ADDITIONAL PAVEMENT
- PROP. 8' SHOULDER

7712 Little River Turnpike
Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
www.urban-ld.com

Seal

Client

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11180 SUNRISE VALLEY DR
RESTON, VIRGINIA 20191
(703) 289-2100

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Hunter Mill District
Fairfax County, Virginia

Drawn By JE	Checked By CM
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Project No. MISC-2381

Date JUNE 5, 2019

Drawing Title

FRONTAGE
IMPROVEMENTS

Scale: 1"=30'

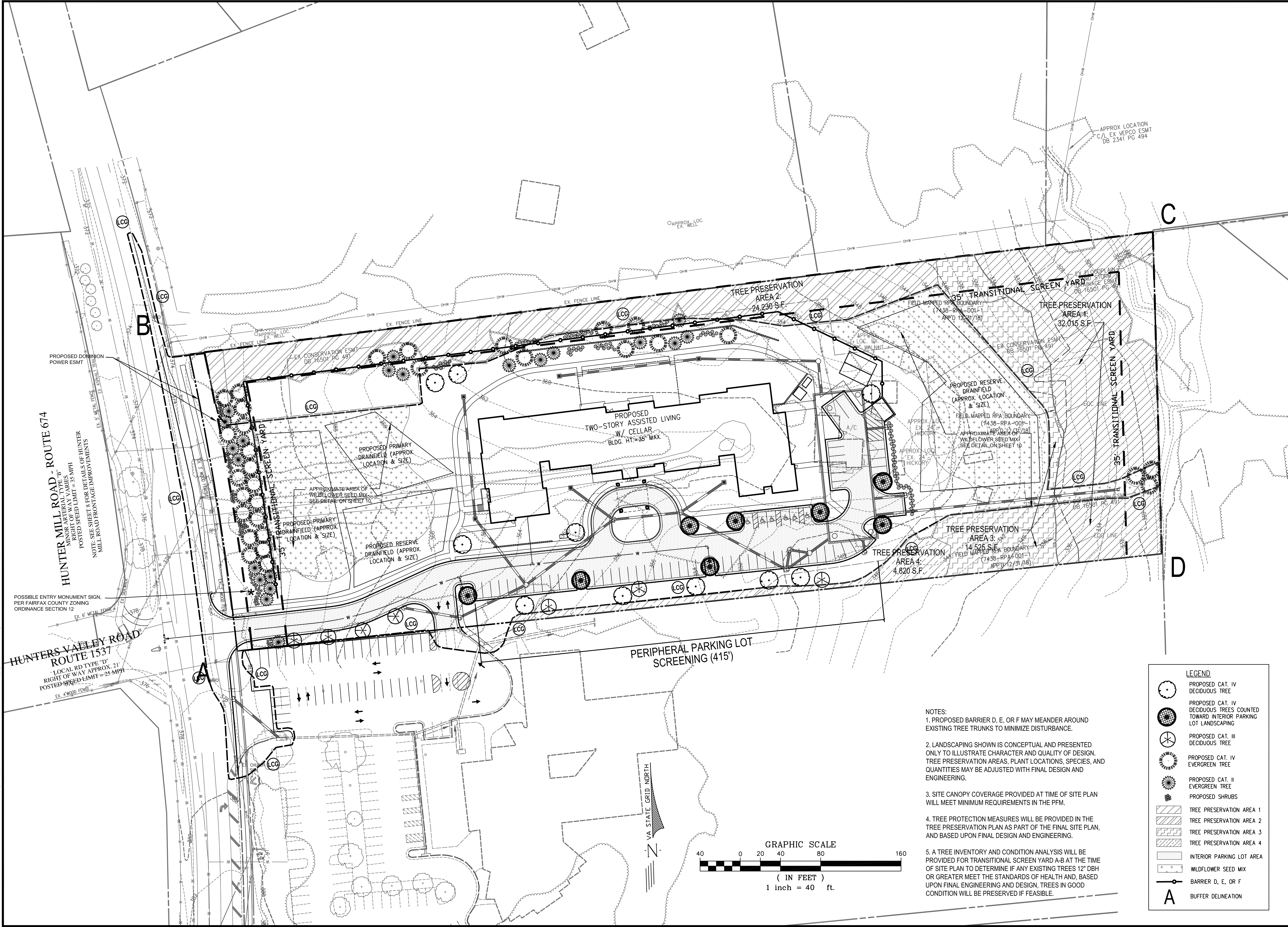
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8

Sheet 8 of 15

MISC-2381

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7712 Little River Turnpike
Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
www.urban-ld.com

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Project No. MISC-2381

Date JUNE 5, 2019

Drawing Title

LANDSCAPE
PLAN

Scale: 1"=40'

Drawing Number

9

Sheet 9 of 15

MISC-2381



CHARACTER OF BARRIER WITHIN TRANSITIONAL SCREEN YARD A-B



CHARACTER OF BARRIER WITHIN TRANSITIONAL SCREEN YARD B-C

BARRIER FENCE DETAILS:

BARRIER FENCE MAY BE CONSTRUCTED OF WOOD, VINYL, COMPOSITE FENCING MATERIALS, BRICK, OR COMBINATION THEREOF.



WILDFLOWER SEED MIX DETAILS:

WILDFLOWER SEED MIX TO BE INSTALLED IN INFORMAL DRIFTS ACROSS DRAINFIELDS, GENERALLY AS SHOWN ON PLAN.

TREE PRESERVATION CALCULATIONS					
Tree Preservation Target (%)					57%
Tree Preservation Target (s.f.)					42,773
Tree Preservation:					
Tree Preservation Areas		Cover Type	S.F.	Credit Factor	Total
Tree Preservation Area 1	Bottomland Forest (RPA)	B & B	32,015	1.00	32,015
Tree Preservation Area 2	Upland Forest	B & B	24,230	1.00	24,230
Tree Preservation Area 3	Bottomland Forest	B & B	14,525	1.25	18,156
Tree Preservation Area 4	Upland Forest	B & B	4,820	1.00	4,820
Total Tree Preservation Provided (s.f.)					79,221

PLANT SCHEDULE							
Symbol	Botanical Name	Common Name	Size	Type	Remarks	10 yr. Canopy Credit	Multiplier
	Cat. IV Deciduous Trees						
	Acer rubrum	Red Maple	3" Cal.	B & B	Uniform branching pattern	250	Native: 1.50
	Carya glabra	Pignut Hickory	3" Cal.	B & B	Uniform branching pattern	250	Native: 1.50
	Fagus grandifolia	American Beech	3" Cal.	B & B	Uniform branching pattern	250	
	Liriodendron tulipifera	Tulip Poplar	3" Cal.	B & B	Uniform branching pattern	250	
	Platanus occidentalis	Sycamore	3" Cal.	B & B	Uniform branching pattern	250	
	Quercus alba	White Oak	3" Cal.	B & B	Uniform branching pattern	250	Wildlife Benefits: 1.50
	Quercus coccinea	Scarlet oak	3" Cal.	B & B	Uniform branching pattern	250	Native: 1.50
	Quercus phellos	Willow Oak	3" Cal.	B & B	Uniform branching pattern	250	Wildlife Benefits: 1.50
	Tilia americana	American Linden	3" Cal.	B & B	Uniform branching pattern	250	
	Cat. III Deciduous Trees						
	Betula nigra	River Birch	3" Cal.	B & B	Uniform branching pattern	175	Wildlife Benefits: 1.50
	Gleditsia triacanthos 'nemris'	Thornless Honeylocust	3" Cal.	B & B	Uniform branching pattern	175	
	Nyssa sylvatica	Black Gum	3" Cal.	B & B	Uniform branching pattern	175	Wildlife Benefits: 1.50
	Cat. IV Evergreen Trees						
	Magnolia grandiflora	Southern Magnolia	10' Ht.	B & B	Uniform branching pattern	250	
	Pinus virginiana	Virginia Pine	10' Ht.	B & B	Uniform branching pattern	250	Wildlife Benefits: 1.50
	Pinus taeda	Loblolly Pine	10' Ht.	B & B	Uniform branching pattern	250	Wildlife Benefits: 1.50
	Cat. II Evergreen Trees						
	Ilex opaca	American Holly	10' Ht.	B & B	Uniform branching pattern	125	Native: 1.50
	Juniperus virginiana	Eastern Redcedar	10' Ht.	B & B	Uniform branching pattern	125	Native: 1.50
	Shrubs						
	Clethra alnifolia 'Hummingbird'	Summersweet	18"-24" Ht.	B & B	Full, dense		
	Hydrangea quercifolia	Oakleaf Hydrangea	18"-24" Ht.	B & B	Full, dense		
	Ilex glabra	Inkberry Holly	18"-24" Ht.	B & B	Full, dense		
	Myrica pensylvanica	Wax Myrtle	18"-24" Ht.	B & B	Full, dense		
	Viburnum dentatum	Arrowwood Viburnum	18"-24" Ht.	B & B	Full, dense		

