

# **APPLICATION ACCEPTED**: December 19, 2022 **PLANNING COMMISSION**: September 20, 2023

(Rescheduled from June 28, 2023)

**BOARD OF SUPERVISORS:** To Be Determined

## County of Fairfax, Virginia

#### **SEPTEMBER 7, 2023**

#### STAFF REPORT ADDENDUM

RZ 2022-SU-00019 SE 2022-SU-00038

**SULLY DISTRICT** 

APPLICANT: PDCREF 2 Chantilly LLC

**EXISTING ZONING**: I-3 (Light Intensity Industrial)

I-5 (General Industrial) C-8 (Highway Commercial)

**PROPOSED ZONING:** I-5 (General Industrial)

**OVERLAYS:** HC (Highway Commercial)

WS (Water Supply Protection)

AN (Airport Noise)

**PARCEL(S):** 33-2 (1)) 6 pt.

ACREAGE: 12.1 acres

SPECIAL AREA: Route 28 Improvement District

FAR: Option 1: 0.8

Option 2: 0.3

**PLAN MAP**: Industrial Flex up to 0.35 FAR

**PROPOSAL:** Rezoning from the I-3, I-5, and C-8 Districts, with

overlays, to the I-5 District, with overlays, to permit a Data Center with an FAR of 0.8 (Option 1) or a Warehouse with an FAR of 0.3 (Option 2), and a Special Exception for an increase in building height in the I-5 District from 75 to 110 feet pursuant to Zoning

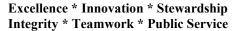
Ordinance Section 5100.2.E(4).

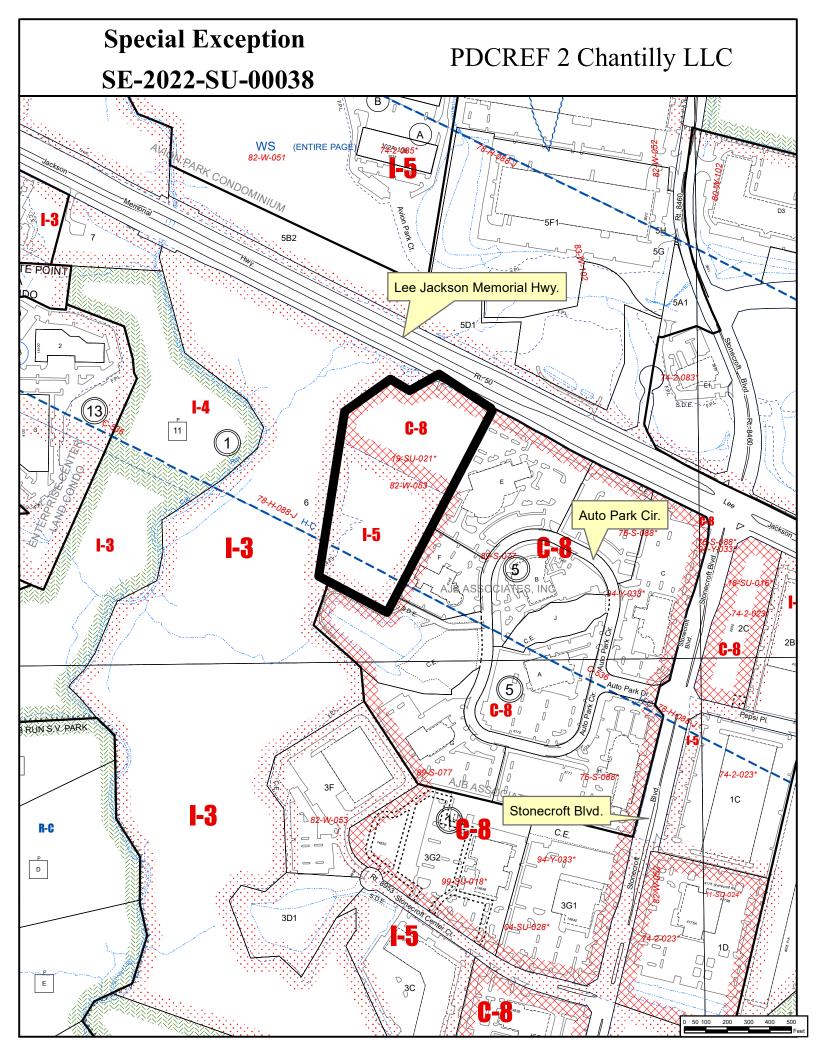
Emma A. Estes

**Department of Planning and Development** 

Zoning Evaluation Division
12055 Government Center Parkway, Suite 801
Fairfax, Virginia 22035-5505

Phone 703-324-1290; FAX 703-324-3924 www.fairfaxcounty.gov/planning-development/





#### STAFF RECOMMENDATIONS:

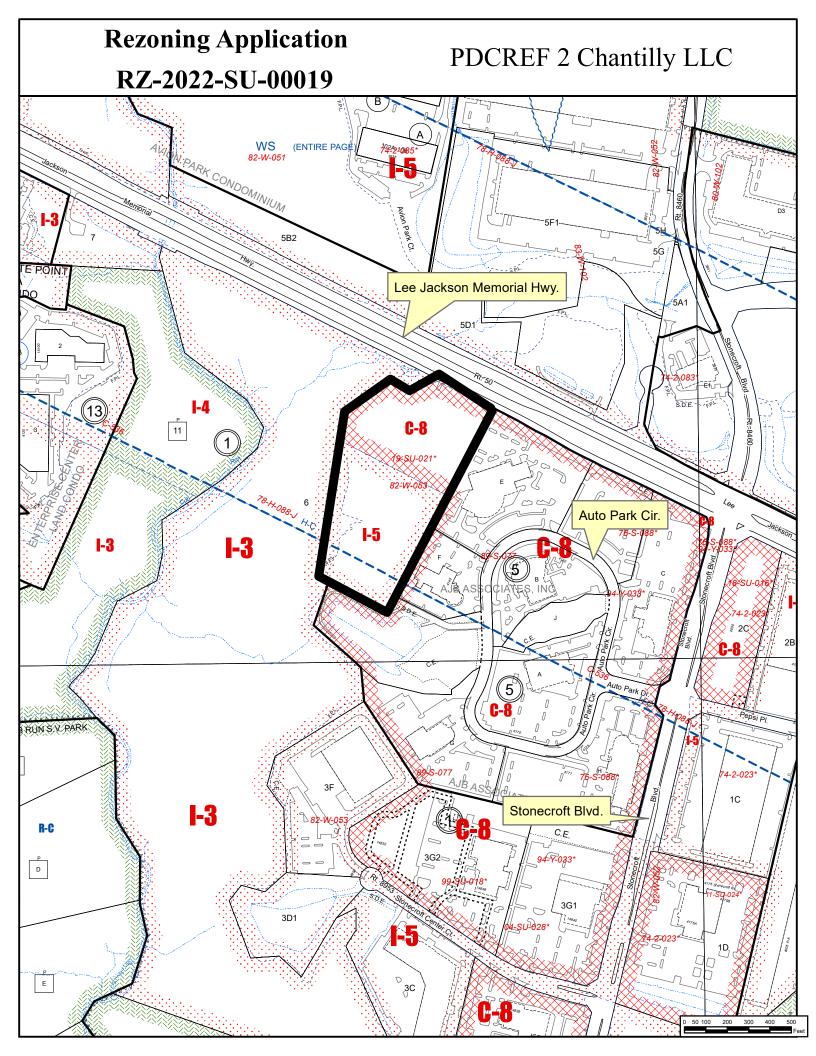
Staff recommends approval of RZ 2022-SU-00019 subject to the execution of proffers consistent with those included in Appendix 1 of this report.

Staff recommends approval of SE 2022-SU-00038 subject to the proposed development conditions contained in Appendix 2 of this report.

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.

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.

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



# GENERALIZED DEVELOPMENT PLAN

RZ-2022-SU-00019
SPECIAL EXCEPTION PLAN

SE-2022-SU-00038

# FOR CHANTILLY PREMIER

PARCEL MAP# 0332 01 0006

## PROJECT TEAM

OWNER / APPLICANT:
PDCREF 2 CHANTILLY LLC
1680 WISCONSIN AVENUE,
SUITE 300
WASHINGTON, DC 20007
TEL: (202) 729-6406
CONTACT: JOSH BOWDEN

LAND USE ATTORNEY:
COZEN O'CONNOR
1200 19TH STREET NW
WASHINGTON, DC 20036
TEL: (703) 304-0430
CONTACT: EVAN PRITCHARD

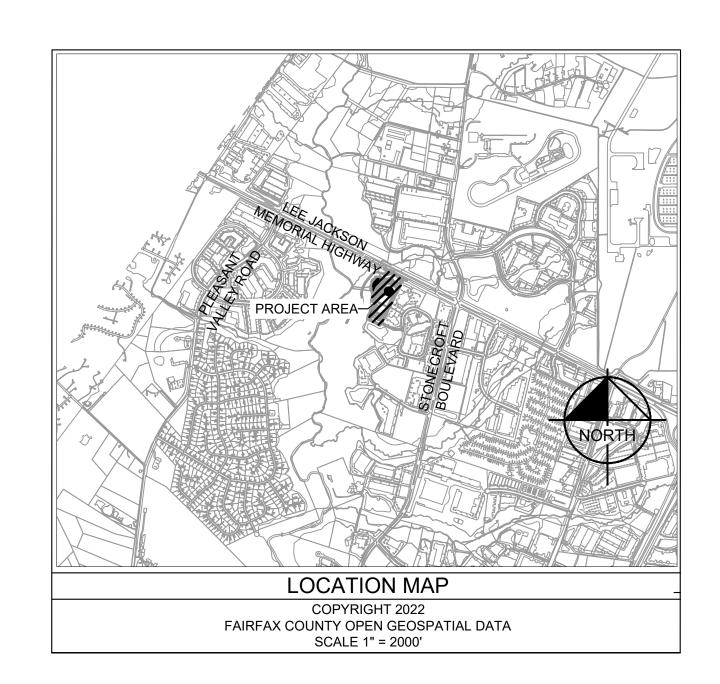
ENGINEER OF RECORD:
KIMLEY-HORN AND ASSOCIATES, INC.
11400 COMMERCE PARK DRIVE
SUITE 400
RESTON, VA 20191
TEL: (703) 674-1300
CONTACT: JAMIE COX, PE

ARCHITECT:
MGMA
131 GREAT FALLS STREET
FALLS CHURCH, VA 22046
TEL: (703) 226-4333
CONTACT: ERIC SPRADLIN

ARCHITECT:
DCM
6311 ROMAINE STREET
LOS ANGELES, CA 90038
TEL: (213) 232-2741
CONTACT: TIEMO MEHNER

LANDSCAPE ARCHITECT:
KIMLEY-HORN AND ASSOCIATES, INC.
11400 COMMERCE PARK DRIVE
SUITE 400
RESTON, VA 20191
TEL: (703) 674-1300
CONTACT: DAVIS WALKER, PLA, ISA-CA

TRAFFIC ENGINEER:
WELLS & ASSOCIATES
1420 SPRING HILL ROAD
SUITE 610
TYSONS, VA 22102
TEL: (703) 917-6620
CONTACT: LESTER E. ADKINS, PE,
PTOE, PTP



	Sheet List Table
Sheet Number	Sheet Title
C - 000	COVER SHEET
C - 001	GENERAL NOTES & TABULATIONS SHEET
C - 002	EXISTING CONDITIONS PLAN
C - 100	GENERALIZED DEVELOPMENT PLAN OPTION 1
C - 101	GENERALIZED DEVELOPMENT PLAN OPTION 2
C - 102	SITE DETAILS
C - 103	CHANTILLY PREMIER SOUND MODEL
C - 200	GRADING AND UTILITY PLAN OPTION 1
C - 201	GRADING AND UTILITY PLAN OPTION 2
C - 202	SANITARY SEWER ANALYSIS
C - 300	PRE-DEVELOPMENT DRAINAGE AREA MAP OPTION 1
C - 301	PRE-DEVELOPMENT DRAINAGE AREA MAP OPTION 2
C - 302	POST-DEVELOPMENT DRAINAGE AREA MAP OPTION 1
C - 303	PRELIMINARY STORMWATER CALCULATIONS OPTION 1
C - 304	PRELIMINARY STORMWATER CALCULATIONS OPTION 1
C - 305	POST DEVELOPMENT DRAINAGE AREA MAP OPTION 2
C - 306	PRELIMINARY STORMWATER CALCULATIONS OPTION 2
C - 307	PRELIMINARY STORMWATER CALCULATIONS OPTION 2
C - 308	STORMWATER OUTFALL NARRATIVE
C - 309	OUTFALL LIMITS OF ANALYSIS
C - 310	PROPOSED OUTFALL CHANNELS
C - 311	CHANNEL PROTECTION CALCULATIONS
C - 312	FLOOD PROTECTION CALCULATIONS
C - 400	VEHICULAR CIRCULATION PLAN OPTION 1
C - 401	VEHICULAR CIRCULATION PLAN OPTION 2
C - 402	PEDESTRIAN CIRCULATION PLAN OPTION 1
C - 403	PEDESTRIAN CIRCULATION PLAN OPTION 2
L - 100	EXISTING VEGETATION MAP
L - 101	EXISTING VEGETATION MAP
L - 102	LANDSCAPE PLAN OPTION 1
L - 103	LANDSCAPE OPTION 1 TABULATIONS
L - 104	LANDSCAPE PLAN OPTION 2
L - 105	LANDSCAPE OPTION 2 TABULATIONS
L - 200	LANDSCAPE NOTES & DETAILS
A - 201	DATA CENTER BUILDING ELEVATIONS
A - 202	DATA CENTER RENDERINGS
A - 203	DATA CENTER RENDERINGS
A - 204	DATA CENTER SIGHT LINES
A - 205	WAREHOUSE BUILDING ELEVATIONS
A - 206	WAREHOUSE SIGHT LINES
A - 207	WAREHOUSE RENDERINGS
A - 208	WAREHOUSE RENDERINGS
A - 209	WAREHOUSE RENDERINGS
A - 210	WAREHOUSE RENDERINGS

BEFORE YOU DIG
CALL "MISS UTILITY" 811
OR 1-800-552-7001
visit online at va811.com

AND ASSOCIATES, INC.
SUITE 400, RESTON, VA 20191
O FAX: 703-674-1350

© 2022 KIMLEY-HORN AND 11400 COMMERCE PARK DR., SUITE PHONE: 703-674-1300 FAX WWW.KIMLEY-HOP



DATE
08/11/2023
SCALE AS SHOWN
DESIGNED BY AWO
DRAWN BY AWO

COVER SHEET

CHAN I ILLY PREMIER
PREPARED FOR
PDCREF 2 CHANTILLY LLC

SHEET NUMBER

## **GENERAL NOTES:**

- 1. SUBJECT APPLICATIONS ARE BEING REQUESTED IN ACCORDANCE WITH THE ZONING ORDINANCE ADOPTED BY THE BOARD OF SUPERVISORS ON MARCH 23, 2021 AND EFFECTIVE JULY 1, 2021.
- 2. PDCREF 2 CHANTILLY LLC. IS THE OWNER OF THE SUBJECT PROPERTY. THE PROPERTIES DELINEATED HEREON ARE LOCATED IN FAIRFAX COUNTY. FAIRFAX COUNTY TAX MAP AND OWNERSHIP INFORMATION LISTED BELOW:
   0332 01 0006 PDCREF 2 CHANTILLY LLC. (ZONED C-8, I-3, 1-5)
- 3. CENTERLINE INFORMATION FOR LEE JACKSON MEMORIAL HIGHWAY, PLEASANT VALLEY ROAD, AND STONECROFT BOULEVARD IS PROVIDED BY FAIRFAX COUNTY GIS OPEN DATA.
- 4. THE BOUNDARY INFORMATION SHOWN HEREON IS BY GRS GROUP, LLC DATED JUNE 2, 2022.
- 5. THE SURVEY IS SET TO THE HORIZONTAL DATUM VCS 83 (2011) (NORTH ZONE) BASED UPON GPS OBSERVATIONS. THE VERTICAL DATUM IS NAVD 88 AND CONVERTED TO NGVD 1929 USING CORPCON AND IS BASED UPON GPS OBSERVATIONS.
- 6. THE TOPOGRAPHY SHOWN HEREON IS AT A CONTOUR INTERVAL OF ONE FEET FROM A FIELD SURVEY BY GRS GROUP, LLC DATED JUNE 2, 2022.
- 7. THE SITE SHOWN ON THIS PLAN IS LOCATED IN THE SULLY DISTRICT, THE AIRPORT NOISE IMPACT DISTRICT, THE HIGHWAY CORRIDOR DISTRICT, THE WATER SUPPLY PROTECTION DISTRICT AND THE CUB RUN WATERSHED.
- 8. LANDSCAPING SHOWN ON SHEET L 102 AND SHEET L 104 ARE FOR ILLUSTRATIVE PURPOSES ONLY, PROVIDED THAT THE QUANTITY AND QUALITY OF PLANTINGS ARE IN GENERAL CONFORMANCE WITH THOSE SHOWN HEREON.
- 9. PARKING SPACES FOR THE PROPOSED DEVELOPMENT PROGRAM ON THE SUBJECT PROPERTY WILL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN ARTICLE 6 OF THE ZONING ORDINANCE AND ARTICLE 7 OF THE PUBLIC FACILITIES MANUAL (MINIMUM OF 8.5' X 18'). THE APPLICANT RESERVES THE RIGHT TO INCREASE OR DECREASE THE AMOUNT OF PARKING SHOWN ON THIS PLAN AS LONG AS THE MINIMUM NUMBER OF PARKING SPACES IS PROVIDED IN ACCORDING WITH THE ZONING ORDINANCE.
- 10.PROPOSED UTILITY LOCATIONS ARE APPROXIMATE. INDIVIDUAL UTILITY PLANS AND PROFILES WILL BE SUBMITTED DURING THE SITE PLAN STAGE FOR CONSTRUCTION PURPOSES.
- 11. PUBLIC WATER AND SEWER ARE CURRENTLY AVAILABLE ON THE SITE.
- 12. STORM WATER MANAGEMENT (SWM) AND BEST MANAGEMENT PRACTICES (BMP) REQUIREMENTS WILL BE PROVIDED AS DESCRIBED IN THE NARRATIVES ON SHEET C 303 AND SHEET C 306.
- 13. TO THE BEST AVAILABLE KNOWLEDGE, THERE ARE NO GRAVES LOCATED ON THE SUBJECT PROPERTY.
- 14. THERE ARE NO EXISTING SCENIC ASSETS LOCATED ON THE SUBJECT PROPERTY. THERE WILL BE NO ADVERSE EFFECTS ON ADJACENT OR NEIGHBORING PROPERTIES. THERE ARE NO COMMUNITY OR PUBLIC FACILITIES PROPOSED WITH THIS PROJECT.
- 15.BY GRAPHIC PLOTTING THE PROPERTY IS LOCATED IN OTHER AREAS (UNSHADED), ZONE "X" (AREA DETERMINED TO BE OUTSIDE THE 2% ANNUAL CHANCE FLOOD PLAIN) AND ZONE "AE" (BASE FLOOD ELEVATIONS DETERMINED) PER FEMA FLOOD INSURANCE RATE MAP FOR FAIRFAX COUNTY, VIRGINIA, AND INCORPORATED AREAS, MAP NUMBER 51059C0115E, PANEL 115 OF 450, MAP EFFECTIVE DATE SEPTEMBER 17, 2010.
- 16. THE LIMITS OF CLEARING AND GRADING ARE SHOWN ON SHEET C 100 AND SHEET C 101.
- 17. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THE PROPOSED BUILDINGS WILL NOT GENERATE, TREAT, OR DISPOSE ANY HAZARDOUS OR TOXIC SUBSTANCES AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS PARTS 116.4, 302.4 AND 355. DIESEL FUEL WILL BE STORED ON SITE AND UTILIZED WHEN THE SITE GENERATORS ARE TRIGGERED FOR USE. FUEL STORAGE WILL MEET ALL STATE AND FEDERAL STORAGE REQUIREMENTS.
- 18. SIGNAGE FOR THE EXISTING AND PROPOSED USES WILL BE IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN ARTICLE 7 OF THE ZONING ORDINANCE.
- 19.IT IS UNDERSTOOD THAT ADDITIONAL SITE FEATURES SUCH AS GAZEBOS, BENCHES, COVERED WALKWAYS, FLAGPOLES, TRELLISES, WATER FOUNTAINS OR FEATURES, OUTDOOR SEATING, SIGNS, WALLS, FENCES, LIGHT STANDARDS AND/OR UTILITY MAINTENANCE STRUCTURES NOT REPRESENTED ON THE APPROVED DEVELOPMENT PLAN, HOWEVER MAY BE PROVIDED AS LONG AS THE RESULTANT PROPOSED DEVELOPMENT IS IN SUBSTANTIAL CONFORMANCE WITH THE ZONING ORDINANCE AND THAT REPRESENTED ON THE APPROVED DEVELOPMENT PLAN. ALL NEWLY PROPOSED LIGHTING ON SITE WILL BE SHIELDED AND LOCATED IN SUCH A MANNER AS TO REDUCE GLARE ON ADJACENT PROPERTIES IN ACCORDANCE WITH THE STANDARDS SET FORTH IN ARTICLE 2 OF THE ZONING ORDINANCE.
- 20.IT IS CURRENTLY ANTICIPATED THAT, SUBJECT TO MARKET CONDITIONS, CONSTRUCTION OF THE PROPOSED DATA CENTER FACILITY OR WAREHOUSE FACILITY WILL COMMENCE AS SOON AS ALL REQUISITE PLANS AND PERMITS ARE APPROVED AND THEY WILL BE CONSTRUCTED IN ONE CONTINUOUS PHASE.
- 21.IN ACCORDANCE WITH SECTION 8100.5 OF THE ZONING ORDINANCE, MINOR MODIFICATIONS TO THE SIZE, DIMENSIONS, FOOTPRINTS, AND LOCATION OF BUILDINGS, PARKING SPACES, SIDEWALKS, AND OTHER SITE FEATURES MAY OCCUR WITH FINAL ENGINEERING DESIGN.
- 22.THE FLOOR AREA REPRESENTED ON THE GRAPHIC IS GROSS FLOOR AREA AS DEFINED IN THE ZONING ORDINANCE.
- 23.THERE ARE NO SPECIAL AMENITIES PROPOSED WITH THIS DEVELOPMENT.
- 24. THERE ARE NO EXISTING WELLS OR SEPTIC FIELDS PRESENT ON SITE.
- 25.THE PROPOSED DEVELOPMENT WILL BE IN CONFORMANCE WITH THE 2017 EDITION COMPREHENSIVE PLAN.
- 26.THE SUBJECT PROPERTY IS NOT LOCATED IN AN EXISTING DAM BREAK INUNDATION ZONE.
- 27.THE PROPOSED DEVELOPMENT WILL CONFORM TO ALL APPLICABLE ORDINANCES, REGULATIONS, AND ADOPTED STANDARDS OF FAIRFAX COUNTY.
- 28.AN EXISTING 10-FOOT WIDE ASPHALT TRAIL IS PROVIDED ALONG THE LEE JACKSON MEMORIAL HIGHWAY FRONTAGE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE COMPREHENSIVE PLAN. THE PAVED TRAILS RUNS EAST TO WEST AND IT IS INTENDED TO BE RELOCATED ALONG THE PROPOSED PUBLIC IMPROVEMENT ASSOCIATED WITH THIS DEVELOPMENT.
- 29.THE DEVELOPMENT SITE WILL REQUIRE A VDOT ACCESS MANAGEMENT EXCEPTION FOR THE ENTRANCE TO THE SITE ALONG LEE JACKSON MEMORIAL HIGHWAY TO BE REQUESTED AT THE TIME OF SITE PLAN.
- 30.THE DEVELOPER IS CURRENTLY COORDINATING AN APPROVAL TO VACATE THE EXISTING VEPCO EASEMENT ALONG THE EASTERN PROPERTY LINE. THE NEW VEPCO EASEMENT WILL BE ESTABLISHED AT THE TIME OF SITE PLAN.
- 31.LOCATION AND WIDTH OF ALL EXISTING UTILITY EASEMENTS AND THE PRELIMINARY LOCATION(S) OF NEW OR RELOCATED UTILITIES ARE SHOWN.
- 32.MEASURES ARE TO BE TAKEN DURING CLEARING AND GRADING TO ENSURE NO ENCROACHMENT INTO THE RPA AND FLOODPLAIN OCCURS. THE OWNER SHOULD ALSO COMMIT TO RESTORING AND RE-VEGETATING AREAS OF THE RPA THAT ARE IMPACTED BY CONSTRUCTION ACTIVITIES.

## SPECIAL EXCEPTIONS:

- 1. THIS SPECIAL EXCEPTION (SE) APPLICATION IS TO INCREASE THE MAXIMUM BUILDING HEIGHT TO ONE HUNDRED TEN (110) FEET IN THE I-5 PORTION OF THE PROPERTY PURSUANT TO FCZO SECTION 5100.2.C8.
- 2. THIS SPECIAL EXCEPTION (SE) APPLICATION IS TO INCREASE THE MAXIMUM FLOOR AREA RATIO (FAR) TO (0.8) IN THE I-5 PORTION OF THE PROPERTY PURSUANT TO FCZO SECTION 5100.2.E(4).

ING CONDITIONS
I-5, I-3
AC
AC
7 AC

\*ALL AREAS PER GERMAIN PROPERTY GDP/SE REZONING PLAT BY URBAN DATED APRIL 10, 2020

PROPOSED ZONING DISTR	RICT:	I-5 (GENERAL INDUS	STRIAL DISTRICT)		
PROPOSED USE:		DATA CENTER	,		
GROSS SITE AREA (GSA):		530,000 SF	(±12.1 ACRES)		
FOR DENSITY CALCULATION	NS:	530,000 SF	(±12.1 ACRES)		
		ALLOWED	PROPOSED		
MAX. FLOOR AREA RATIO	(FAR):	0.5	0.8***		
MAX. GROSS FLOOR AREA	A (GFA):	±265,000 SF	±402,000 SF		
		ALLOWED	PROPOSED		
MAX. BUILDING HEIGHT:		75 FT	110 FT (INCLUDING ROOFTOP EQUIPMENT)**		
MIN. LOT WIDTH:		100 FT	±1700 FT		
MIN. LOT AREA:		20,000 SF	±530,000 SF		
	FRONT:	100 FT	±210 FT		
SETBACKS:	SIDE:	N/A	N/A		
	REAR:	N/A	N/A		
		REQUIREMENT	PROPOSED		
OPEN SPACE:		15%	33.0%		
		79,061 SF	174,240 SF		
	PAR	KING			
MIN. PARKING REQUIRED:		REQUIREMENT	PROPOSED		
(1) SPACES PER (1.5) EMP	LOYEES:	38 EMPLOYEES 26 SPACES	N/A		
(1) SPACES PER COMPAN	Y VEHICLE:	2 VEHICLES 2 SPACES	N/A		
TOTAL REQUIRED PARKING	G SPACES:	28 SPACES	50 SPACES**		
	LOA	DING			
MIN. LOADING REQUIRED:		REQUIREMENT	PROPOSED		
NO COUNTY REQUIREMEN	ITQ.	N/A	2 SPACES		

\*\*\* REQUESTED WITH SPECIAL EXCEPTION
ADDITIONAL PARKING

SITE TABULATIONS - 0	OPTION 2 WAREHOU	JSE
PROPOSED ZONING DISTRICT:	I-5 (GENERAL INDUS	STRIAL DISTRICT)
PROPOSED USE:	WAREHOUSE	
GROSS SITE AREA (GSA):	530,000 SF	(±12.1 ACRES)
FOR DENSITY CALCULATIONS:	530,000 SF	(±12.1 ACRES)
	ALLOWED	<u>PROPOSED</u>
MAX. FLOOR AREA RATIO (FAR):	0.5	0.3
MAX. GROSS FLOOR AREA (GFA):	±265,000 SF	±150,000 SF
	ALLOWED	PROPOSED
MAX. BUILDING HEIGHT:	75 FT	55 FT
MIN. LOT WIDTH:	100 FT	±1700 FT
MIN. LOT AREA:	20,000 SF	±530,000 SF
FRONT:	100 FT	±173 FT
SETBACKS: SIDE:	N/A	N/A
REAR:	N/A	N/A
	REQUIREMENT	PROPOSED
OPEN SPACE:	15%	30.7%
	79,061 SF	162,043 SF
DAE		
	RKING	DDODOCED
MIN. PARKING REQUIRED:	REQUIREMENT 150,000 GFA	<u>PROPOSED</u>
(1) SPACE PER 1,000 GSF:	150,000 GFA 150 SPACES	150 SPACES
	.00 0.7.020	
TOTAL REQUIRED PARKING SPACES:	150 SPACES	150 SPACES
	DINO	
	DING	DD000000
MIN. LOADING REQUIRED:	<u>REQUIREMENT</u>	<u>PROPOSED</u>
ARTICLE 6.6101.3 OF THE FAIRFAX	0.004.050	20 004 000
COUNTY ZONING ORDINANCE - STANDARD A	6 SPACES	30 SPACES

BEFORE YOU DIG
CALL "MISS UTILITY" 811
OR 1-800-552-7001
visit online at va811.com

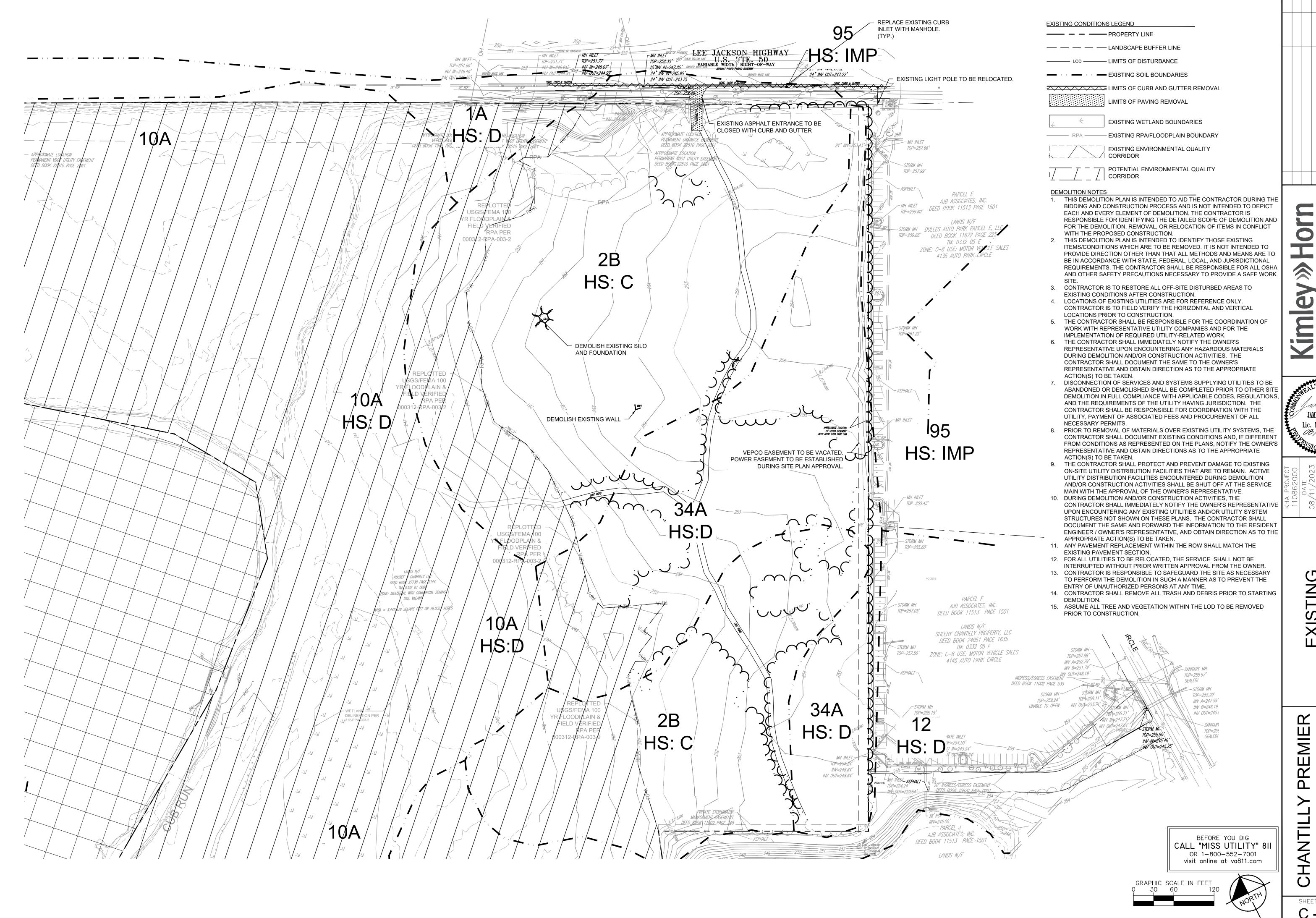
CHANTILLY PREMIEF
PREPARED FOR
PDCREF 2 CHANTILLY LL

SHEET NUMBER

C - 001

Щ Z

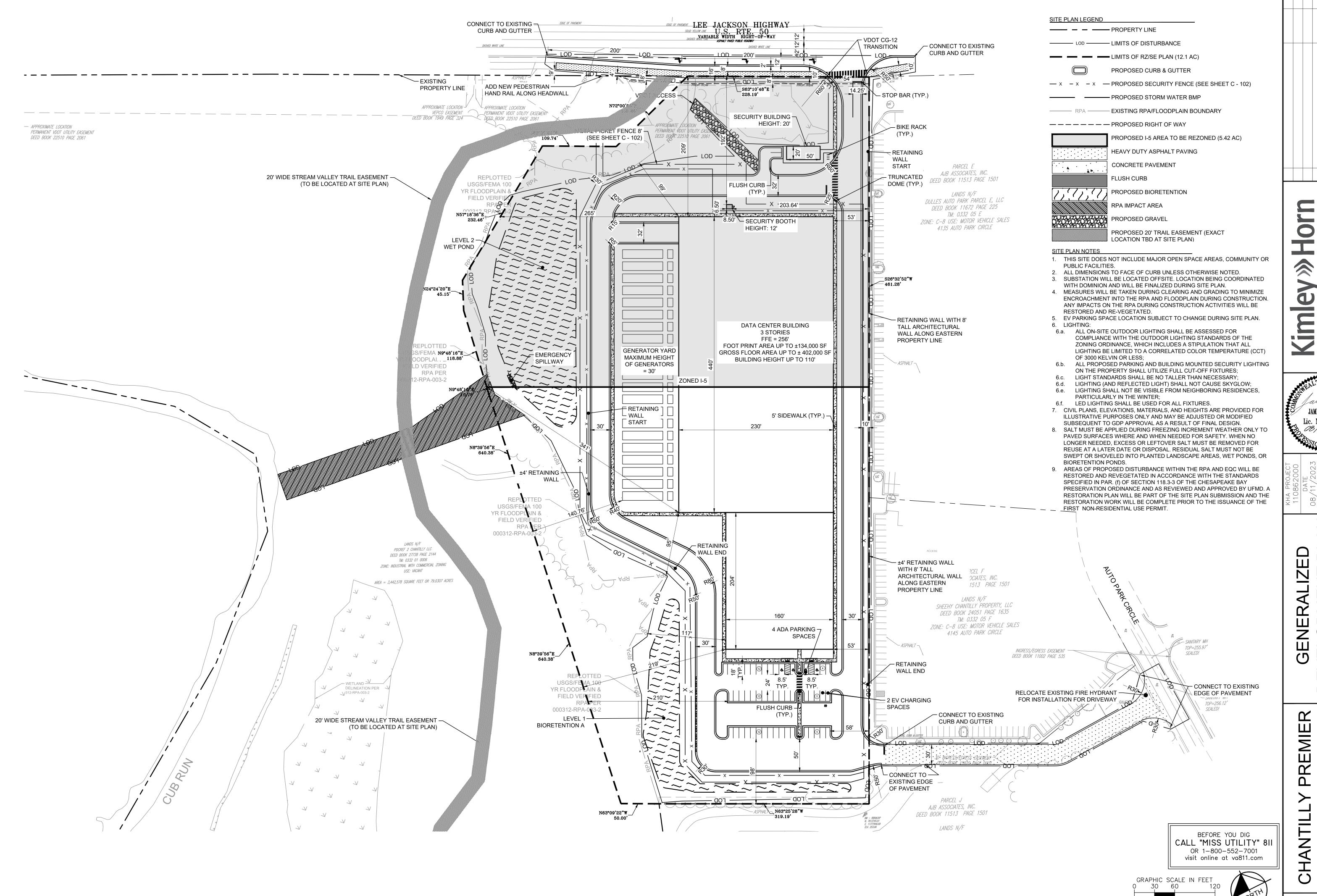
08/11/2023



> anes (o. JAMES R. COX Lic. No. 065059 08/11/2013

EXISTING CONDITIONS |

**PREMIER** CHANTILL  $\equiv$ **図 C** 



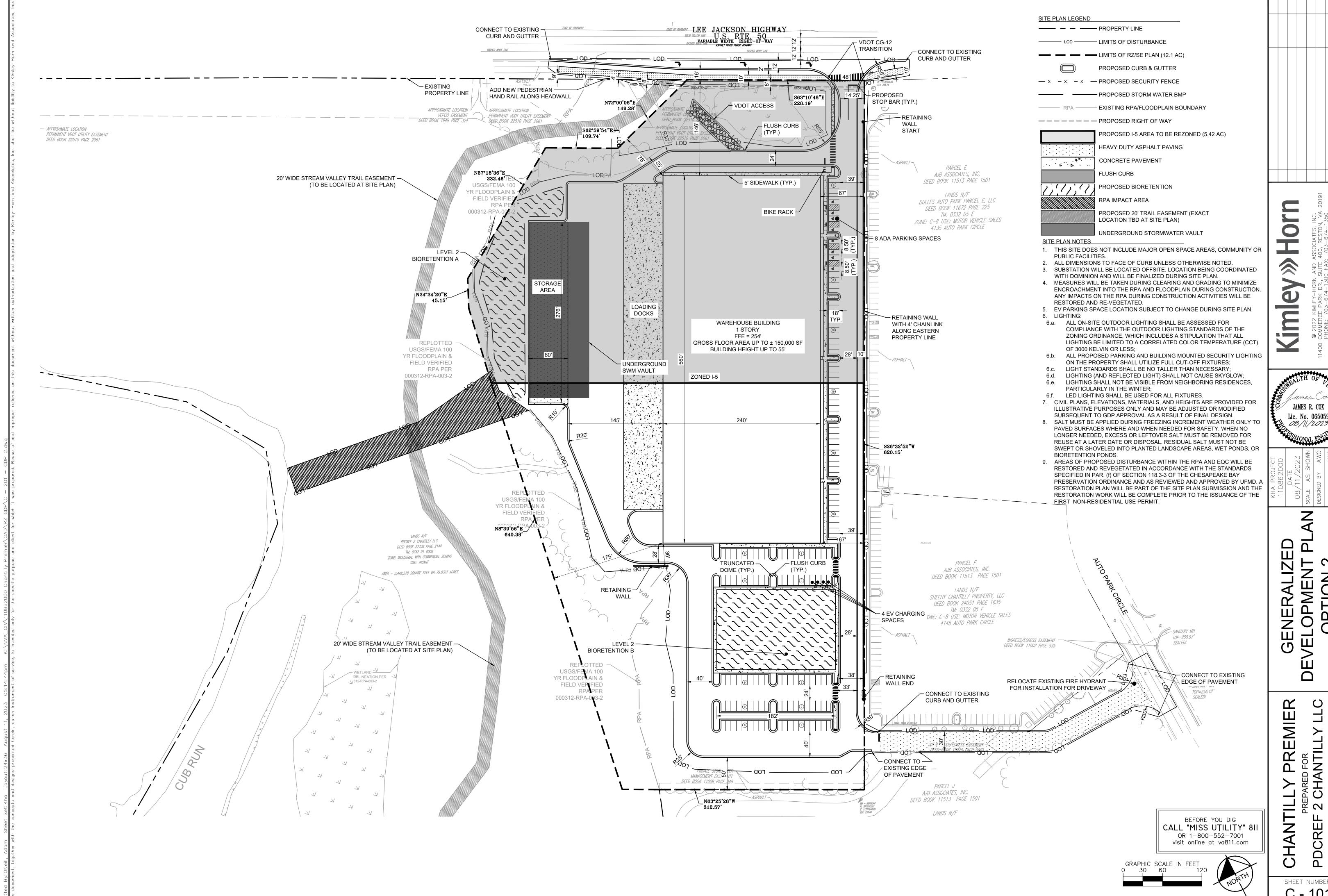
anes (ox Lic. No. 065059 08/11/2023

**GENERALI** 

Ш EM PR  $\equiv$ 

SHEET NUMBER

C - 100



Lic. No. 065059 08/11/2023

SHEET NUMBER

1 IMPASSE II TRIDENT FENCE

N.T.S.

\*USE THIS DETAIL OR EQUIVALENT

3" [76.2 mm] (Latch Clearance) — Ameristar Standard Leaf Widths ② — 2" [50.8 mm] (Hinge Clearance) — Gate Rail Varies with Height Standard Heights 6' [1828.8mm], 7' [2133.6mm], 8' [2438.4mm], 9' [2743.2mm], 10' [3048.0mm] Weld on Box Hinge 3¼" [82.6mm] .] ' 36" [914.4mm] Min. Footing depth - 2" [50.8mm] |--Single gate Arrangement NOTES:

1.) Post size depends on fence height, weight and wind loads. See IMPASSE<sup>11</sup> post sizing chart.

2.) See Ameristar gate table for standard out to outs. Custom gate openings available for special out to out/leaf widths.

3.) Additional styles of gate hardware are available on request. This could change the Latch & Hinge Clearance. Third rail optional. (Some heights noted require the third rail.) Over all Out to Out 2 Leaf Widths 2 2" [50.8mm](Hinge Clearance) 25½" [647.7mm] Varies with Height Standard Heights 6' [1828.8mm], 7' [2133.6mm], 8' [2438.4mm], 9' [2743.2mm], 10' [3048.0mm] 36" [914.4mm] Min. Footing depth Double gate Arrangement Values shown are nominal and not to be used for installation purposes. See product specification HIGH SECURITY STEEL GATE IMPASSE TRIDENT 2/3-RAIL SGL & DBL GATE
DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1 SCALE: DO NOT SCALE

DR: KMc SH. 10f 1

2) IMPASSE II TRIDENT GATE

N.T.S.

\*USE THIS DETAIL OR EQUIVALENT

SITE DETAILS

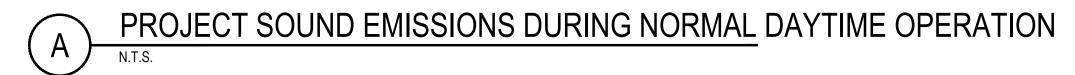
anes Oxy

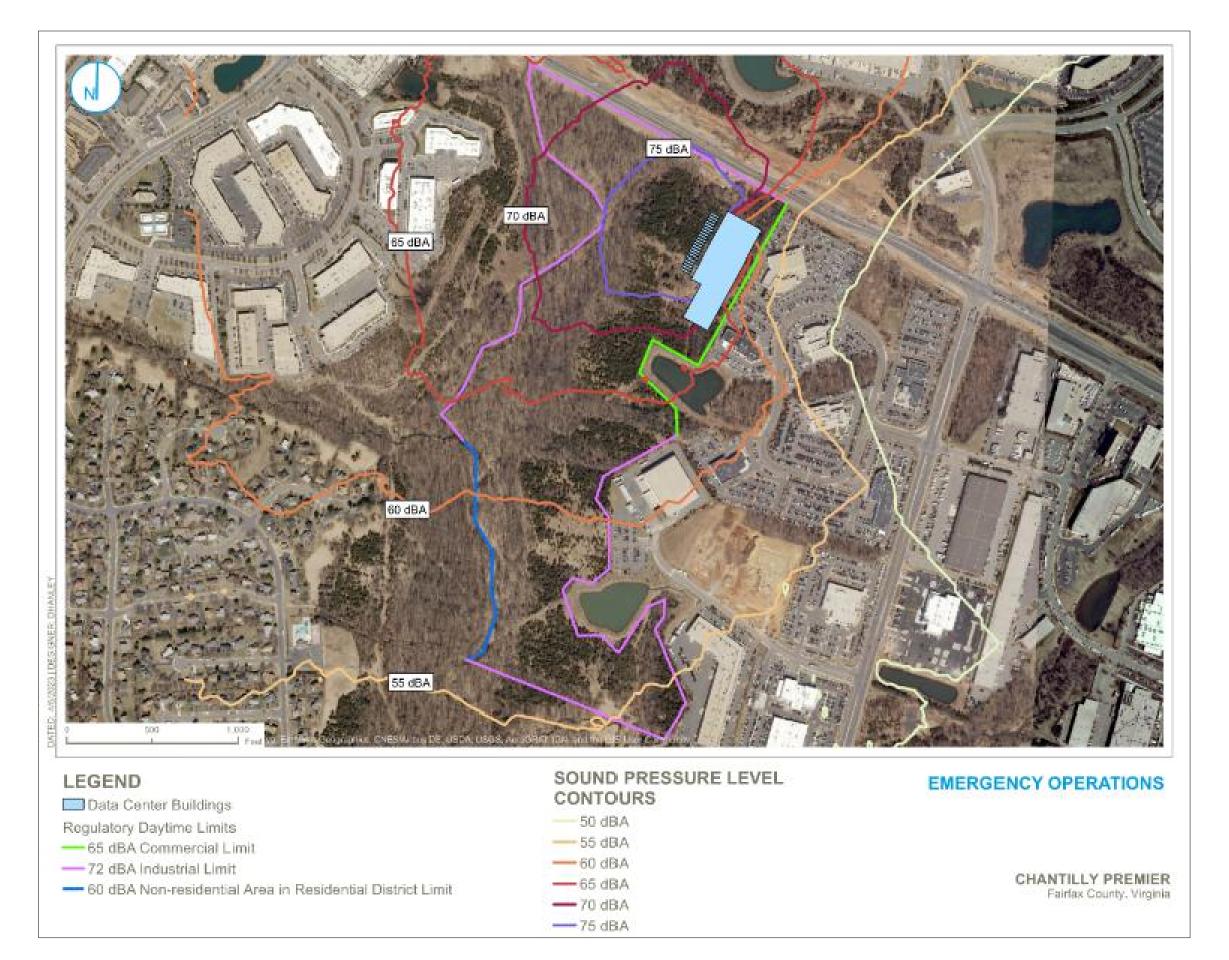
CHANTILLY PREMIER
PDCREF 2 CHANTILLY LLC

SHEET NUMBER

C - 102

BEFORE YOU DIG
CALL "MISS UTILITY" 811
OR 1-800-552-7001
visit online at va811.com





PROJECT SOUND EMISSIONS DURING EMERGENCY OPERATIONS



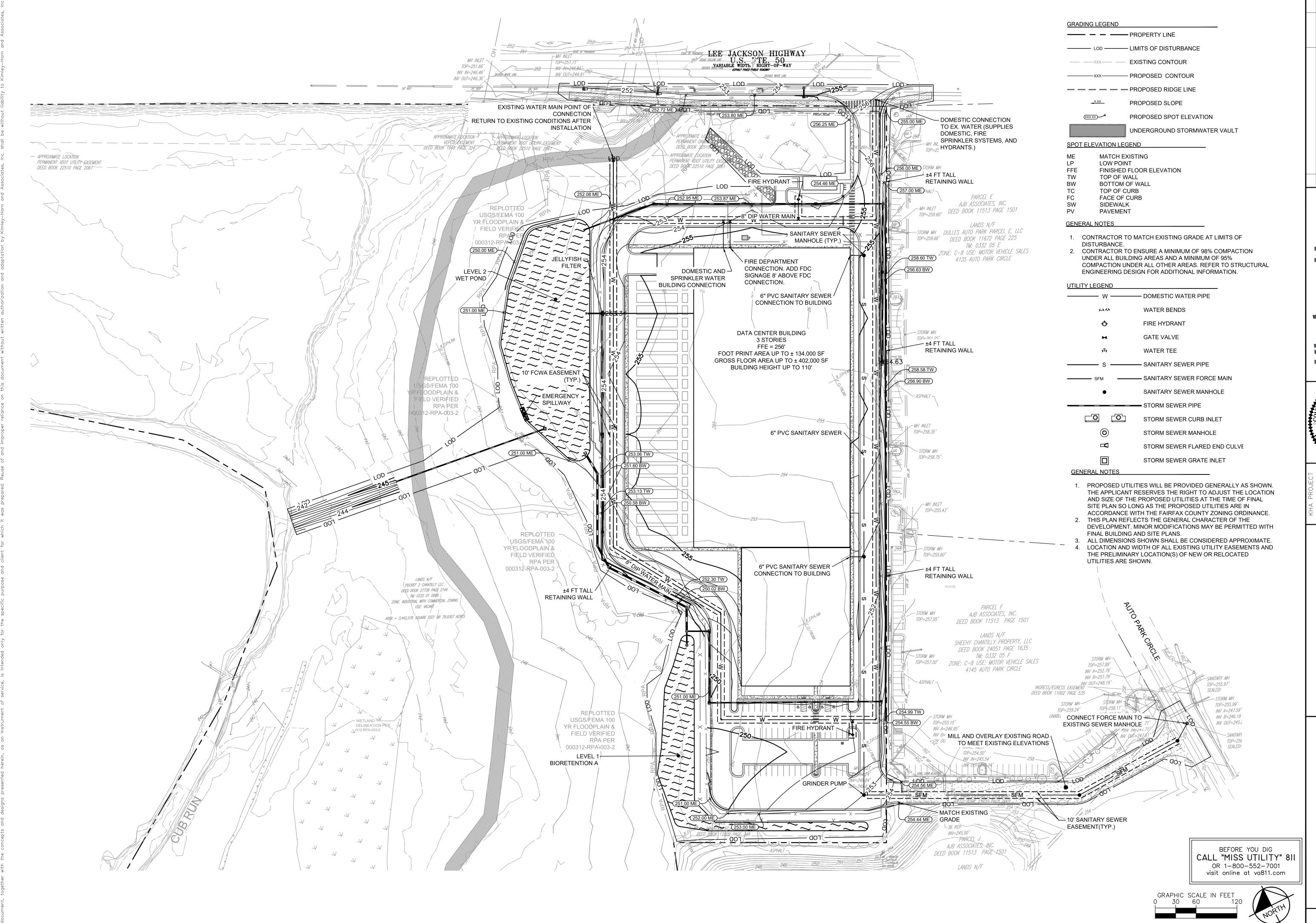
PROJECT SOUND EMISSIONS DURING SINGLE GENERATOR MAINTENANCE ACTIVITIES

CHANTILLY SOUND

**PREMIER** ANTILLY

PDC

BEFORE YOU DIG
CALL "MISS UTILITY" 811
OR 1-800-552-7001
visit online at va811.com



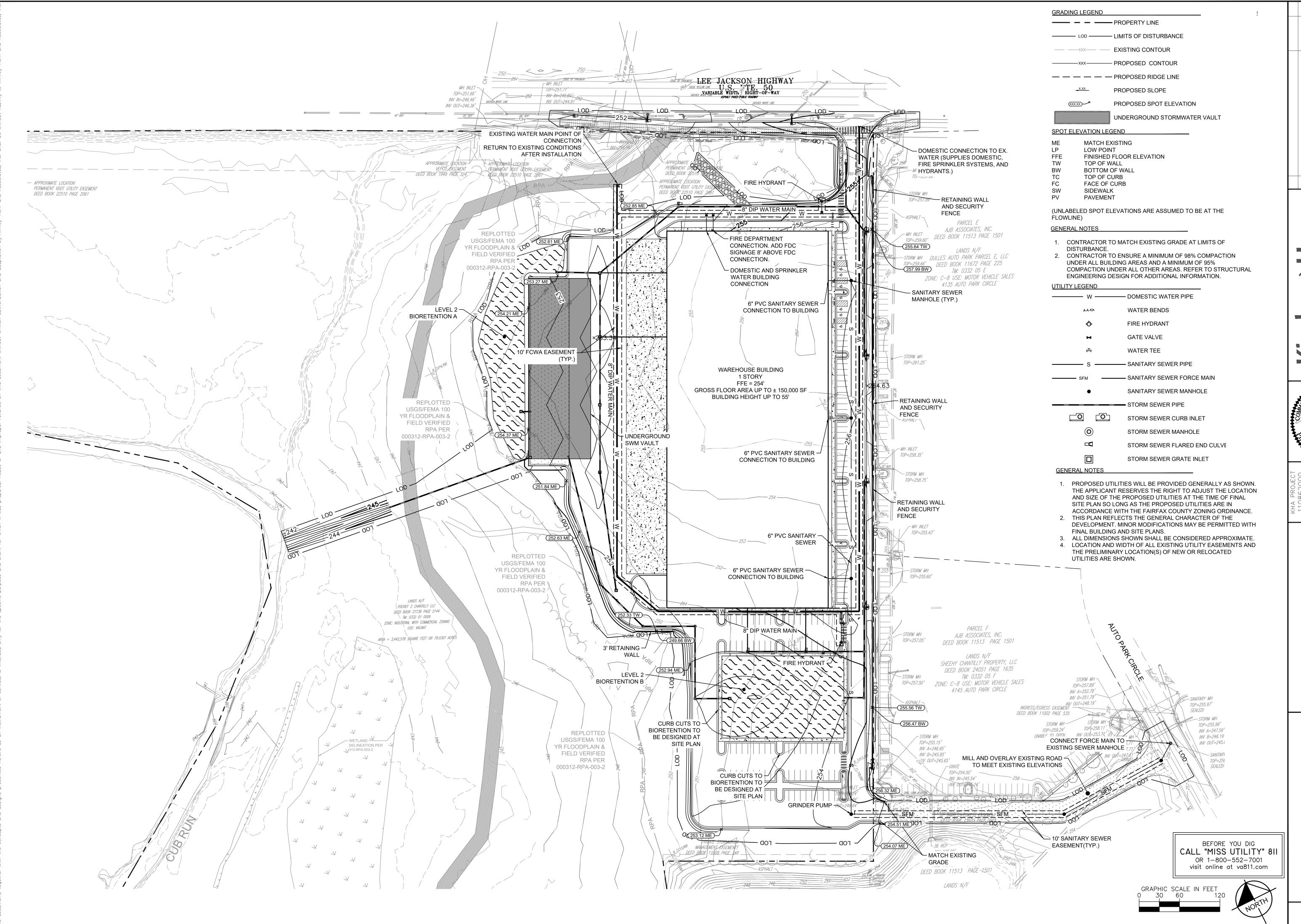
08/11/2023

GRADIN

Ш EM PR 

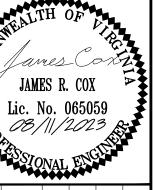
SHEET NUMBER

C - 200



AND ASSOCIATES, INC.
SUITE 400, RESTON, VA 20191
O FAX: 703-674-1350

© 2022 KIMLEY—HORN AND A: 11400 COMMERCE PARK DR., SUITE 4 PHONE: 703—674—1300 FAX: WWW.KIMLEY—HORN.



SCALE AS SHOWN
DESIGNED BY AWO
DRAWN BY AWO

GRADING AND UTILITY PLAN

ITILLY PREMIER
PREPARED FOR

F 2 CHANTILLY LLC

CHANT

SHEET NUMBER

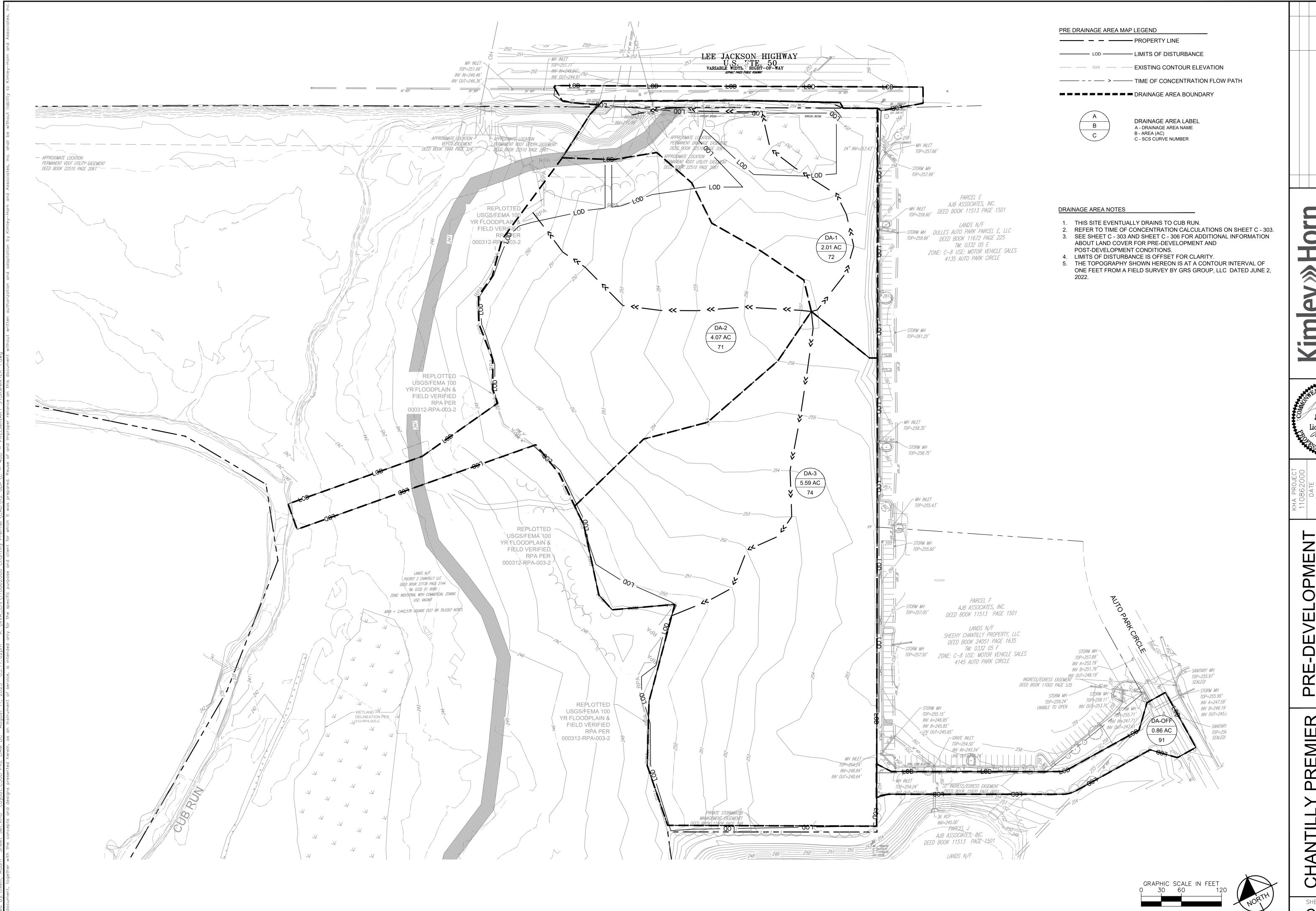
C - 202

# BEFORE YOU DIG CALL "MISS UTILITY" 811 OR 1-800-552-7001 visit online at va811.com

		PIPEINF	ORMATIO	N				FLOW IN	FORMATIC	ON NC							FLOWS	SUMMARY	
UP	DOWN	UPPER	LOWER	LENGTH	SLODE	DIA	LAND USE OR		OFFICE		COMM	ERCIAL	INDU	STRIAL	AVG. DAILY	PEAK	PEAK	CAPACITY	%
STREAM	STREAM	INV			SLOPE			BLDG	85% GSF	A.D.F.	BLDG	A.D.F.	BLDG	A.D.F.	FLOW		FLOW	MGD	
MH	MH	IIVV	INV	FT	%	IN	INCOMING STRUCTURE #	GROSS SF	NET SF	GPD/SF	GROSS SF	GPD/SF	GROSS SF	GPD/SF	(MGD)	FACTOR	(MGD)	IVIOD	FLOW
Ex. 089	Ex. 244	247.88	246.57	208	0.63%	8	(total)								0.008	4.000	0.456	0.620	73.5%
							0332 05 B - Jaguar / Land Rover				38,706	0.046			0.002				
							333 05 C - Kia				33,332	0.046			0.002	1			
							335 05 E - Toyota				44,752	0.046			0.002	1			
							336 05 F - Infiniti				27,650	0.046			0.001	1			
							0332 01 006 - PROPOSED DATA CENTE	R (60 people	x 30 gallon	ıs/day)					0.002	1			
Ex. 244	Ex. 241	246.47	245.12	331	0.41%	8	(total)				•				0.008	4.000	0.456	0.498	91.5%
			•				Ex. Structure 244								0.008			•	•
Ex. 241	Ex. 371	245.06	244.31	210	0.36%	10	(total)			•	,				0.010	4.000	0.462	0.845	54.7%
			l				Ex. Structure 241								0.008				
							0334 05 A - Fiat or Chrystler / Jeep / Dodge				35,884	0.046			0.002	1			
Ex. 371	Ex. 240	244.31	243.91	198	0.20%	10	(total)		I		,				0.011	4.000	0.468	0.637	73.4%
				I			Ex. Structure 371								0.010				
							0334 05 G - Mazda				28,409	0.046			0.001	1			
Ex. 240	Ex. 239	243.84	241.88	393	0.50%	10	(total)			1					0.011	4.000	0.468	1.002	46.6%
					1 0.0070		Ex. Structure 240								0.011		0.,00		10.070
Ex. 239	Ex. 238	241.78	241.09	117	0.59%	10	(total)		<u> </u>						0.014	4.000	0.479	1.087	44.1%
LX. 200	LX. 200	212.70	2 12.03		1 0.0070		Ex. Structure 239								0.011		0.175	1.007	111270
							0334 01 0003F - FedEx				63,389	0.046			0.003	-			
Ex. 238	Ex. 237	240.96	240.50	111	0.41%	10	(total)			1	03,303	0.010			0.021	4.000	0.507	0.911	55.7%
LX. 230	LX. 237	2 10.30	2 10.30		1 0. 11/0	10	Ex. Structure 238								0.014	1.000	0.307	0.511	1 33.770
							0334 01 0003G2 - Hyundai				42,615	0.046			0.002	1			
							0334 01 0003G1 - Nissan				45,834	0.046			0.002	1			
							0334 01 0003B - Audi / Mercedes Benz				65,609	0.046			0.003	-			
Ex. 237	Ex. 236	240.33	239.61	191	0.38%	10	(total)			1	03,003	0.040			0.026	4.000	0.526	0.871	60.4%
LX. 257	LX. 250	2-0.55	255.01	131	1 0.3070	10	Ex. Structure 237								0.021	7.000	0.520	0.071	1 00.470
							0334 01 0003C - MFG ONE, LLC				100,200	0.046			0.005	<del>                                     </del>			
Ex. 236	Ex. 235	239.51	238.50	252	0.40%	10	(total)				100,200	0.040			0.026	4.000	0.526	0.900	58.4%
LX. 230	LX. 233	233.31	238.30	232	0.4070	10	Ex. Structure 236	1	<u> </u>	T					0.026	4.000	0.320	0.500	30.470
Ex. 235	Ex. 234	238.40	237.41	247	0.40%	10	(total)								0.026	4.000	0.526	0.894	58.8%
EX. 233	EX. 254	230.40	237.41	247	0.40%	10	Ex. Structure 235		1	T					0.026	4.000	0.320	0.034	30.0/0
Γ <sub>V</sub> 224	Ex. 233	237.31	236.23	281	0.39%	10	(total)								0.026	4.000	0.527	0.879	59.9%
Ex. 234	EX. 233	237.31	230.23	201	0.39%	10	Ex. Structure 234								+	4.000	0.527	0.679	39.970
										1	4.400	0.046			0.026	<del>                                     </del>			
F., 222	F., 222	226.07	225.45	255	10.20%	10	0334 01 0003C - Car Wash				4,490	0.046			0.000	4.000	0.527	0.050	T 62 00/
Ex. 233	Ex. 232	236.07	235.15	255	0.36%	10	(total)	T	I	T	T				0.026	4.000	0.527	0.850	62.0%
F., 222	F., 224	225.05	224.02	F4	0.2004	10	Ex. Structure 233		<u> </u>						0.026	4.000	0.537	0.740	T 72 20/
Ex. 232	Ex. 231	235.05	234.92	51	0.26%	10	(total)	1	1	1					0.026	4.000	0.527	0.718	73.3%
		2015=	201		10000	1.5	Ex. Structure 232								0.026	1 222	0.75-		T == ==:
Ex. 231	Ex. 006	234.85	234.23	204	0.31%	10	(total)	T	I	T	T		<u> </u>		0.026	4.000	0.527	0.783	67.3%
							Ex. Structure 231								0.026				

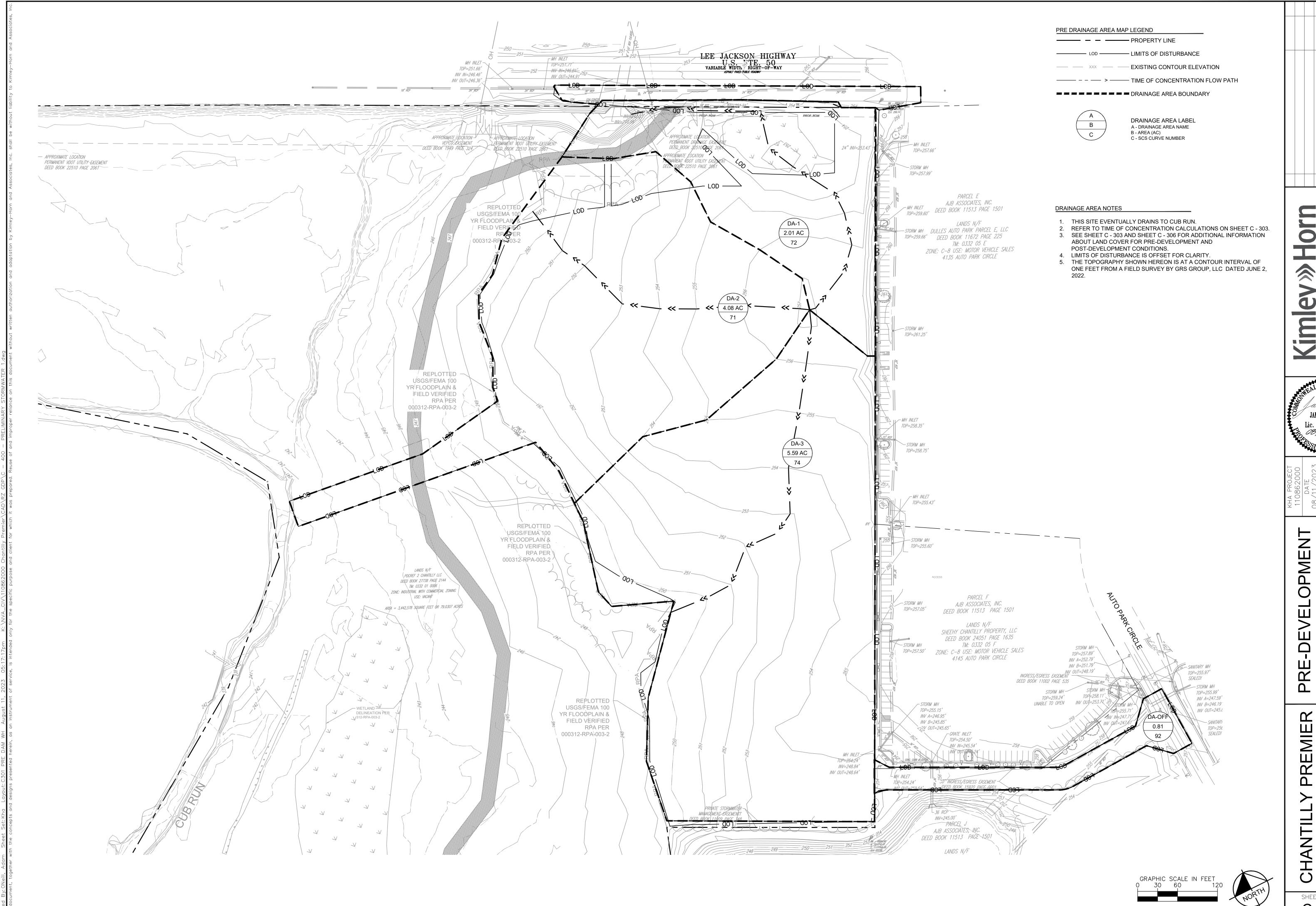
# OPTION 1 - DATA CENTER

	DIDEINI					T	FLOVATIN	CODN 4A TIO	\N.I							FLOW(C	1 IN AN AN DW	
LID DOMAS	PIPEINI	ORMATIO T	ואין 				LLOW III	FORMATIC	/ I <b>V</b>	CO 1 41 4	EDC!A!	INITALI	CTDIAI	AVC DAILY			JUMMARY T	
UP DOWN	UPPER	LOWER	LENGTH	SLOPE	DIA.	LAND USE OR	DI DC	OFFICE		COMM			STRIAL	AVG. DAILY	PEAK	PEAK	CAPACITY	%
STREAM STREAM	INV	INV	FT	%	IN	INCOMING STRUCTURE #	BLDG	85% GSF	A.D.F.	BLDG	A.D.F.	BLDG	A.D.F.	FLOW	FACTOR	FLOW	MGD	FLOW
MH MH	247.00	246.57	200	0.630/		(4-4-1)	GROSS SF	NET SF	GPD/SF	GROSS SF	GPD/SF	GROSS SF	GPD/SF	(MGD)	4.000	(MGD)	0.630	26.50/
Ex. 089   Ex. 244	247.88	246.57	208	0.63%	8	(total)		1		20.706	0.046			0.041	4.000	0.165	0.620	26.5%
						0332 05 B - Jaguar / Land Rover				38,706	0.046			0.002				
						333 05 C - Kia	<u> </u>			33,332	0.046			0.002				
						335 05 E - Toyota				44,752	0.046			0.002				
						336 05 F - Infiniti				27,650	0.046	450.000	0.00	0.001				
	I			1	Γ_	0332 01 006 - PROPOSED WAREHOUSE						150,000	0.23	0.035				
Ex. 244   Ex. 241	246.47	245.12	331	0.41%	8	(total)		1	1			I		0.041	4.000	0.165	0.498	33.0%
<u> </u>	I	I	<u> </u>	T .		Ex. Structure 244								0.041			I	
Ex. 241   Ex. 371	245.06	244.31	210	0.36%	10	(total)		1				ı		0.043	4.000	0.171	0.845	20.2%
						Ex. Structure 241	<u> </u>							0.041				
	1	1				0334 05 A - Fiat or Chrystler / Jeep / Dodge	!			35,884	0.046			0.002			T	T
Ex. 371 Ex. 240	244.31	243.91	198	0.20%	10	(total)								0.044	4.000	0.176	0.637	27.7%
						Ex. Structure 371								0.043				
						0334 05 G - Mazda				28,409	0.046			0.001			_	
Ex. 240 Ex. 239	243.84	241.88	393	0.50%	10	(total)								0.044	4.000	0.176	1.002	17.6%
						Ex. Structure 240								0.044				_
Ex. 239 Ex. 238	241.78	241.09	117	0.59%	10	(total)								0.047	4.000	0.188	1.087	17.3%
						Ex. Structure 239								0.044				
						0334 01 0003F - FedEx				63,389	0.046			0.003				
Ex. 238 Ex. 237	240.96	240.50	111	0.41%	10	(total)								0.054	4.000	0.216	0.911	23.7%
						Ex. Structure 238								0.047				
						0334 01 0003G2 - Hyundai				42,615	0.046			0.002	]			
						0334 01 0003G1 - Nissan				45,834	0.046			0.002				
						0334 01 0003B - Audi / Mercedes Benz				65,609	0.046			0.003				
Ex. 237 Ex. 236	240.33	239.61	191	0.38%	10	(total)		•	•					0.059	4.000	0.235	0.871	27.0%
•	•	•	•	•	•	Ex. Structure 237								0.054				
						0334 01 0003C - MFG ONE, LLC				100,200	0.046			0.005				
x. 236 Ex. 235	239.51	238.50	252	0.40%	10	(total)			ı	•				0.059	4.000	0.235	0.900	26.1%
<b>I</b>			1			Ex. Structure 236								0.059	l			
Ex. 235 Ex. 234	238.40	237.41	247	0.40%	10	(total)		1	<u> </u>					0.059	4.000	0.235	0.894	26.3%
						Ex. Structure 235								0.059				
Ex. 234 Ex. 233	237.31	236.23	281	0.39%	10	(total)		1	l					0.059	4.000	0.235	0.879	26.8%
	1	1		1 -1		Ex. Structure 234								0.059	1		1	
						0334 01 0003C - Car Wash	-			4,490	0.046			0.000				
Ex. 233 Ex. 232	236.07	235.15	255	0.36%	10	(total)				1,150	0.010			0.059	4.000	0.235	0.850	27.7%
LA. 200   LA. 202				1 0.30/0	1 10	Ex. Structure 233								0.059	1.000	0.233	1 0.000	
Ex. 232 Ex. 231	235.05	234.92	51	0.26%	10	(total)		1	l .				<u> </u>	0.059	4.000	0.235	0.718	32.8%
LA. 232   LA. 231	_ 233.03	254.52		1 0.20/0	1 10	Ex. Structure 232		1						0.059	7.000	0.233	0.710	J2.070
Ex. 231 Ex. 006	234.85	234.23	204	0.31%	10	(total)		<u> </u>	<u> </u>					0.059	4.000	0.235	0.783	30.1%
LA. 231   LX. 000	254.05	234.23	1 204	0.51/0	10	, ,	T							0.059	7.000	0.233	1 0.765	JU.1/0
						Ex. Structure 231								J 0.059				



ELOPMENT AREA MAP

**PREMIER** EPARED FOR CHANTILLY ANTILL 以 以 PDC



ANTILL

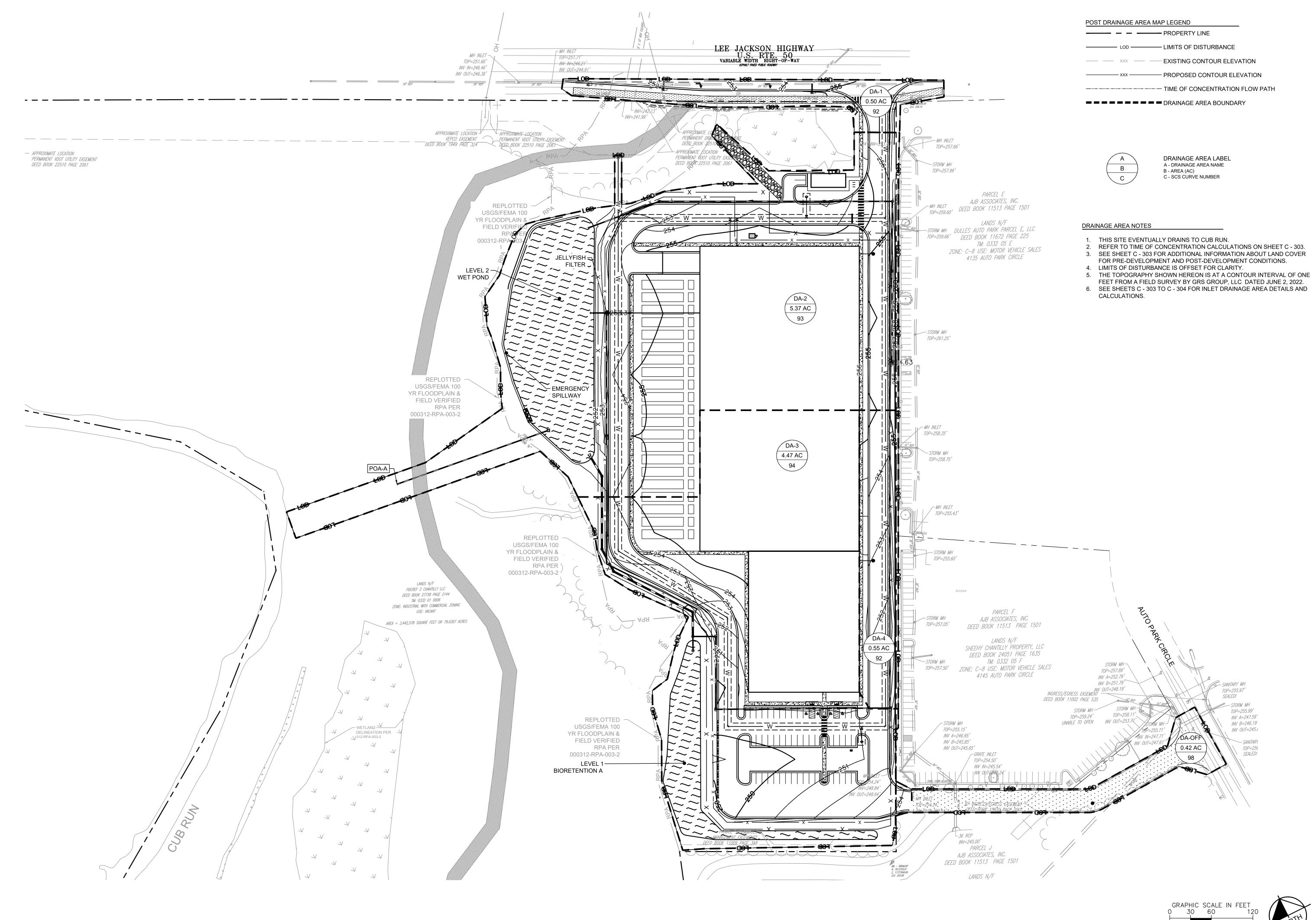
SHEET NUMBER C - 301

ELOPMENT : AREA MAP ION 2

PRE

**PREMIER** EPARED FOR CHANTILLY 以 以

PDC



SHEET NUMBER C - 302

PREMIE





## data input cells constant values

## Post-Development Project (Treatment Volume and Loads)

Land Cover (acres)					
	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) undisturbed,					0.00
protected forest/open space or reforested					0.00
Managed Turf (acres) disturbed, graded					2.70
for yards or other turf to be			1.64	1.14	2.78
Impervious Cover (acres)				8 53	8.53

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
Pi (unitless correction factor)	0.90

Site Information

Runoff Coefficier	nts (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

## Post-Development Requirement for Site Area TP Load Reduction Required (lb/yr) 15.32

LAND	COVER SU
Land Cover Summary	У
Forest/Open Space Cover (acres)	0.00
Weighted Rv (forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	2.78
Weighted Rv (turf)	0.23
% Managed Turf	25%
Impervious Cover (acres)	8.53
Rv (impervious)	0.95
% Impervious	75%
Site Area (acres)	11.31
Site Rv	0.77

T	A. Lacollo
Treatment Volume and Nutrier	it Loads
Treatment Volume (acre-ft)	0.7291
Treatment Volume (cubic feet)	31,760
TP Load (lb/yr)	19.95
TN Load (lb/yr) (Informational Purposes Only)	142.75

#### **Drainage Area Calculations for SCS Method** Kimley » Horn

ct:	Chantilly Premier	Date:	08/0	9/23	-	Initials:	AO
Γ	Curve Numbers	h.					ĺ
Γ	Land Cover		Α	В	С	D	
Γ	Impervious		98	98	98	98	
	Open Space (good)		39	61	79	80	
	Woods (good)		30	55	70	77	
	-		-	-	-	-	
Г	-		-		-	-	

					Curve Humbers										
		То		Woods (go	ood)	Open Space (	(good)	Open Space	(good)	Woods (go	ood)	lm pervio	us	Total Area	Curve Number
		Drainage Area	Area	HSG	С	HSG	С	HSG	D	HSG	D	HSG	В	tal	C di
		211	(sf)	Curve Number	70	Curve Number	79	Curve Number	80	Curve Number	77	Curve Number	98		_
				Area (sf)	Area (ac)	Area (sf)	Area (ac)	Area (sf)	Area (ac)	Area (sf)	Area (ac)	Area (sf)	Area (ac)	Α	CN
		DA-1 (within LOD)	54,739	31,296	0.72					23,071	0.53	372	0.01	1.26	73
		DA-1 (outside LOD)	32,671	32,190	0.74							481		0.75	69
	_	DA-1	87,410	63,486	1.46					23,071	0.53	852	0.02	2.01	72
	EN	DA-2 (within LOD)	161,745	147,915	3.40					13,830	0.32			3.71	71
	PM	DA-2 (outside LOD)	15,632	15,632	0.36									0.36	70
	E.Co	DA-2	177,377	163,547	3.75					13,830	0.32			4.07	71
	PRE-DEVELOPMENT	DA-3 (within LOD)	238,937	96,272	2.21					142,665	3.28			5.49	74
		DA-3 (outside LOD)	4,515	788	0.02					3,727	0.09			0.10	76
		DA-3	243,453	97,060	2.23					146,393	3.36			5.59	74
	_	POA-A	508,239	324,093	7.44					183,294	4.21	852	0.02	11.67	73
		DA-OFF	37,381	4,241	0.10					6,245	0.14	26,894	0.62	0.86	91
		TOTAL LOD	492,802	279,724	6.42					185,812	4.27	27,266	0.63	11.31	74
		DA-1	21,796			4,493	0.10	2,441	0.06			14,862	0.34	0.50	92
		DA-2	233,792			43,178	0.99	18,092	0.42			172,523	3.96	5.37	93
	INT	DA-3	194,795			22,527	0.52	22,266	0.51			150,002	3.44	4.47	94
	PME	DA-4	24,017			1,399	0.03	6,784	0.16			15,834	0.36	0.55	92
	ELO	POA-A	474,400			71,597	1.64	49,583	1.14			353,221	8.11		
	DEV	DA-OFF	18,234									18,234	0.42	0.42	98
OST-DEVELOPMENT	TOTAL LOD	492,634			71,597	1.64	49,583	1.14			371,454	8.53	11.31	93	
	ŏ														

Area Checks D.A. A

2.78

OK.