PERIPHERAL PARKING LOT LANDSCAPING CALCULATIONS				
Location (Abutting Use)	Length (l.f.)	Required Trees	Provided Trees	
South (Abutting Non-R.O.W.)	415	8 Trees (1/50 l.f.)	5 Cat. IV Deciduous	
			3 Cat. III Deciduous	
			8 Total Trees Provided	

Table 12.11 Interior Parking Lot Landscaping Calculations		
	ft²	Remarks
Area to be counted (SF) =	33,686	S.F.
Interior Landscaping Required (5%) =	1,685	S.F.
Total Tree Canopy Provided:		
(8 trees @ 250 ft² ea.) =	2,000	S.F.
Total Area Required (SF) =	1,685	5%
Total Area Provided (SF) =	2,000	5.9%

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
West: Buffer A-B Assisted Living to Single Family Detached (Group 1)	Type 2; D, E, or F	35	275 Subtotal	9,625	7,219 (Mixture of large & medium evergreen trees) 3 Shrubs /10 l.f.	20 Cat IV Evergreen Trees @ 250 s.f. 18 Cat II Evergreen Trees @ 125 s.f. 83 Shrubs Barrier D, E, or F	18 Cat IV Evergreen Trees @ 250 s.f. 11 Cat II Evergreen Trees @ 125 s.f. 1,410 s.f. Existing Canopy to be Preserved 83 Shrubs Barrier D, E, or F	4,500 s.f. 1,375 s.f. 1,410 s.f.
Total								7,285 s.f.
Requirement is met...		7,285 s.f. is greater than...		7,219				
NOTE: The full 35' width of Transitional Screen Yard A-B has been provided immediately behind the 15' overhead electric line easement								
North: Buffer B-C Assisted Living to Single Family Detached (Group 1)	Type 2; D, E, or F	35	966 Subtotal	33,810	25,358 (Mixture of large & medium evergreen trees) 3 Shrubs /10 l.f.	70 Cat IV Evergreen Trees @ 250 s.f. 63 Cat II Evergreen Trees @ 125 s.f. 290 Shrubs Barrier D, E, or F	10 Cat IV Evergreen Trees @ 250 s.f. 10 Cat II Evergreen Trees @ 125 s.f. 27,155 s.f. Existing Canopy to be Preserved 62 Shrubs Barrier D, E, or F; See note 2.	2,500 s.f. 1,250 s.f. 27,155 s.f.
Total								30,905 s.f.
Requirement is met...		30,905 s.f. is greater than...		25,358				
East: Buffer C-D Assisted Living to Single Family Detached (Group 1)	Type 2; D, E, or F	35	320 Subtotal	11,200	8,400 (Mixture of large & medium evergreen trees) 3 Shrubs /10 l.f.	24 Cat IV Evergreen Trees @ 250 s.f. 20 Cat II Evergreen Trees @ 125 s.f. 96 Shrubs Barrier D, E, or F	3 Cat IV Evergreen Trees @ 250 s.f. 0 Cat II Evergreen Trees @ 125 s.f. 7,875 s.f. Existing Canopy to be Preserved 0 Shrubs Barrier D, E, or F; See note 2.	750 s.f. 0 s.f. 7,875 s.f.
Total								8,625 s.f.
Requirement is met...		8,625 s.f. is greater than...		8,400				
South: Buffer D-A Assisted Living to Church (Group 4)	None Required							

- NOTES:
- MODIFICATION OF THE TRANSITIONAL SCREENING REQUIREMENT ALONG NORTHERN AND EASTERN EDGES (B-C-D) TO ALLOW THE USE OF EXISTING TREES WHERE FEASIBLE MAY BE REQUESTED AT TIME OF SITE PLAN.
 - A MODIFICATION OF THE BARRIER REQUIREMENT IS REQUESTED FOR THE EASTERN PROPERTY LINE AND A PORTION OF THE NORTHERN PROPERTY LINE WHERE DUE TO THE TOPOGRAPHY, THE BARRIER WILL NOT BE EFFECTIVE.
 - PLANTINGS PROVIDED TO SUPPLEMENT THE EXISTING VEGETATION WITHIN TRANSITIONAL SCREEN YARD B-C AND C-D SHALL BE FIELD LOCATED TO AVOID CONFLICTS WITH EXISTING VEGETATION.

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)	166,309	see § 12-0307.2
B	Percentage of gross site area covered by existing tree canopy =	57%	
C	Percentage of 10-year tree canopy required for site =	30%	see Table 12.4
D	Percentage of the 10-year tree canopy requirement that should be met through tree preservation =	57%	
E	Proposed percentage of canopy requirement that will be met through tree preservation =	104.7%	
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 § 12-0308.3 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 § 12-0308.3
H	If step G requires a narrative, it shall be prepared in accordance with § 12-0308.4	n/a	see § 12-0308.4
I	Place this information prior to the 10-year Tree Canopy Calculations as per instructions in Table 12.10.	✓	

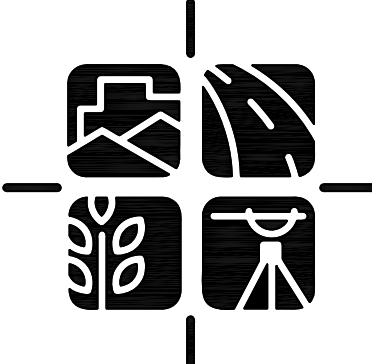
Table 12.10 10-Year Tree Canopy Calculation Worksheet			
Step		Totals	
A. Tree Preservation Target and Statement			
A 1	Place the Tree Preservation Target calculations and statement here preceding the 10-year tree canopy	✓	see § 12-0308.2 for list of required elements and worksheet
B. Tree Canopy Requirement			
B1	Identify gross site area (SF) =	291,224	§ 12-0311.1A
B2	Subtract area dedicated to parks, road frontage (SF) =	0	§ 12-0311.1B
B3	Subtract area of exemptions (SF) =	39,065	§ 12-0311.1C(1) through § 12-0311.1C(6)
B4	Adjusted gross site area (B1-B2,B3) (SF) =	252,159	Square feet
B5	Identify the site's zoning and/or use	R-E	
B6	Percentage of 10-year tree canopy required =	30.0%	§ 12-0310.1 and Table 12.4
B7	Area of 10-year Tree Canopy Required (B4 x B6) (SF) =	75,648	Square feet
B8	Modification of 10-year Tree Canopy Requirements requested?	No	Yes or No
B9	If B8 is yes, then list plan sheet where modification request is located	n/a	Sheet number

C. Tree Preservation			
C 1	Tree Preservation Target Area (SF) =	43,200	Square Feet
C 2	Total canopy area meeting standards of § 12-0400 (SF) =	14,525	Square Feet
C 3	C 2 x 1.25 (SF) =	18,156	§ 12-0310.3B
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	§ 12-0310.3B(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	§ 12-0310.3B(2)
C 8	Canopy area of trees within Resource Protection Areas and 100-year floodplains (SF) =	32,015	Square Feet
C 9	C 8 x 1.0 (SF) =	32,015	§ 12-0310.3C(1)
C 9A	Other areas of preserved tree canopy not receiving multiplier (SF) =	29,050	Square Feet
C 10	Total of C 3, C 5, C 7, C 8, and C 9A (SF) =	79,221	If area of C 10 is less than B 7 remainder of requirement must be met through tree planting - go to D

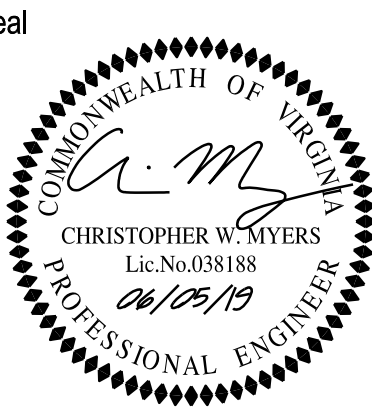
D. Tree Planting			
D 1	Area of canopy to be met through tree planting (B 7-C 10) =	0	Square feet
D 2	Area of canopy planted for air quality benefits =	0	Square feet
D 3	D 2 x 1.5 (SF) =	0	§ 12-0310.4B(1)
D 4	Area of canopy planted for energy conservation =	0	Square feet
D 5	D 4 x 1.5 (SF) =	0	§ 12-0310.4B(2)
D 6	Area of canopy planted for water quality benefits =	0	Square feet
D 7	D 6 x 1.25 (SF) =	0	§ 12-0310.4B(3)
D 8	Area of canopy planted for wildlife benefits =	0	Square feet
D 9	D 8 x 1.5 (SF) =	0	§ 12-0310.4B(4)
D 10	Area of canopy provided by native trees =	0	Square feet
D 11	D 10 x 1.5 (SF) =	0	§ 12-0310.4B(5)
D 12	Area of canopy provided by improved cultivars and varieties =	0	Square feet
D 13	D 12 x 1.25 (SF) =	0	§ 12-0310.4B(6)
D 14	Area of canopy provided through tree seedlings (SF) =	0	§ 12-0310.4D(1)
	D 14 x 1.0 =	0	Square feet
D 15	Area of canopy provided through native shrubs =	0%	
	D 15 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 =	15,850	Square feet
D 17	Total of canopy area provided through tree planting =	15,850	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 § 12-0312
D 20	Canopy area requested to be provided through offsite banking or tree fund =	0	Square Feet
D 21	Amount to be deposited into the Tree Preservation and Planting Fund =	0	