FOREST/OPEN SPACE (ac)

**IMPERVIOUS COVER (ac)** 

MANAGED TURF AREA (ac)

Site Treatment Volume (ft<sup>3</sup>) 31,760

**AREA CHECK** 

TP LOAD REMAINING (lb/yr) 3.73

TP LOAD REMAINING (lb/yr): 4.64

POST-DEVELOPMENT LOAD (lb/yr) 142.75

**Total Phosphorus** 

TP LOAD REDUCTION ACHIEVED (lb/yr) 15.32

FINAL POST-DEVELOPMENT TP LOAD (lb/yr) 19.95

NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) 63.35

REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr) 79.40

IMPERVIOUS COVER TREATED (ac)

MANAGED TURF AREA TREATED (ac)

RUNOFF REDUCTION VOLUME ACHIEVED (ft<sup>3</sup>)

TP LOAD AVAILABLE FOR REMOVAL (lb/yr)

TP LOAD REDUCTION ACHIEVED (lb/yr)

TP LOAD REDUCTION REQUIRED (lb/yr)

REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):

**Total Nitrogen (For Information Purposes)** 

Runoff Reduction Volume and TP By Drainage Area

**Site Results (Water Quality Compliance)** 

D.A. B

0.00

0.00

0.00

OK.

0.00

0.91

NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) 63.35 0.00 0.00 0.00 0.00 63.35

\*\*No further TP load reduction required

D.A. C

0.00

0.00

0.00

0.00

0.00

OK.

D.A. B D.A. C D.A. D

0.00

0.00

D.A. D

0.00

0.00

0.00

0.00

OK.

0.00

0.00

0.00

## ONSITE DRAINAGE AREAS

## Drainage Area A

## Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)					0.00	0.00
Managed Turf (acres)			1.64	1.14	2.78	0.23
Impervious Cover (acres)				8.11	8.11	0.95
				Total	10.89	

**Stormwater Best Management Practices (RR = Runoff Reduction)** 

## **CLEAR BMP AREAS**

otal Phosphorus Available for Removal in D.A. A (lb/yr)	19.04
Post Development Treatment Volume in D.A. A (ft <sup>3</sup> )	30,312

Se	lect from	dropdown	lis

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Cover Credit	Volume from Upstream Practice (ft <sup>3</sup> )	Reduction	Remaining Runoff Volume (ft <sup>3</sup> )	Total BMP Treatment Volume (ft <sup>3</sup> )	Phosphorus Removal Efficiency (%)	Load from Upstream	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (Ib)	Remaining Phosphorus Load (lb)	DOWNSTIPANT PLACTICE TO D
6. Bioretention (RR)													
6.a. Bioretention #1 or Micro-Bioretention #1 or Urban Bioretention (Spec #9)	40	1.03	1.62	0	2,584	3,876	6,461	25	0.00	4.05	2.23	1.82	13.c. Wet Pond #2
6.b. Bioretention #2 or Micro-Bioretention #2 (Spec #9)	80			0	0	0	0	50	0.00	0.00	0.00	0.00	
13. Wet Ponds (no RR)													
13.a. Wet Pond #1 (Spec #14)	0			0	0	0	0	50	0.00	0.00	0.00	0.00	
13.b. Wet Pond #1 (Coastal Plain) (Spec #14)	0			0	0	0	0	45	0.00	0.00	0.00	0.00	
13.c. Wet Pond #2 (Spec #14)	0	1.75	3.07	14,429	0	26,491	26,491	75	4.14	7.57	8.78	2.93	
13.d. Wet Pond #2 (Coastal Plain) (Spec #14)	0			0	0	0	0	65	0.00	0.00	0.00	0.00	
14. Manufactured Treatment Devices (	no RR)												
14.a. Manufactured Treatment Device- Hydrodynamic	0		3.06	0	0	10,552	10,552	65	0.00	6.62	4.30	2.32	13.c. Wet Pond #2
14.b. Manufactured Treatment Device-Filtering	0			0	0	0	0	65	0.00	0.00	0.00	0.00	
14.c. Manufactured Treatment Device-Generic	0			0	0	0	0	20	0.00	0.00	0.00	0.00	

OFFSITE DRAINAGE AREA

## Drainage Area B

D.A. E

0.00

0.00

0.00

0.00

D.A. E

0.00

0.00

REQUIREMENT OF 50%

PHOSPHORUS REDUCTION

**AREA CHECK** 

OK.

OK.

OK.

OK.

TOTAL

2,584

19.95

15.32

4.64

## Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)					0.00	0.00
Managed Turf (acres)					0.00	0.00
Impervious Cover (acres)				0.42	0.42	0.95
	•		,	Total	0.42	

## **CLEAR BMP AREAS**

otal Phosphorus Available for Removal in D.A. B (lb/yr)	0.91
Post Development Treatment Volume in D.A. B (ft <sup>3</sup> )	1,448

## TOTAL IMPERVIOUS COVER TREATED (ac) 0.00 AREA CHECK: OK. TOTAL MANAGED TURF AREA TREATED (ac) 0.00 AREA CHECK: OK. TOTAL PHOSPHORUS REMOVAL REQUIRED ON SITE (lb/yr) 15.32 TOTAL PHOSPHORUS AVAILABLE FOR REMOVAL IN D.A. B (lb/yr) 0.91 TOTAL PHOSPHORUS REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. B (lb/yr) 0.00 TOTAL PHOSPHORUS REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. B (lb/yr) 0.00

TOTAL IMPERVIOUS COVER TREATED (ac) 7.75 AREA CHECK: OK. TOTAL MANAGED TURF AREA TREATED (ac) 2.78 AREA CHECK: OK.

TOTAL PHOSPHORUS REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 13.09 TOTAL PHOSPHORUS REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 2.23

TOTAL PHOSPHORUS REMAINING AFTER APPLYING BMP LOAD REDUCTIONS IN D.A. A (lb/yr) 3.73

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

NITROGEN REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 18.56 NITROGEN REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr) 44.79

TOTAL PHOSPHORUS REMOVAL REQUIRED ON SITE (lb/yr) 15.32

TOTAL NITROGEN REMOVED IN D.A. A (lb/yr) 63.35

TOTAL PHOSPHORUS AVAILABLE FOR REMOVAL IN D.A. A (lb/yr) 19.04

TOTAL PHOSPHORUS LOAD REDUCTION ACHIEVED IN D.A. A (lb/yr) 15.32

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

TOTAL PHOSPHORUS REMAINING AFTER APPLYING BMP LOAD REDUCTIONS IN D.A. B (Ib/yr) 0.91

TOTAL PHOSPHORUS LOAD REDUCTION ACHIEVED IN D.A. B (lb/yr) 0.00

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

SHEET NUMBER

C - 303

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

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

This information is required under Zoning Ordinance subsection 8101.1.G.

- ☐ 1. Plat is at a minimum scale of 1"=50' (Unless it is depicted on one sheet with a minimum scale of 1"=100')
- X 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)\_\_\_\_\_C - 200\_\_\_\_ 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: C - 3	302					
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.)
WET POND	10.89 AC	0.00 AC	10.89 AC	35,327 sf	172,500 cuft	252.0'
BIORETENTION A	3.20 AC	0.00 AC	3.20 AC	15,088 sf	22,865 cuft	249.25'
JELLYFISH FILTER	3.06 AC	0.00 AC	3.06 AC	N/A	N/A	N/A
_						
Totals:						

- X 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet(s) C 200 Pond inlet and outlet pipe systems are
- shown on Sheet(s) C 200 ☐ 5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet(s)\_\_\_
  - Type of maintenance access road surface noted on the plat is \_\_\_\_\_\_ (asphalt, geoblock, gravel, etc.)
- X 6. Landscaping and tree preservation in and near the stormwater management facility is shown on Sheet(s) L 102 X 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) C - 303 & C - 304
- X 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) \_ C - 308 \_ . If the outfall is proposed to be improved off-site it should be specifically noted.
- X 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) C 308. X 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) \_ C 002 \_\_\_.
- 11. A submission waiver is required for \_\_\_ 12. Stormwater management is not required because \_\_\_\_

Revised: 8/4/2015 Zoning Ordinance Citation only revised 7/1/2021

#### **Catchments Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
EX-DA-1	Pre-Development 1	1	3,778.000	12.550	0.47
EX-DA-1	Pre-Development 2	2	5,917.000	12.550	0.80
EX-DA-1	Pre-Development 10	10	13,831.000	12.450	2.08
EX-DA-1	Pre-Development 50	50	26,472.000	12.450	4.10
EX-DA-1	Pre-Development 100	100	33,699.000	12.450	5.24
EX-DA-2	Pre-Development 1	1	7,104.000	12.550	0.85
EX-DA-2	Pre-Development 2	2	11,275.000	12.550	1.50
EX-DA-2	Pre-Development 10	10	26,890.000	12.450	4.01
EX-DA-2	Pre-Development 50	50	52,078.000	12.450	8.06
EX-DA-2	Pre-Development 100	100	66,545.000	12.450	10.35
EX-DA-3	Pre-Development 1	1	12,101.000	12.550	1.57
EX-DA-3	Pre-Development 2	2	18,485.000	12.550	2.57
EX-DA-3	Pre-Development 10	10	41,598.000	12.500	6.20
EX-DA-3	Pre-Development 50	50	77,825.000	12.450	11.86
EX-DA-3	Pre-Development 100	100	98,356.000	12.450	15.02
DA-OFF	Post-Development 1	1	3,459.000	11.900	1.32
DA-OFF	Post-Development 2	2	4,263.000	11.900	1.61
DA-OFF	Post-Development 10	10	6,709.000	11.900	2.49
DA-OFF	Post-Development 50	50	10,026.000	11.900	3.68
DA-OFF	Post-Development	100	11,792.000	11.900	4.30
DA-1	Post-Development 1	1	3,070.000	11.900	1.27
DA-1	Post-Development 2	2	3,970.000	11.900	1.63
DA-1	Post-Development 10	10	6,779.000	11.900	2.72
DA-1	Post-Development 50	50	10,658.000	11.900	4.18
DA-1	Post-Development	100	12,737.000	11.900	4.95
DA-2	Post-Development 1	1	34,651.000	11.900	14.29
DA-2	Post-Development 2	2	44,455.000	11.900	18.16
DA-2	Post-Development 10	10	74,882.000	11.900	29.83
DA-2	Post-Development 50	50	116,727.000	11.900	45.39
DA-2	Post-Development	100	139,122.000	11.900	53.59
DA-3	Post-Development 1	1	30,303.000	11.900	12.40
DA-3	Post-Development 2	2	38,568.000	11.900	15.61
DA-3	Post-Development 10	10	64,089.000	11.900	25.26
DA-3	Post-Development 50	50	99,055.000	11.900	38.14
DA-3	Post-Development	100	117,740.000	11.900	44.94
DA-4	Post-Development 1	1	3,377.000	11.900	1.40
DA-4	Post-Development 2	2	4,367.000	11.900	1.80
DA-4	Post-Development 10	10	7,457.000	11.900	3.00
DA-4	Post-Development 50	50	11,724.000	11.900	4.60
DA-4	Post-Development 100	100	14,011.000	11.900	5.44

Bentley Systems, Inc. Haestad Methods Solution Center 27 Siemon Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666 SWM Design.ppc 8/10/2023

## Subsection: Master Network Summary

## **Catchments Summary**

			1909	V-112
Scenario		, , ,		Peak Flow (ft³/s)
	(years)	(ft³)	(flours)	(10 /3)
Pre-Development 1	1	4,968.000	12.450	0.77
Pre-Development 2	2	6,480.000	12.450	1.00
Pre-Development 10	10	11,226.000	12.450	1.71
Pre-Development 50	50	17,812.000	12.450	2.66
Pre-Development 100	100	21,350.000	12.450	3.16
	Pre-Development 2 Pre-Development 10 Pre-Development 50	Event (years)  Pre-Development 1	Event (years)         Volume (ft³)           Pre-Development 1         1         4,968.000           Pre-Development 2         2         6,480.000           Pre-Development 10         10         11,226.000           Pre-Development 50         50         17,812.000	Event (years)         Volume (ft³)         (hours)           Pre-Development 1         1         4,968.000         12.450           Pre-Development 2         2         6,480.000         12.450           Pre-Development 10         10         11,226.000         12.450           Pre-Development 50         50         17,812.000         12.450

#### **Node Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
OFFSITE	Pre-Development 1	1	4,968.000	12.450	0.77
OFFSITE	Post-Development 1	1	3,459.000	11.900	1.32
OFFSITE	Pre-Development 2	2	6,480.000	12.450	1.00
OFFSITE	Post-Development 2	2	4,263.000	11.900	1.61
OFFSITE	Pre-Development 10	10	11,226.000	12.450	1.71
OFFSITE	Post-Development 10	10	6,709.000	11.900	2.49
OFFSITE	Pre-Development 50	50	17,812.000	12.450	2.66
OFFSITE	Post-Development 50	50	10,026.000	11.900	3.68
OFFSITE	Pre-Development 100	100	21,350.000	12.450	3.16
OFFSITE	Post-Development 100	100	11,792.000	11.900	4.30
POI 1	Pre-Development 1	1	22,983.000	12.550	2.89
POI 1	Post-Development 1	1	44,183.000	13.900	1.07
POI 1	Pre-Development 2	2	35,676.000	12.550	4.87
POI 1	Post-Development 2	2	52,964.000	14.050	1.24
POI 1	Pre-Development 10	10	82,318.000	12.450	12.29
POI 1	Post-Development 10	10	100,389.000	12.300	11.91
POI 1	Pre-Development 50	50	156,375.000	12.450	24.02
POI 1	Post-Development 50	50	177,412.000	12.100	37.35
POI 1	Pre-Development 100	100	198,600.000	12.450	30.61
POI 1	Post-Development 100	100	219,979.000	12.100	40.81

Pond	Summary
. 0	Janna

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
BIO 1 (IN)	Post- Development 1	1	30,303.000	11.900	12.40	(N/A)	(N/A)

SWM Design.ppc 8/10/2023

PondPack CONNECT Edition

[10.02.00.01] Page 1 of 5

Bentley Systems, Inc. Haestad Methods Solution Center 27 Siemon Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666

PondPack CONNECT Edition [10.02.00.01] Page 2 of 5

PondPack CONNECT Edition [10.02.00.01] Page 4 of 5

## Subsection: Master Network Summary

## **Pond Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
BIO 1 (OUT)	Post- Development 1	1	30,214.000	12.050	8.02	248.10	5,927.000
BIO 1 (IN)	Post- Development 2	2	38,568.000	11.900	15.61	(N/A)	(N/A)
BIO 1 (OUT)	Post- Development 2	2	38,459.000	12.050	10.12	248.20	7,461.000
BIO 1 (IN)	Post- Development 10	10	64,089.000	11.900	25.26	(N/A)	(N/A)
BIO 1 (OUT)	Post- Development 10	10	63,919.000	12.000	17.05	248.49	11,634.000
BIO 1 (IN)	Post- Development 50	50	99,055.000	11.900	38.14	(N/A)	(N/A)
BIO 1 (OUT)	Post- Development 50	50	98,803.000	12.050	22.98	248.92	18,165.000
BIO 1 (IN)	Post- Development 100	100	117,740.000	11.900	44.94	(N/A)	(N/A)
BIO 1 (OUT)	Post- Development 100	100	117,445.000	12.050	23.86	249.23	22,865.000
POND 1 (IN)	Post- Development	1	71,311.000	11.950	23.30	(N/A)	(N/A)
POND 1 (OUT)	Post- Development	1	44,183.000	13.900	1.07	247.77	83,969.000
POND 1 (IN)	Post- Development 2	2	91,250.000	11.950	29.49	(N/A)	(N/A)
POND 1 (OUT)	Post- Development 2	2	52,964.000	14.050	1.24	248.24	97,605.000
POND 1 (IN)	Post- Development 10	10	153,036.000	11.950	48.89	(N/A)	(N/A)
POND 1 (OUT)	Post- Development 10	10	100,389.000	12.300	11.91	248.89	117,742.000

Bentley Systems, Inc. Haestad Methods Solution Center 27 Siemon Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666 PondPack CONNECT Edition [10.02.00.01] Page 3 of 5 SWM Design.ppc 8/10/2023

## Subsection: Master Network Summary

## **Pond Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
POND 1 (IN)	Post- Development 50	50	237,912.000	11.950	73.47	(N/A)	(N/A)
POND 1 (OUT)	Post- Development 50	50	177,412.000	12.100	37.35	249.55	139,137.000
POND 1 (IN)	Post- Development 100	100	283,315.000	11.900	86.41	(N/A)	(N/A)
POND 1 (OUT)	Post- Development 100	100	219,979.000	12.100	40.81	249.90	151,434.000
24" PIPE (IN)	Post- Development	1	33,591.000	12.000	9.05	(N/A)	(N/A)
24" PIPE (OUT)	Post- Development	1	33,591.000	12.000	9.05	0.00	0.000
24" PIPE (IN)	Post- Development 2	2	42,826.000	12.000	11.42	(N/A)	(N/A)
24" PIPE (OUT)	Post- Development 2	2	42,826.000	12.000	11.42	0.00	0.000
24" PIPE (IN)	Post- Development 10	10	71,376.000	12.000	19.48	(N/A)	(N/A)
24" PIPE (OUT)	Post- Development 10	10	71,376.000	12.000	19.48	0.00	0.000
24" PIPE (IN)	Post- Development 50	50	110,527.000	11.950	26.87	(N/A)	(N/A)
24" PIPE (OUT)	Post- Development 50	50	110,527.000	11.950	26.87	0.00	0.000
24" PIPE (IN)	Post- Development 100	100	131,456.000	11.950	28.24	(N/A)	(N/A)
24" PIPE (OUT)	Post- Development 100	100	131,456.000	11.950	28.24	0.00	0.000

Bentley Systems, Inc. Haestad Methods Solution Center 27 Siemon Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666 SWM Design.ppc 8/10/2023

Subsection: Runoff CN-Area

Label: DA-1 Scenario: Post-Development 1

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	0.340	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Fair condition; grass cover 50% to 75% - Soil C	79.000	0.100	0.0	0.0	79.000
Open space (Lawns,parks etc.) - Fair condition; grass cover 50% to 75% - Soil D	83.000	0.060	0.0	0.0	83.000
COMPOSITE AREA & WEIGHTED CN>	(N/A)	0.500	(N/A)	(N/A)	92.400

Subsection: Runoff CN-Area Label: DA-2

Return Event: 1 years Storm Event: 1 Year

Return Event: 1 years

Storm Event: 1 Year

Scenario: Post-Development 1

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	3.960	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Fair condition; grass cover 50% to 75% - Soil C	79.000	0.990	0.0	0.0	79.000
Open space (Lawns,parks etc.) - Fair condition; grass cover 50% to 75% - Soil D	84.000	0.420	0.0	0.0	84.000
COMPOSITE AREA & WEIGHTED CN>	(N/A)	5.370	(N/A)	(N/A)	93.402

Subsection: Runoff CN-Area Label: DA-3 Scenario: Post-Development 1 Return Event: 1 years Storm Event: 1 Year

**Runoff Curve Number Data** 

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	3.440	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Fair condition; grass cover 50% to 75% - Soil C	79.000	0.520	0.0	0.0	79,000
Open space (Lawns,parks etc.) - Fair condition; grass cover 50% to 75% - Soil D	84.000	0.510	0.0	0.0	84.000
COMPOSITE AREA & WEIGHTED CN>	(N/A)	4.470	(N/A)	(N/A)	94.192

Subsection: Runoff CN-Area Label: DA-4 Scenario: Post-Development 1

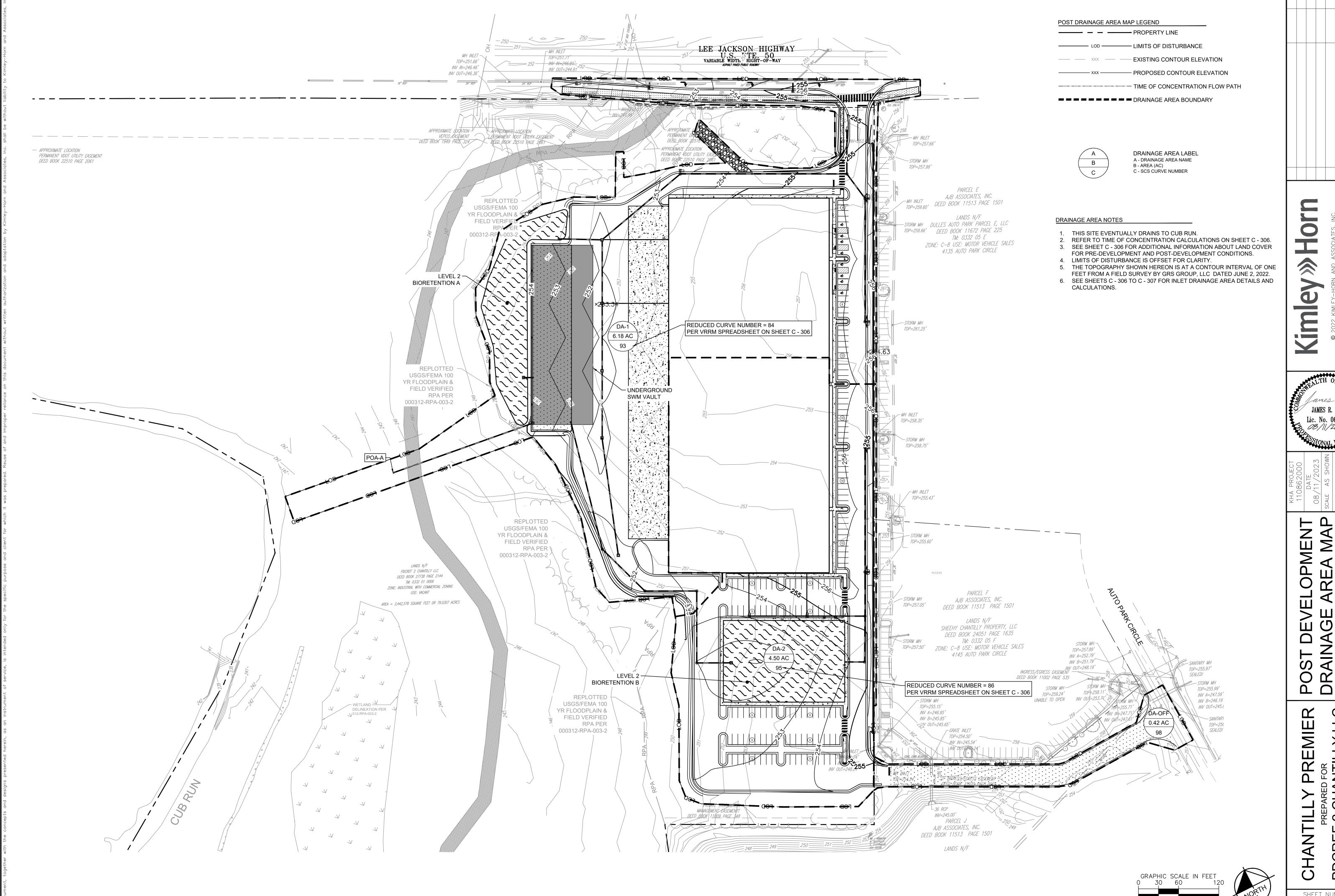
Runoff Curve Number Data

Return Event: 1 years Storm Event: 1 Year

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	0.360	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Fair condition; grass cover 50% to 75% - Soil C	79.000	0.030	0.0	0.0	79.000
Open space (Lawns,parks etc.) - Fair condition; grass cover 50% to 75% - Soil D	80.000	0.160	0.0	0.0	80.000
COMPOSITE AREA & WEIGHTED CN>	(N/A)	0.550	(N/A)	(N/A)	91.727

Kimle

PREMIER CHANTILLY <u>қ</u> 2 PDCREF



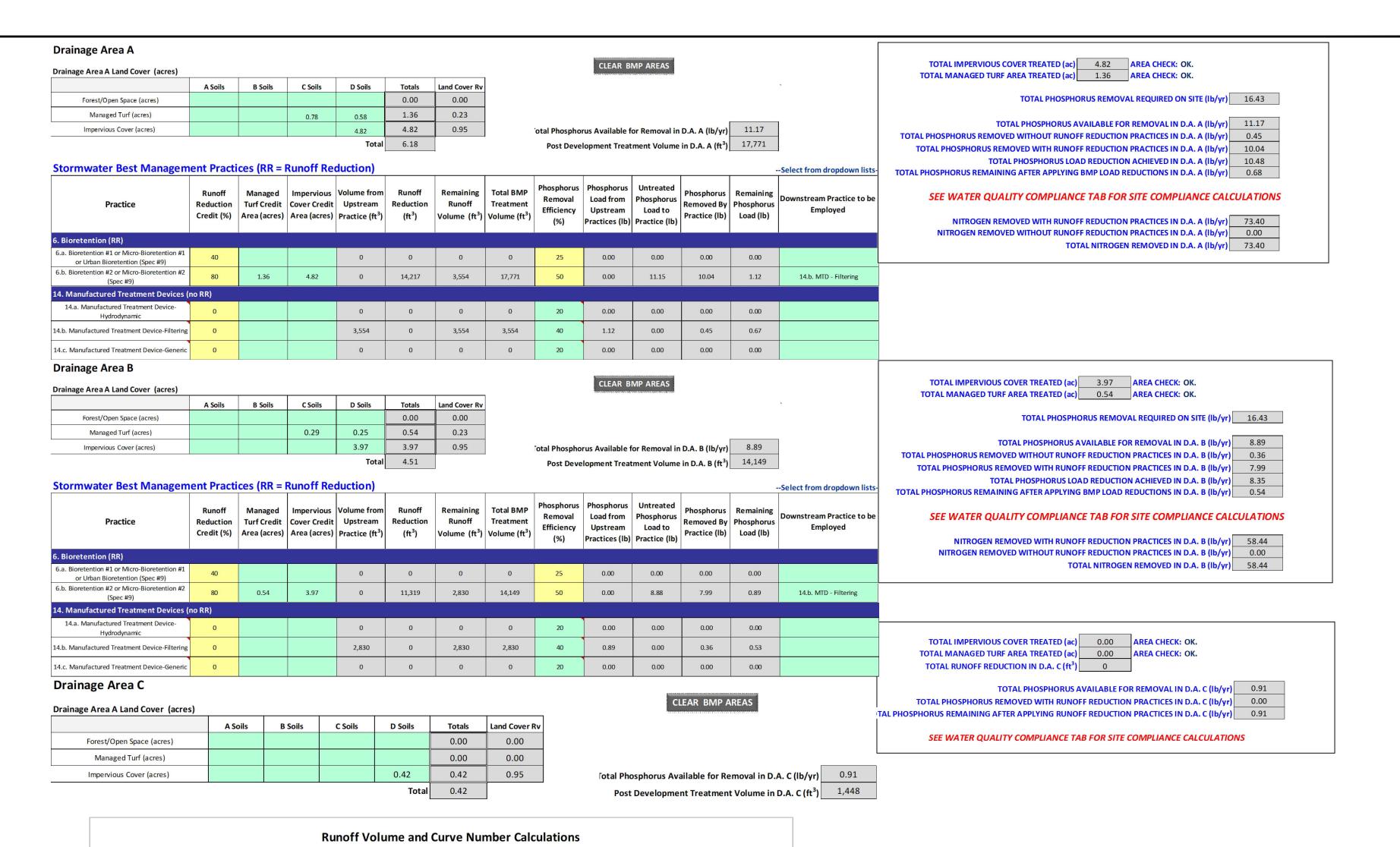
**PREMIE** EPARED FOR CHANTILLY

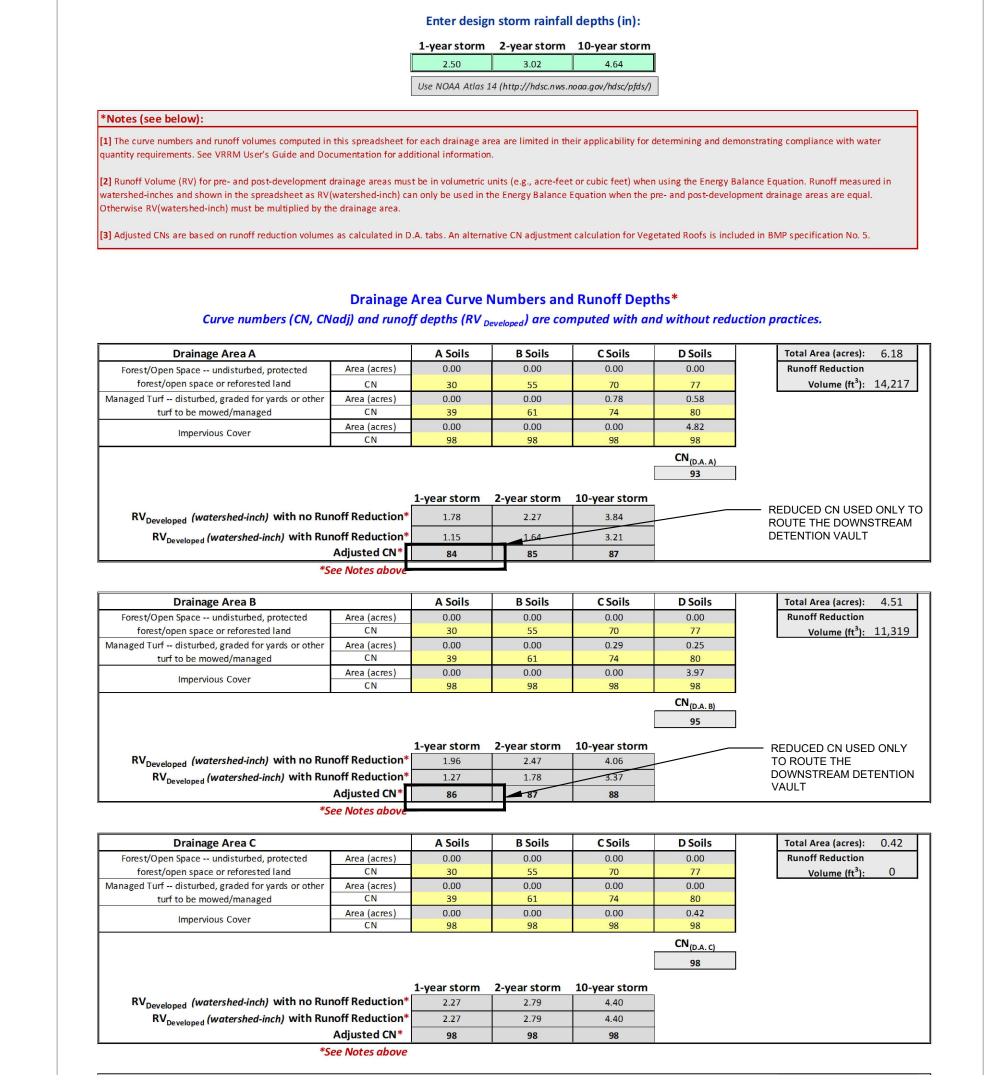
PD SHEET NUMBER

C - 305

NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) 131.85

REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)





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

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

This information is required under Zoning Ordinance subsection 8101.1.G.

- 1. Plat is at a minimum scale of 1"=50' (Unless it is depicted on one sheet with a minimum scale of 1"=100')
- X 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) C 201

  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.

X 3. Provide: C - 305

Facility Name/ Type & No. (E.g. dry pond, infiltration trench, underground vauit, 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.)
BIORETENTION A	6.18 AC	0.00 AC	6.18 AC	16,000 sf	34,400 cuft	N/A
BIORETENTION B	4.50 AC	0.00 AC	4.50 AC	18,000 sf	34,200 cuft	N/A
INDERGROUND VAULT	10.68 AC	0.00 AC	10.68 AC	24,700 sf	83,080 cuft	N/A
Totals:						

- X 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet(s) C 201 . Pond inlet and outlet pipe systems are shown on Sheet(s) C 201 .
- Shown on Sheet(s) \_\_\_\_.

   Maintenance access (road) to stormwater management facility(ies) are shown on Sheet(s)\_\_\_\_.
- Type of maintenance access road surface noted on the plat is \_\_\_\_\_\_ (asphal
- X 6. Landscaping and tree preservation in and near the stormwater management facility is shown on Sheet(s) <u>L 104</u>.
   X 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) <u>C 306 & C 307</u>

  X 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) <u>C 308</u>. If the outfall is proposed to be improved off-site it should be specifically noted.
- X 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) C 308.
- X 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) C 002 \_\_\_.

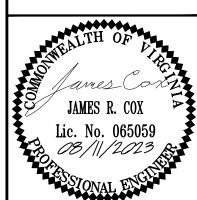
  11. A submission waiver is required for \_\_\_.
- Stormwater management is not required because \_

Revised: 8/4/2015 Zoning Ordinance Citation only revised 7/1/2021

S, INC.
ON, VA 20191
H–1350
No.
REVISIONS

KIMIEY-HORN AND ASSOCIATES, INC.

© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
400 COMMERCE PARK DR., SUITE 400, RESTON, VA
PHONE: 703-674-1350



BATE
B/11/2023
LE AS SHOWN
IGNED BY AWO
WN BY AWO

DAT

08/11/

SCALE AS

DESIGNED BY

STORMWATER SALCULATIONS

NATILLY PREMIER
PREPARED FOR
REF 2 CHANTILLY LLC

Subsection: Master Network Summary

#### Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
EX-DA-OFF	Pre-Development 1	1	4,922.000	12.450	0.76
EX-DA-OFF	Pre-Development 2	2	6,368.000	12.450	0.98
EX-DA-OFF	Pre-Development 10	10	10,881.000	12.450	1.65
EX-DA-OFF	Pre-Development 100	100	20,458.000	12.450	3.01
EX-DA-1	Pre-Development 1	1	3,778.000	12.550	0.47
EX-DA-1	Pre-Development 2	2	5,917.000	12.550	0.80
EX-DA-1	Pre-Development 10	10	13,831.000	12.450	2.08
EX-DA-1	Pre-Development 100	100	33,699.000	12.450	5.24
EX-DA-2	Pre-Development 1	1	7,121.000	12.550	0.86
EX-DA-2	Pre-Development 2	2	11,303.000	12.550	1.51
EX-DA-2	Pre-Development 10	10	26,956.000	12.450	4.02
EX-DA-2	Pre-Development 100	100	66,709.000	12.450	10.36
DA-OFF	Post-Development 1	1	3,459.000	11.900	1.32
DA-OFF	Post-Development 2	2	4,263.000	11.900	1.63
DA-OFF	Post-Development 10	10	6,709.000	11.900	2.49
DA-OFF	Post-Development 100	100	11,792.000	11.900	4.30
DA-1	Post-Development 1	1	24,999.000	11.950	10.39
DA-1	Post-Development 2	2	34,524.000	11.900	14.32
DA-1	Post-Development 10	10	65,945.000	11.900	27.47
DA-1	Post-Development 100	100	136,175.000	11.900	55.52
DA-2	Post-Development 1	1	20,285.000	11.950	8.41
DA-2	Post-Development 2	2	27,543.000	11.900	11.48
DA-2	Post-Development 10	10	51,114.000	11.900	21.21
DA-2	Post-Development 100	100	103,011.000	11.900	41.62
EX-DA-3	Pre-Development 1	1	12,106.000	12.550	1.59
EX-DA-3	Pre-Development 2	2	18,491.000	12.550	2.59
EX-DA-3	Pre-Development 10	10	41,610.000	12.450	6.32
EX-DA-3	Pre-Development 100	100	98,382.000	12.450	15.30

#### **Node Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
OFFSITE	Pre-Development 1	1	4,922.000	12.450	0.76
OFFSITE	Post-Development 1	1	3,459.000	11.900	1.32
OFFSITE	Pre-Development 2	2	6,368.000	12.450	0.98
OFFSITE	Post-Development 2	2	4,263.000	11.900	1.61
OFFSITE	Pre-Development 10	10	10,881.000	12.450	1.65
OFFSITE	Post-Development 10	10	6,709.000	11.900	2.49
OFFSITE	Pre-Development 100	100	20,458.000	12.450	3.01

SWM Design- Warehouse.ppc 8/11/2023

Bentley Systems, Inc. Haestad Methods Solution Center 27 Siemon Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666

PondPack CONNECT Edition [10.02.00.01] Page 1 of 2

Subsection: Master Network Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
OFFSITE	Post-Development 100	100	11,792.000	11.900	4.30
POI 1	Pre-Development 1	1	23,005.000	12.550	2.91
POI 1	Post-Development 1	1	35,693.000	13.000	1.25
POI 1	Pre-Development 2	2	35,710.000	12.550	4.90
POI 1	Post-Development 2	2	50,139.000	12.800	1.86
POI 1	Pre-Development 10	10	82,397.000	12.450	12.42
POI 1	Post-Development 10	10	100,242.000	12.100	10.97
POI 1	Pre-Development 100	100	198,790.000	12.450	30.90
POI 1	Post-Development 100	100	215,106.000	12.000	76.08

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
UG SWM Vault (IN)	Post- Development 1	1	45,284.000	11.950	18.80	(N/A)	(N/A)
UG SWM Vault (OUT)	Post- Development 1	1	35,693.000	13.000	1.25	245.90	23,346.000
UG SWM Vault (IN)	Post- Development 2	2	62,067.000	11.900	25.80	(N/A)	(N/A)
UG SWM Vault (OUT)	Post- Development 2	2	50,139.000	12.800	1.86	246.26	32,421.000
UG SWM Vault (IN)	Post- Development 10	10	117,060.000	11.900	48.68	(N/A)	(N/A)
UG SWM Vault (OUT)	Post- Development 10	10	100,242.000	12.100	10.97	247.28	56,571.000
UG SWM Vault (IN)	Post- Development 100	100	239,187.000	11.900	97.14	(N/A)	(N/A)
UG SWM Vault (OUT)	Post- Development 100	100	215,106.000	12.000	76.08	248.73	82,857.000

SWM Design- Warehouse.ppc 8/11/2023

Bentley Systems, Inc. Haestad Methods Solution Center 27 Siemon Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666

PondPack CONNECT Edition [10.02.00.01] Page 2 of 2

PRELIMINARY STORMWATER CALCULATIONS OPTION 2

PREPARED FOR PDCREF 2 CHANTILLY LLC

SHEET NUMBER

C - 307

CHANTILLY PREMIER

**Node Summary** 

Pond	Summa	r

THE SITE IS BOUNDED BY ROUTE 50 TO THE NORTH, CUB RUN TO THE WEST AND AUTO PARK CIRCLE TO THE EAST. UNDER EXISTING CONDITIONS, THE ENTIRE SITE DRAINS TO CUB RUN. DUE TO THE INCREASE IN IMPERVIOUS AREA FROM THE PROPOSED CONDITIONS WATER QUANTITY AND QUALITY HAS BEEN EVALUATED AND FOUND TO MEET THE REQUIREMENTS OF FAIRFAX COUNTY PFM AND CHAPTER 124 AS EXPLAINED IN THE NARRATIVE BELOW.

BORDERING CUB RUN IS AN EXISTING 100-YR FEMA FLOODPLAIN AND RPA. PER FAIRFAX COUNTY APPROVED PLAN 312-RPA-003-2, THE RPA WAS DELINEATED BASED ON WETLAND DELINEATIONS PERFORMED ON OCTOBER 15 1H AND 17 1H, 2018. NO CHANGES TO THE RPA HAVE OCCURRED IN THIS TIME TO INTRODUCE NEW WETLAND FEATURES OR CHANGES TO THE FLOODPLAIN, THEREFORE THIS RPA DETERMINATION REMAINS VALID TODAY. AS PART OF THIS RPA DETERMINATION, A FLOODPLAIN CERTIFICATION WAS ISSUED BY REMAPPING THE APPROVED USGS FLOODPLAIN STUDY ON SURVEYED TOPOGRAPHY: THEREFORE, THE DELINEATED 100-YR FLOODPLAIN BOUNDARY IS VALID AS WELL.

THE PROPOSED DEVELOPMENT INCLUDES APPROXIMATELY 11.31 ACRES OF LAND DISTURBANCE. THIS PROJECT PROPOSES ONE (1) LEVEL #1 STANDARD BIORETENTION FACILITY, ONE (1) MANUFACTURED TREATMENT DEVICE, AND ONE (1) LEVEL #2 WET POND. THESE BMPs SHALL BE DESIGNED IN ACCORDANCE WITH THE PUBLIC FACILITIES MANUAL (PFM) AND DCR. THE PROPOSED DEVELOPMENT MEETS THE SPECIFIC PERFORMANCE TARGET OF REDUCING DISCHARGES LEAVING THE SITE TO MINIMIZE STREAM EROSION THROUGH THE USE OF THE ENERGY BALANCE METHOD, SEE BELOW FOR ENERGY BALANCE EQUATIONS. PER OUR ANALYSIS, 117,742 CUBIC FT. OF STORAGE IS REQUIRED TO RETAIN THE 10-YEAR STORM, AND 172,515 CUBIC FT. OF STORAGE IS PROVIDED BY THE LEVEL 2 WET POND.

ADDITIONALLY, THIS DEVELOPMENT REQUIRED THE APPLICANT TO PROVIDE 15.32 LBS/YEAR OF TOTAL PHOSPHORUS LOAD REDUCTION FOR THE PROJECT AREA WITHIN THE LIMITS OF DISTURBANCE. THE REQUIRED PHOSPHORUS REMOVAL REQUIREMENT WILL BE MET WITH THE BMP FACILITIES MENTIONED ABOVE WHICH COMBINE TO PROVIDE 15.32 LBS/YEAR OF TREATMENT. THIS EXCEEDS THE WSPOD REQUIREMENTS OF 50% PHOSPHORUS REDUCTION. SEE SHEET C - 303 FOR STORMWATER QUALITY CALCULATIONS.

THE PROPOSED DEVELOPMENT MEETS THE REQUIREMENTS OF CHAPTER 124 ARTICLE 4 OF THE FAIRFAX COUNTY CODE OF ORDINANCES.

#### ADEQUATE OUTFALL UTILIZING THE ENERGY BALANCE METHODOLOGY (9VAC25-870-66.B.3.a)

THE ENERGY BALANCE EQUATION WAS PROVIDED BASED ON DISCHARGE TO A NATURAL SYSTEM USING THE FOLLOWING EQUATION:

#### Q/DEVELOPED ≤ (Q FOREST\*RV FOREST) / RV DEVELOPED

#### A SUMMARY OF THIS ANALYSIS IS PROVIDED ON THIS SHEET.

FOR POA-A, THE ENERGY BALANCE EQUATION SHOWS AN ALLOWED 1-YEAR 24-HOUR STORM PEAK FLOW TO BE 1.43 CFS IN THE PROPOSED CONDITION. OUR CALCULATIONS SHOW THAT WITH THE PROPOSED BIORETENTION FACILITIES AND UNDERGROUND STORAGE, THE PEAK FLOW 1-YEAR 24-HOUR STORM EVENT WILL BE REDUCED TO 1.07 CFS. THEREFORE, THE CHANNEL PROTECTION REQUIREMENTS ARE MET. AND DEMONSTRATE HOW THE PEAK FLOW RUNOFF IS NON-EROSIVE AND WILL DISCHARGE TO THE ENVIRONMENT WITHOUT DEGRADING THE DOWNSTREAM CHANNEL

#### FLOOD PROTECTION (9VAC25-970-66.C, SWMO 124-1-6, 124-4-1, 124-4-4.;B, AND 124-4-4.C)

THE 10-YEAR 24-HOUR STORM EVENT WAS ANALYZED AT THE POINT OF DISCHARGE AND THE POST-DEVELOPED PEAK FLOW (11.91 CFS) HAS BEEN SHOWN TO BE LESS THAN THE PRE-DEVELOPED PEAK FLOW (12.29 CFS).

ADEQUATE OUTFALL, CHANNEL & FLOOD PROTECTION REQUIREMENTS FOR THIS SITE HAVE BEEN MET IN ACCORDANCE WITH CODE SECTIONS 124-4-4(b)(3)a & (c)(4) AND 124-4-4(b)(6)A & (c)(6)a AND PFM **SECTIONS 6-0203.2** 

### PFM MODIFICATION FOR DIVISION OF DRAINAGE DIVIDES (PFM 6-0202.2):

THE EXISTING DRAINAGE DIVIDES ON-SITE HAVE NOT BEEN MODIFIED BASED ON THE PROPOSED DEVELOPMENT

#### OVERLAND RELIEF AND MAJOR DRAINAGE SYSTEM ADEQUACY (PFM 6-1502):

THE OVERLAND FLOW PATHS PROVIDE POSITIVE DRAINAGE AWAY FROM ALL PROPOSED BUILDINGS. THE FINISH FLOOR ELEVATIONS FOR THE PROPOSED STRUCTURES ARE AT LEAST 2' ABOVE THE TOP OF DAM FOR THE PROPOSED STORMWATER MANAGEMENT FACILITIES. IN THE EVENT OF A FLOOD WITH CLOGGED INFRASTRUCTURE, DRAINAGE WOULD DRAIN TOWARDS THE PROPOSED STORM INLETS AND OVERFLOW ABOVE THE TOP OF CURB. FOR THE MAJORITY OF THE INLETS, THIS OVERFLOW EVENT WILL DIRECT THE DRAINAGE TO ONE OF THE PROPOSED BIORETENTION FACILITIES, OR ULTIMATELY CUB RUN. FOR INLETS ON THE PERIMETER OF THE SITE, THE DRAINAGE WOULD MAKE ITS WAY TO CUB RUN.

#### RPA ENCROACHMENT (FFX COUNTY CODE OF ORDINANCES SECTION 118-6):

THE ENCROACHMENT INTO THE RPA IS SHOWN IN ORDER TO DISCHARGE THE PROPOSED STORM SEWER SYSTEM TO CUB RUN. LIMITS OF DISTURBANCE HAVE BEEN LIMITED TO THE AREA REQUIRED TO CLEAR AND INSTALL THE STORM SEWER PIPE AND DOWNSTREAM RECEIVING CHANNEL. THE TOTAL DISTURBANCE TO THE RPA FOR THE NORTHERN OUTFALL CHANNEL IS APPROXIMATELY 17,368 SF. NO IMPERVIOUS IS PROPOSED AS PART OF THIS ENCROACHMENT OTHER THAN RIP RAP FOR STABILIZATION OF THE RECEIVING CHANNEL. A WATER QUALITY IMPACT ASSESSMENT WILL BE PROVIDED AS PART OF THE SITE PLAN TO SUMMARIZE THE PROPOSED IMPACTS AS PART OF THIS DEVELOPMENT

## FLOODPLAIN USE DETERMINATION (ZONING ORDINANCE SECTION 5105.3)

THE ENCROACHMENT INTO THE FLOODPLAIN IS SHOWN IN ORDER TO DISCHARGE THE PROPOSED STORM SEWER SYSTEM TO CUB RUN. ALL PROPOSED GRADING IN THE FLOODPLAIN RESULTS IN A NET FILL OF APPROXIMATELY 63 CY OF FILL; THEREFORE, NO IMPACT TO THE WATER SURFACE ELEVATION WILL OCCUR AS A RESULT OF THESE IMPROVEMENTS. A FLOODPLAIN USE DETERMINATION SHALL BE SUBMITTED AS PART OF THE SITE PLAN APPROVAL PROCESS.

## STORMWATER NARRATIVE (WAREHOUSE OPTION #2)

THE SITE IS BOUNDED BY ROUTE 50 TO THE NORTH, CUB RUN TO THE WEST AND AUTO PARK CIRCLE TO THE EAST. UNDER EXISTING CONDITIONS, THE ENTIRE SITE DRAINS TO CUB RUN. DUE TO THE INCREASE IN IMPERVIOUS AREA FROM THE PROPOSED CONDITIONS WATER QUANTITY AND QUALITY HAS BEEN EVALUATED AND FOUND TO MEET THE REQUIREMENTS OF FAIRFAX COUNTY PFM AND CHAPTER 124 AS EXPLAINED IN THE NARRATIVE BELOW.

BORDERING CUB RUN IS AN EXISTING 100-YR FEMA FLOODPLAIN AND RPA. PER FAIRFAX COUNTY APPROVED PLAN 312-RPA-003-1, THE RPA WAS DELINEATED BASED ON WETLAND DELINEATIONS PERFORMED ON OCTOBER 15 H AND 17 H, 2018. NO CHANGES TO THE RPA HAVE OCCURRED IN THIS TIME TO INTRODUCE NEW WETLAND FEATURES OR CHANGES TO THE FLOODPLAIN, THEREFORE THIS RPA DETERMINATION REMAINS VALID TODAY. AS PART OF THIS RPA DETERMINATION, A FLOODPLAIN CERTIFICATION WAS ISSUED BY REMAPPING THE APPROVED USGS FLOODPLAIN STUDY ON SURVEYED TOPOGRAPHY: THEREFORE, THE DELINEATED 100-YR FLOODPLAIN BOUNDARY IS VALID AS WELL.

THE PROPOSED DEVELOPMENT INCLUDES APPROXIMATELY 11.12 ACRES OF LAND DISTURBANCE. THIS PROJECT PROPOSES TWO (2) LEVEL #2 STANDARD BIORETENTION FACILITIES AND AN UNDERGROUND DETENTION FACILITY TO SATISFY THE STORMWATER QUALITY AND QUANTITY REQUIREMENT FOR THIS SITE OPTION. ADDITIONALLY, THE PROPOSED DEVELOPMENT MEETS THE SPECIFIC PERFORMANCE TARGET OF REDUCING DISCHARGES LEAVING THE SITE TO MINIMZE STREAM EROSION THROUH THE USE OF THE ENERGY BALANCE METHOD, SEE BELOW FOR ENERGY BALANCE EQUATIONS. PER OUR ANALYSIS, 56,571 CUBIC FT. OF STORAGE IS REQUIRED TO RETAIN THE 10-YEAR STORM, AND 83,080 CUBIC FT. OF STORAGE IS PROVIDED BY THE UNDERGROUND STORAGE FACILITY.

ADDITIONALLY, THIS DEVELOPMENT REQUIRED THE APPLICANT TO PROVIDE 16.43 LBS/YEAR OF TOTAL PHOSPHORUS LOAD REDUCTION FOR THE PROJECT AREA WITHIN THE LIMITS OF DISTURBANCE. THE REQUIRED PHOSPHORUS REMOVAL REQUIREMENT WILL BE MET WITH THE BMP FACILITIES MENTIONED ABOVE WHICH COMBINE TO PROVIDE 18.83 LBS/YEAR OF TREATMENT, EXCEEDING THE REQUIREMENTS BY 2.16 LBS/YEAR. THIS EXCEEDS THE WSPOD REQUIREMENTS OF 50% PHOSPHORUS REDUCTION. SEE SHEET C - 306 FOR STORMWATER QUALITY CALCULATIONS

#### THE PROPOSED DEVELOPMENT MEETS THE REQUIREMENTS OF CHAPTER 124 ARTICLE 4 OF THE FAIRFAX COUNTY CODE OF ORDINANCES.

#### ADEQUATE OUTFALL UTILIZING THE ENERGY BALANCE METHODOLOGY (9VAC25-870-66.B.3.a)

THE ENERGY BALANCE EQUATION WAS PROVIDED BASED ON DISCHARGE TO A NATURAL SYSTEM USING THE FOLLOWING EQUATION:

#### Q/DEVELOPED ≤ (Q FOREST\*RV FOREST) / RV DEVELOPED

#### A SUMMARY OF THIS ANALYSIS IS PROVIDED ON THIS SHEET

FOR POA-A, THE ENERGY BALANCE EQUATION SHOWS AN ALLOWED 1-YEAR 24-HOUR STORM PEAK FLOW TO BE 1.50 CFS IN THE PROPOSED CONDITION. OUR CALCULATIONS SHOW THAT WITH THE PROPOSED BIORETENTION FACILITIES AND UNDERGROUND STORAGE, THE PEAK FLOW 1-YEAR 24-HOUR STORM EVENT WILL BE REDUCED TO 1.25 CFS. THEREFORE, THE CHANNEL PROTECTION REQUIREMENTS ARE MET. AND DEMONSTRATE HOW THE PEAK FLOW RUNOFF IS NON-EROSIVE AND WILL DISCHARGE TO THE ENVIRONMENT WITHOUT DEGRADING THE DOWNSTREAM CHANNEL.

#### FLOOD PROTECTION (9VAC25-970-66.C, SWMO 124-1-6, 124-4-1, 124-4-4.;B, AND 124-4-4.C)

THE 10-YEAR 24-HOUR STORM EVENT WAS ANALYZED AT THE POINT OF DISCHARGE FOR POA-A AND THE POST-DEVELOPED PEAK FLOW (10.97 CFS) HAS BEEN SHOWN TO BE LESS THAN THE PRE-DEVELOPED PEAK FLOW (12.42 CFS).

ADEQUATE OUTFALL, CHANNEL & FLOOD PROTECTION REQUIREMENTS FOR THIS SITE HAVE BEEN MET IN ACCORDANCE WITH CODE SECTIONS 124-4-4(b)(3)a & (c)(4) AND 124-4-4(b)(6)A & (c)(6)a AND PFM **SECTIONS 6-0203.2** 

#### PFM MODIFICATION FOR DIVISION OF DRAINAGE DIVIDES (PFM 6-0202.2):

THE EXISTING DRAINAGE DIVIDES ON-SITE HAVE NOT BEEN MODIFIED BASED ON THE PROPOSED DEVELOPMENT

#### OVERLAND RELIEF AND MAJOR DRAINAGE SYSTEM ADEQUACY (PFM 6-1502):

THE OVERLAND FLOW PATHS PROVIDE POSITIVE DRAINAGE AWAY FROM ALL PROPOSED BUILDINGS. THE FINISH FLOOR ELEVATIONS FOR THE PROPOSED STRUCTURES ARE AT LEAST 2' ABOVE THE TOP OF DAM FOR THE PROPOSED STORMWATER MANAGEMENT FACILITIES. IN THE EVENT OF A FLOOD WITH CLOGGED INFRASTRUCTURE, DRAINAGE WOULD DRAIN TOWARDS THE PROPOSED STORM INLETS AND OVERFLOW ABOVE THE TOP OF CURB. FOR THE MAJORITY OF THE INLETS, THIS OVERFLOW EVENT WILL DIRECT THE DRAINAGE TO ONE OF THE PROPOSED BIORETENTION FACILITIES, OR ULTIMATELY CUB RUN. FOR INLETS ON THE PERIMETER OF THE SITE, THE DRAINAGE WOULD MAKE ITS WAY TO CUB RUN.

#### RPA ENCROACHMENT (FFX COUNTY CODE OF ORDINANCES SECTION 118-6):

THE ENCROACHMENT INTO THE RPA IS SHOWN IN ORDER TO DISCHARGE THE PROPOSED STORM SEWER SYSTEM TO CUB RUN. LIMITS OF DISTURBANCE HAVE BEEN LIMITED TO THE AREA REQUIRED TO CLEAR AND INSTALL THE STORM SEWER PIPE AND DOWNSTREAM RECEIVING CHANNEL. THE TOTAL DISTURBANCE TO THE RPA FOR THE OUTFALL CHANNEL IS APPROXIMATELY 17,386 SF. NO IMPERVIOUS SURFACES ARE PROPOSED AS PART OF THIS ENCROACHMENT OTHER THAN RIP RAP FOR STABILIZATION OF THE RECEIVING CHANNEL. A WATER QUALITY IMPACT ASSESSMENT WILL BE PROVIDED AS PART OF THE SITE PLAN TO SUMMARIZE THE PROPOSED IMPACTS AS PART OF THIS DEVELOPMENT.

## FLOODPLAIN USE DETERMINATION (ZONING ORDINANCE SECTION 5105.3)

Chantilly Premier

THE ENCROACHMENT INTO THE FLOODPLAIN IS SHOWN IN ORDER TO DISCHARGE THE PROPOSED STORM SEWER SYSTEM TO CUB RUN. ALL PROPOSED GRADING IN THE FLOODPLAIN RESULTS IN A NET FILL OF APPROXIMATELY 63 CY OF FILL; THEREFORE, NO IMPACT TO THE WATER SURFACE ELEVATION WILL OCCUR AS A RESULT OF THESE IMPROVEMENTS. A FLOODPLAIN USE DETERMINATION SHALL BE SUBMITTED AS PART OF THE SITE PLAN APPROVAL PROCESS.

#### Calculations for Compliance with VA DEQ Requirements Kimley » Horn Chantilly Premier **Date:** 08/11/23 Initials: AO

SITE OPTION 1

## POA-1 Peak Flow Comparison

Storm Frequency (years)	Pre-Development (cfs)	Post-Developmer (cfs)		
1	2.89	1.07		
2	4.87	1.24		
10	12.29	11.91		

## POA-A ENERGY BALANCE EQUATION

I.F. (improvement factor)	0.8	
RV <sub>1-y r-Dev eloped</sub>	44,781	cf
Q <sub>1-y</sub> r-Pre-Dev eloped	2.89	cfs
RV <sub>1-y r-Pre-Dev eloped</sub>	27,622	cf
Q <sub>1-y r-Dev eloped</sub> Allowed	1.43	cfs
Q <sub>1-y r-Dev eloped</sub> Proposed	1.07	cfs

## Flood Protection (9VAC25-870-66 C)

Q <sub>10-y</sub> r-Pre-Dev eloped	12.29	cts
Q <sub>10-y rDev eloped</sub>	11.91	cfs

## <u>Notes</u>

NOAA Atlas 14 Precipitation Depth Data: Technical Release 55 (TR-55) Calculation Methodology: Autodesk Hydraflow Hydrographs Calculation Software:

## In accordance with the following methodology (Energy Balance): $Q_{1-yr-Developed} \le I.F.*(Q_{1-yr-Pre-developed}*RV_{1-yr-Pre-Developed})/RV_{1-yr-Developed}$ Under no condition shall: $Q_{1-yr-Developed} > Q_{1-yr-Pre-Developed}$ $Q_{1-yr-Developed} < (Q_{1-yr-Forest} * RV_{1-yr-Forest})/RV_{1-yr-Developed};$

# I.F. (Improvement Factor) = 0.8 for sites > 1 acre or 0.9 for sites ≤ 1 acre Q<sub>1-vr-Developed</sub> = the allowable peak flow rate of runoff from the developed site

 $RV_{1-vr-Developed}$  = the volume of runoff from the site in the developed condition

Q<sub>1-yr-Pre-Developed</sub> = the peak flow rate of runoff from the site in the pre-developed condition  $RV_{1-yr-Pre-Developed}$  = the volume of runoff from the site in pre-developed condition Q<sub>1-yr-Forest</sub> = the peak flow rate of runoff from the site in a forested condition RV<sub>1-vr-Forest</sub> = the volume of runoff from the site in a forested condition

# POA-A ENERGY BALANCE EQUATION

(cfs)

2.91

4.90

12.42

Pre-Development | Post-Developmer

(cfs)

1.25

1.86

10.97

I.F. (improvement factor)	0.8	
$RV_{1-yr\text{-}Developed}$	31,899	cf
Q <sub>1-y</sub> r-Pre-Developed	2.91	cfs
RV <sub>1-y r-Pre-Dev eloped</sub>	20,598	cf
Q <sub>1-y r-Dev eloped</sub> Allowed	1.50	cfs
Q <sub>1-y r-Dev eloped</sub> Proposed	1.25	cfs

## Flood Protection (9VAC25-870-66 C)

Q <sub>10-y</sub> r-Pre-Dev eloped	12.42	cfs	
Q <sub>10-y rDev eloped</sub>	10.97	cfs	
		_	_

## <u>Notes</u>

Kimley » Horn

Storm Frequency

(years)

POA-1 Peak Flow Comparison

<ul> <li>Precipitation Depth Data:</li> </ul>	NOAA Atlas 14
<ul> <li>Calculation Methodology:</li> </ul>	Technical Release 55 (TR-55)
Calculation Software:	Autodesk Hydraflow Hydrographs

## In accordance with the following methodology (Energy Balance): $Q_{1-yr-Developed} \le I.F.*(Q_{1-yr-Pre-developed}*RV_{1-yr-Pre-Developed})/RV_{1-yr-Developed}$ Under no condition shall:

## $Q_{1-yr-Developed} > Q_{1-yr-Pre-Developed}$

**Date:** 08/11/23

Calculations for Compliance with VA DEQ Requirements

$Q_{1-yr-Developed} < (Q_{1-yr-Forest} * RV_{1-yr-Forest})/RV_{1-yr-Developed};$

#### I.F. (Improvement Factor) = 0.8 for sites > 1 acre or 0.9 for sites ≤ 1 acre Q<sub>1-yr-Developed</sub> = the allowable peak flow rate of runoff from the developed site $RV_{1-vr\text{-}Developed}$ = the volume of runoff from the site in the developed condition

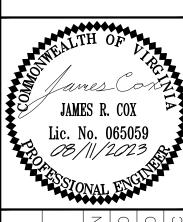
Q<sub>1-vr-Pre-Developed</sub> = the peak flow rate of runoff from the site in the pre-developed

ndition	
$I_{1-\text{yr-Pre-Developed}}$ = the volume of runoff from the site in pre-developed condition	

# Q<sub>1-yr-Forest</sub> = the peak flow rate of runoff from the site in a forested condition

## $RV_{1-vr-Forest}$ = the volume of runoff from the site in a forested condition

SITE OPTION 2



RMWA

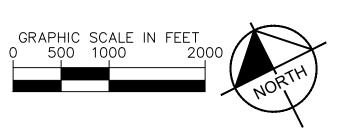
PFM AND COUNTY CODE.

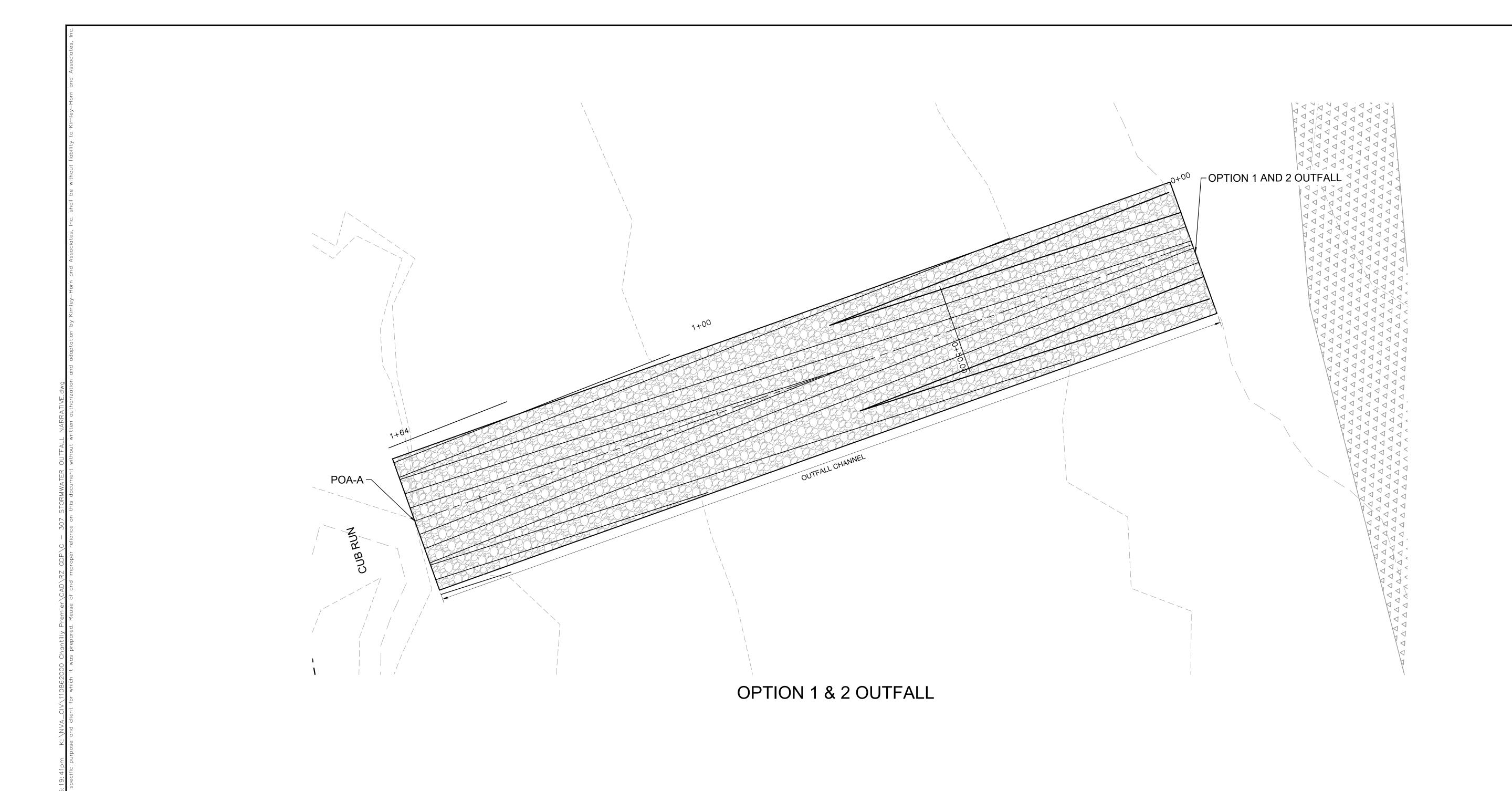
OPINION OF KIMLEY-HORN THAT ALL ADEQUATE OUTFALL

REQUIREMENTS HAVE BEEN MET IN ACCORDANCE WITH THE PROPOSED DEVELOPMENT LIMITS OF ANALYSIS — © 2022 Microsoft Corporation © 2022 Maxar ©CNES (2022) Distribution Airbus DS

TOTAL DRAINAGE AREA = 5,492 ACRES SITE DRAINAGE AREA = 11.3 ACRES

SITE DRAINAGE AREA IS 0.2% OF WATERSHED DRAINAGE AREA AT LIMITS OF ANALYSIS.





NELS DESIGNED BY AWO

DRAWN BY AWO

KHA PROJECT

110862000

DATE

08/11/2023

SCALE AS SHOWN

PARMINE AND

DRAWN BY AWO

DRAWN BY AWO

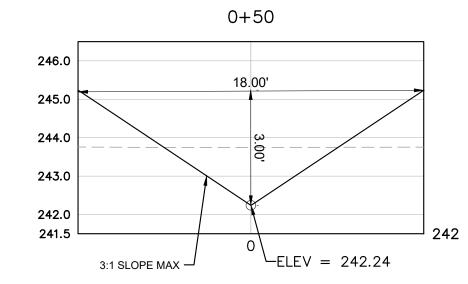
PROPOSED JTFALL CHANNELS

CHANTILLY PREMIER
PREPARED FOR
PDCREF 2 CHANTILLY LLC

NORTH

SCALE: 1" = 5' H

1" = 0' V



NORTHERN OUTFALL CHANNEL - OPTION 1 - 1-YR, 24-HR

NORTHERN OUTFALL CHANNEL - OPTION 1 - 2-YR, 24-HR

Rainfall file not specified ChantillyPremier Prepared by Kimley-Horn & Associates Printed 8/10/2023 HydroCAD® 10.20-3c s/n 02344 © 2023 HydroCAD Software Solutions LLC Page 11

### Summary for Reach 26R: NORTHERN OUTFALL CHANNEL OPTION 1 (1-YR)

Inflow = 1.07 cfs @ 5.00 hrs, Volume= 1.331 af, Incl. 1.07 cfs Base Flow 1.320 af, Atten= 0%, Lag= 84.0 min Outflow = 1.07 cfs @ 6.40 hrs, Volume=

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3 Max. Velocity= 0.97 fps, Min. Travel Time= 2.8 min Avg. Velocity = 0.97 fps, Avg. Travel Time= 2.8 min

Peak Storage= 180 cf @ 6.30 hrs

Average Depth at Peak Storage= 0.61', Surface Width= 3.63'

Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 76.18 cfs 0.00' x 3.00' deep channel, n= 0.069 Side Slope Z-value= 3.0 '/' Top Width= 18.00'

Length= 163.2' Slope= 0.0107 '/' Inlet Invert= 242.75', Outlet Invert= 241.00' ChantillyPremier Prepared by Kimley-Horn & Associates HydroCAD® 10.20-3c s/n 02344 © 2023 HydroCAD Software Solutions LLC Rainfall file not specified Printed 8/10/2023 Page 7

Rainfall file not specified

#### Summary for Reach 13R: NORTHERN OUTFALL CHANNEL OPTION 1 (2-YR)

Inflow = 1.24 cfs @ 5.00 hrs, Volume= 1.542 af, Incl. 1.24 cfs Base Flow Outflow = 1.24 cfs @ 6.30 hrs, Volume= 1.530 af, Atten= 0%, Lag= 78.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3 Max. Velocity= 1.01 fps, Min. Travel Time= 2.7 min Avg. Velocity = 1.01 fps, Avg. Travel Time= 2.7 min

Peak Storage= 201 cf @ 6.25 hrs Average Depth at Peak Storage= 0.64', Surface Width= 3.84' Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 76.18 cfs

0.00' x 3.00' deep channel, n= 0.069 Side Slope Z-value= 3.0 '/' Top Width= 18.00' Length= 163.2' Slope= 0.0107 '/' Inlet Invert= 242.75', Outlet Invert= 241.00'

NORTHERN OUTFALL CHANNEL - OPTION 2 - 1-YR, 24-HR

NORTHERN OUTFALL CHANNEL - OPTION 2 - 2-YR, 24-HR

Rainfall file not specified ChantillyPremier Prepared by Kimley-Horn & Associates Printed 8/11/2023 HydroCAD® 10.20-3c s/n 02344 © 2023 HydroCAD Software Solutions LLC

## Summary for Reach 25R: NORTHERN OUTFALL CHANNEL OPTION 2 (1-YR)

1.555 af, Incl. 1.25 cfs Base Flow Inflow = 1.25 cfs @ 5.00 hrs, Volume= Outflow = 1.25 cfs @ 6.25 hrs, Volume= 1.543 af, Atten= 0%, Lag= 75.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3 Max. Velocity= 1.01 fps, Min. Travel Time= 2.7 min

Avg. Velocity = 1.01 fps, Avg. Travel Time= 2.7 min

Peak Storage= 203 cf @ 6.20 hrs Average Depth at Peak Storage= 0.64', Surface Width= 3.85'

Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 76.09 cfs

0.00' x 3.00' deep channel, n= 0.069 Side Slope Z-value= 3.0 '/' Top Width= 18.00' Length= 163.6' Slope= 0.0107 '/' Inlet Invert= 242.75', Outlet Invert= 241.00'

Prepared by Kimley-Horn & Associates Printed 8/11/2023 HydroCAD® 10.20-3c s/n 02344 © 2023 HydroCAD Software Solutions LLC

## Summary for Reach 23R: NORTHERN OUTFALL CHANNEL OPTION 2 (2-YR)

Inflow = 1.86 cfs @ 5.00 hrs, Volume= 2.313 af, Incl. 1.86 cfs Base Flow Outflow = 1.86 cfs @ 5.95 hrs, Volume= 2.297 af, Atten= 0%, Lag= 57.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Max. Velocity= 1.12 fps, Min. Travel Time= 2.4 min Avg. Velocity = 1.12 fps, Avg. Travel Time= 2.4 min

Peak Storage= 272 cf @ 5.85 hrs Average Depth at Peak Storage= 0.75', Surface Width= 4.47'

Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 76.18 cfs

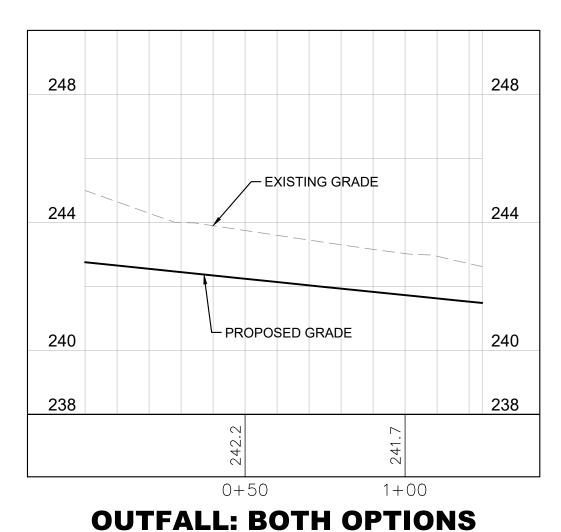
0.00' x 3.00' deep channel, n= 0.069 Side Slope Z-value= 3.0 '/' Top Width= 18.00' Length= 163.2' Slope= 0.0107 '/'
Inlet Invert= 242.75', Outlet Invert= 241.00'