E. Total of 10-year Tree Canopy Provided			
E 1	Total of canopy area provided through tree preservation (C 10) =	79,221	Square Feet
E 2	Total of canopy area provided through tree planting (D 17) =	15,850	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)	95,071	Total of E 1 through E 3, area should meet or exceed area in B 7

- NOTES:
- THE PLANT LIST REPRESENTS A GENERAL PALETTE OF PROPOSED PLANT MATERIAL FOR THE SITE, THOUGH IT IS NOT INTENDED TO BE FULLY INCLUSIVE OF ALL VARIETIES THAT MAY BE PLANTED. FINAL PLANT LIST SELECTIONS WILL INCLUDE SPECIES LISTED IN PFM 12-0000, TABLE 12.19 OR AS OTHERS APPROVED BY UFMd AT THE TIME OF SITE PLAN.
 - 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. THE GENERAL DENSITY OF TREES SHOWN AND MINIMUM CANOPY COVERAGE REQUIREMENTS SPECIFIED IN THE PUBLIC FACILITIES MANUAL WILL BE PROVIDED.
 - THIS PLAN REFLECTS THE GENERAL CHARACTER AND INTENT OF THE PROPOSED DEVELOPMENT BASED ON PRELIMINARY ENGINEERING, ARCHITECTURAL AND LANDSCAPE ARCHITECTURAL DESIGN. MINOR VARIATIONS MAY OCCUR WITH FINAL BUILDING DESIGN AND SITE PLAN.
 - 39,065 S.F. EXEMPTED FOR PROPOSED DRAINFIELDS.



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Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
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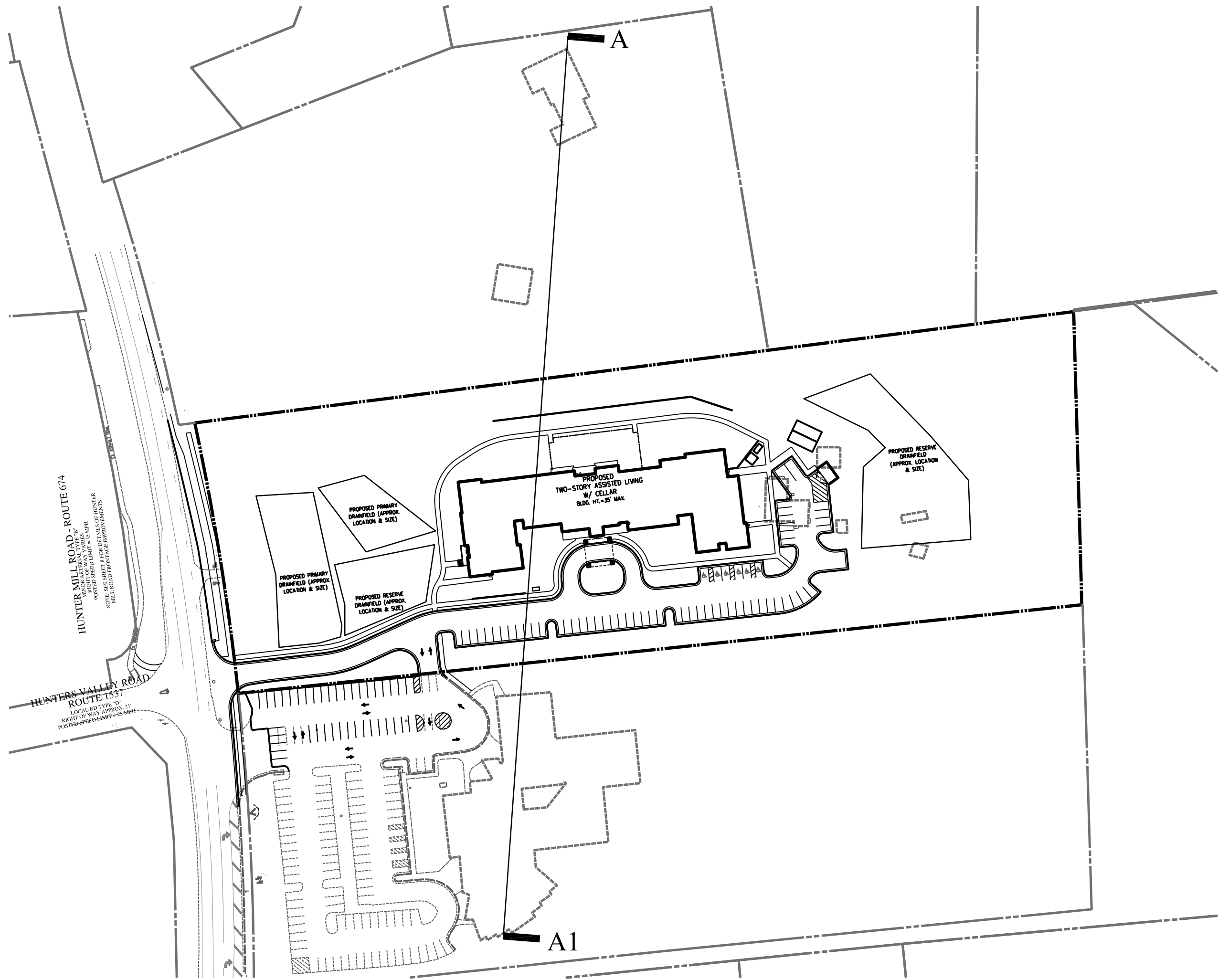
Drawing Title

LANDSCAPE
COMPUTATIONS

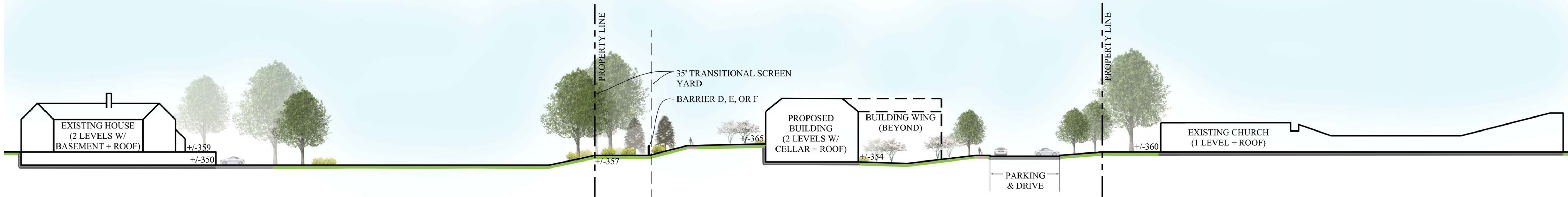
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Drawing Number

10
Sheet 10 of 15



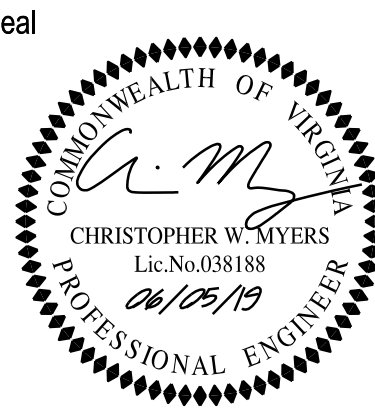
PLAN KEY
SCALE: 1"=100'



SITE SECTION
SCALE: 1"=30'



7712 Little River Turnpike
Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
www.urban-ld.com



Client

ORR PARTNERS
11180 SUNRISE VALLEY DR
RESTON, VIRGINIA 20191
(703) 289-2100

Revision / Issue		
No.	Description	Date
1.	1ST SUBMISSION	10/19/2018
2.	1ST SUBMISSION (REV)	11/09/2018
3.	1ST SUBMISSION (REV)	11/20/2018
4.	2ND SUBMISSION	02/25/2019
5.	3RD SUBMISSION	04/19/2019
6.	4TH SUBMISSION	06/05/2019

Issue	
Date	Description

Project Name

HUNTER MILL
ASSISTED LIVING
SPECIAL EXCEPTION PLAT

Hunter Mill District
Fairfax County, Virginia

Drawn By JE	Checked By CM
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Project No. MISC-2381