ChantillyPremier



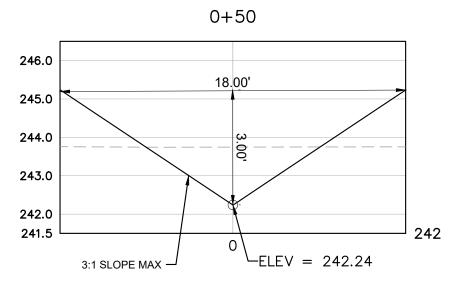
CHANNEL **D** 

**PREMIER** NTILL ₹ **~** 



SCALE: 1" = 5' H

1" = 0' V



NORTHERN OUTFALL CHANNEL - OPTION 1 - 10-YR, 24-HR

NORTHERN OUTFALL CHANNEL - OPTION 2 - 10-YR, 24-HR

ChantillyPremier Rainfall file not specified Prepared by Kimley-Horn & Associates
HydroCAD® 10.20-3c s/n 02344 © 2023 HydroCAD Software Solutions LLC Printed 8/10/2023

## Summary for Reach 4R: NORTHERN OUTFALL CHANNEL OPTION 1 (10-YR)

Inflow = 11.91 cfs @ 5.00 hrs, Volume= Outflow = 11.91 cfs @ 5.75 hrs, Volume= 14.814 af, Incl. 11.91 cfs Base Flow 14.734 af, Atten= 0%, Lag= 45.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3 Max. Velocity= 1.77 fps, Min. Travel Time= 1.5 min Avg. Velocity = 1.77 fps, Avg. Travel Time= 1.5 min

Peak Storage= 1,096 cf @ 5.70 hrs Average Depth at Peak Storage= 1.50', Surface Width= 8.97'
Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 76.18 cfs

0.00' x 3.00' deep channel, n= 0.069 Riprap, 6-inch Side Slope Z-value= 3.0 '/' Top Width= 18.00' Length= 163.2' Slope= 0.0107 '/' Inlet Invert= 242.75', Outlet Invert= 241.00'

ChantillyPremier Prepared by Kimley-Horn & Associates
HydroCAD® 10.20-3c s/n 02344 © 2023 HydroCAD Software Solutions LLC Rainfall file not specified Printed 8/11/2023

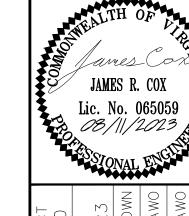
Summary for Reach 24R: NORTHERN OUTFALL CHANNEL OPTION 2 (10-YR)

Inflow = 10.97 cfs @ 5.00 hrs, Volume= 13.645 af, Incl. 10.97 cfs Base Flow Outflow = 10.97 cfs @ 5.75 hrs, Volume= 13.570 af, Atten= 0%, Lag= 45.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3 Max. Velocity= 1.74 fps, Min. Travel Time= 1.6 min Avg. Velocity = 1.74 fps, Avg. Travel Time= 1.6 min

Peak Storage= 1,033 cf @ 5.70 hrs Average Depth at Peak Storage= 1.45', Surface Width= 8.71' Bank-Full Depth= 3.00' Flow Area= 27.0 sf, Capacity= 76.09 cfs

0.00' x 3.00' deep channel, n= 0.069 Side Slope Z-value= 3.0 '/' Top Width= 18.00' Length= 163.6' Slope= 0.0107 '/' Inlet Invert= 242.75', Outlet Invert= 241.00'



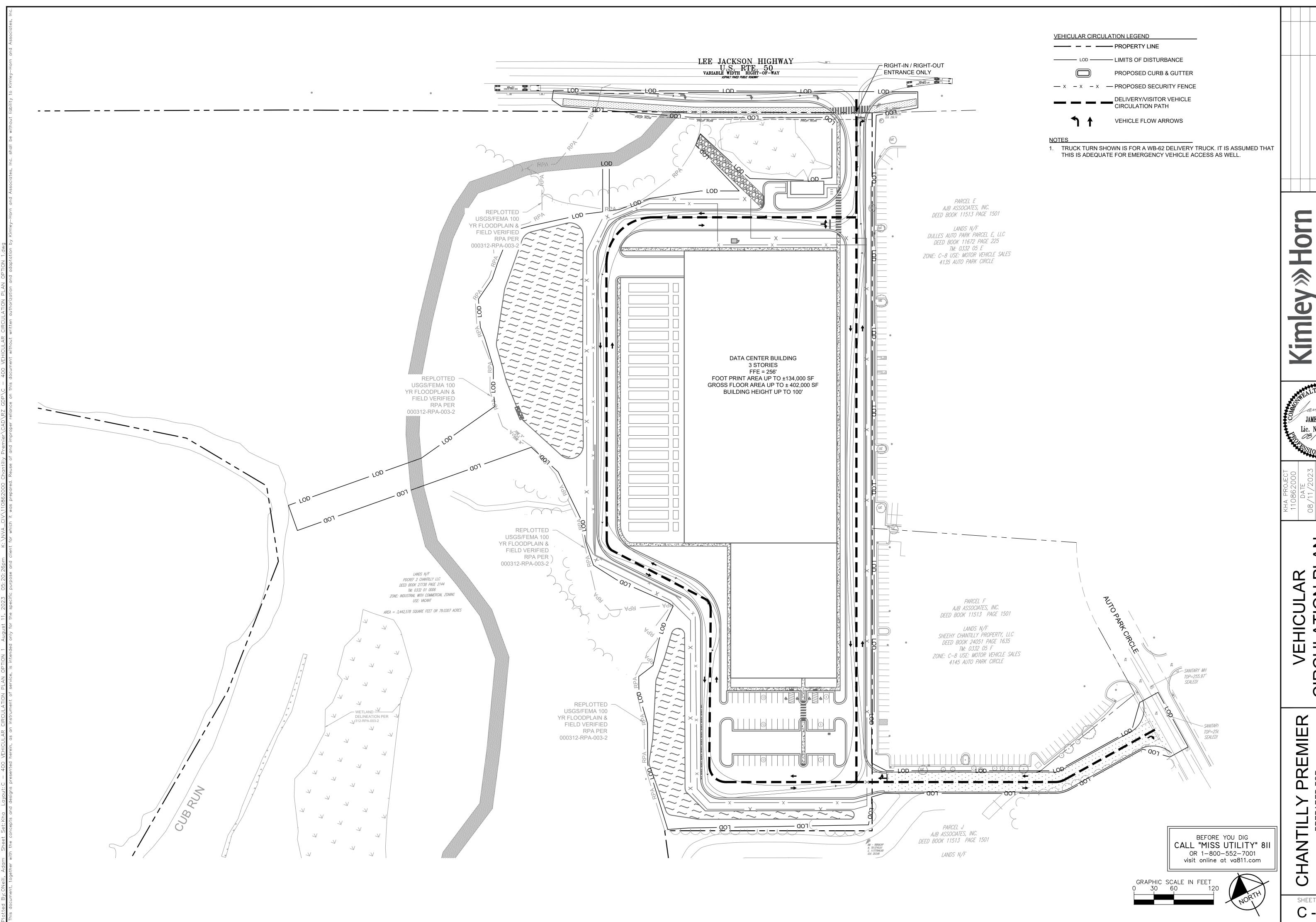
D 

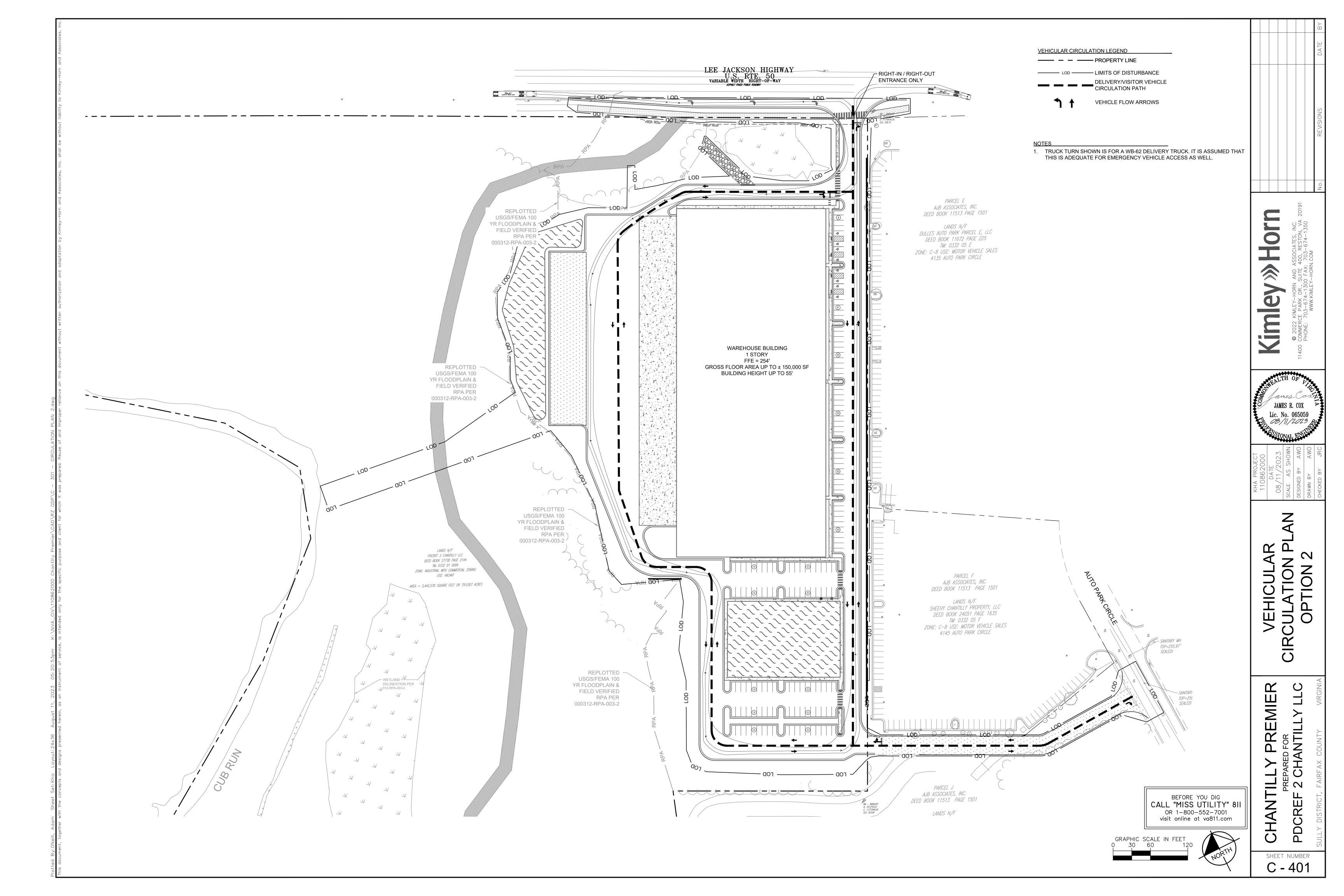
FLOOD PROTECTION CALCULATIONS

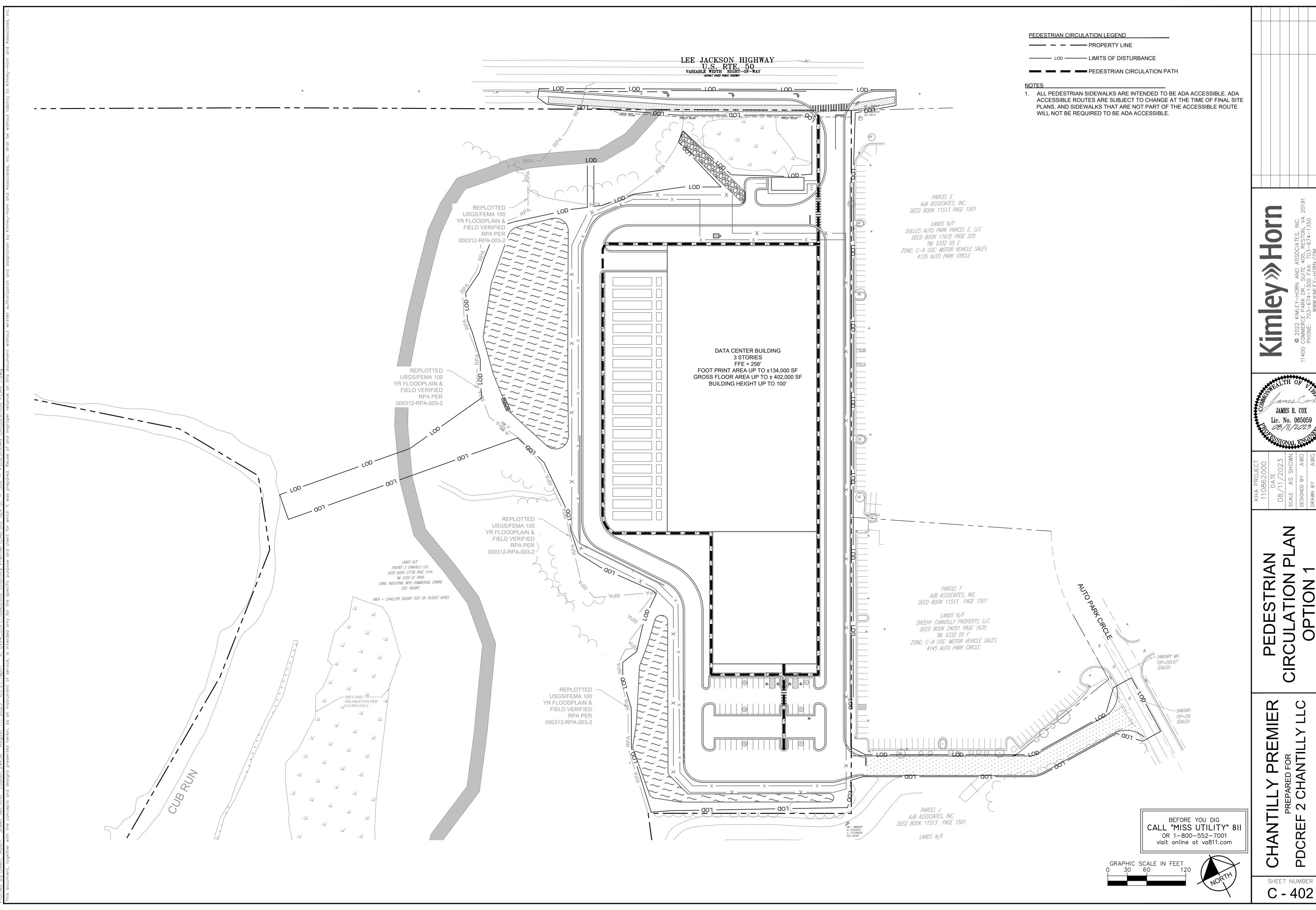
CHANTILLY PREMIER PDCREF 2 CHANTILLY LLC

SHEET NUMBER

C - 312

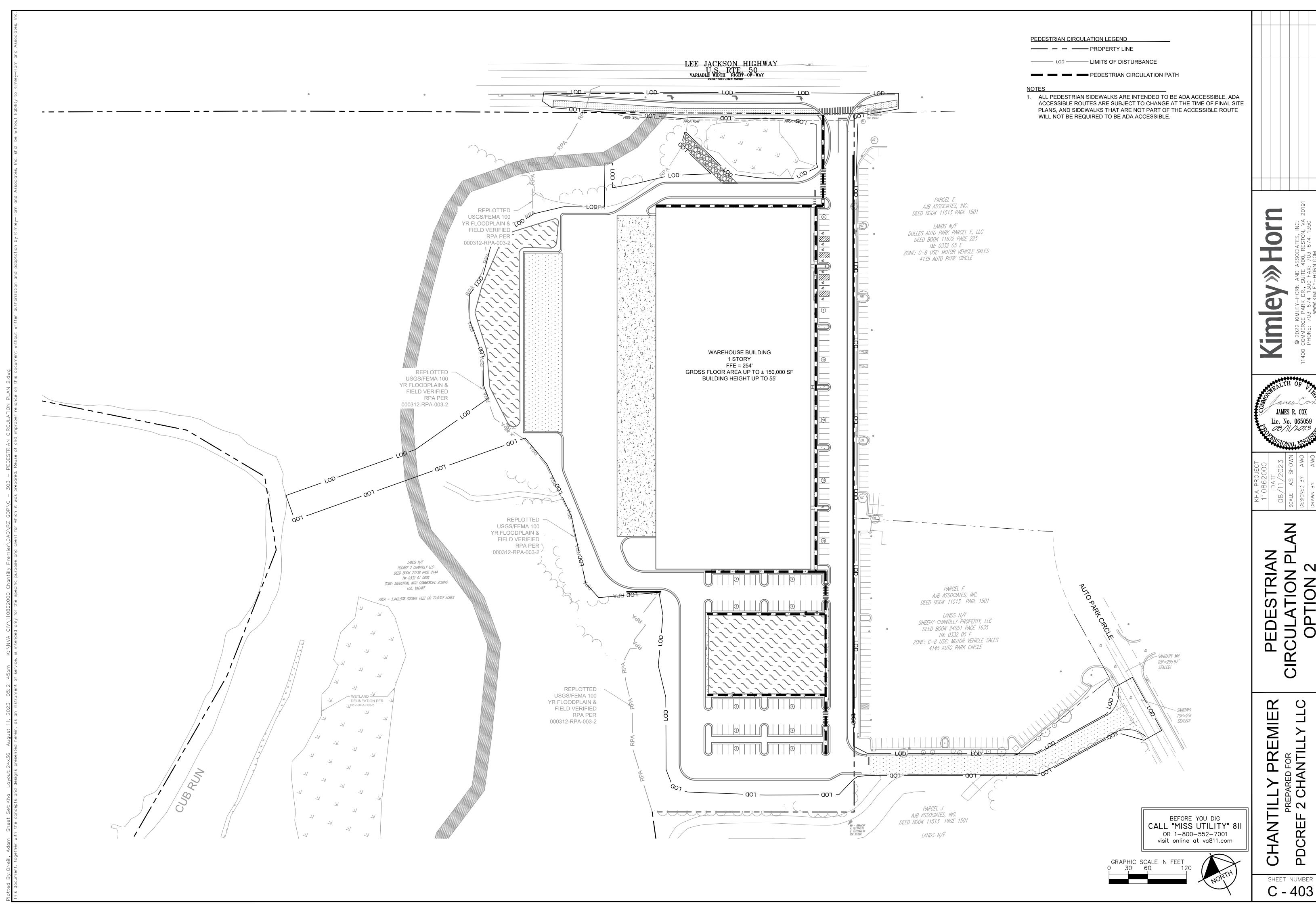


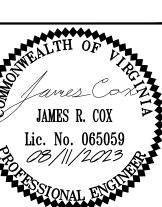


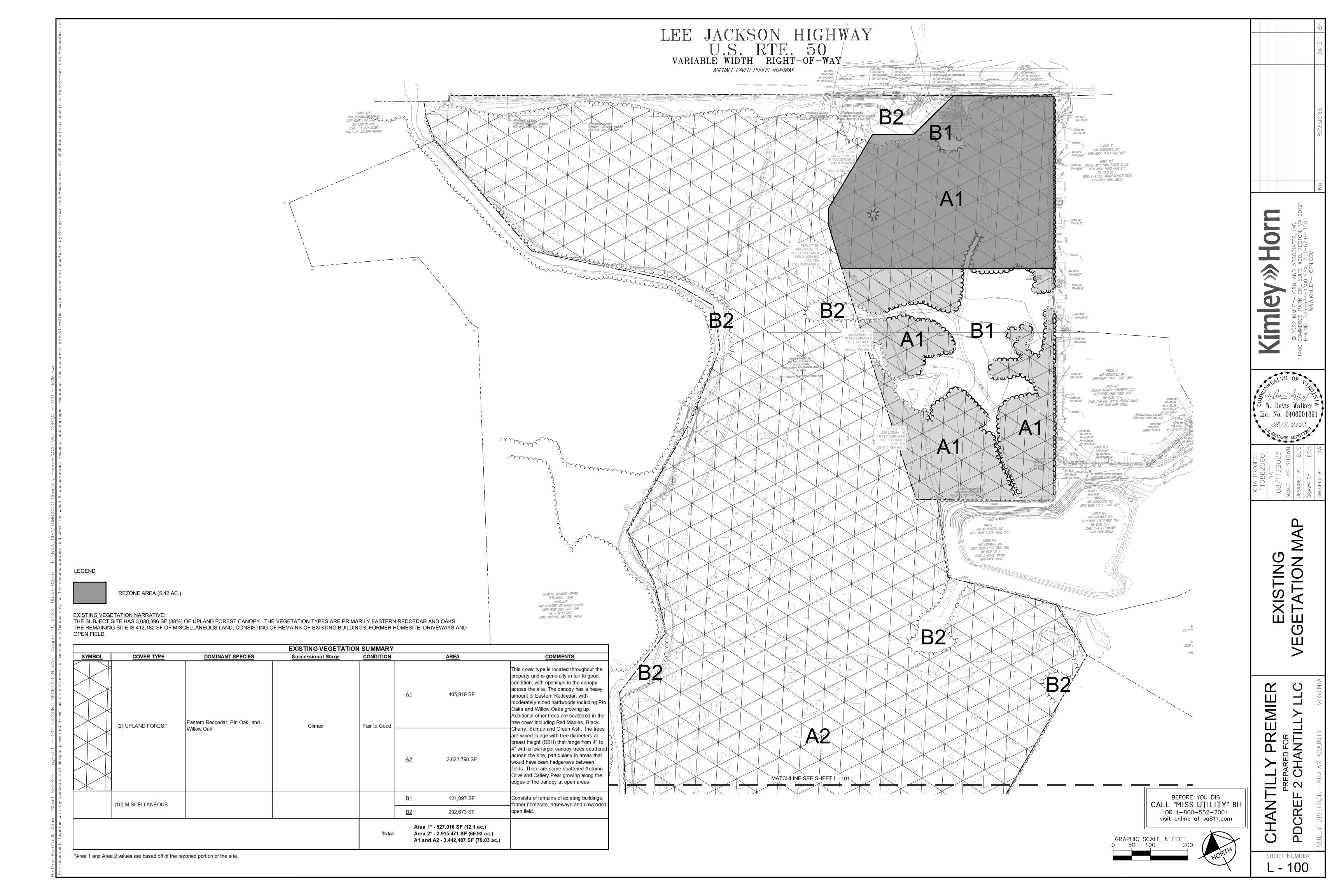


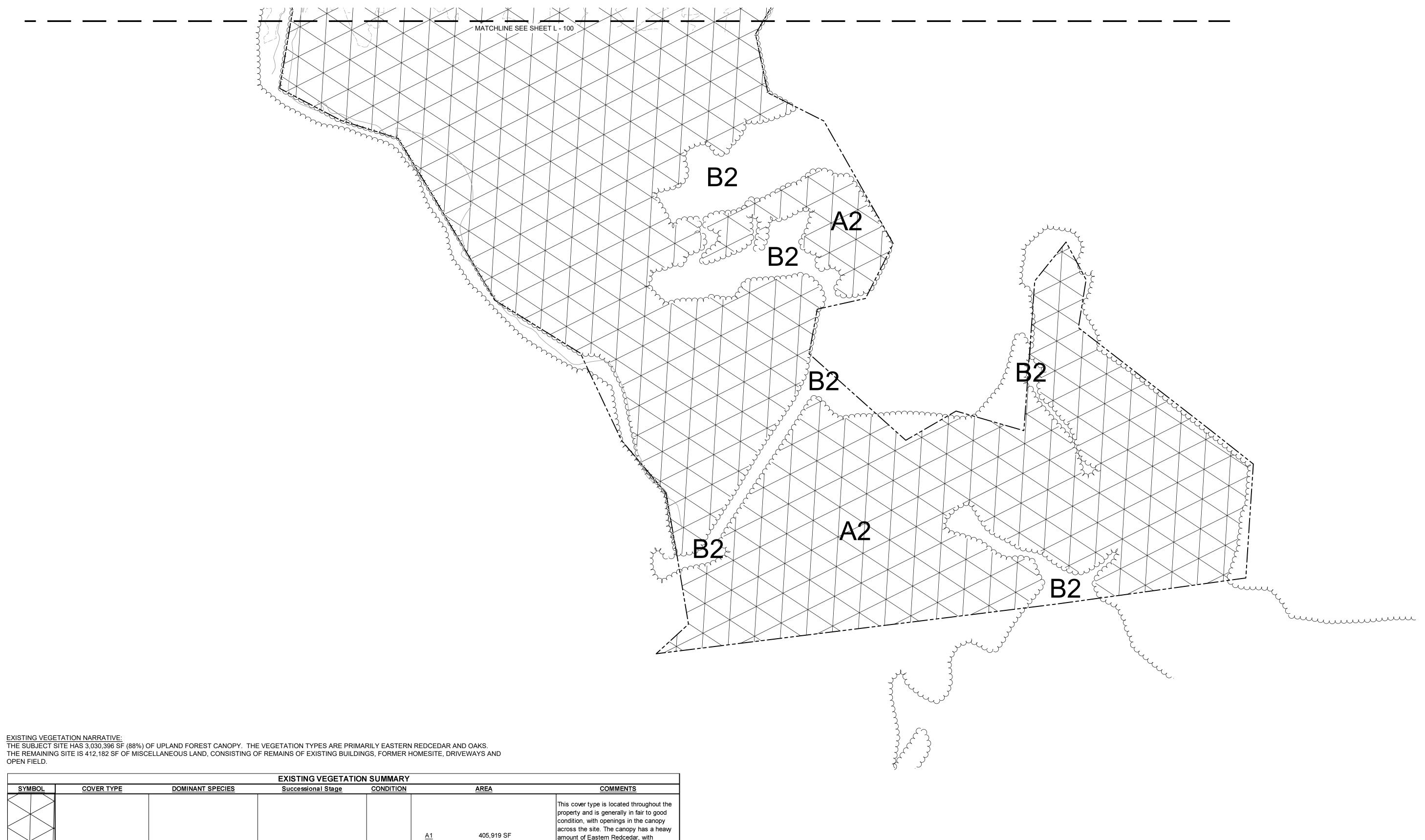


SHEET NUMBER



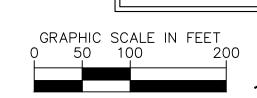


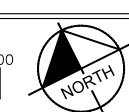




SYMBOL	COVER TYPE	DOMINANT SPECIES	Successional Stage	CONDITION		<u>AREA</u>	<u>COMMENTS</u>
	(2) UPLAND FOREST	Eastern Redcedar, Pin Oak, and	Climax Fair t	Fair to Good	<u>A1</u>	405,919 SF	This cover type is located throughout the property and is generally in fair to good condition, with openings in the canopy across the site. The canopy has a heavy amount of Eastern Redcedar, with moderately sized hardwoods including Pin Oaks and Willow Oaks growing up.  Additional other trees are scattered in the tree cover including Red Maples, Black
		Willow Oak			<u>A2</u>	2,622,798 SF	Cherry, Sumac and Green Ash. The trees are varied in age with tree diameters at breast height (DBH) that range from 4" to 4" with a few larger canopy trees scattered across the site, particularly in areas that would have been hedgerows between fields. There are some scattered Autumn Olive and Callery Pear growing along the edges of the canopy at open areas.
	(40) MIGOELL ANEQUIO		<u>B1</u>	121,097 SF	Consists of remains of existing buildings, former homesite, driveways and unwooded		
	(10) MISCELLANEOUS				<u>B2</u>	292,673 SF	open field.
				Total	Area 2	1* - 527,016 SF (12.1 ac.) 2* - 2,915,471 SF (66.93 ac.) d A2 - 3,442,487 SF (79.03 ac.)	

BEFORE YOU DIG
CALL "MISS UTILITY" 811
OR 1-800-552-7001
visit online at va811.com





ි W. Davis Walker වි

PREMIER

ANTILLY

SHEET NUMBER



\*Area 1 and Area 2 values are based off of the rezoned portion of the site.

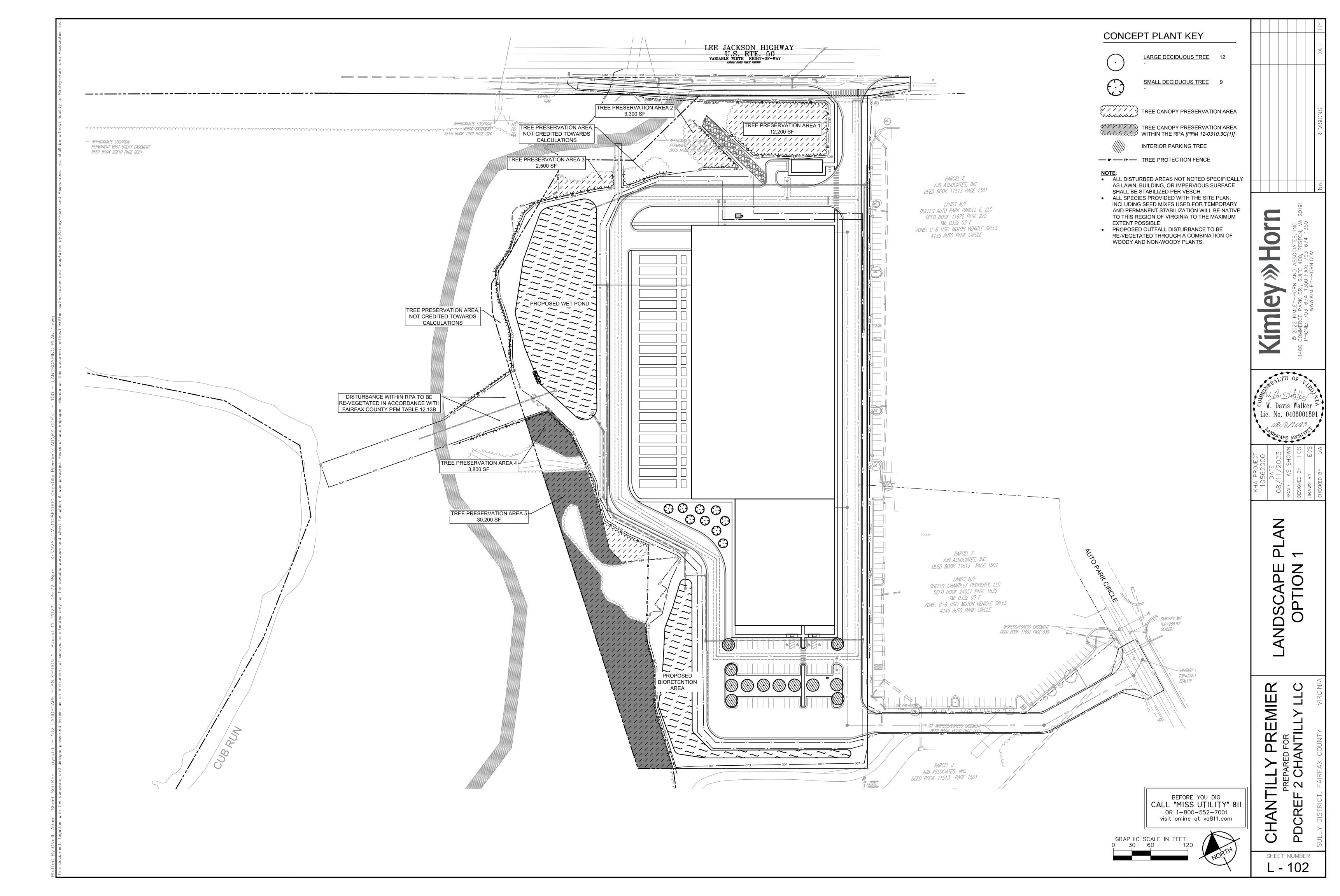


	Table 12.3 - Tree Preservation Target Calculations and Stateme	nt
Α	Pre-development area (SF) of existing tree canopy	405,919 SF
	(from Existing Vegetation Map) =	or 9.32 acres
В	Percentage of gross site area covered by existing tree canopy =	77.3%
С	Percentage of 10 year tree coneny required for cite (see Table 12.4) -	10%
<u> </u>	Percentage of 10-year tree canopy required for site (see Table 12.4) =	or 52,543 SF
D	Percentage of the 10-year tree canopy requirement that should be met through	77.3%
	tree preservation =	or 40,616 SF
E	Proposed percentage of canopy requirement that will be met through tree	99%
	preservation =	or 52,000 SF
F	Has the Tree Preservation Target minimum been met?	Yes
G	If No for line F, then a request to deviate from the Tree Preservation Target shall be provided on the plan that states one or more of the justifications listed in § 12-0307.3 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	
Н	If step G requires a narrative, it shall be prepared in accordance with § 12-0308.4	-
I	Place this information prior to the 10-year Tree Canopy Calculations as per instructions in Table 12.9.	-

TRANSITIONAL SCREENING AND BARRIER CALCULATIONS								
	Onsite Use: Data Center ZMOD § 5108.6.B - 8 ZO § 13-300 - 14							300 - 14
Adjacent Use (Group)			Required Transitional	Length	Barrier		Barrier	
ocation	Use # & Use		Screening	Lengui	Required	Provided	Required	Provided
orth	#9 - L	Lee Jackson Memorial Highway / Goods Distribution Hub	None		None	N/A	None	N/A
ast	#9 - \	/ehicle Repair / Vehicle Sales	None		None	N/A	D,E, or F	D
outh	Vacai	nt Land Zoned (Industrial with Commercial)	None		None	N/A	None	N/A
/est	Vacai	nt Land Zoned (C-8)	None		None	N/A	None	N/A
			-	-	<u> </u>		·	

LEE JACKSON HIGHWAY VALUE OF THE SOLY	
PROPERTY LINE (TYP.)  PARKING LOT AREA (TYP.)	



Step	Table 12.9 - 10-year Tree Canopy Calculation	Totals	Reference
	reservation Target and Statement		
A1	Place the Tree Preservation Target calculations and statement here preceding the 10-year tree canopy calculations	77.3%	see § 12-0308.2 for list of required elements and worksheet
B. Tree C	anopy Requirement		
B1	Identify gross site area =	525,428 SF	§ 12-0311.1A
B2	Subtract area dedicated to parks, road frontage, and	0	§ 12-0311.1B
			§ 12-0311.1C(1)
B3	Subtract area of exemptions =		through § 12-0311.1C(6)
B4	Adjusted gross site area (B1 – B2) =	525,428 SF	
B5	ldentify site's zoning and/or use	C8	
B6	Percentage of 10-year tree canopy required =	10%	§ 12-0310.1 and Table 12.4
B7	Area of 10-year tree canopy required (B4 x B6) =	52,543 SF	
B8 B9	Modification of 10-year Tree Canopy Requirements requested?  If B8 is yes, then list plan sheet where modification request is located	No	
	reservation		
C1	Tree Preservation Target Area =	40,616	
C2	Total canopy area meeting standards of § 12-0200 =	19,800	S 42 0240 2D
C3 C4	C2 x 1.00 =  Total canopy area provided by unique or valuable forest or woodland	19,800	§ 12-0310.3B
O4	communities =	-	
C5	C4 x 1.5 =		§ 12-0310.3B(1)
C6	Total of canopy area provided by "Heritage," "Memorial," "Specimen,"	<u> </u>	3 12 00 10.00(1)
	or "Street" trees =	_	
C7	C6 x 1.5 to 3.0 =	_	§ 12-0310.3B(2)
C8	Canopy area of trees within Resource Protection Areas and 100-year	32,200	_ (=/
	floodplains =		
C9	C8 x 1.0 =		§ 12-0310.3C(1)
C10	Total of C3, C5, C7 and C9 =	52,000	If area of C10 is less than
			then remainder of
			requirement must be met through tree planting - go to
<b>D. Tree P</b> D1	Area of canopy to be met through tree planting (B7-C10) =	543	
D2	Area of canopy planted for air quality benefits =	-	
D3	x 1.5 =	1-	§ 12-0310.4B(1)
D4	Area of canopy planted for energy conservation =	1.5	
D5	x 1.5 =	-	§ 12-0310.4B(2)
D6	Area of canopy planted for water quality benefits =	-	
D7	x 1.25 =	-	§ 12-0310.4B(3)
D8	Area of canopy planted for wildlife benefits =		0.40.0040.40(4)
D9 D10	x 1.5 =  Area of canopy provided by native trees =	-	§ 12-0310.4B(4)
D10 D11	x 1.5 =		§ 12-0310.4B(5)
D11 D12	Area of canopy provided by improved cultivars and varieties =	_	3 12 33 13.7B(3)
D13	x 1.25 =	_	§ 12-0310.4B(6)
D14	Area of canopy provided through tree seedlings =	-	
	x 1.0 =		§ 12-0310.4D(1)
D15	Area of canopy provided through native shrubs or woody seed mix =	-	
	x 1.0 =	-	§ 12-0510.4D(1)(a)
D16	Percentage of D14 represented by D15=	-	Must not exceed 33% of D
D17.0	Area of canopy planted for no additional credits (x 1.0)=	<u>.</u>	(Included Reduced Credits
D17	Total of canopy area provided through tree planting =	4,375	V
D18	ls an offsite planting relief requested?	No N/A	Yes or No
D19 D20	Tree Bank or Tree Fund?  Canopy area requested to be provided through offsite banking or tree  fund	N/A	§ 12-0312
D21	Amount to be deposited into the Tree Preservation and Planting Fund	\$0.00	\$906 per tree
E. Total o	f 10-year Tree Canopy Provided		
E1	Total of canopy area provided through tree preservation (C10) =	52,000	
	Total of canopy area provided through tree planting (D17) =	4,375	
E2	, ,	ļ <u>.</u>	
E2 E3	Total of canopy area provided through offsite mechanism (D19) =		

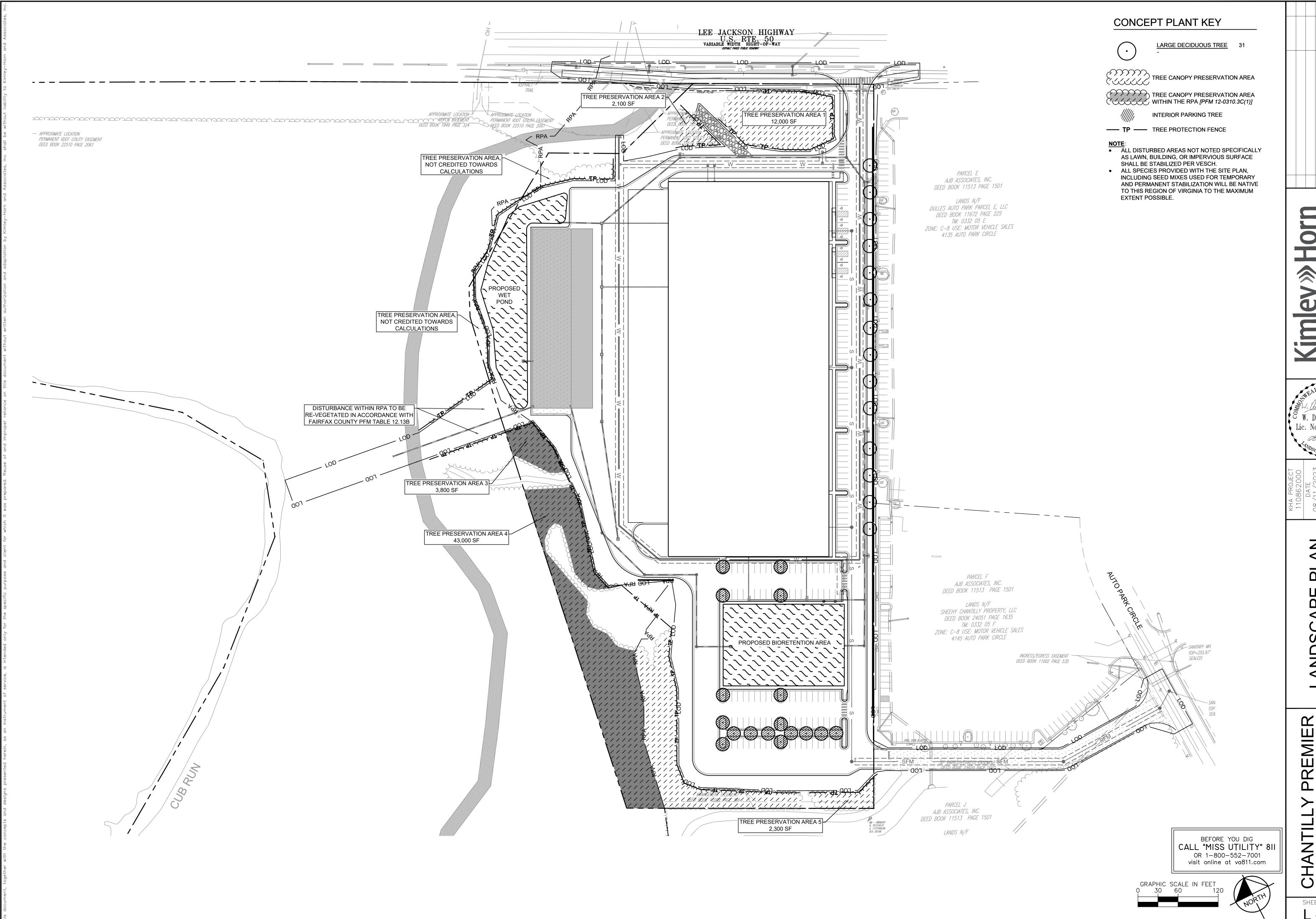
Table 12.10 - Interior Parking Lot Landscaping Calculations				
Parking Spaces Provided	50 spaces			
Area to be Counted (§ 12-0314.2) =	58,067 SF			
Interior Landscaping Required (5%) =	2,903 SF			
Total Shade Tree Canopy Provided	3,000 SF			
(12 trees @ 250 SF ea.) =				
Note:				

1. Per Fairfax County ZO: Any parking lot of 20 or more spaces must include interior landscaping covering a minimum of 5% of the total area of the parking lot.