Date JUNE 5, 2019

Drawing Title

SITE
SECTION

Scale: AS SHOWN

Drawing Number

10A
Sheet 10A of 15

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

Special Permits (Sect. 8-011 2J & 2L)	Special Exceptions (Sect. 9-011 2J & 2L)
Cluster Subdivision (Sect. 9-615 1G & 1N)	Commercial Revitalization Districts (Sect. 9-622 2A (12) & (14))
Development Plans PRC District (Sect. 16-302 3 & 4L)	PRC Plan (Sect. 16-303 1E & 1 O)
FDP P Districts (Sect. 16-502 1A (6) & (17))	Amendments (Sect. 18-202 10F & 10I)

- | 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.) |
| Underground Detention | ±4.10 | N/A | ±4.10 | ±7,500 | ±30,000 | N/A |
| | | | | | | |
| | | | | | | |
| Totals: | | | | | | |

- 14

[illegible]

11

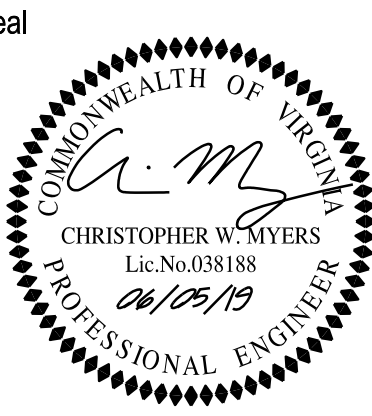
Urban, Ltd. - Q:\JOBS\Hunter Mill Road Assisted Living Project\PRZ and SE\CAD\07-BMP Analysis.dwg [12 BMP 2] June 04, 2019 - 2:13pm cjohnson

PRELIMINARY BMP CALCULATIONS NOTE:
THE CALCULATION SHOWN ON THIS SHEET REFLECT PRELIMINARY ENGINEERING BASED ON THE 2013 VRRM SPREADSHEET. CALCULATIONS ARE SUBJECT TO BE CHANGED WITH FINAL ENGINEERING.


urban

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www.urban-ld.com

Seal



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6.	4TH SUBMISSION	06/05/2019

Issue

Date	Description
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Project Name

HUNTER MILL
ASSISTED LIVING

SPECIAL EXCEPTION PLAT

Hunter Mill District
Fairfax County, Virginia

Drawn By
JE

Checked By
CM

Project No.

MISC-2381

Date

JUNE 5, 2019

Drawing Title

PRELIMINARY
BMP ANALYSIS

Scale:

N/A

Drawing Number

12

Sheet 12 of 15

MISC-2381

Stormwater Best Management Practices (RR = Runoff Reduction)

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft³)	Runoff Reduction (ft³)	Remaining Runoff Volume (ft³)	Total BMP Treatment Volume (ft³)	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
14. Manufactured Treatment Devices (no RR)													
14.a. Manufactured Treatment Device-Filtering	0	1.68	0.99	0	0	4,713	4,713	50	0.00	2.96	1.48	1.48	14.b. MTD - Filtering
14.b. Manufactured Treatment Device-Filtering	0	0.57	0.69	4,713	0	7,533	7,533	40	1.48	1.77	1.30	1.95	

TOTAL IMPERVIOUS COVER TREATED (ac) 1.68 AREA CHECK: OK.
TOTAL MANAGED TURF AREA TREATED (ac) 2.25 AREA CHECK: OK.

TOTAL PHOSPHORUS REMOVAL REQUIRED ON SITE (lb/yr) 2.67

TOTAL PHOSPHORUS AVAILABLE FOR REMOVAL IN D.A. A (lb/yr) 5.25
TOTAL PHOSPHORUS REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 2.78
TOTAL PHOSPHORUS REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 0.00
TOTAL PHOSPHORUS LOAD REDUCTION ACHIEVED IN D.A. A (lb/yr) 2.78
TOTAL PHOSPHORUS REMAINING AFTER APPLYING BMP LOAD REDUCTIONS IN D.A. A (lb/yr) 2.47

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

NITROGEN REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 0.00
NITROGEN REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 0.00
TOTAL NITROGEN REMOVED IN D.A. A (lb/yr) 0.00

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	1.70	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER (ac)	1.68	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	1.68	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	3.31	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	2.25	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft³) 8,620

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft³)	0	0	0	0	0	0
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	5.25	0.00	0.00	0.00	0.00	5.25
TP LOAD REDUCTION ACHIEVED (lb/yr)	2.78	0.00	0.00	0.00	0.00	2.78
TP LOAD REMAINING (lb/yr)	2.47	0.00	0.00	0.00	0.00	2.47

NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) 0.00 0.00 0.00 0.00 0.00 0.00

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr) 5.42
TP LOAD REDUCTION REQUIRED (lb/yr) 2.67
TP LOAD REDUCTION ACHIEVED (lb/yr) 2.78
TP LOAD REMAINING (lb/yr) 2.64
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr) 0.00 **

** TARGET TP REDUCTION EXCEEDED BY 0.11 LB/YEAR **

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr) 38.75
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) 0.00
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr) 38.75

Drainage Area A		A Soils	B Soils	C Soils	D Soils	Total Area (acres): 6.69	Runoff Reduction Volume (ft ³): 0
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	Area (acres)	0.00	0.53	0.08	1.09		
	CN	30	55	70	77		
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.00	2.37	0.13	0.81		
	CN	39	61	74	80		
Impervious Cover	Area (acres)	0.00	1.28	0.09	0.31		
	CN	98	98	98	98		
CN _(D.A. A)							
75							
		1-year storm	2-year storm	10-year storm			
RV _{Developed} (watershed-inch) with no Runoff Reduction*		0.72	1.07	2.34			
RV _{Developed} (watershed-inch) with Runoff Reduction*		0.72	1.07	2.34			
Adjusted CN*		75	75	75			

Site Land Cover Summary

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.53	0.08	1.09	1.70	25
Managed Turf (acres)	0.00	2.37	0.13	0.81	3.31	49
Impervious Cover (acres)	0.00	1.28	0.09	0.31	1.68	25
					6.69	100

Site Tv and Land Cover Nutrient Loads

Site Rv	0.35
Treatment Volume (ft³)	8,620
TP Load (lb/yr)	5.42
TN Load (lb/yr)	38.75

Total TP Load Reduction Required (lb/yr)	2.67
--	------

Site Compliance Summary

Total Runoff Volume Reduction (ft³)	0
Total TP Load Reduction Achieved (lb/yr)	2.78
Total TN Load Reduction Achieved (lb/yr)	0.00
Remaining Post Development TP Load (lb/yr)	2.64
Remaining TP Load Reduction (lb/yr) Required	0.00

** TARGET TP REDUCTION EXCEEDED BY 0.11 LB/YEAR **

PRELIMINARY SWM NARRATIVE:

THIS APPLICATION IS PROPOSING AN ASSISTED LIVING FACILITY SHOWN ON SHEET 6. AS CURRENTLY SHOWN WITH THIS APPLICATION, THERE IS ONE POINT OF CONCENTRATED DISCHARGE FROM THE DEVELOPED SITE. OUTFALL #1 IS LOCATED TO THE SOUTHEAST OF THE SITE. THE CONCENTRATED FLOW FOR OUTFALL #1 WILL BE DISCHARGED DIRECTLY INTO AN EXISTING NATURAL CHANNEL THAT FLOWS IN A NORTHERN DIRECTION.

UPSTREAM OF OUTFALL #1'S DISCHARGE POINT, A POTENTIAL UNDERGROUND STORMWATER DETENTION FACILITY MAY BE UTILIZED IN ORDER TO REDUCE THE 1-YEAR POST DEVELOPMENT PEAK RUNOFF RATES FROM THE SITE TO BELOW THE PEAK RUNOFF RATES FOR THE SITE USING THE EQUATION REFERENCED IN SECTION 124-4-4.B.3a. THE 2-YEAR AND 10-YEAR POST DEVELOPMENT PEAK RUNOFF RATES FROM THE SITE WILL BE REDUCED PER SECTION 124-4-4.C.4, WHICH STATES THAT IF THE 2-YEAR AND 10-YEAR STORM ARE RELEASED AT A RATE THAT SATISFIES THE EQUATION REFERENCED IN 124-4-4.B.3a, THE DOWNSTREAM REVIEW ANALYSIS SHALL BE LIMITED TO PROVIDING CROSS-SECTIONS TO SHOW A DEFINED CHANNEL. DUE TO THE PROXIMITY OF THE ADJACENT PROPOSED DRAINFIELD, THE POTENTIAL FACILITY IS CURRENTLY SIZED FOR SWM AND BMP ASSUMING NO INFILTRATION AND NO INFILTRATION CREDIT IS CLAIMED.

IN ACCORDANCE WITH PFM SECTION 6-0203.3, THE OUTFALL POINT AT THE NATURAL CHANNEL WILL BE ANALYZED WITH THE RELEASE RATE BASED ON THE CHANNEL PROTECTION AND FLOOD PROTECTION REQUIREMENTS OF CHAPTER 124-4-4 OF THE COUNTY CODE. EXISTING AND PROPOSED DRAINAGE DIVIDES FOR THE OUTFALL POINT HAVE BEEN PROVIDED ON THIS SHEET IN ORDER TO DEMONSTRATE THE PRE AND POST DEVELOPMENT PEAK RUNOFF AREAS. THE DRAINAGE DIVIDES ARE SHOWN BASED ON THE CONCEPTUAL LAYOUT AND ARE SUBJECT TO CHANGE WITH FINAL ENGINEERING.

THERE ARE MULTIPLE AREAS WITHIN THE PROPOSED SITE THAT CONTRIBUTE SHEET FLOW TO OUTFALL #1. PER SECTION 124-4-4.E, THESE SHEET FLOW AREAS DO NOT RESULT IN DOWN-GRADIENT EROSION, SEDIMENTATION, OR FLOODING. IN THE PRE-DEVELOPMENT CONDITION THE ENTIRE 6.69 ACRE SITE CONTRIBUTES SHEET FLOW TO THE NORTH, EAST, AND SOUTH INTO ANGELICO BRANCH. IN THE POST DEVELOPMENT CONDITION APPROXIMATELY 4.10 ACRES OF THE SITE IS DETAINED AND RELEASED AS CONCENTRATED FLOW INTO ANGELICO BRANCH PER SECTION 124-4-4.B3a, AND APPROXIMATELY 2.59 ACRES CONTRIBUTES SHEET FLOW. IN ADDITION TO THE REDUCTION IN SHEET FLOW AREA TO OUTFALL #1 IN THE POST DEVELOPMENT CONDITION, APPROXIMATELY 100% OF THE IMPERVIOUS SITE AREA WILL BE DETAINED IN THE PROPOSED UNDERGROUND DETENTION SYSTEM; THIS ENSURES THAT ONLY TURF AND WOODED AREAS CONTRIBUTE RUNOFF TO OUTFALL #1, SIMILAR TO THE EXISTING CONDITION.

IN ACCORDANCE WITH THE REQUIREMENTS OUTLINED IN SECTION 124-4-4 OF THE COUNTY CODE, THE RELEASE RATE REQUIREMENT WILL BE SATISFIED. ADDITIONAL CALCULATIONS WILL BE INCLUDED WITH THE FINAL SITE PLAN.

PRELIMINARY SWM NOTE:

AREAS,CALCULATIONS AND FACILITY LOCATIONS SHOWN WITH THIS APPLICATION ARE FOR PRELIMINARY PURPOSES ONLY. THEY ARE SUBJECT TO CHANGE WITH FINAL ENGINEERING.

"SITE" DEFINITION:

FOR THE PURPOSE OF THIS NARRATIVE, THE SITE IS DEFINED AS THE AREA WITHIN THE PROPERTY BOUNDARY THAT DRAINS TO THE POSSIBLE UNDERGROUND STORMWATER DETENTION FACILITY (APPROXIMATE AREA = 7,500 SF AND APPROXIMATE STORAGE VOLUME = 30,000 CF) . ONLY ONSITE DRAINAGE IS CONSIDERED IN THE CALCULATION WHEN DETERMINING THE ALLOWABLE PEAK FLOW RATE OF RUNOFF FROM THE DEVELOPED SITE. PER THE FAIRFAX COUNTY PFM AND THE COUNTY CODE, THIS WILL SATISFY THE RELEASE RATE REQUIREMENTS FOR THE SITE. THE SITE IS APPROXIMATELY 4.10 ACRES ACRES AND CONSISTS OF HYDROLOGIC GROUP B,C AND D SOILS (SEE SHEET 2 OF THE PLANS).

UNDERGROUND DETENTION SIZING:

THE UNDERGROUND DETENTION SYSTEM WAS PRELIMINARILY SIZED USING BENTLEY POND BACK TO REDUCE PEAK FLOW FOR THE 1, 2 AND 10-YEAR 24 HOUR STORMS PER THE REQUIREMENTS OF EQUATION 124-4-4.B.3c. THE PEAK FLOW VOLUME GENERATED (SEE COMPUTATIONS BELOW FOR POND PACK RESULTS) FOR THE 10-YEAR STORM WAS CALCULATED AS APPROXIMATELY 0.541 AC-FT (APPROXIMATELY 24,000 CUBIC FEET). IN ORDER TO CONSERVATIVELY ROUTE THE 10-YEAR FLOW THROUGH THIS FACILITY WITHOUT OVERTOPPING THE DETENTION SYSTEM, A FACILITY OF APPROXIMATELY 30,000 CUBIC FEET WAS PROPOSED.

THE PROPOSED APPROXIMATE DEPTH OF THIS FACILITY IS 6.75'. IN ORDER TO ACHIEVE THIS REQUIRED VOLUME, A FOOTPRINT OF 150' BY 50' WITH AN ASSUMED EFFECTIVE VOID RATIO OF APPROXIMATELY 60% (COMPOSITE OF 100% FOR OPEN CELLS AND 40% STONE BACKFILL, SIMILAR TO STORMTECH SYSTEMS BY ADS) WAS PROPOSED TO FIT WITHIN THE PARKING AREA BETWEEN THE ASSISTED LIVING FACILITY AND OUTFALL LOCATION WITHOUT AFFECTING PROPOSED DRAINFIELDS.

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
To Underground Detention	Post-Development 10 -year	10	0.895	12.150	11.36

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)
Outfall #1	Post-Development 10 -year	10	0.533	14.050	0.73