BEFORE YOU DIG
CALL "MISS UTILITY" 811
OR 1-800-552-7001
visit online at va811.com

ANDSCAPE OPTION TABULATIONS

CLC CHANTILLY PREMIER EPARED FOR CHANTILLY I 2 ( PDCREF



MLEY-HORN AND ASSOCIATES, INC.
PARK DR., SUITE 400, RESTON, VA 20191
03-674-1300 FAX: 703-674-1350
WWW.KIMLEY-HORN.COM

W. Davis Walker Lic. No. 0406001891

DATE
OB/11/2023
SCALE AS SHOWN
DESIGNED BY ECS

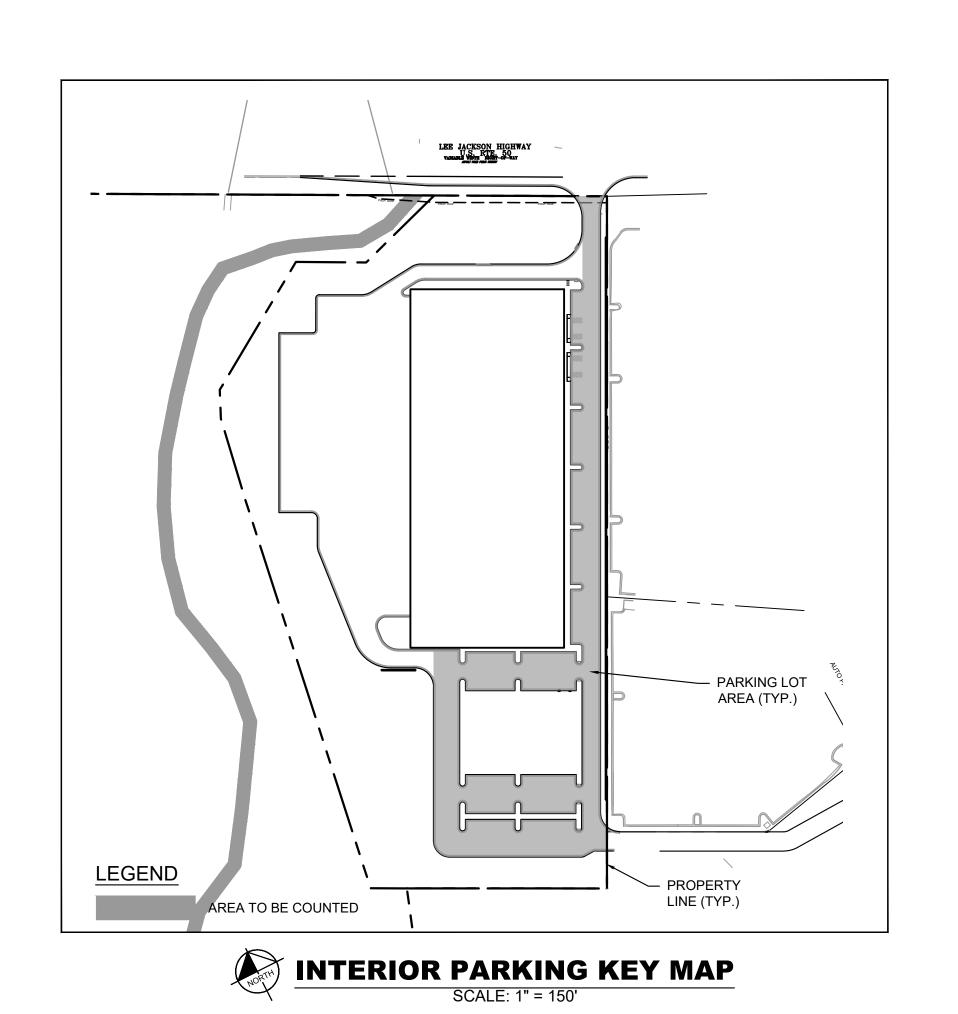
ANDSCAPE PLA OPTION 2

CHAN I ILLY PREMIEK

PREPARED FOR

PDCREF 2 CHANTILLY LLC

TRANSITIONAL SCREENING AND BARRIER CALCULATIONS									
Onsite	Onsite Use: Goods Distribution Hub					ZMOD § 5108.6.B - 15 ZO § 13-300			
	Adjacent Use (Group)	Required Transitional	Length	Barrier		Barrier			
Location	Use # & Use	Screening	Length	Required	Provided	Required	Provided		
North	#9 - Lee Jackson Memorial Highway / Goods Distribution Hub	None		None	N/A	None	N/A		
East	#9 - Vehicle Repair / Vehicle Sales	None		D, E, of F	D	D,E, or F	D		
South	Vacant Land Zoned (Industrial with Commercial)	None		None	N/A	None	N/A		
West	Vacant Land Zoned (C-8)	None		None	N/A	None	N/A		



PERIPHERAL PARKING LOT LANDSCAPE CALCULATIONS ZO-5108 § 5.B.2 Required Required Transitional Landscaping Length Required Trees Provided Trees Parking Lot Screening Strip Width 14 1 Tree per 40 LF 550' 10' Eastern Parking Aisle None

1. Per Fairfax County ZO: Any parking lot containing 20 or more spaces where transitional screening is not required must have peripheral landscaping.

Table 12.10 - Interior Parking Lot Landscaping Calculations				
Parking Spaces Provided	146 spaces			
Area to be Counted (§ 12-0314.2) =	83,072 SF			
Interior Landscaping Required (5%) =	4,154 SF			
Total Shade Tree Canopy Provided	4,250 SF			
(17 trees @ 250 SF ea.) =	.,230 01			

Note:

1. Per Fairfax County ZO: Any parking lot of 20 or more spaces must include interior landscaping covering a minimum of 5% of the total area of the parking lot.

BEFORE YOU DIG
CALL "MISS UTILITY" 811
OR 1-800-552-7001
visit online at va811.com

SHEET NUMBER L - 105

ANDSCAPE OPTION TABULATIONS

PREMIER

HANTILLY

EPARED FOR CHANTILLY I

<u>қ</u> 2

PDCREF

## **GENERAL NOTES**

- 1. Plants shall be healthy, vigorous material, free of pests and diseases and are subject to approval/rejection of the Landscape Architect prior to, during and after installation
- 2. Contractor shall identify all materials at growing location prior to purchase and submit digital photographs, and source list to the Landscape Architect for approval at a minimum of six (6) calendar weeks prior to installation. Plants not approved shall be resourced and resubmitted.

3. Planting beds and individual tree plantings shall be mulched continuously as specified.

4. Prior to construction the contractor shall be responsible for locating underground utilities and execute work in a manner that avoids damage to utilities during the course of work. Contractor shall be responsible or remedy of any damage to utilities, structures, site appurtenances that occur as a result of landscape

5. Contractor is responsible for verifying quantities shown on documents. Field adjustments shall be approved by Landscape Architect prior to installation. Quantities indicated on drawings are for reference-it

- is the Contractor's responsibility to ensure full coverage of plants at the indicated spacing. 6. Contractor is responsible for maintenance of all plantings including, but not limited to watering, mowing, edging, spraying, mulching, fertilizing, of plantings and turf areas for one (1) calendar year from date of certificate of occupancy. Contractor is responsible for warranty of all plant material for a period of one (1) calendar year from date of certificate of occupancy. Warranty replacement planting shall meet or exceed the original specification identified on drawings. Replacement planting shall extend the same warranty as originally installed materials. Plantings and grass areas shall be flourishing and fully thriving at end of
- 7. Plants identified for replacement by Owner, Landscape Architect shall be replaced immediately by the Contractor unless otherwise agreed upon. Plantings (trees, shrubs, groundcover) subject to replacement by warranty shall exhibit characteristics of 30% dead-per individual plant, non-contributing or disease compromised. Grass areas suitable for acceptance shall demonstrate 85% sustained/consistent and continuous, densely established coverage.
- Contractor shall perform a site review at end of warranty period and provide the Owner with written documentation of the site, including plant health, warranty replacement items, and conditions that may be influencing plant health. Contractor shall remove from plants and site, all staking and guying material at end of warranty period.
- 8. Contractor shall comply with all local, state and federal requirements, codes and regulations related to the work undertaken.
- 9. All material including planting operation appurtenances shall be of domestic origin manufacture and sourced within 100 miles of the project site.
- 10. Contractor is responsible for coordination among trades operating on site. Coordination and if necessary resulting modifications to schedules are responsibility of the Contractor.

### PERFORMANCE SPECIFICATION

### I. PLANTS

A.General 1. Live healthy plants free of dead branches and parts

# 2. Free of disease, insect, injury and damage

- 3. Unbroken, intact, dense and solid rootballs and containers, without cracks, flat sides or previously repaired
- 4. Free of girdling roots or rootbound/circling container conditions 5. Plants of consistent in growth habit and healthy character
- 6. Free of compromising growth conditions such as weak crotch connections, crossed branches, snags and
- 7. Point of origin growing location within 100 miles of project site 8. Graded, standards, caliper, sizes and stock consistent with <u>ANSI Z60.1, American Standard for Nursery</u> Stock most current edition
- 9. Species identified consistent with <u>Hortus Third: Concise Dictionary of Plants Cultivated in the United</u> States and Canada, most current edition and Manual of Woody Plants: Their Identification, Ornamental <u>Characteristics, Culture, Propagation and Uses</u>, most current edition
- 10. All disturbed areas shall be grass seed unless otherwise identified on landscape plans

## B. Trees:

- 1. Deciduous Single Trunk
- a. Full, straight and upright with consistent symmetrical natural branching pattern throughout b. Branching Height-seven (7) feet to lowest branch in two years unless otherwise required by local
- jurisdiction

# 2. Deciduous Multi-Trunk

- a. Full and upright with straight consistent symmetrical natural branching pattern throughout b. Canes evenly spaced and of similar growth habit
- c. Free of suckers and extraneous branching

# 3. Evergreen Single-Trunk

- a. Full and upright with continuous symmetrical dense natural habit b. Clear branching height twelve (12) inches above top of rootball
- c. Free of suckers and extraneous branching
- d. Do not shear or otherwise prune to shape plantings

# C.Evergreen and Deciduous Shrubs

1. Full, dense and naturally symmetrical.

2. Consistent with container and/or balled and burlapped size 3. Free of suckers and extraneous branching

4. Do not shear or otherwise prune or shape plantings

#### D. Evergreen and Deciduous Groundcover 1. Full and dense in pots or flats

E. Perennials and Seasonal Color 1. Full and dense in pots or flats

# F. Turf Grass

# 1. Subgrade

- a. Soil Mix-10% Compost, 90% topsoil by volume
- b. Preparation-loosen subgrade to a minimum depth of four (4) inches. Remove all non-natural materials including litter, stones, sticks and all items greater than 3/4 inch in any dimension
- c. Preparation-spread soil mix at a depth of four (4) inches continuously to meet grade elevations shown on drawings. Allow for thickness of sod when applicable

# 2. Grass Sod

- a. Install not longer than twenty-four (24) hours from harvest b. Grass bed not less than two (2) inches in continuous thickness
- c. 100% continuous live sod coverage after first growing season and at end of warranty period.
- d. Of uniform non-varying density and continuous texture quality capable of growth and development
- immediately upon installation. Weed and noxious plant free e. Stagger installation rows and place aligned parallel to contours
- f. Fill joints solidly with planting bed preparation soil
- g. Provide anchor pins at twenty-four (24) inches on center for slopes greater than 4:1

# 3. Grass Seed

- a. Mix approved by the Landscape Architect
- b. Provide first and new of year seed crops in mix free of weed seeds and deleterious matter
- c. Provide seed mix not greater than 15% annual or perennial rye d. Coverage 85% continuous coverage live stand after first growing season and at end of warranty
- e. Replacement or overseeding mixes consistent with original application/installation f. Provide erosion blankets or other slope retention methods as noted on drawings

# **II. Materials and Appurtenances**

A.Testing 1. Materials testing information/certificates/dated labels shall be current to the project and performed/certified not greater than 120 calendar previous days from current date of submittal for review

# B. Top Soil

. Neutral Ph balance 5.5 -7.5. Friable and containing 2.0-5.0% organic matter by dry weight. Continuously free of non-soil items such as stones, debris, sticks, trash, and deleterious matter greater than 3/4 inch in any direction. Clay content shall not exceed 25%. Gravel content shall not exceed 10%. Silt shall not exceed 25%

# **C.Use of Existing Topsoil**

1. Existing topsoil on-site may be repurposed with prior Owner approval. Contractor shall provide soil testing and additive program that demonstrates consistent performance and characteristics and composition as identified herein. Owner shall approve soil testing and soil amendment/additive methods and procedures

#### D. Shredded Hardwood Mulch

1. 100% organic shredded first year hardwood free of deleterious matter, rock, gravel and weed seed. Neutral Ph balance 5.5-7.5

## E. Compost Ph

1. Balanced 5.0-8.5 mature, stable and weed free produced by natural aerobic decomposition. Free of visible contaminants and toxic substances. Not greater than 5% sand, silt, clay or rock by dry weight. Consistent with US-EPA CFR Title 40 Part 503 Standards for Class A biosolids

- **G.Compost Testing** 1. Prior to delivery on-site, the following items are required for approval by Owner: Feedstock percentage in final compost product; statement that the products meets federal, state and local health safety
- 2. Provide copy of lab analysis less than 120 calendar days old verifying that the product meets described physical requirements; chemical contaminants; Ph; physical contaminants; biological contaminants (including a statement that fecal coliform and salmonella testing and results comply with requirements of the US Composting Council Seal of Testing approval programs

### H.Planting Mix

1. 85% topsoil and 15% Compost

#### I. Fertilizer

1. Granular 10% nitrogen, 6% Phosphorous, 4% Potassium granular form with 50% Nitrogen in organic form. Product and Material Safety Data as approved by Owner

1. Product and Material Safety Data as approved by Owner

### 1. Potable only unless otherwise approved by Owner

# 1. 2 x 2 x 48 inch square of sound hardwood, painted flat black on all sides

1. Villa Non-Abrasive Rubber Tree Ties or approved equal

# N. Filter Fabric

1. Mirafi 140-N or approved equal

## III. Execution

- A.Site Conditions 15. Inspect site and notify Owner in writing of acceptance with indication that project conditions are acceptable are suitable to proceed with work. Notify Owner of any existing damage and/or other conflicting
- 16. Do not proceed with work until unsatisfactory conditions have been satisfactorily remedied. Notify Owner of acceptance prior to commencement of work
- 17. Notify Owner in writing of any conditions that may preclude successful completion of work including items such as coordination with other trades, incomplete work, drainage, soil temperature and/or composition, access to storage/work areas, damage to conditions, etc.
- 18. Notify Owner in writing immediately of any items that may influence work schedule, timing of tasks, materials delivery and/or installation and warranty responsibilities.
- 19. Coordinate and cooperate with other trades working in and adjacent to work areas. Examine drawings of other trades which show development of the entire project and become familiar with the scope of required work by others.

#### **B. Planting Seasons**

Recommended seasons are a general guide based on historical climatic data and typical performance of plantings, and which vary dependent on project-specific environmental conditions. Due to construction schedules, recommended planting seasons may/may not coincide with request(s) for certificate of occupancy for projects. Coordination of planting installation and seasons shall be reviewed with Owner on an individual project basis.

### 1. Deciduous and Evergreen Trees

- Do not install/plant the following trees between September 15 and March 15 1. Oaks (Quercus Sp., Such as Q. rubra, Q. alba, Q. phellos, Q. coccinnea)
- 2. Dogwood (Cornus Sp.)
- 3. Sweetgum (Liquidambar Sp.)
- 4. All Conifers and Evergreens except White Pine (Pinus strobus Sp.)

#### 2. Deciduous and Evergreen Shrubs a. Install/plant between March 15 and June 15 and/or September 15 and November 30

3. Perennials

# a. Install/plant between March 15 and June 15 and/or September 15 and November 30

4. Spring Flowering Bulbs a. Install/plant between September 15 and December 15

# 5. Seasonal Annuals

a. Install/plant in season per approved schedule

# 6. Turf Grass

a. Install/plant between March 15 and May 15 and/or September 15 and November 30 b. Do not install/plant seed or sod turf grass areas when ambient air temperature is below forty (40) degrees Fahrenheit, or forecast for a twelve (12) hour period after completion of work

7. No Plant Installation

# a. Do not install plantings or turf grass between June 15 and September 15, without approval by Owner

#### **C.Positioning & Location of Plantings** 1. Position plants to show the most-prominent and well-formed face to most-public view

2. Field locate plants and location/spacing/dimension of planting beds on project site prior to beginning

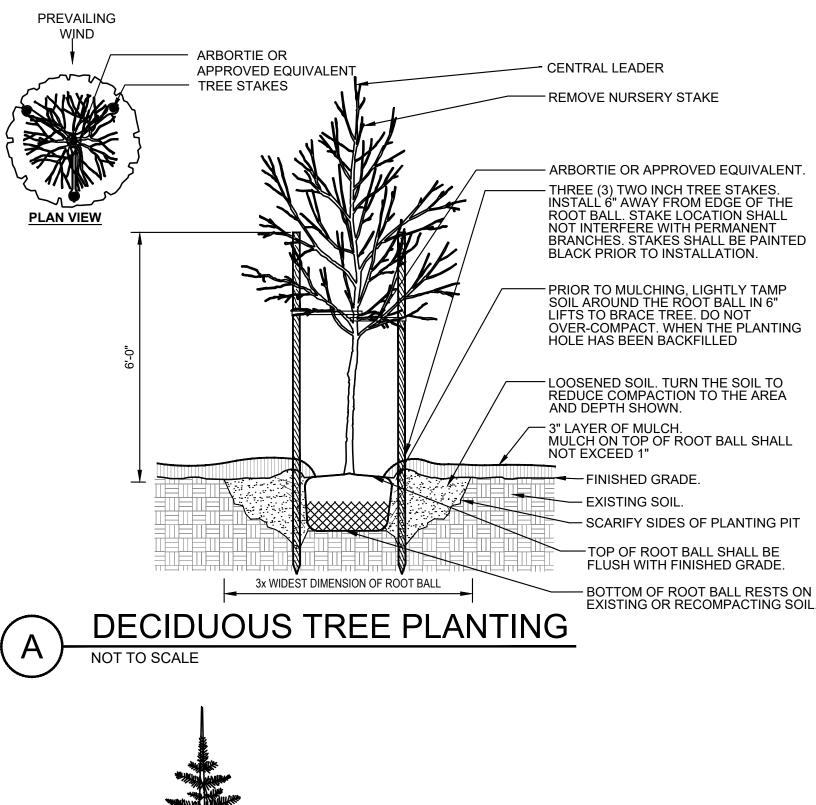
# 3. Verify location of individual plants and plant beds prior to beginning installation. Do not proceed without Owner approval

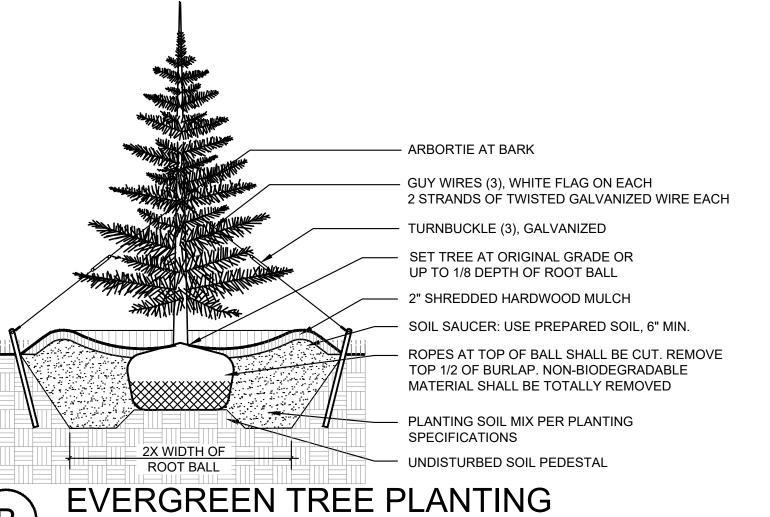
# D.Implementation

- 1. Pursue work continuously without delay or interruption until completion unless notified otherwise by Owner 2. Provide project submittals ahead of commencement of work. Landscape Architect requires a minimum of ten (10) working days from date of receipt for review of submittals and response to Owner and Contractor. Plan accordingly for procurement of materials
- 3. Continuously update implementation schedule and notify Owner of progress. Delays related to material availability are not cause for non-completion of scheduled delivery of work
- 4. Report delays due to weather or site conditions immediately upon finding. Provide recommendation for remedy of schedule delays. Do not work, place or modify frozen soil 5. Report delays due to extraordinary natural or other conditions beyond control of Contractor

1. Remove trash, debris and work materials from site prior to request for substantial completion. Thoroughly clean surfaces impacted by work including building, parking areas, roadways, sidewalks, signs, lights, site 2. Repair any damage to existing conditions that occurred during execution of work.

3. All clean-up and demobilization procedures shall be performed to satisfaction of the Owner and Landscape





BEFORE YOU DIG CALL "MISS UTILITY" 811 OR 1-800-552-7001 visit online at va811.com

HANTILL PR  $\overline{\mathcal{O}}$ 2 Z  $\triangleleft$  $\mathbf{O}$ 

**(D**)

W. Davis Walker

Lic. No. 0406001891

08/11/2023

Ш

M M

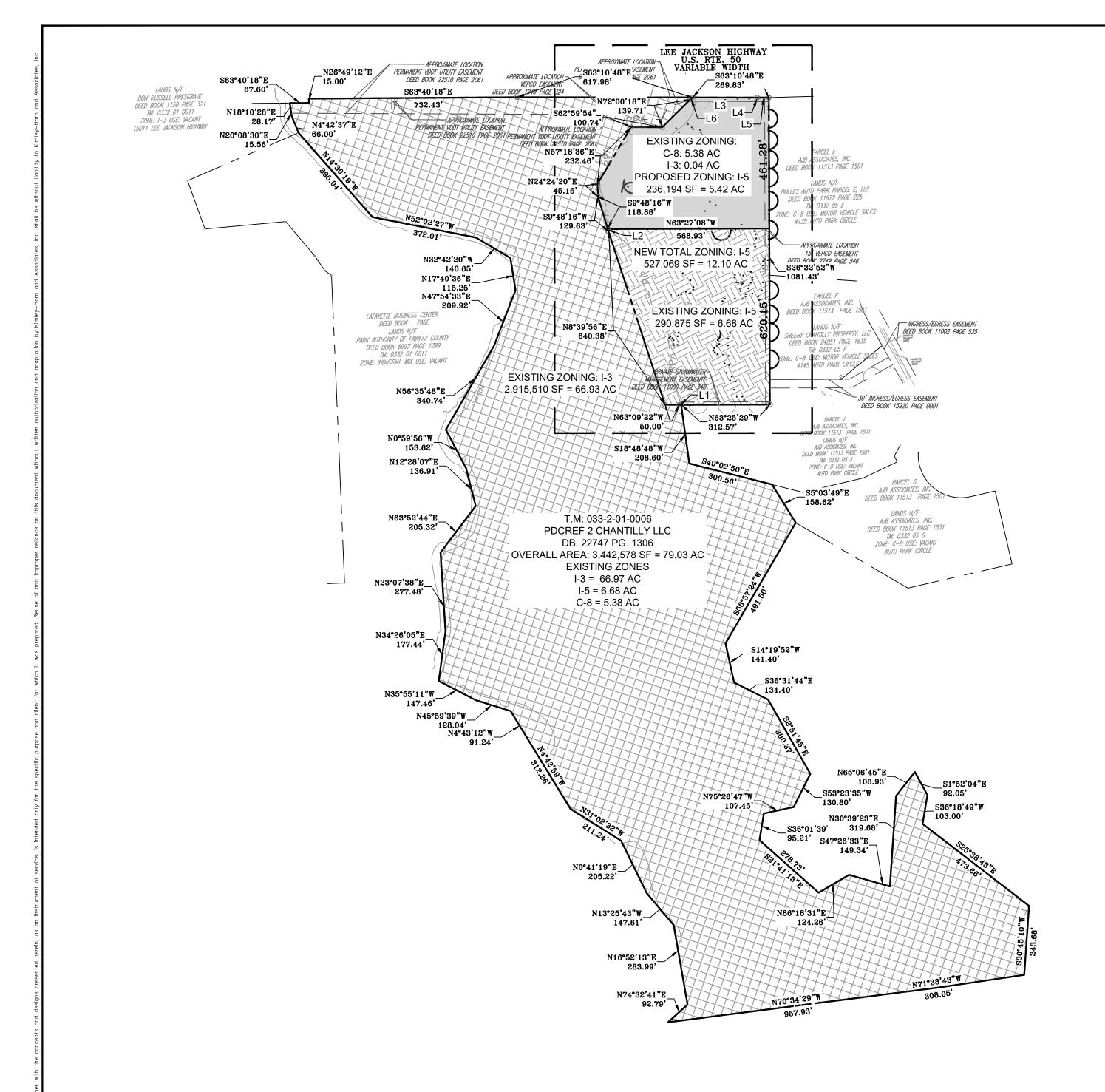
S

Z

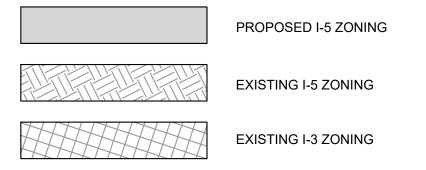
Ш

EM

SHEET NUMBER \_ - 200



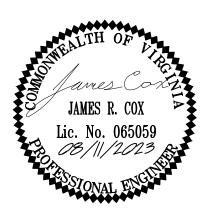
# LEGEND:

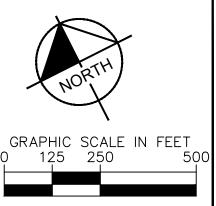


# **NOTES:**

- . EASEMENTS SHOWN HEREON ARE TAKEN FROM AVAILABLE INFORMATION AND MAY NOT INCLUDE ALL EASEMENTS.
- 2. BOUNDARY INFORMATION SHOWN HEREON IS BASED ON A FIELD RUN ALTA SURVEY BY GRS GROUP LLC.
- 3. OFFSITE INFORMATION IS FOR REFERENCE ONLY.
- 4. ALL PROPOSED BEARINGS AND DISTANCES ARE LABELED IN THE TABLE BELOW. ALL EXISTING BEARINGS AND DISTANCES ARE CALLED OUT ON THE PLAN.

LINE TABLE						
INE	LENGTH	BEARING				
L1	6.62	N63°24'52"W				
L2	10.75	N9°48'16"E				
L3	234.96	S63°01'04"E				
L4	7.42	N26°58'23"E				
L5	41.64	S63°10'48"E				
L6	10.62	N71°57'24"E				





**Kimley** » Horn

11400 COMMERCE PARK DR., SUITE 400, RESTON, VA 20191 PHONE: 703-674-1300 FAX 703-674-1350 WWW.KIMLEY-HORN.COM PLAT SHOWING REZONING OF PARCEL

SULLY DISTRICT FAIRFAX COUNTY, VIRGINIA SCALE: AS SHOWN
DATE: 10/18/2022

#### **OVERVIEW OF THE APPLICATION**

The applicant, PDCREF 2 Chantilly LLC, requests approval of a rezoning (RZ 2022-SU-00019) of 12.1 acres of land within Fairfax County Tax Map 33-2 ((1)) 6 pt. from the I-3, I-5, and C-8 Zoning Districts to the I-5 Zoning District to permit the development of one of two options on the subject property. Option 1 is a Data Center development with a Floor Area Ratio (FAR) of 0.8. A Special Exception (SE 2022-SU-00038) is also proposed for Option 1 to allow an increase in building height from 75 feet to 110 feet. Option 2 is a Warehouse development with an FAR of 0.3.

Since the issuance of the staff report dated June 14, 2023, the applicant has refined its application and resubmitted a revised Generalized Development Plan (GDP)/Special Exception Plat (SE Plat) dated August 14, 2023 and draft proffers dated September 6, 2023. Staff has reviewed the revisions and offers the following additional analysis.

A reduced copy of the revised GDP/SE Plat is included at the front of this report. A blacklined version of the proffers showing changes from those in the staff report and the proposed development conditions are contained in Appendices 1 and 2, respectively.

#### **REVISED APPLICATION AND STAFF ANALYSIS**

#### **Environment Analysis (Environment Development Review Branch (EDRB))**

Noise (Option 1)

Noise Study Revisions

The applicant has revised the noise study (contained in Appendix 3) for the data center option. It now reflects 27 generators as proposed by the applicant. The noise study also reflects upgraded generator types proposed by the applicant that are designed to control noise to 75 decibels at 23 feet from the generator, whereas the previous study reflected generators designed to control noise to 85 decibels at 23 feet.

#### Noise Proffer Revisions

- 1. Revised Proffer 29 (Interior Noise): The proffer was edited to ensure the preconstruction acoustical analysis of the interior noise in office portions of the building accounts for future noise sources.
- 2. Revised Proffer 30 (Exterior Noise): The applicant's revised proffer requires stricter limitations on maximum permitted noise at the boundary of the residentially zoned area to the southwest of the property in scenarios of regular operation, generator testing, and emergencies.

- a. Regular Operations Noise. Per the proffer, the building must be designed to ensure that noise during regular operation, inclusive of all constantly operating equipment, will not exceed 50 dBA at the residential property boundary to the southwest. This represents a decrease of 10 dBA at the property line from the maximum permitted by the Noise Ordinance (60 dBA). The noise study projects that this limit will be met, estimating noise at the subdivision boundary to be a maximum of 42 dBA during regular operation. Per the proffers, a pre-construction acoustical analysis and post-construction acoustical analysis certified by an acoustical engineer will be conducted to enforce this commitment.
- b. Maintenance Testing/Emergency Noise. Per the proffer, the building must also be designed to limit noise during generator testing and emergencies to a maximum of 60 dBA. The Noise Ordinance does not have a noise level requirement for testing or emergency scenarios. The noise study projects these noise levels will be met, estimating noise at the residential property boundary will be 47 dBA during single-generator testing, and 52 dBA from all 27 generators during emergencies or from a cumulative test.

The revised proffer commitments address the outstanding staff recommendations to commit to lower noise levels than the Noise Ordinance limitations.

#### Additional Testing Information

For informational purposes on the maintenance testing frequency the applicant has provided an example of typical testing procedures from an end user; while these procedures may vary between end users, this information helps provide context on the potential frequency and extent of noise impacts: Every 2 weeks, a readiness test of 6 minutes for each generator at one time occurs; every 6 months, a test of 10 minutes for each generator at one time occurs; once a year, a 30-minute test of all generators occurs.

#### Resource Protection Area (Options 1 and 2)

The Resource Protection Area (RPA) proffer has been revised in coordination with EDRB to address staff's recommended protection measures during construction. The revised proffer language for both Option 1 and 2 (Proffers 18 and 53) is as follows:

- Resource Protection Area (RPA)/Environmental Quality Corridor (EQC). Areas of proposed disturbance within the RPA and EQC will be restored and revegetated in accordance with the standards specified in Par. (f) of Section 118.3-3 of the Chesapeake Bay Preservation Ordinance and as reviewed and approved by FCON [Forest Conservation Branch]. A restoration plan will be part of the site plan submission and the restoration work will be completed prior to the issuance of the first non-residential use permit.

No expansion of limits of disturbance may occur in the RPA from that shown on the GDP. The Applicant will ensure at the time of site plan that the limits of disturbance will be minimized so that they do not encroach into the wetland area located in the northeast corner of the Property. The applicant will also reduce the limits of disturbance for the outfall construction to the minimum necessary in coordination with FCON at site plan.

Where the Limits of Disturbance (LOD) and Tree Protection (TP) fencing follows the RPA/EQC boundaries, additional signage will be included along the super silt fence/tree protection fence noting the location of the RPA/EQC and prohibiting any disturbance within it except as provided on the plan (e.g., outfall area).

As addressed in the Park Authority comments in the below section, the applicant has also added a proffer (Proffer 33) addressing diesel fuel storage, spill containment, and operational safeguards to prevent contamination of the adjacent RPA.

The applicant has addressed staff comments on RPA protection.

#### **Green Building**

The applicant has made minor corrections to Proffer 28 (Green Building Commitment) to clarify that LEED-Data Center Silver will be implemented in Option 1, as recommended by staff.

#### <u>Parking</u>

The applicant has also added new Proffers 10 and 45 (Parking) to commit to seek to minimize parking and loading areas to the extent feasible and/or consider use of permeable pavement at site plan, in both options, as recommended by staff.

The proposed changes address EDRB comments and no concerns remain.

# Stormwater Analysis (Site Development and Inspections Division (SDID) (Appendix 4))

The applicant has worked with SDID to adjust the location and limits of clearing and grading for the proposed stormwater outfall. The above RPA-related proffer commitments will further ensure disturbance will be reduced from that shown on the plan to the minimum necessary as determined by SDID. All technical comments have also been resolved by the revised CDP/FDP. An updated SDID memo is included in Appendix 4 and no stormwater concerns remain.

#### Parks Analysis (Fairfax County Park Authority (FCPA) (Appendix 5))

The applicant has revised its application to address outstanding Park Authority comments related to the land dedication, diesel storage, and stormwater. An updated Park Authority memo is included in Appendix 5.

- Park Dedication (Proffers 6 and 41). The applicant's revised proffers for both development options commit to dedicate to the County the 67-acre RPA on Parcel 6 if that area is accepted by the Park Authority. The proffer states that if the dedication is exercised, it will occur prior to the issuance of the first non-Residential Use Permit (non-RUP) and be subject to the following conditions: removal of bamboo on site; performance of any necessary additional environmental site assessment and remediation/removal of any identified environmental concerns; the applicant's perpetual maintenance of the stormwater outfall; and a field visit with the Park Authority prior to dedication. The Park Authority continues to support the dedication.
- Stormwater Management. In response to staff's earlier concerns regarding the proposed stormwater management approach, the applicant has revised its stormwater plan and addressed concerns related to detention capacity, outfall adequacy, and revegetation of outfall areas, to the satisfaction of Park Authority staff. The Park Authority may have additional comments on the proposed stormwater management approach when a more detailed stormwater management plan is provided at the time of site plan.
- Diesel Storage Design (Proffer 33). Option 1 would permit the construction of a diesel generator yard to support the data center use. Staff previously noted concerns regarding contamination of the Park Authority's adjacent and downstream properties and the Cub Run watershed in the event of a diesel spill. The applicant has provided additional details regarding diesel fuel handling, storage, spill containment, and operational safeguards. Further, the revised proffer includes new commitments to safety features and the use of an oil/water separator to contain any potential leaks onsite and prevent contamination of the adjacent RPA or stormwater facilities.

Park Authority comments have been addressed.

# Forestry Analysis (Forest Conservation Branch (FCON), Land Development Services (LDS) (Appendix 6))

The applicant has edited the invasive species management proffers (Proffers 24 and 58) for both development options to reflect the language recommended by FCON. No issues remain. A revised memo is contained in Appendix 6.

### Wastewater (Option 1) (Wastewater Planning and Management Division (WPMD))

The applicant has included the following wastewater proffer (Proffer 35) recommended by WPMD addressing sewer capacity, water quality pre-treatment, prohibition of bromide, and water quality monitoring:

- <u>Sewer Capacity</u>. At site plan, the Applicant will perform a final sanitary sewer capacity analysis for approval by the Wastewater Planning and Monitoring Division (WPMD). The analysis will provide the anticipated monthly average and

maximum instantaneous wastewater flow rates. Should the analysis indicate that the sewer system needs to be improved, then the Applicant will provide its proportionate share all required improvements attributable to its use of the Property.