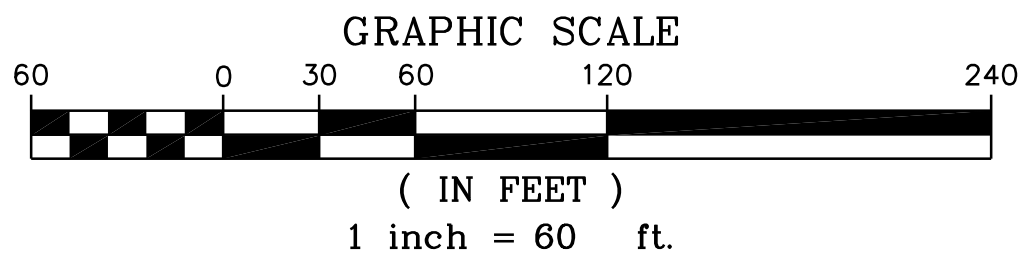
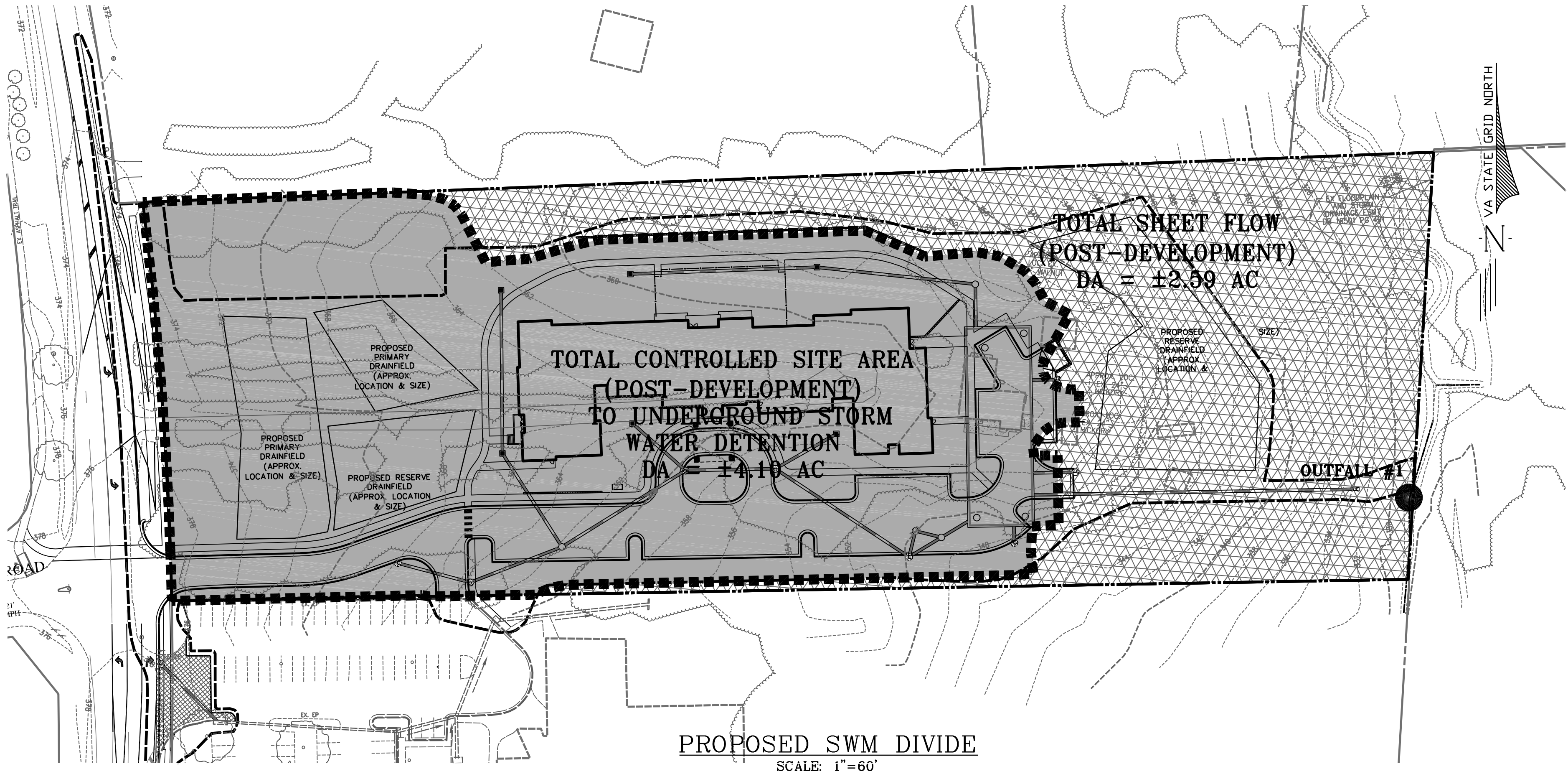
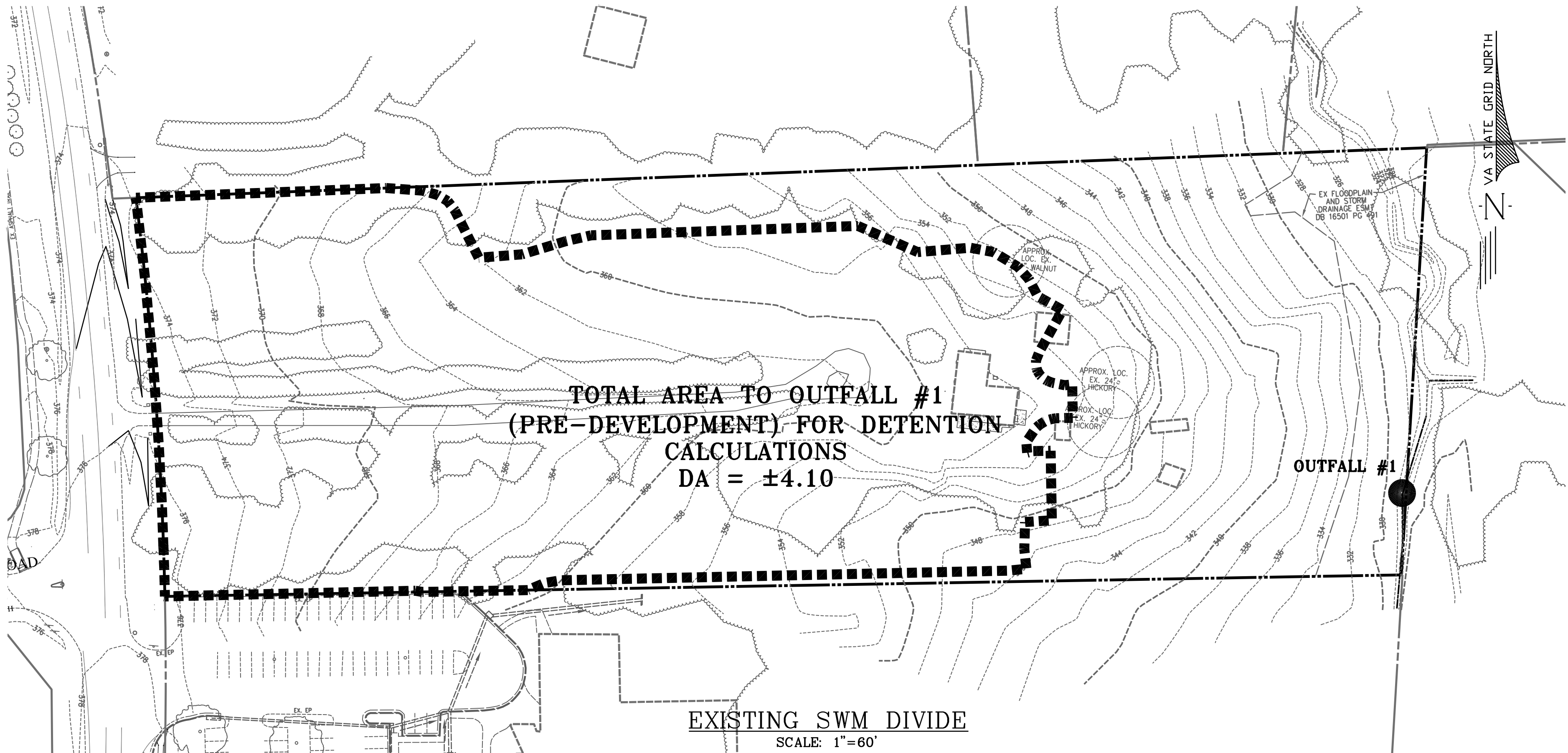
Pond Summary


Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Underground Detention (IN)	Post-Development 10-year	10	0.895	12.150	11.36	(N/A)	(N/A)
Underground Detention (OUT)	Post-Development 10-year	10	0.533	14.050	0.73	349.17	0.541

VALUE USED TO DETERMINE FACILITY VOLUME

LEGEND

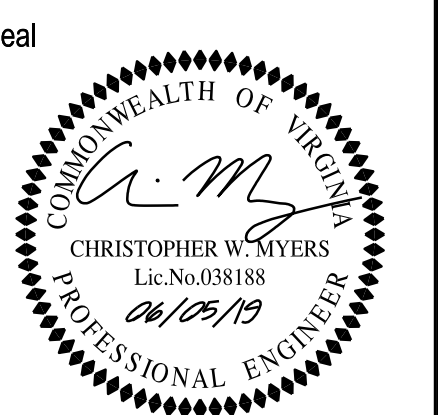
- DRAINAGE DIVIDE
- [Cross-hatched box] SHEET FLOW
- [Solid grey box] ON-SITE AREA DRAINING TO OUTFALL #1





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Issue

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Project Name

HUNTER MILL
ASSISTED LIVING
SPECIAL EXCEPTION PLAT

Hunter Mill District
Fairfax County, Virginia

Drawn By JE	Checked By CM
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Project No. MISC-2381

Date JUNE 5, 2019

Drawing Title

PRELIMINARY
SWM ANALYSIS

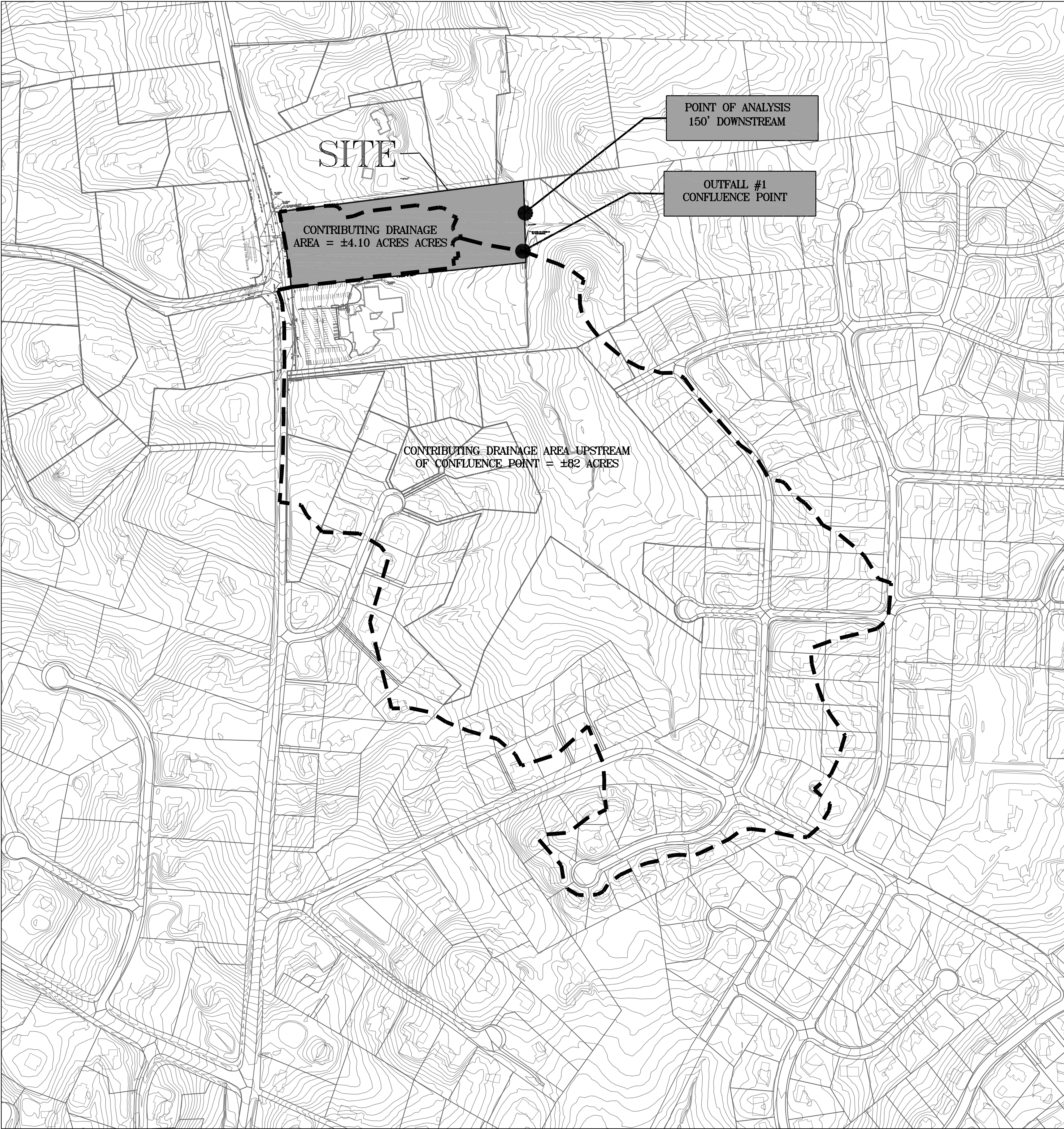
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Drawing Number

13

Sheet 13 of 15

Urban, Ltd. - Q:\JOBS\Hunter Mill Road Assisted Living Project\RZ and SE\CAD\09-Adequate Outfall.dwg [14 ADEQUATE OUTFALL] June 04, 2019 - 2:16pm cjohnson



PRELIMINARY OUTFALL NARRATIVE:

THERE IS ONE POTENTIAL POINT OF CONCENTRATED DISCHARGE FROM THE DEVELOPED SITE. OUTFALL #1 IS LOCATED TO THE SOUTHEAST OF THE SITE. THE CONCENTRATED FLOW FOR OUTFALL #1 WILL BE DISCHARGED DIRECTLY INTO AN EXISTING NATURAL CHANNEL THAT FLOWS IN A NORTHERN DIRECTION. IN ACCORDANCE WITH SECTION 124-4-4 OF THE COUNTY CODE, ONLY CONCENTRATED OUTFALLS HAVE BEEN ANALYZED FOR ADEQUATE CHANNEL AND FLOOD PROTECTION WITH THIS APPLICATION.

PRELIMINARY OUTFALL ANALYSIS FOR OUTFALL #1:

CHANNEL PROTECTION:

SECTION 124-4-4.B.3 OF THE COUNTY CODE STATES THAT WHEN OUTFALLING INTO A NATURAL STORMWATER CONVEYANCE SYSTEM, THE CHANNEL PROTECTION REQUIREMENT OF ADEQUATE OUTFALL IS SATISFIED BY VERIFYING THAT THE MAXIMUM PEAK FLOW RATE FROM THE 1-YEAR 24-HOUR STORM FOLLOWING THE LAND-DISTURBING ACTIVITIES MEETS THE CRITERIA OF 124-4-4.B.3.a ("DETENTION METHOD").

THIS APPLICATION IS PROPOSING POTENTIAL SWM/BMP FACILITIES, AS DESCRIBED ON SHEET 8, PROPOSED ONSITE AND UPSTREAM OF OUTFALL #1 THAT ARE DESIGNED TO DETAIN THE 1-YEAR STORM PER SECTION 124-4-4.B.3.a. THEREFORE, PER SECTION 124-4-4.B.6.c, THE LIMITS OF ANALYSIS IS LOCATED AT LEAST 150 FEET DOWNSTREAM OF A POINT WHERE THE RECEIVING PIPE OR CHANNEL IS JOINED BY ANOTHER THAT HAS A DRAINAGE AREA THAT IS AT LEAST 90 PERCENT OF THE SIZE OF THE FIRST DRAINAGE AREA AT THE POINT OF CONFLUENCE. THE LIMIT OF ANALYSIS IS LOCATED APPROXIMATELY 150' NORTH OF OUTFALL#1 WITHIN A NATURAL CHANNEL IN ANGELICO BRANCH. THE CONTRIBUTING DRAINAGE AREA FROM THE SITE IS APPROXIMATELY 4.10 ACRES, AND THE OFF SITE CONTRIBUTING DRAINAGE AREA TO THE CONFLUENCE POINT IS APPROXIMATELY 82 ACRES; THEREFORE, THE 90 PERCENT REQUIREMENT HAS BEEN MET. WITH THE USE OF THE DETENTION METHOD AND THE ANALYSIS DESCRIBED ABOVE, THE CHANNEL PROTECTION CRITERIA PER SECTION 124-4-4.B FOR OUTFALL #1 WILL BE SATISFIED WITH THE FINAL SITE PLAN.

FLOOD PROTECTION:

SECTION 124-4-4.C.4 OF THE COUNTY CODE STATES THAT IF THE DETENTION REQUIREMENTS OF SECTION 124-4-4.B.3a ARE MET FOR THE 2-YEAR AND 10-YEAR 24-HOUR STORMS, THE DOWNSTREAM ANALYSIS SHALL BE LIMITED TO PROVIDING CROSS SECTIONS TO DEMONSTRATE A DEFINED CHANNEL EXISTS AND CHECKING FOR FLOODING OF EXISTING DWELLINGS OR BUILDINGS CONSTRUCTED UNDER AN APPROVED BUILDING PERMIT FROM THE 100-YEAR STORM EVENT FOR THE EXTENT OF REVIEW. THE EXTENT OF REVIEW SHALL BE LIMITED TO A POINT WHERE THE RECEIVING PIPE OR CHANNEL IS JOINED BY ANOTHER THAT HAS A DRAINAGE AREA THAT IS AT LEAST 90 PERCENT OF THE SIZE OF THE FIRST DRAINAGE AREA AT THE POINT OF CONFLUENCE. THE LIMIT OF THIS ANALYSIS IS LOCATED APPROXIMATELY 150' NORTH OF OUTFALL #1 WITHIN A NATURAL CHANNEL IN ANGELICO BRANCH. THE CONTRIBUTING DRAINAGE AREA FROM THE SITE IS APPROXIMATELY 4.10 ACRES, AND THE OFF SITE CONTRIBUTING DRAINAGE AREA TO THE CONFLUENCE POINT IS APPROXIMATELY 82 ACRES; THEREFORE, THE 90 PERCENT REQUIREMENT HAS BEEN MET. WITH THE USE OF THE DETENTION METHOD AND THE ANALYSIS DESCRIBED ABOVE, THE FLOOD PROTECTION CRITERIA PER SECTION 124-4-4.C FOR OUTFALL #1 WILL BE SATISFIED WITH THE FINAL SITE PLAN.

SHEET FLOW NARRATIVE:

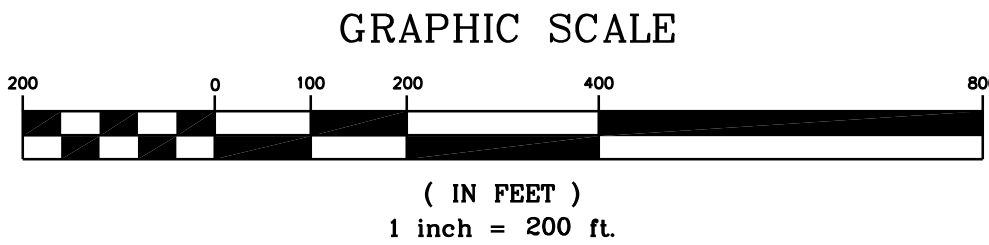
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PRELIMINARY OUTFALL NOTE:

OUTFALL LOCATIONS, DRAINAGE AREAS AND FACILITY LOCATIONS ARE SHOWN CONCEPTUALLY WITH THIS APPLICATION. THE ADEQUATE OUTFALL ANALYSIS, SITE LAYOUT AND CALCULATIONS SHOWN WITH THIS APPLICATION ARE FOR PRELIMINARY PURPOSES ONLY. THEY ARE ALL SUBJECT TO CHANGE WITH FINAL ENGINEERING.