- <u>Water Quality Pretreatment</u>. At site plan, the Applicant must provide water quality data on the concentrations of chloride, fluoride, and sodium in the wastewater from the proposed data center. This analysis may be accomplished either through calculation or analytical data of wastewater discharges from similar data centers. Should there be a need for pretreatment, the Applicant will provide the required pretreatment of the wastewater after approval by the WPMD.
- <u>Prohibition</u>. The Applicant agrees not to use water treatment chemicals containing bromide, bromine, and/or brominated compounds at the facility.
- <u>Water Quality Monitoring</u>. At site plan, the applicant will coordinate with WPMD to create an agreement for ongoing water quality monitoring. Once the data center is fully operational, the Applicant agrees to monitor chloride, fluoride, and sodium concentrations in the water discharged into the County's sanitary sewer system, as required, to determine whether such concentrations meet applicable regulatory limits. If it is determined that the concentrations exceed applicable limits or requirements, the Applicant will work with the WPMD to identify appropriate onsite measures to address the issue and implement those measures subject to approval by WPMD. [...]

There are no wastewater concerns.

#### **Buffering and Visual Impacts**

#### Height (Proffer 3)

The applicant modified Proffer 3 in order to ensure that the maximum height of 110 feet is inclusive of rooftop mechanical equipment and screening features.

#### Second Drone Fly

On August 30, 2023, the applicant conducted a second drone fly to assess visual impacts to Pleasant Valley. More details will be made available by the applicant.

#### **Buffering**

To show the extent of the buffer and clarify the setbacks to adjacent buildings, the applicant has also provided a graphic showing exact distances from the generator yard to buildings on adjacent properties (included in Appendix 7). The Resource Protection Area provides a buffer of approximately a quarter-mile (1,345 feet) from on-site generators to the Lafayette Business Park (west) and 4/10ths of a mile (2,172 feet) from

on-site generators to the closest residential home (southwest). Mature trees in this area are up to 80 feet tall and include both deciduous and non-deciduous trees.

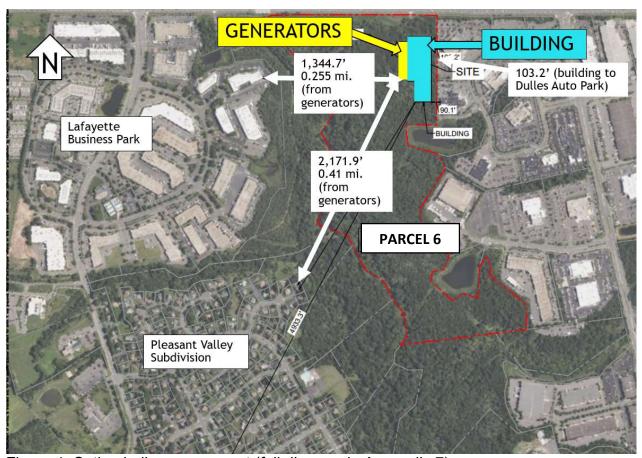


Figure 1: Setback diagram excerpt (full diagram in Appendix 7)

#### CONCLUSIONS AND RECOMMENDATIONS

#### Staff Conclusions

The applicant has worked with staff to sufficiently address all outstanding comments in the staff report. The applicant has provided stronger commitments related to noise attenuation, RPA protection, land dedication, wastewater management, and other issues. Staff finds these commitments to be significant improvements that further reduce the potential for negative impacts on adjacent properties.

Staff continues to find that the proposed Rezoning and Special Exception conform with the Zoning Ordinance. The proposal also conforms with the Comprehensive Plan.

#### Recommendations

Staff recommends approval of RZ 2022-SU-00019, subject to proffers consistent with those contained in Appendix 1.

Staff recommends approval of SE 2022-SU-00038 subject to the proposed development conditions contained in Appendix 2.

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

The approval of this rezoning and/or special exception would 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.

This report reflects the analyses and recommendations of staff; it does not and does not represent or anticipate any position of the Board of Supervisors.

#### **APPENDICES**

- 1. Applicant's Revised Draft Proffers
- 2. Revised Proposed Development Conditions
- 3. Revised Noise Study
- 4. Revised Stormwater Management Analysis (SDID)
- 5. Revised Fairfax County Park Authority Analysis (FCPA)
- 6. Revised Forest Conservation Branch Analysis (FCON)
- 7. Setback Diagram

# Proffered Conditions PDCREF2 CHANTILLY LLC RZ 2022-SU-00019

**June 13 September 6, 2023** 

Pursuant to Section 15.2-2303(A), Code of Virginia, 1950 as amended, the undersigned Owner/Applicant ("Applicant"), proffer that the development of the parcel under consideration and shown on the Fairfax County Tax Map as Tax Map Reference 33-2 ((1)) 6 (part) (hereinafter referred to as the "Property") will be in accordance with the following conditions (the "Proffered Conditions"), if and only if, said rezoning to the I-5 (General Industrial) District is granted. In the event said request is denied, these Proffered Conditions will be null and void. The Applicant, for themselves, their successors, and assigns hereby agree that these Proffered Conditions will be binding on the future development of the Property unless modified, waived, or rescinded in the future by the Board of Supervisors of Fairfax County, Virginia, (hereinafter referred to as the "Board") in accordance with applicable County and State statutory procedures. These conditions supersede all other proffered conditions applicable to the Property, specifically, those associated with RZ 2019-SU-021. The Proffered Conditions are organized in two parts. The proffers in Part 1 are applicable to the property if Option 1 (Data Center), as shown on the Generalized Development Plan ("GDP"), is developed and the proffers in Part 2 are applicable to the Property if Option 2 (Warehouse), as shown on the GDP, is developed.

PART 1 – The following proffers, Proffer 1 through 3538, apply if and only if Option 1 (Data Center), as shown on the GDP, is developed.

#### I. GENERAL

- 1. <u>Substantial Conformance.</u> Subject to the provisions of Section 8100.2.D of the Fairfax County Zoning Ordinance (the "Zoning Ordinance"), development of the Property will be in substantial conformance with the GDP prepared by Kimley-Horn dated <u>June 8</u>August 14, 2023.
- 2. Density. The maximum floor area ratio for the Property must not exceed .8.
- 3. <u>Height.</u> The maximum building height for the Property will not exceed one-hundred ten (110) feet, <u>inclusive of rooftop mechanical equipment and screening features</u>, except if a lower height is mandated by the Federal Aviation Administration ("FAA"). Formal review by the FAA of the building height will be requested at the time of site plan prior to building construction.
- 4. <u>Minor Modifications</u>. Pursuant to Section 8100.5.A.1 of the Zoning Ordinance, minor modifications to the GDP, such as, but not limited to locations of utilities, landscaping, the general location, and footprints of buildings and parking may be permitted when it is determined by the Zoning Administrator that such modifications are in substantial conformance with the GDP and provided that the modifications do not increase the floor area ratio, decrease the amount of open space, tree save, or distances to peripheral lot

- lines, change the points of access to the Property, or alter the limits of clearing and grading shown on the GDP.
- 5. <u>Density Credit.</u> Advance density credit is and will be reserved as may be permitted by the provisions of the Zoning Ordinance for all eligible dedications described herein or as may be required by the Fairfax County Department of Transportation ("FCDOT") or the Virginia Department of Transportation ("VDOT") pursuant to the Public Facilities Manual ("PFM"), at or prior to the time of subdivision and/or site plan approval.
- 6. Fairfax County Park Authority Contribution/Potential Dedication. Prior to the issuance of the first Non-RUP for a building on the Property, the Applicant will either (1) dedicate the 67-acre RPA adjacent to the Property to the Park Authority, if accepted by the Park Authority, or (2) in the event that the Park Authority does not accept the dedication upon review of the criteria below, the applicant will contribute to the Park Authority \$0.27 per square foot gross floor area (GFA) to offset the impacts of non-residential development in Suburban Centers or (2) dedicate the RPA area as described below.

In the event that the Applicant elects to dedicate the approximately 67 acre RPA area adjacent to the Property to the Park Authority, the Applicant will retain maintenance responsibilities for offsite stormwater outfalls within the dedicated area.

6. In the event that the Applicant does not elect to dedicate the RPA area to the Park Authority, the Applicant will. The Applicant will also, prior to issuance of the first Non-RUP for a building on the Property, grant a twenty (20)-footwide public access easement, as generally shown on the GDP, to allow the establishment of a trail within the open space by others in the future. Prior

If the dedication option is exercised (Option 1), the dedication will be subject to the following criteria and conditions:

- a. Prior to dedication, if there is any invasive bamboo onsite, the Applicant will delineate the onsite bamboo cover and prepare an invasive species control and remediation plan and submit to the Park Authority's Natural Resource Branch for review and approval. Upon said approval, the Applicant will be responsible for the control and removal of any invasive bamboo per the agreed upon invasive species control and remediation plan.
- b. Prior to dedication, the Applicant will perform any additional environmental site assessment necessary to confirm there are no environmental hazards (e.g., underground storage tanks, illegal dumping sites, major construction debris) present onsite. If any such environmental hazards are identified onsite, the Applicant will develop a plan to

remediate and/or remove any identified environmental concerns and submit to the Park Authority for review and approval. Upon said approval, the Applicant will be responsible for the removal and/or remediation of any identified environmental concerns per the agreed upon remediation plan.

- c. The Applicant will retain perpetual maintenance responsibilities for offsite stormwater outfalls within the dedicated area. Upon acceptance of the land dedication, the Park Authority will grant necessary easements for (a) the construction of stormwater outfalls within the RPA area and/or (b) the maintenance, repair, and/or replacement of stormwater outfalls within the RPA area.
- d. Prior to final dedication, the Applicant and FCPA will conduct a field visit and FCPA staff will review the dedication plat to be recorded with the deed for accuracy.

Regardless of either option discussed above and prior to submission of the first site plan for the Property, the Applicant will coordinate with the Park Authority's Trail Planner to field locate the trail easement shown on the GDP. The final location of the easement may be revised during site plan review, as there may be stormwater features that may conflict with the proposed easement as shown on the GDP. The Applicant will have no obligation to fund or construct the trail.

- 10.7. Architecture. The final architectural treatment and design of all buildings will include unifying elements such as materials, textures, color, lighting, and landscaping as generally reflected on the materials and exhibits contained in the GDP. Architectural plans, elevations, illustrations, materials, and heights may be revised as a result of final architectural and engineering design, provided the quality of design remains in substantial conformance with that shown on the GDP and as set forth in these Proffers, as determined by DPD.
- 11. <u>Sewer Capacity</u>. At the time of site plan, Applicant will perform a final sanitary sewer capacity analysis for approval by the Wastewater Planning and Monitoring Division. The Applicant must comply with all applicable provisions of Chapter 67.1 of the Fairfax County Code, as subsequently amended, with respect to the treatment and discharge of wastewater.
- 12.8. Signage. Signage on the Property will be installed in conformance with the Zoning Ordinance. Only one (1) freestanding tenant sign will be visible from Lee Jackson Highway/U.S. Rt. 50.
- 13.9. <u>Lighting.</u> All on-site, outdoor lighting must comply with the outdoor lighting standards of the Zoning Ordinance. All proposed parking and building mounted lighting on the Property must utilize full cut-off fixtures and LED lighting will be used for all streetlights. Exterior building and site lighting on

the Property must be limited to a Correlated Color Temperature ("CCT") of 3000 Kelvin or less.

#### II. TRANSPORTATION

- 14.10. Parking. The Applicant will provide parking as shown on the GDP.

  However, Applicant reserves the right to reduce the amount of parking provided at site plan so long as the minimum required by the Zoning Ordinance is met. The Applicant will seek to minimize the amount of parking and loading areas at the time of site plan, to the extent feasible, and/or consider the use of permeable pavement.
- 15.11. Bicycle Parking. The Applicant must install a bicycle rack in the location(s) shown on the GDP, or in an alternative location determined in consultation with Fairfax County Land Development Services ("LDS") and FCDOT at the time of site plan review.
- 16.12. Interparcel Access Easement. Interparcel access between the Property and the adjacent Auto Park property will be provided via the easement recorded among the land records of Fairfax County in Deed Book 27739 at Page 1401.
- 17.13. Public Access Easements. At the time of record plat recordation, the Applicant must cause to be recorded among the land records a public access easement running to the benefit of Fairfax County, in a form acceptable to the County Attorney, over all the sidewalks and trails as shown on the GDP.
- 18.14. Dedication and Construction of Right Turn Lane. Subject to VDOT approval and prior to issuance of the first Non-Residential Use Permit, the Applicant will construct a right turn lane meeting VDOT standards along eastbound Lee Jackson Highway/U.S. Rte. 50, as generally shown on the GDP. The Applicant must also dedicate in fee simple, at no cost to Fairfax County, right-of-way necessary to accommodate said right turn lane.
- 19.15. Construction of Trail Along Route 50. Subject to VDOT approval and prior to issuance of the first Non-Residential Use Permit, the Applicant will construct a ten (10)-foot wide asphalt-paved trail along eastbound Lee Jackson Highway/U.S. Rte. 50, as generally shown on the GDP.

#### III. ENVIRONMENTAL

20.16. Landscaping. A landscape plan that shows, at a minimum, landscaping in conformance with the landscape design shown on the GDP must be submitted concurrently with the first submission, and all subsequent submissions of the site plan for review and approval of the Forest Conservation ("FCON") Branch of Land Development Services.

Landscaping must be generally consistent with the quality, quantity, and the locations shown on the GDP. The landscape plan must include native groundcover plantings throughout the landscaped area. A diverse selection of native or adapted species that are non-invasive plants must be incorporated to encourage native pollinators to reduce the needs for supplemental watering and the use of chemical fertilizers, herbicides, and pesticides. The landscape plan will not include any invasive species and will incorporate native species to the greatest extent feasible. At the time of planting, the minimum caliper for deciduous trees will be one and one-half (1.5) inches to three (3) inches and the minimum height for evergreen trees will be six (6) feet. Actual types and species of vegetation will be determined pursuant to more detailed landscape plans approved by FCON at the time of site plan approval. The Applicant reserves the right to make minor modifications to such landscaping to reasonably accommodate utilities and other design considerations, as approved by FCON, provided such relocated landscaping must retain a generally equivalent number of plantings as shown on the approved GDP.

21.17. Limits of Clearing and Grading. The Applicant must conform strictly to the limits of clearing and grading as shown on the GDP, as modified by the tree preservation walk-through, subject to allowances specified in the proffers and for the installation of utilities and/or trails as determined necessary by the Director of DPWES, as described herein. If it is determined necessary to install utilities in areas protected by the limits of clearing and grading as shown on the GDP, they must be located in the least disruptive manner necessary as determined by FCON. A replanting plan must be developed and implemented, subject to approval by FCON, for any areas protected by the limits of clearing and grading that must be disturbed for such utilities.

The Applicant must provide appropriate tree protection devices, based on site conditions and proposed construction activities as reviewed and approved by FCON. Tree protection fences must consist of four-foot-high welded wire attached to six-foot steel posts driven 18 inches into the ground and spaced no further than 10 feet apart; or super silt fence.

18. Resource Protection Area (RPA)/Environmental Quality Corridor (EQC).

Areas of proposed disturbance within the RPA and EQC will be restored and revegetated in accordance with the standards specified in Par. (f) of Section 118.3-3 of the Chesapeake Bay Preservation Ordinance and as reviewed and approved by FCON. A restoration plan will be part of the site plan submission and the restoration work will be completed prior to the issuance of the first non-residential use permit.

No expansion of limits of disturbance may occur in the RPA from that shown on the GDP. The Applicant will ensure at the time of site plan that the limits of disturbance will be minimized so that they do not encroach into the wetland area located in the northeast corner of the Property. The applicant will also

reduce the limits of disturbance for the outfall construction to the minimum necessary in coordination with FCON at site plan.

Where the Limits of Disturbance (LOD) and Tree Protection (TP) fencing follows the RPA/EQC boundaries, additional signage will be included along the super silt fence/tree protection fence noting the location of the RPA/EQC and prohibiting any disturbance within it except as provided on the plan (e.g., outfall area).

- 22.19. Tree Preservation. The Applicant will submit a Tree Preservation Plan and Narrative as part of the first and all subsequent site plan submissions. The preservation plan and narrative will be prepared by a Certified Arborist or a Registered Consulting Arborist and will be subject to the review and approval of FCON. The tree preservation plan must include a tree inventory that identifies the location, species, critical root zone, trunk size, crown spread, and condition analysis percentage rating for individual trees, living or dead, with trunks twelve (12) inches in diameter or greater (measured at four and one-half (4.5) feet from the base of the trunk or as otherwise allowed in the latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture), ten (10) feet inside and twenty-five (25) feet outside of the proposed limits of clearing and grading. The tree preservation plan will include areas for preservation shown on the approved GDP, as well as any additional areas in which trees can be preserved as a result of final engineering. The tree preservation plan will include elements of Public Facilities Manual ("PFM") 12-0309 deemed appropriate to the project site as determined by FCON. Tree preservation measures will be clearly identified, labeled, and detailed on the Erosion and Sediment Control Plan sheets and the Tree Preservation Plan. Tree preservation measures may include, but are not limited to the following: root pruning, crown pruning, mulching, watering, etc. Specifications will be provided on the plan detailing how preservation measures will be implemented. Tree preservation activities will be completed during implementation of Phase I of the Erosion and Sediment Control Plan.
- 23.20. Project Arborist/Pre-construction Meeting. Prior to the pre-construction meeting, the Applicant must have the approved limits of clearing and grading flagged with a continuous line of flagging. The Applicant must retain the services of a Certified Arborist or Registered Consulting Arborist ("Project Arborist") to attend the pre-construction meeting. The Project Arborist retained may be different than the Design Arborist who prepared the Tree Preservation Plan for approval. During the pre-construction meeting, the Project Arborist will review the limits of clearing and grading with a FCON representative to determine where adjustments to the clearing limits can be made to increase the area of the tree preservation and/or to increase the survivability of trees at the limits of clearing and grading. Such adjustments must be recorded by the Project Arborist and tree protection fencing must be

- implemented under the Project Arborist's supervision based on these adjustments.
- 24.21. Landscape Planting Pre-installation Meeting. Prior to installation of any plants to meet the requirements of the approved landscape planting plan, the contractor/developer must coordinate a pre-installation meeting on the site with the landscape contractor, FCON staff, and any additional appropriate parties. Any proposed changes to planting locations, tree/shrub planting sizes, and species substitutions shown on the approved plan must be reviewed and approved by FCON staff prior to planting. The installation of plants not approved by FCON may require the submission of a revision to the landscape plan or removal and replacement with approved trees/shrubs prior to bond release.
- 25.22. Site Monitoring. The Applicant's Project Arborist must be present on-site during implementation of all tree preservation measure and monitor any construction activities conducted within or adjacent to areas of trees to be preserved. Construction activities include, but may not be limited to clearing, root pruning, tree protection fence installation, vegetation/tree removal, and demolition activities. During implementation of remaining Erosion and Sediment Control devices, the Project Arborist must visit the site on a regular basis to continue monitoring tree preservation measures and ensure that all activities are conducted as identified in the Tree Preservation Plan and approved by FCON. Written reports must be submitted to FCON and SDID site inspector detailing site visits. A monitoring schedule and Project Arborist reports must be described and detailed in the Tree Preservation Plan on the first, and all subsequent submissions of the site plan.
- 26.23. Soil Remediation. Soil in planting areas that contain construction debris and rubble, are compacted or are unsuitable for the establishment and long-term survival of landscape plants, will be the subject of remedial action to restore planting areas to satisfy cultural requirements of trees, shrubs, and groundcovers specified in the landscape planting plan. The Applicant must provide notes and details specifying how the soil will be restored for the establishment and long-term survival of landscape plants for review and approval by FCON.
- 27.24. Invasive Species Management Plan. Forested areas within the limits of clearing and grading containing plant species that are known to be invasive in quantities that threaten the long term health and survival of the existing vegetation present must be the subject of an invasive plan species management plan in order for the area to be awarded full 10-year canopy credit. At the time of site plan submission, the Applicant must provide a management plan for review and approval by FCON specifying the common and scientific name of invasive species proposed for management, the target area for management efforts, methods of control and disposal of invasive

- plants, timing of treatments and monitoring, duration of the management program, and potential reforestation as needed.
- 28.25. Stormwater Management. Stormwater management quantity and quality requirements will be met by utilizing Best Management Practices and Low Impact Development ("LID") technology practices like bio-retention or biofiltration facilities, vegetated swales, porous pavement, and/or tree box filters. Final Site design will look at converting At site plan the applicant reserves an option to convert wet ponds to extended detention ponds in appropriate areas around the site. Landscape features will incorporate infiltration of rainwater and preservation and/or creation of forested areas with no soil compaction. Additional LID design features will be considered as site plan is further refined. Stormwater management facilities will be designed in a manner calculated to reduce discharges leaving the site to levels that will minimize stream erosion through the use of the energy balance method (based on forested existing conditions or an improvement factor of 0.7) or any equivalent methodology.

The existing VDOT stormwater facility will meet the same conditions as currently existpre-development if it is impacted by the improvements for this site. This includes, but is not limited to capacity, function, area, volume and easements or right of way for this facility. Access to this facility will be maintained or replaced in kind with equivalent access and accessibility by maintenance vehicles.

- 29.26. Salt Management. Salt must be applied during freezing increment weather only to paved surfaces where and when needed for safety. When no longer needed, excess or leftover salt must be removed for reuse at a later date or disposal. Residual salt must not be swept or shoveled into planted landscape areas, wet ponds, or bioretention ponds.
- 30. Resource Protection Area (RPA)/Environmental Quality Corridor (EQC).

  Areas of proposed disturbance within the RPA and EQC will be restored and revegetated in accordance with the standards specified in Par. (f) of Section 118.3-3 of the Chesapeake Bay Preservation Ordinance and as reviewed and approved by FCON. A restoration plan will be part of the site plan submission and the restoration work will be completed prior to the issuance of the first non-residential use permit.
- 32.27. Electric Vehicle Charging. Concurrent with the first site plan submission, the Applicant will designate at least 2% of the parking spaces to be equipped with universal, Level 2 electric vehicle charging stations, fully wired and functional. This proffer does not apply to any parking or loading areas for tractor trailer trucks.
- 33.28. Green Building Commitment.

A. The Applicant must include, as part of the building plan submission for any new building to be constructed on the Property, a list of specific credits within the project's registered version of the U.S. Green Building Council's Leadership in Energy and Environmental Design Core and ShellData Center Silver ("LEED®-CSDC") rating system, determined to be applicable by the USGBC, or its equivalent (as determined by the Applicant and Fairfax County), that the Applicant anticipates attaining. All references herein to LEED-CSDC Silver include both LEED-CSDC Silver or its equivalent as determined by the Applicant and the County and all references to USGBC include the applicable equivalent agency.

Except as otherwise provided below in Paragraph E as an alternative, the LEEDAP will provide certification statements at the time of building plan review confirming that the items on the list will meet at least the minimum number of credits necessary to attain LEED-Data Center Silver certification of the building.

B. The Applicant must designate the Chief of 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, 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. Prior to building plan approval for the building to be constructed, the Applicant must post a "green building escrow" in the form of cash or a letter(s) of credit from a financial institution acceptable to DPWES as defined in the PFM, in the amount of \$2.00/square foot of GFA, as shown on the approved site plan. This green building escrow will be in addition to and separate from other bond requirements and will be released upon demonstration of attainment of LEED-Data Center Silver certification, by the USGBC, under the project's registered version of the LEED-CSData Center Silver rating system. The provision to EDRB of documentation from the USGBC that each building has attained LEED-Data Center Silver certification will be sufficient to satisfy this commitment.

D. At the time LEED-Data Center Silver certification is demonstrated to EDRB, the escrowed funds and/or letter(s) of credit will be released to the Applicant.

If, prior to bond extension, reduction or final bond release for the applicable building site plan, whichever occurs first, the Applicant provides to EDRB documentation demonstrating that LEED-Data Center 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-Data Center Silver certification, 50% of the green building escrow will be released to the Applicant; the other 50% will be released to Fairfax County and will be

posted to a fund within the County budget supporting implementation of county environmental initiatives. If the certification is still in progress at the time of application for bond extension or reduction, which given the construction timelines associated with the Proposed Development there is the potential for multiple bond extensions or reductions prior to the Proposed Development's completion, the time frame for the provision of the documentation described above will be automatically extended to the time of the next bond extension or reduction. However, the documentation must be provided prior to the final bond release.

If prior to bond extension, release or final bond release for the applicable building site plan, whichever occurs first, the Applicant fails to provide documentation to the EDRB demonstrating attainment of LEED-Data Center Silver certification or the Applicant provides documentation demonstrating that the building has fallen short of LEED-Data Center 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. If the certification is still in progress at the time of application for bond extension or reduction, which given the construction timelines associated with the Proposed Development there is the potential for multiple bond extensions or reductions prior to the Proposed Development's completion, the time frame for the provision of the documentation described above will be automatically extended to the time of the next bond extension or reduction. However, the documentation must be provided prior to the final bond release.

- 34.29. Interior Noise. Noise attenuation construction measures must be utilized, based on a pre-construction Building Shell and Barrier acoustical analysis that accounts for existing and future noise sources (e.g., traffic noise from Route 50, airport noise), to ensure that interior noise in office portions of the building is mitigated to levels that do not exceed 50 dBA DNL. Such acoustical analysis (the "Pre-Construction Acoustical Analysis") will be provided prior to issuance of the first interior building permit. Prior to the issuance of the non-residential use permit for each building, the Applicant will conduct post-development interior noise testing of the building(s), with such tests certified by an acoustical engineer, to demonstrate that an interior noise level of 50 dBA DNL or less has been achieved in the office portions of each building. The results of such post-development interior noise testing must be provided to the Environment and Development Review Branch (EDRB) of the Department of Planning and Development.
- 30. Maximum Exterior Noise. The Pre-Construction Acoustical Analysis will also confirm that final engineered design will meet applicable noise limitations specified in the Fairfax County Noise Ordinance, subject to approval by and will not exceed 50 dBA during periods of typical operation inclusive of all constantly operating equipment, and 60 dBA during intermittent testing of generators and during periods of emergency operations

at the County Zoning Permits Section ("ZPS"), Zoning Administration
Division. Approvalboundary of the Pre-Construction Acoustical Analysis by
ZPS must occur prior to issuance of residentially zoned area to the first Non-Residential Use Permit.southwest of the Property. The results of the Pre-Construction Acoustical Analysis will also be submitted to the Zoning Permits Section ("ZPS"), Zoning Administration Division, and the Environmental and Development Review Branch ("EDRB"), Department of Planning and Development for informational purposes.

Further, the Applicant will use construction design techniques and mitigation measures, which may include, but not necessarily be limited to, silencers, baffles, upgraded enclosures, or other acoustical treatments as necessary to ensure that sound levels meet applicable noise limitations. Techniques must include upgraded generators to limit expected sound pressure level rating to 75 dBA at 23 feet. Following the completion of construction and installation of all mechanical equipment, the Applicant will conduct a post-construction noise analysis, with such tests certified by an acoustical engineer, to ensure that all proffered noise commitments and Noise Ordinance requirements have been met. Said study will be provided to the Zoning Permit Review Section of Zoning Administration (ZPS) and the Environmental and Development Review Branch ("EDRB"), Department of Planning and Development prior to issuance of the first Non-Residential Use Permit.

- 35. Post-construction Noise Study. Following the completion of construction and installation of all mechanical equipment, the Applicant will conduct a noise analysis to ensure that all proffered noise commitments have been met. Said study will be provided to ZPS for review and approval prior to issuance of the first Non-Residential Use Permit. The results of the study will also be submitted to the Environmental and Development Review Branch ("EDRB"), Department of Planning and Development for informational purposes.
- 36.31. Generator Testing. Generator testing will only be conducted between 9 a.m. and 9 p.m. and will be limited in duration to no more than two (2) hours per day.
- 37.32. Bird-friendly Building Design. At the time of site plan submission, a narrative of bird-friendly design strategies to be employed with this building will be prepared and submitted to EDRB) for review. The objective of the strategies will be to make the building visible to birds in flight and reduce reflections that district or confuse birds through the use of appropriate glazing treatments or architectural elements, such as using color, texture, opacity, patterns, louvers, screens, interior window treatments, or ultraviolet materials that are visible to birds. In addition, the Applicant will study whether interior lighting should be reduced and direct lighting which is visible from the exterior should be eliminated to reduce a building's attractiveness to birds flying at night. The Applicant should describe the results of its studies of bird-friendly design strategies, and to what extent any of the strategies will be implemented, in a

- narrative at the time of building permit issuance. To the extent strategies are identifies but not implemented, the narrative will describe the reason(s) for the exclusion of such strategies.
- 33. Diesel Storage Design. Any aboveground storage tanks for the storage of diesel fuel on the Property for backup generators must include safety features such as, but no necessarily limited to, inner and outer emergency vents, overfill protection valves, fill ports within a spill containers, and leak detection equipment. Further, the area in which storage tanks are to be located will be graded and designed in a manner to contain any leaks onsite within an oil-water separator until cleanup can occur and that prevents leaks from entering into the RPA or stormwater facilities. The Applicant will abide by all applicable regulations, including the United States Environmental Protection Agency (EPA) Spill Prevention, Control, and Countermeasure (SPCC) regulation (40 CFR Part 112), the Virginia Department of Environmental Quality (DEQ) Tank Compliance Program, the Virginia State Water Control Board regulations for aboveground storage tanks (ASTs), and Fairfax County Fuel Storage Tank Regulations.
- 34. Seating. The applicant may add outdoor seating for employees on site, provided it does not reduce open space or increase land disturbance and the location will be selected to minimize noise based on the Applicant's noise analyses.

#### 35. Wastewater.

- a. Sewer Capacity. At site plan, the Applicant will perform a final sanitary sewer capacity analysis for approval by the Wastewater Planning and Monitoring Division (WPMD). The analysis will provide the anticipated monthly average and maximum instantaneous wastewater flow rates. Should the analysis indicate that the sewer system needs to be improved, then the Applicant will provide its proportionate share all required improvements attributable to its use of the Property.
- b. Water Quality Pretreatment. At site plan, the Applicant must provide water quality data on the concentrations of chloride, fluoride, and sodium in the wastewater from the proposed data center. This analysis may be accomplished either through calculation or analytical data for wastewater discharges from similar data centers. Should there be a need for pretreatment, the Applicant will provide the required pretreatment of the wastewater after approval by the WPMD.
- c. Prohibition. The Applicant agrees not to use water treatment chemicals containing bromide, bromine, and/or brominated compounds at the facility.

- d. Water Quality Monitoring. At site plan, the applicant will coordinate with WPMD to create an agreement for ongoing water quality monitoring. Once the data center is fully operational, the Applicant agrees to monitor chloride, fluoride, and sodium concentrations in the water discharged into the County's sanitary sewer system, as required, to determine whether such concentrations meet applicable regulatory limits. If it is determined that the concentrations exceed applicable limits or requirements, the Applicant will work with the WPMD to identify appropriate onsite measures to address the issue and implement those measures subject to approval by WPMD.
- e. Requirements. The Applicant must comply with all applicable provisions of Chapter 67.1 of the Fairfax County Code with respect to the treatment and discharge of wastewater.

#### IV. MISCELLANEOUS

38.36. Zoning Administrator Consideration. Upon demonstration that despite diligent efforts or due to factors beyond the Applicant's control, proffered improvements such as, but not limited to, the proffered right turn lane, have been delayed (due to, but not limited to, an inability to secure necessary permission from VDOT) beyond the timeframes specified, the Zoning Administrator may agree to a later date for completion of these proffered improvement(s).

PART 2 – The following proffers, Proffer 3639 through 6566, apply if and only if Option 2 (Warehouse), as shown on the GDP, is developed.

#### V. GENERAL

- 39.37. Substantial Conformance. Subject to the provisions of Section 8100.2.D of the Fairfax County Zoning Ordinance (the "Zoning Ordinance"), development of the Property will be in substantial conformance with the GDP prepared by Kimley-Horn dated June 8, 2023.
- 40.38. Density. The maximum floor area ratio for the Property must not exceed .3.
- 41.39. Minor Modifications. Pursuant to Section 8100.5.A.1 of the Zoning Ordinance, minor modifications to the GDP, such as, but not limited to locations of utilities, landscaping, the general location, and footprints of buildings and parking may be permitted when it is determined by the Zoning Administrator that such modifications are in substantial conformance with the GDP and provided that the modifications do not increase the floor area ratio, decrease the amount of open space, tree save, or distances to peripheral lot lines, change the points of access to the Property, or alter the limits of clearing and grading shown on the GDP.

- 42.40. Density Credit. Advance density credit is and will be reserved as may be permitted by the provisions of the Zoning Ordinance for all eligible dedications described herein or as may be required by the Fairfax County Department of Transportation ("FCDOT") or the Virginia Department of Transportation ("VDOT") pursuant to the Public Facilities Manual ("PFM"), at or prior to the time of subdivision and/or site plan approval.
- 43. Fairfax County Park Authority Contribution/Potential Dedication. Prior to the issuance of the first Non-RUP for a building on the Property, the Applicant will either (1) dedicate the 67-acre RPA adjacent to the Property to the Park Authority, or (2). In the event that the Park Authority does not accept the dedication upon review of the criteria below, the applicant will contribute to the Park Authority \$0.27 per square foot gross floor area (GFA) to offset the impacts of non-residential development in Suburban Centers or (2) dedicate the RPA area as described below.

In the event that the Applicant elects to dedicate the approximately 67-acre RPA area adjacent to the Property to the Park Authority, the Applicant will retain maintenance responsibilities for offsite stormwater outfalls within the dedicated area.

41. In the event that the Applicant does not elect to dedicate the RPA area to the Park Authority, the Applicant will. The Applicant will also, prior to issuance of the first Non-RUP for a building on the Property, grant a twenty (20)-footwide public access easement, as generally shown on the GDP, to allow the establishment of a trail within the open space by others in the future. Prior

<u>If the dedication option is exercised (Option 1), the dedication will be subject</u> to the following criteria and conditions:

- a. Prior to dedication, if there is any invasive bamboo onsite, the Applicant will delineate the onsite bamboo cover and prepare an invasive species control and remediation plan and submit to the Park Authority's Natural Resource Branch for review and approval. Upon said approval, the Applicant will be responsible for the control and removal of any invasive bamboo per the agreed upon invasive species control and remediation plan.
- b. Prior to dedication, the Applicant will perform any additional environmental site assessment necessary to confirm there are no environmental hazards (e.g., underground storage tanks, illegal dumping sites, major construction debris) present onsite. If any such environmental hazards are identified onsite, the Applicant will develop a plan to remediate and/or remove any identified environmental concerns and submit to the Park Authority for review and approval. Upon said approval, the Applicant will be responsible for the removal and/or remediation of

- any identified environmental concerns per the agreed upon remediation plan.
- c. The Applicant will retain perpetual maintenance responsibilities for offsite stormwater outfalls within the dedicated area. Upon acceptance of the land dedication, the Park Authority will grant necessary easements for (a) the construction of stormwater outfalls within the RPA area and/or (b) the maintenance, repair, and/or replacement of stormwater outfalls within the RPA area.
- d. Prior to final dedication, the Applicant and FCPA will conduct a field visit and FCPA staff will review the dedication plat to be recorded with the deed for accuracy.

Regardless of either option discussed above and prior to submission of the first site plan for the Property, the Applicant will coordinate with the Park Authority's Authority's Trail Planner to field locate the trail easement shown on the GDP. The final location of the easement may be revised during site plan review, as there may be stormwater features that may conflict with the proposed easement as shown on the GDP. The Applicant will have no obligation to fund or construct the trail.

47.42. Architecture. The final architectural treatment and design of all buildings will include unifying elements such as materials, textures, color, lighting, and land-scapinglandscaping as generally reflected on the materials and exhibits contained in the GDP. Architectural plans, elevations, illustrations, materials, and heights may be revised as a result of final architectural and engineering design, provided the quality of design remains in substantial conformance with that shown on the GDP and as set forth in these Proffers, as determined by DPD.

#### 43. Wastewater.

- a. <u>Sewer Capacity</u>. At the time of site plan, the Applicant will perform a final sanitary sewer capacity analysis for approval by the Wastewater Planning and Monitoring Division (WPMD). The analysis will provide the anticipated monthly average and maximum instantaneous wastewater flow rates. Should the analysis indicate that the sewer system needs to be improved, then the Applicant will provide its proportionate share all required improvements attributable to its use of the Property.
- b. Requirements. The Applicant must comply with all applicable provisions of Chapter 67.1 of the Fairfax County Code with respect to the treatment and discharge of wastewater.

- 48.44. Signage. Signage on the Property will be installed in conformance with the Zoning Ordinance. Only one (1) freestanding tenant sign will be visible from Lee Jackson Highway/U.S. Rt. 50.
- 49.45. Lighting. All on-site, outdoor lighting must comply with the outdoor lighting standards of the Zoning Ordinance. All proposed parking and building mounted lighting on the Property must utilize full cut-off fixtures and LED lighting will be used for all streetlights. Exterior building and site lighting on the Property must be limited to a Correlated Color Temperature ("CCT") of 3000 Kelvin or less.

#### VI. TRANSPORTATION

- 45. Parking. Applicant reserves the right to reduce the amount of parking provided at site plan so long as the minimum required by the Zoning Ordinance is met. The Applicant will seek to minimize the amount of parking and loading areas at the time of site plan, to the extent feasible, and/or consider the use of permeable pavement.
- 45.46. Bicycle Parking. The Applicant must install a bicycle rack in the location(s) shown on the GDP, or in an alternative location determined in consultation with Fairfax County Land Development Services ("LDS") and FCDOT at the time of site plan review.
- 46.47. Interparcel Access Easement. Interparcel access between the Property and the adjacent Auto Park property will be provided via the easement recorded among the land records of Fairfax County in Deed Book 27739 at Page 1401.
- 47.48. Public Access Easements. At the time of record plat recordation, the Applicant must cause to be recorded among the land records a public access easement running to the benefit of Fairfax County, in a form acceptable to the County Attorney, over all the sidewalks and trails as shown on the GDP.
- 48.49. Dedication and Construction of Right Turn Lane. Subject to VDOT approval and prior to issuance of the first Non-Residential Use Permit, the Applicant will construct a right turn lane meeting VDOT standards along eastbound Lee Jackson Highway/U.S. Rte. 50, as generally shown on the GDP. The Applicant must also dedicate in fee simple, at no cost to Fairfax County, right-of-way necessary to accommodate said right turn lane.
- 49.50. Construction of Trail Along Route 50. Subject to VDOT approval and prior to issuance of the first Non-Residential Use Permit, the Applicant will construct a ten (10)-foot wide asphalt-paved trail along eastbound Lee Jackson Highway/U.S. Rte. 50, as generally shown on the GDP.