LEGEND


— DRAINAGE DIVIDE





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6.	4TH SUBMISSION	06/05/2019

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ASSISTED LIVING
SPECIAL EXCEPTION PLAT

Hunter Mill District
Fairfax County, Virginia

Drawn By JE	Checked By CM
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Date JUNE 5, 2019

Drawing Title

ADEQUATE
OUTFALL
ANALYSIS

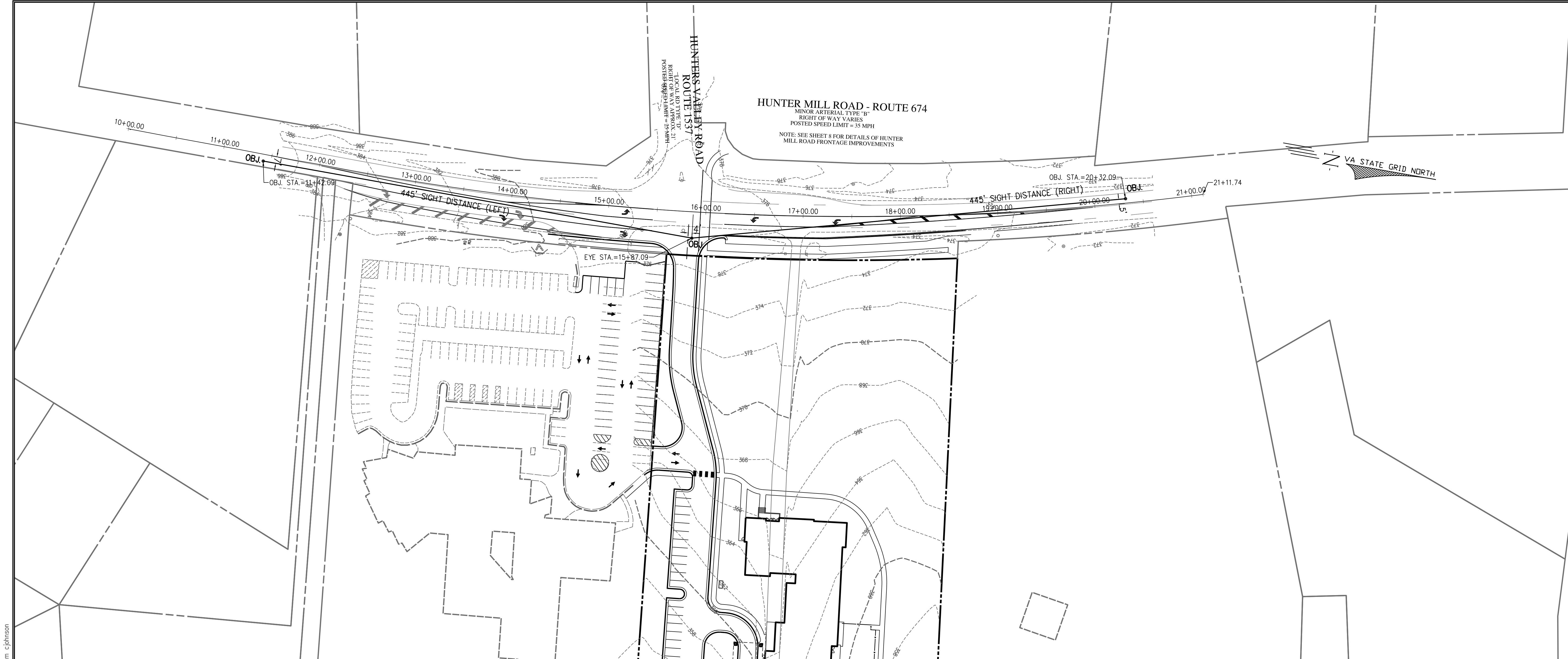
Scale: 1" = 200'

Drawing Number

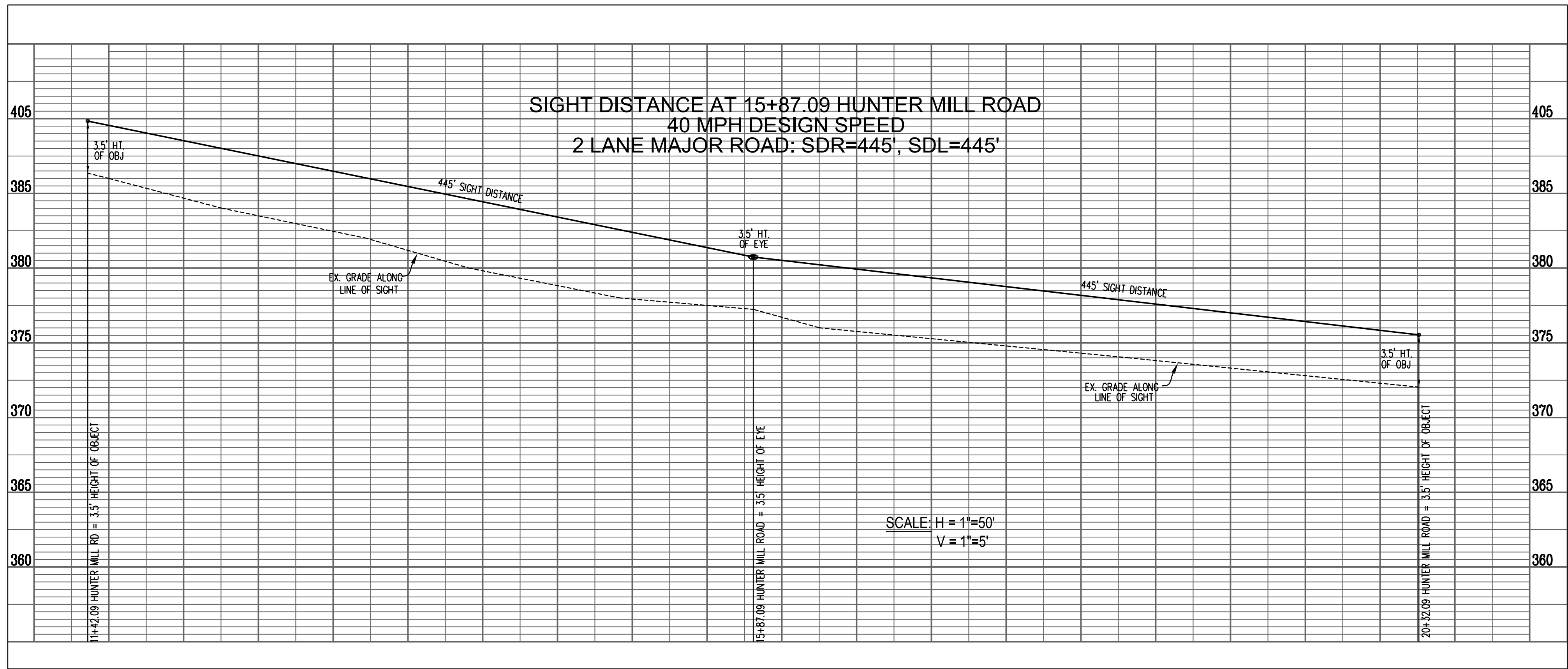
14


Sheet 14 of 15

Urban, Ltd. - Q:\JOBS\Hunter Mill Road Assisted Living Project\RZ and SE\CAD\10-Sight Distance.dwg [15 Sight Distance] June 04, 2019 - 2:16pm cjohnson




SCALE: 1"=50'





7712 Little River Turnpike
Annandale, Virginia 22003
TEL 703.642.8080 FAX 703.642.8251
www.urban-ld.com

Seal



COMMONWEALTH OF VIRGINIA
CHRISTOPHER W. MYERS
Lic. No. 038188
04/05/19
PROFESSIONAL ENGINEER

Client

ORR PARTNERS
11180 SUNRISE VALLEY DR
RESTON, VIRGINIA 20191
(703) 289-2100

Revision / Issue

No.	Description	Date
1.	1ST SUBMISSION	10/19/2018
2.	1ST SUBMISSION (REV)	11/09/2018
3.	1ST SUBMISSION (REV)	11/20/2018
4.	2ND SUBMISSION	02/25/2019
5.	3RD SUBMISSION	04/19/2019
6.	4TH SUBMISSION	06/05/2019

Issue

Date	Description
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Project Name

HUNTER MILL
ASSISTED LIVING
SPECIAL EXCEPTION PLAT

Hunter Mill District
Fairfax County, Virginia

Drawn By JE	Checked By CM
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Project No. MISC-2381

Date JUNE 5, 2019

Drawing Title

SIGHT DISTANCE
ANALYSIS

Scale: AS SHOWN

Drawing Number

15

Sheet 15 of 15

MISC-2381