#### VII. ENVIRONMENTAL

50.51. <u>Landscaping</u>. A landscape plan that shows, at a minimum, landscaping in conformance with the landscape design shown on the GDP must be submitted concurrently with the first submission, and all subsequent submissions of the site plan for review and approval of the Forest Conservation ("FCON") Branch of Land Development Services.

Landscaping must be generally consistent with the quality, quantity, and the locations shown on the GDP. The landscape plan must include native groundcover plantings throughout the landscaped area. A diverse selection of native or adapted species that are non-invasive plants must be incorporated to encourage native pollinators to reduce the needs for supplemental watering and the use of chemical fertilizers, herbicides, and pesticides. The landscape plan will not include any invasive species and will incorporate native species to the greatest extent feasible. At the time of planting, the minimum caliper for deciduous trees will be one and one-half (1.5) inches to three (3) inches and the minimum height for evergreen trees will be six (6) feet. Actual types and species of vegetation will be determined pursuant to more detailed landscape plans approved by FCON at the time of site plan approval. The Applicant reserves the right to make minor modifications to such landscaping to reasonably accommodate utilities and other design considerations, as approved by FCON, provided such relocated landscaping must retain a generally equivalent number of plantings as shown on the approved GDP.

51.52. Limits of Clearing and Grading. The Applicant must conform strictly to the limits of clearing and grading as shown on the GDP, as modified by the tree preservation walk-through, subject to allowances specified in the proffers and for the installation of utilities and/or trails as determined necessary by the Director of DPWES, as described herein. If it is determined necessary to install utilities in areas protected by the limits of clearing and grading as shown on the GDP, they must be located in the least disruptive manner necessary as determined by FCON. A replanting plan must be developed and implemented, subject to approval by FCON, for any areas protected by the limits of clearing and grading that must be disturbed for such utilities.

The Applicant must provide appropriate tree protection devices, based on site conditions and proposed construction activities as reviewed and approved by FCON. Tree protection fences must consist of four-foot-high welded wire attached to six-foot steel posts driven 18 inches into the ground and spaced no further than 10 feet apart; or super silt fence.

53. Resource Protection Area (RPA)/Environmental Quality Corridor (EQC).

Areas of proposed disturbance within the RPA and EQC will be restored and revegetated in accordance with the standards specified in Par. (f) of Section 118.3-3 of the Chesapeake Bay Preservation Ordinance and as reviewed and approved by FCON. A restoration plan will be part of the site plan submission

and the restoration work will be completed prior to the issuance of the first non-residential use permit.

No expansion of LOD may occur in the RPA from that shown on the GDP. The Applicant will ensure at the time of site plan that the limits of disturbance will be minimized so that they do not encroach into the wetland area located in the northeast corner of the Property. The applicant will also reduce the limits of disturbance for the outfall construction to the minimum necessary in coordination with FCON at site plan.

Where the Limits of Disturbance (LOD) and Tree Protection (TP) fencing follows the RPA/EQC boundaries, additional signage will be included along the super silt fence/tree protection fence noting the location of the RPA/EQC and prohibiting any disturbance within it except as provided on the plan (e.g., outfall area).

- 52.54. Tree Preservation. The Applicant will submit a Tree Preservation Plan and Narrative as part of the first and all subsequent site plan submissions. The preservation plan and narrative will be prepared by a Certified Arborist or a Registered Consulting Arborist and will be subject to the review and approval of FCON. The tree preservation plan will include a tree inventory that identifies the location, species, critical root zone, trunk size, crown spread, and condition analysis percentage rating for individual trees, living or dead, with trunks twelve (12) inches in diameter or greater (measured at four and one-half (4.5) feet from the base of the trunk or as otherwise allowed in the latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture), ten (10) feet inside and twenty-five (25) feet outside of the proposed limits of clearing and grading. The tree preservation plan will include areas for preservation shown on the approved GDP, as well as additional areas in which trees can be preserved as a result of final engineering. The tree preservation plan will include elements of Public Facilities Manual ("PFM") 12-0309 deemed appropriate to the project site as determined by FCON. Tree preservation measures will be clearly identified, labeled, and detailed on the Erosion and Sediment Control Plan sheets and the Tree Preservation Plan. Tree preservation measures may include, but are not limited to the following: root pruning, crown pruning, mulching, watering, etc. Specifications will be provided on the plan detailing how preservation measures will be implemented. Tree preservation activities will be completed during implementation of Phase I of the Erosion and Sediment Control Plan.
- 53.55. Project Arborist/Pre-construction Meeting. Prior to the pre-construction meeting, the Applicant must have the approved limits of clearing and grading flagged with a continuous line of flagging. The Applicant must retain the services of a Certified Arborist or Registered Consulting Arborist ("Project Arborist") to attend the pre-construction meeting. The Project Arborist retained may be different than the Design Arborist who prepared the Tree

Preservation Plan for approval. During the pre-construction meeting, the Project Arborist will review the limits of clearing and grading with a FCON representative to determine where adjustments to the clearing limits can be made to increase the area of the tree preservation and/or to increase the survivability of trees at the limits of clearing and grading. Such adjustments must be recorded by the Project Arborist and tree protection fencing must be implemented under the Project Arborist's supervision based on these adjustments.

- 54.56. Landscape Planting Pre-installation Meeting. Prior to installation of any plants to meet the requirements of the approved landscape planting plan, the contractor/developer must coordinate a pre-installation meeting on the site with the landscape contractor, FCON staff, and any additional appropriate parties. Any proposed changes to planting locations, tree/shrub planting sizes, and species substitutions shown on the approved plan must be reviewed and approved by FCON staff prior to planting. The installation of plants not approved by FCON may require the submission of a revision to the landscape plan or removal and replacement with approved trees/shrubs prior to bond release.
- 55.57. Site Monitoring. The Applicant's Project Arborist must be present on-site during implementation of all tree preservation measure and monitor any construction activities conducted within or adjacent to areas of trees to be preserved. Construction activities include, but may not be limited to clearing, root pruning, tree protection fence installation, vegetation/tree removal, and demolition activities. During implementation of remaining Erosion and Sediment Control devices, the Project Arborist must visit the site on a regular basis to continue monitoring tree preservation measures and ensure that all activities are conducted as identified in the Tree Preservation Plan and approved by FCON. Written reports mut be submitted to FCON and SDID site inspector detailing site visits. A monitoring schedule and Project Arborist reports must be described and detailed in the Tree Preservation Plan on the first, and all subsequent submissions of the site plan.
- 56.58. Soil Remediation. Soil in planting areas that contain construction debris and rubble, are compacted or are unsuitable for the establishment and long-term survival of landscape plants, will be the subject of remedial action to restore planting areas to satisfy cultural requirements of trees, shrubs, and groundcovers specified in the landscape planting plan. The applicant must provide notes and details specifying how the soil will be restored for the establishment and long-term survival of landscape plants for review and approval by FCON.
- 57.59. Invasive Species Management Plan. Forested areas within the limits of elearing and grading containing plant species that are known to be invasive in quantities that threaten the long term health and survival of the existing

vegetation present must be the subject of an invasive plan species management plan in order for the area to be awarded full 10-year canopy credit. At the time of site plan submission, the Applicant must provide a management plan for review and approval by FCON specifying the common and scientific name of invasive species proposed for management, the target area for management efforts, methods of control and disposal of invasive plants, timing of treatments and monitoring, duration of the management program, and potential reforestation as needed.

58.60. Stormwater Management. Stormwater management quantity and quality requirements will be met by utilizing Best Management Practices and Low Impact Development ("LID") technology practices like bio-retention or biofiltration facilities, vegetated swales, porous pavement, and/or tree box filtersFinal Site design will look at filters. At site plan, the applicant will consider converting wet ponds to extended detention ponds in appropriate areas around the site. Landscape features will incorporate infiltration of rainwater and preservation and/or creation of forested areas with no soil compaction. Additional LID design features will be considered as site plan is further refined. Stormwater management facilities will be designed in a manner calculated to reduce discharges leaving the site to levels that will minimize stream erosion through the use of the energy balance method (based on forested existing conditions or an improvement factor of 0.7) or any equivalent methodology.

The existing VDOT stormwater facility will meet the samepre-development conditions as currently exist if it is impacted by the improvements for this site, subject to approval by VDOT. This includes, but is not limited to capacity, function, area, volume, and easements or right of way for this facility. Access to this facility will be maintained or replaced in kind with equivalent access and accessibility by maintenance vehicles.

- 59.61. Salt Management. Salt must be applied during freezing increment weather only to paved surfaces where and when needed for safety. When no longer needed, excess or leftover salt must be removed for reuse at a later date or disposal. Residual salt must not be swept or shoveled into planted landscape areas, wet ponds, or bioretention ponds.
- 60. Resource Protection Area (RPA)/Environmental Quality Corridor (EQC).
  Areas of proposed disturbance within the RPA and EQC will be restored and revegetated in accordance with the standards specified in Par. (f) of Section 118.3-3 of the Chesapeake Bay Preservation Ordinance and as reviewed and approved by FCON. A restoration plan will be part of the site plan submission and the restoration work will be completed prior to the issuance of the first non-residential use permit.

- 61.62. Electric Vehicle Charging. Concurrent with the first site plan submission, the applicant will designate at least 2% of the parking spaces to be equipped with universal, Level 2 electric vehicle charging stations, fully wired and functional. This proffer does not apply to any parking or loading areas for tractor trailer trucks.
- 62.63. Green Building Commitment. The Applicant will select one of the following programs to be implemented, and will inform EDRB which program the Applicant has chosen as part of building plan submission for the building:

#### A. LEED New Construction

If the Applicant selects the Leadership in Energy and Environmental Design-New Construction ("LEED-NC") rating system, then the Applicant will pursue certification for the warehouse building under the most recent version of the LEED for Building Design and Construction, New Construction Rating System ("LEED BD+C-NC") rating system, other LEED rating system for which the project meets the eligibility requirements, or another equivalent rating system, with approval by EDRB.

- i. Project Checklist. The Applicant will include as part of the building plan submission for the warehouse building, a list of specific credits within the applicable LEED BD+C rating system that the Applicant anticipates attaining for the warehouse building. A LEED AP who is also a professional engineer or licensed architect will provide project scorecard updates at the time of building plan review for the warehouse building confirming that the items on the list will meet at least the minimum number of credits necessary to attain LEED Certification for the warehouse building.
- ii. County Team Member. In addition, the Applicant will designate the Chief of 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, but will not be assigned responsibility for any LEED credits and will not be provided with the authority to modify any documentation or paperwork.
- iii. <u>Green Building Escrow.</u> The Applicant will, prior to building plan approval, 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 of the new warehouse building.

The Green Building Escrow will be in addition to, and separate from, other bond requirements and will be released upon demonstration of attainment of LEED Certification, or higher level of certification, by the USGBC, under the applicable version of the LEED BD+C rating system. The provision to the EDRB of documentation from the USGBC that the warehouse building have attained LEED Certification will be sufficient to satisfy this commitment.

- iv. Waiver of Green Building Escrow. If the Applicant, prior to building plan approval for the warehouse building and prior to the posting of the Green Building Escrow submits documentation to the EDRB from the USGBC's design final review portion of the split review process, demonstrating that the warehouse building is anticipated to attain a sufficient number of design-related credits that, along with anticipated construction-related credits, will be sufficient to attain LEED Silver, the requirement for posting the Green Building Escrow will be waived. In the event the Applicant is unable to provide said documentation, or in the event that the design final review portion of the split review process is incomplete at the time of building plan approval, then the Applicant will be required to post the Green Building Escrow.
- v. <u>Release of Green Building Escrow.</u> The Green Building Escrow will be released in accordance with the following:
  - a. If the Applicant is able, subsequent to building plan approval, to provide the USGBC's documentation of the design final review portion of the split review process as described above demonstrating that the warehouse building is anticipated to attain LEED Silver, the County will release the entirety of the Green Building Escrow to the Applicant. Prior to release of the bond for the project, the Applicant will provide documentation to the EDRB demonstrating the status of attainment of LEED Silver from the USGBC for the warehouse building.
  - b. If, prior to bond extension, reduction or final bond release for the Property, whichever occurs first, the Applicant provides to the EDRB documentation demonstrating that LEED Certification for the warehouse building has been attained, the entirety of the Green Building Escrow will be released to the Applicant. If the certification is still in progress at the time of application for the bond extension or reduction, the time frame for the provision of the

- documentation described above will be automatically extended to the time of the next bond extension or reduction. However, the documentation must be provided prior to the final bond release for the Property.
- c. If, prior to bond extension, reduction or final bond release for the Property, whichever occurs first, the Applicant provides to the EDRB documentation demonstrating that LEED Certification for the warehouse building has not been attained but that the building has been determined by the USGBC to fall within three (3) points of the attainment of LEED Certification, fifty (50) percent of the Green Building Escrow will be released to the Applicant; the other fifty (50) percent will be released to Fairfax County and will be posted to a fund within the County budget supporting the implementation of County environmental initiatives. If the certification is still in progress at the time of application for the bond extension or reduction, the time frame for the provision of the documentation described above will be automatically extended to the time of the next bond extension or reduction. However, the documentation must be provided prior to the final bond release for the Property.
- d. If, prior to bond extension, reduction or final bond release for the Property, whichever occurs first, the Applicant fails to provide to the EDRB documentation demonstrating the attainment of LEED Certification or demonstrating that the warehouse building has fallen short of LEED Certification by three (3) points or fewer, the entirety of the Green Building Escrow will be released to Fairfax County and will be posted to a fund within the County budget supporting the implementation of County environmental initiatives. If the certification is still in progress at the time of application for the bond extension or reduction, the time frame for the provision of the documentation described above will be automatically extended to the time of the next bond extension or reduction. However, the documentation must be provided prior to the final bond release for the Property.
- e. Extension of Time. If the Applicant provides documentation from the USGBC demonstrating, to the satisfaction of EDRB, that USGBC's completion of the review of the LEED Certification application for the warehouse building have 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 will be made to the Applicant or to the County during the extension.
- vi. Alternative Program. Where the Applicant has provided evidence sufficient for EDRB to find that an alternative green building program that is administered by an independent third party or a proprietary program that has demonstrated equivalence to LEED or another independent third party rating system, other than the foregoing programs, will ensure that equivalent environmental and energy efficiency will be achieved in the project, the Zoning Administrator may approve the use of such alternative program, subject to such conditions as may be reasonably necessary to ensure that the alternative program will achieve the goals of this Proffer. The use of an alternative program must be approved by EDRB prior to Site Plan approval.
- 63.64. Noise. Noise attenuation construction measures must be utilized to ensure that interior noise is mitigated to levels that do not exceed 50 dBA DNL. Prior to the issuance of the non-residential use permit for each building, the Applicant will conduct post-development interior noise testing of the building(s), with such tests certified by an acoustical engineer, to demonstrate that an interior noise level of 50 dBA DNL or less has been achieved. The results of such post-development interior noise testing must be provided to EDRB.
- 64.65. Bird-Friendly Design. At the time of site plan submission, a narrative of bird-friendly design strategies to be employed with this building will be prepared and submitted to EDRB for review. The objective of the strategies will be to make the building visible to birds in flight and reduce reflections that district or confuse birds through the use of appropriate glazing treatments or architectural elements, such as using color, texture, opacity, patterns, louvers, screens, interior window treatments, or ultraviolet materials that are visible to birds. In addition, the Applicant will study whether interior lighting should be reduced and direct lighting which is visible from the exterior should be eliminated to reduce a building's attractiveness to birds flying at night. The Applicant should describe the results of its studies of bird-friendly design strategies, and to what extent any of the strategies will be implemented, in a narrative at the time of building permit issuance. To the extent strategies are identifies but not implemented, the narrative will describe the reason(s) for the exclusion of such strategies.
- 66. Seating. The applicant may add outdoor seating for employees on site, provided it does not reduce open space or increase land disturbance and is located in an areas with projected noise levels below 70 dba.

#### VIII. MISCELLANEOUS

65.67. Zoning Administrator Consideration. Upon demonstration that despite diligent efforts or due to factors beyond the Applicant's control, proffered improvements such as, but not limited to, the proffered right turn lane, have been delayed (due to, but not limited to, an inability to secure necessary permission from VDOT) beyond the timeframes specified, the Zoning Administrator may agree to a later date for completion of these proffered improvement(s).

#### **Successors and Assigns**

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

#### **Counterparts**

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

TITLE OWNER/APPLICANT'S SIGNATURES TO FOLLOW ON NEXT PAGE:

### RZ 2022-SU-00019

### PDCREF2 CHANTILLY LLC

\_\_\_\_

By: Michael Lefkowitz

Its: Authorized Agent

#### PROPOSED DEVELOPMENT CONDITIONS

#### SE 2022-SU-00038

#### **SEPTEMBER 7, 2023**

If it is the intent of the Board of Supervisors to approve SE 2022-SU-00038 to permit an Increase in Building Height for the proposed Data Center located on Tax Map Parcel 33-2 (1)) 6 pt., staff recommends that the Board of Supervisors condition the approval by requiring conformance with the following development conditions:

- Development of the property will be in substantial conformance with the Final Development Plan entitled "Generalized Development Plan RZ 2022-SU-00019 Special Exception Plan SE 2022-SU-00038" prepared by Kimley Horn, and dated August 14, 2023.
- 2. Pursuant to the Zoning Ordinance, this Special Exception will automatically expire, without notice, thirty (30) months after the date of approval unless, at a minimum, the Special Exception use has been established. The Board of Supervisors may grant additional time to establish the use or to commence construction if a written request for additional time is filed with the Zoning Administrator prior to the date of expiration of the Special Exception. The request must specify the amount of additional time requested, the basis for the amount of time requested and an explanation of why additional time is required.

The above proposed conditions are staff recommendations and do not reflect the position of the Board of Supervisors unless and until adopted by that Board.

This approval, contingent on the above noted conditions, will not relieve the applicants from compliance with the provisions of any applicable ordinances, regulations or adopted standards.

Date

August 14, 2023

# PRELIMINARY SOUND MODELING REPORT

Chantilly Premier Fairfax County, Virginia

### **Executive Summary**

Kimley-Horn has retained Ramboll to conduct a preliminary acoustical evaluation for a proposed data center site, "Chantilly Premier", within Fairfax County, Virginia. The following information is intended to present acoustical design considerations and evaluate potential impacts from the data center site on the surrounding area.

The project will include one 3-story data center building, which will operate 24 hours per day, 7 days per week. The primary sources of sound emissions are expected to be ventilation equipment, including rooftop exhaust fans and indoor air handling units, and emergency generators. The equipment and associated sound emissions considered in this assessment were based on available project information and Ramboll's experience with equipment typical of data center facilities.

The sound emissions associated with the proposed data center operation were assessed through predictive acoustical modeling. Under normal operation, compliance with Fairfax County Code of Ordinances is expected to require implementation of mitigation as described in this report, namely the use of upgraded rooftop exhaust fans and the installation of silencers (or acoustically equivalent) for air handling unit inlets on the east side of the building. With the implementation of these upgrades, the project is expected to be below the regulatory requirement for all surrounding zoning districts and align with land use compatibility guidelines for nearby residential receptors.

The sound emissions during two other operating scenarios were also evaluated: generator maintenance/testing, and emergency generator operation due to power loss. The predicted sound emissions during these scenarios represent increases over the normal operating conditions, but generator maintenance/testing is expected to occur within the parameters for exemption from the noise regulations described in Section 108.1-5-1(g) of the Fairfax County Code of Ordinances.

## 1. Regulatory Framework

An overview of the legislative/regulatory framework for the applicable jurisdictions as related to sound and vibration emissions is presented below.

#### 1.1 Environmental Sound Emissions

#### 1.1.1 Commonwealth of Virginia

No applicable regulatory requirements were discovered for the Commonwealth of Virginia.

#### **1.1.2** Fairfax County

The Fairfax County Code of Ordinances establishes noise limits based on the land use and zoning district classification specific to the property of the sound source or at any point within the property affected by the sound. Zoning district classification is determined based on the scheme of land use classifications contained in the Fairfax County Zoning Ordinance. The Code of Ordinances establishes limits for both continuous and impulsive sounds. Since the proposed facility is not expected to emit impulsive sounds, only the limits for continuous sound are identified below:

	Maximum Continuous Sound Levels (dBA)	
Use and Zoning District	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Residential Areas in Residential Districts - Residential area shall mean a parcel on which a residential dwelling is located and any contiguous rights-of-ways	60	55
Non-Residential Areas in Residential Districts - Non-residential area shall mean a parcel in a residential district that does not contain a residential dwelling and contains non-residential uses	60	60
Mixed Use Area - Mixed use area means the parcel on which one or more residential dwellings and at least one other non-residential use are located and any contiguous rights-of-ways	65	60
Commercial Districts	65	65
Industrial Districts	72	65

Emergency Operations - The emission of sound in the performance of emergency work is exempt from the Fairfax County Code of Ordinances. Additionally, the emission of sound associated with the operation of back-up generators during power outages resulting from storms and other emergencies is specifically exempt from the noise ordinance limits per Section 108.1-5-1(g).

Emergency Generator Testing/Maintenance - Routine testing and maintenance of back-up generators is exempt from the noise ordinance limits per Section 108.1-5-1(g) when the following conditions are met:

- Testing and maintenance occur during daytime hours (7 a.m. and 9 p.m.); and
- Testing and maintenance occur for no more than two hours a day.

Construction Activities - Noise from construction activities is exempt from the County ordinances per Section 108.1-5-1(k) provided the activities occur between 7 a.m. and 9 p.m. and provided such activities do not exceed 90 dBA in a residential area. Construction is prohibited per Section 108.1-4-1(b) between the hours of 9 p.m. and 7 a.m. on Sunday through Thursday, or between 9 p.m. and 9 a.m. on Fridays, Saturdays, and the day before a Federal holiday.

#### 1.1.3 References

Ramboll reviewed the following regulatory sources in August 2023. Links to the sources reviewed are provided below:

- Fairfax County Code of Ordinances, Chapter 108.1, Noise <u>CHAPTER 108.1. Noise</u>
   <u>Ordinance. | Code of Ordinances | Fairfax County, VA | Municode Library</u>
- Fairfax County Zoning Ordinance <a href="https://www.fairfaxcounty.gov/planning-development/zoning-ordinance">https://www.fairfaxcounty.gov/planning-development/zoning-ordinance</a>
- Fairfax County GIS and Zoning Maps <a href="https://www.fairfaxcounty.gov/planning-development/maps-and-geographic-applications">https://www.fairfaxcounty.gov/planning-development/maps-and-geographic-applications</a>

## 2. Sound Emissions Analyses

#### 2.1 Methodology

The noise emissions assessment for the project was completed using a sound prediction software package, Cadna/A, published by Datakustik GmbH, which is configured to implement the ISO 9613

environmental sound propagation algorithms. It allows the creation of complex acoustical models and predicts sound pressure levels due to sound emissions from a specific source(s). The modelling considers many factors that influence sound propagation including source sound level and directivity, distance attenuation, source-receptor geometry, barrier effects of buildings and topography, and ground and atmospheric attenuation.

#### 2.2 Facility Design and Equipment

The equipment and associated sound emissions considered in this assessment were based on available project information and Ramboll's experience with equipment typical of data center facilities. The facility equipment and associated equipment sound level data considered in the acoustical model are identified in the table below.

Estimated Equipment Sound Levels						
Equipment Type		Location	Sound Level (dBA)	Quantity		
Cooling and Ventilation System	Upgraded Exhaust Fans - Daytime (100% speed)	Exhaust fans on the roof	91 ¹	115		
	Upgrade Exhaust Fans - Nighttime (83% speed)	and directed upward	87 <sup>1</sup>			
	Air Handling Unit - West side	Inlet Louver Face	85 <sup>2</sup>	9 per building side. East side includes effects of inlet silencers.		
	Air Handling Unit - East side (with inlet silencer)	Thet Louver Face	71 <sup>3</sup>			
Emergency Power Generators (≤ 2.75 MW)		Generator yard	105 4	27		
Emergency Power Generators - House ( $\leq 1$ MW)		Generator yard per building	105 <sup>5</sup>	1		
Load Bank		Atop each generator	109 ¹	1 per generator		

- 1. Vendor furnished sound power levels.
- 2. Vendor furnished sound power level (per square meter) for air-handling unit at 100% load.
- 3. Vendor furnished sound power level (per square meter) for air-handling unit at 100% load. Includes silencer with minimum insertion loss of 14 dB.
- 4. Vendor provided sound power level for emergency power generators with upgraded enclosures, based on expected sound pressure level rating of 75 dBA at 23 feet. Based on conceptual layout, a portion of the generators are expected to be stacked
- 5. Vendor provided sound power level for house generator, based on sound pressure level rating of 75 dBA at 23 feet.

## 3. Normal Operations

#### Typical Daily Operation

As previously discussed, the data center will operate 24 hours per day, 7 days per week. During nighttime hours, select building ventilation equipment operates at a capacity below typical daytime operation. During typical operation, sound will emanate from both the ventilation systems (i.e., air inlet and exhaust fans) for the building. Daytime operation was considered as the worst-case operating condition for assessing compliance with local limits since rooftop ventilation equipment sound emissions are higher during the day, and regulatory limits for commercial (65 dBA) and nonresidential areas in a residentially zoned district (60 dBA) do not change from day to night. Figure 1 presents the modeled project sound emissions during normal operations.

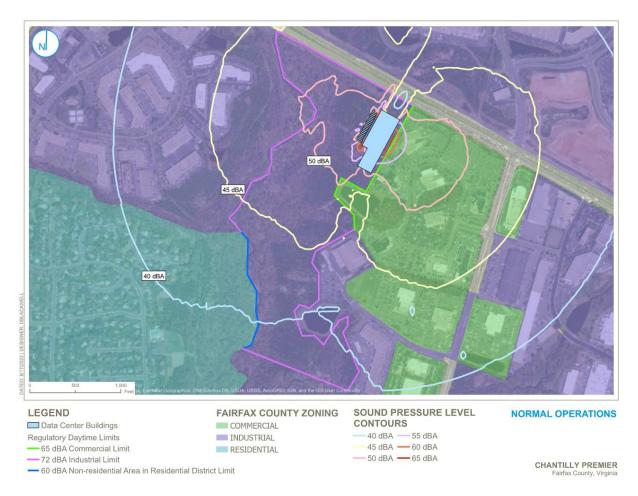


Figure 1 - Project sound emissions full load daytime operation

#### Code Compliance

Based on the results of the acoustical model, mitigation measures as described in the previous section (upgraded rooftop exhaust fans and air handling unit inlet silencers, or other mitigation measures of comparable performance) will be required to achieve compliance at the commercial boundary east of the site. As shown in Figure 1, sound emissions from the facility are expected to be 52 – 61 dBA at the commercial boundary to the west, and 40 - 42 dBA at the residential area to the southwest during daytime hours. Project sound emissions during nighttime hours will be lower since fan operating speed will be reduced at night. Sound emissions at all site boundaries are predicted to comply with regulatory limits as shown in the following table:

Preliminary Sound Modeling Results - Normal Operations, Daytime						
	Location					
	Commercial Boundary (East)	Residential Boundary (Southwest)	Industrial Boundary			
Predicted Project Sound Level	52 - 61 dBA	40 - 42 dBA	45 - 55 dBA			
Applicable Regulatory Limit	65 dBA	60 dBA	72 dBA			

## 4. Generator Maintenance/Testing and Emergency Operations

The emergency generators are expected to operate occasionally for a short duration to test and ensure readiness, and all generators will operate during any potential power outages. As noted previously, noise emission from generator maintenance and testing are exempt from the limits set forth in the Fairfax County Zoning Ordinance provided that the maintenance and testing occur between 7 a.m. and 9 p.m. and provided such activities occur for no more than two hours per day. Emergency generator operations during power outages resulting from storms and other emergencies are also exempt from the noise ordinance limits.

The following table summarizes the predicted project sound emissions at the property boundary during maintenance and emergency operations. Modeled sound level contours for single generator maintenance scenarios and during emergency operations are presented in Figure 2 and Figure 3 below.

Preliminary Sound Modeling Results – Generator Maintenance and Emergency Operations						
	Location					
Scenario	Commercial Boundary (East)	Residential Boundary (Southwest)	Industrial Boundary			
Maintenance/Testing - Single Generator	47 - 61 dBA	41 - 47 dBA	45 - 54 dBA			
Maintenance/Testing - All Generators	49 - 61 dBA	46 - 52 dBA	52 - 63 dBA			
Emergency Operations	49 - 61 dBA	46 - 52 dBA	52 - 63 dBA			

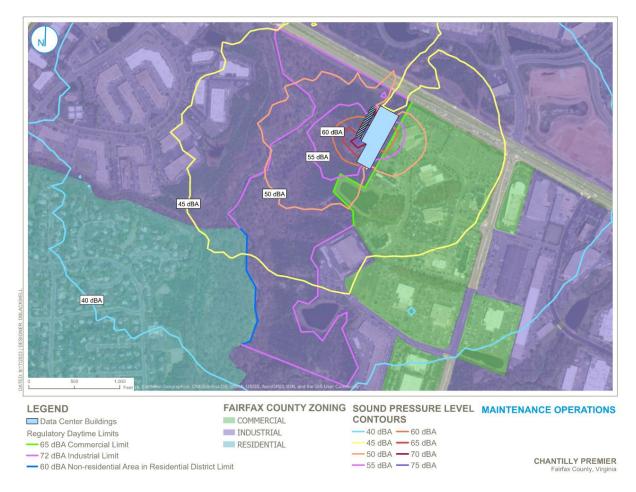


Figure 2 - Project sound emissions during single generator maintenance activities

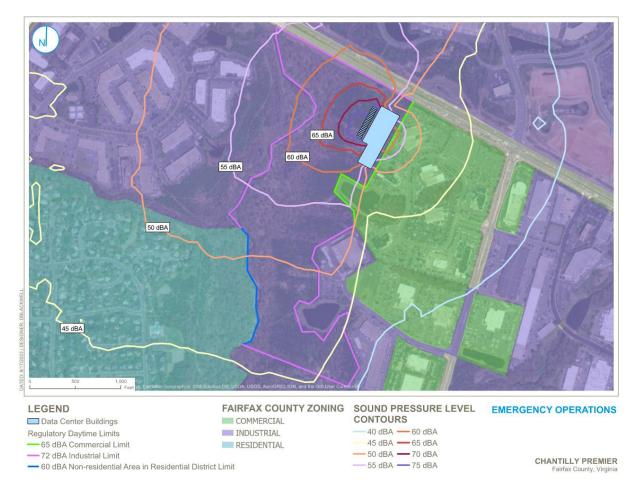


Figure 3 - Project sound emissions during emergency operations and simultaneous testing of all generators



## County of Fairfax, Virginia

## MEMORANDUM

**DATE:** 09/01/2023 | 13:52:17 EDT

**TO:** Emma Estes, Staff Coordinator

**Zoning Evaluation Division** 

Department of Planning and Development

**FROM:** Camylyn Lewis, P.E., CFM

Senior Engineer III, North Branch

Site Development and Inspections Division (SDID) Department of Land Development Services (LDS)

**SUBJECT:** Zoning Application No. RZ-2022-SU-00019; Chantilly Premier; Generalized

Development Plan dated August 11, 2023; Tax Map No 033-2-01-0006; Sully

District

The subject application has been reviewed and the following stormwater management comments are offered at this time:

#### **Chesapeake Bay Preservation Ordinance (CBPO)**

There is Resource Protection Area (RPA) on the project property. The applicant has shown the approved RPA boundary from plan 312-RPA-003-2

#### Option 1

The plan indicates a manufactured treatment device, a level 2 wet pond, and a level 1 bioretention facility. There is one outfall into the RPA.

Sheet C-100 states that areas of proposed disturbance in the RPA will be restored and revegetated in accordance with 118-3-3; the note about the disturbance in the RPA, is just for the outfall; a water quality impact assessment will be required in the plan for the outfall.

#### Option 2

The plan indicates two level 2 bio-retention facilities and an underground vault. There is one outfall into the RPA.

Sheet C-100 states that areas of proposed disturbance in the RPA will be restored and revegetated in accordance with 118-3-3; the note about the disturbance in the RPA, is just for the outfall; a water quality impact assessment will be required in the plan for the outfall.



Emma Estes, Staff Coordinator Zoning Application No. RZ-2022-SU-00019 Page 2 of 3

#### **Floodplain**

There is regulated floodplain on the project property.

The applicant has plotted the floodplain boundary on the plans (it is noted in the narrative on sheet C-308). The certifications from technical bulletin 16-02 and letter to industry 12-03 will be required in the site plan. A floodplain use determination (FPUD) will be required for the outfall into the floodplain at the time of the site plan.

#### **Downstream Drainage Complaints**

There are no contemporary downstream drainage complaints on file.

#### **Stormwater Quality**

Water quality controls are required for this project per the Stormwater Management Ordinance (SWMO), County Code Chapter 124, at sections 124-1-6, 124-4-1, and 124-4-2.

The applicant has provided the VRRM spreadsheets for both option 1 and option 2 to demonstrate that the Chapter 124 water quality requirements, and the Water Supply Overlay District requirements could be met. The detailed review will be with the site plan.

#### **Stormwater Quantity - Detention**

Water quantity controls for stormwater detention are required for this project per SWMO 124-1-6, 124-4-1, and 124-4-4.D. The entire site is wooded, see the CN number on sheet C-300 and C301; the applicant is providing detention to forested conditions

#### **Stormwater Quantity - Outfalls**

Water quantity controls for outfall channel and flood protection are required for this project per SWMO 124-1-6, 124-4-1, 124-4-4.B, and 124-4-4.C. The applicant states in the narrative that the plan proposes to address the outfall for both option 1 and option 2 by providing detention to forested conditions. The pre-developed site is wooded, see the CN number on sheet C-300 and C301; the applicant is providing detention to forested conditions

Sheet C-309 shows the limit of analysis. The 11.3 acre site discharges into Cub Run where the drainage area is 5,492 acres.

Both options propose a pipe discharging to the floodplain limit and a channel to the main stream bed. Option 1 requires an emergency spillway. The applicant has considered the space needed for the overland emergency spillway and for the pond outfall pipe.

An administrative WQIA will be required to be included in the site plan, outfalls are an allowed use and an exception is not required (Sheet C-308).

#### **Watershed Management Plans**

Emma Estes, Staff Coordinator Zoning Application No. RZ-2022-SU-00019 Page 3 of 3

This site is located within the Cub Run Watershed and the Upper Cub Run Water Management Area. Stormwater Planning completed a stream restoration project on Schneider Branch. As the applicant's project proposes onsite SWM/BMP facilities, this project should have little to no impact on the future County projects.

#### Dam Breach

The project property is not located within a dam breach inundation zone.

#### **Miscellaneous**

The stormwater management plan to be prepared at final design must address all of the items listed in SWMO 124-2-7.B.

The latest BMP specifications provided on the Virginia Stormwater BMP Clearinghouse website, in addition to the Public Facilities Manual, must be used for final design. The design engineer is also referred to LTI 14-13 with regard to the selection of appropriate BMPs.

Please contact me at 703-324-1720 (1804 direct) or Camylyn.Lewis@FairfaxCounty.gov, if you have any questions or require additional information.

cc: Shannon Curtis, Chief, Watershed Assessment Branch, Stormwater Planning Division (SWPD), Department of Public Works and Environmental Services (DPWES)
Dipmani Kumar, Chief, Watershed Planning and Evaluation Branch, Stormwater Planning Division SWPD, DPWES

Bin Zhang, Chief, North Branch, SDID, LDS Thakur Dhakal, Engineer IV, SDID, LDS Zoning Application File



## FAIRFAX COUNTY PARK AUTHORITY





#### ------ MEMORANDUM ------

**TO:** Suzanne Wright, Director

**Zoning Evaluation Division** 

Department of Planning and Development

**FROM:** Randall Farren, Manager

Park Planning Branch, PDD \*\*

**DATE:** August 28, 2023

SUBJECT: RZ-2022-SU-00019 & SE-2022-00038 Chantilly Premier - REVISED

Tax Map Number: 33-2 ((1)) 6 (pt.)

#### **BACKGROUND**

The Fairfax County Park Authority (FCPA) staff has reviewed the draft Proffer Statement dated August 14, 2023, and General Development Plan (GDP) revised August 11, 2023, for the above-referenced application. The applicant requests to rezone a split-zoned 12-acre portion of a 79-acre parcel to the I-5 industrial zoning district to develop either a 402,000-SF data center ("Option 1") or 150,000-SF warehouse ("Option 2"). The applicant also requests a Special Exception (SE) for Option 1 to increase the allowable building height and floor area ratio (FAR). The remaining 67-acre portion of the parcel, which is zoned I-3 and not subject to this rezoning, is located within a Resource Protection Area (RPA) and is immediately adjacent to Cub Run Stream Valley Park, owned by the Fairfax County Park Authority (FCPA). This memo supersedes previous FCPA memos for this case dated May 4, 2023, and June 6, 2023.

#### 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 policy plan describes multiple objectives focusing on protection, preservation, and sustainability of resources (Parks and Recreation Objectives 2 and 5, pp.5-7).

The Dulles Suburban Center recommendations in the Area III Plan describe the importance of neighborhood parks and trails. In addition, recommendations for the sub-unit containing this application site specifically cite the importance of resource protection and pedestrian links to achieving the Plan's objectives (Area III, Dulles Suburban Center, Area-Wide Recommendations, Parks and Recreation, pp. 37-41, 116, 118).

#### **ANALYSIS AND RECOMMENDATIONS**

#### Park Needs:

Using adopted service level standards, FCPA staff has identified a need for all types of parkland and recreational facilities in this area. Existing nearby parks meet only a portion of the demand for parkland generated by development in the Dulles Suburban Center. In addition to parkland, the recreational facilities in greatest need in this area include basketball courts, playgrounds, and trails. As described in *the Great Parks*, *Great Communities* Comprehensive Park System Plan, the opportunities to add to existing parkland in the Bull Run Planning District are limited.

#### Recreational Impact of Commercial Development:

The proposed commercial development is anticipated to impact park resources and service levels. Employees have a need to access recreational amenities at lunchtime or after work. The Comprehensive Plan for the Dulles Suburban Center area calls for a combination of private and public funding to contribute toward new facilities to serve both residents and workers. Recent monetary contributions to offset the impacts of commercial development in Suburban Centers have averaged \$0.27 per square foot. Applying this rate to the proposed development options, the Park Authority requests a contribution of \$108,540 (Option 1) or \$40,500 (Option 2) for recreational facility development at one or more park sites located within the service area of the subject property. As noted below, the applicant's draft Proffer Statement includes a commitment (Proffer #6) to provide this contribution in the event that the option to dedicate the RPA area to the Park Authority is not exercised.

#### Natural Resources Impact:

Stormwater management. The stormwater facilities proposed contain two wet pond designs, which vary based on the development option. The designs have been improved since the previous submission to only include one outfall through a pipe and extended rip-rap channel that outfalls into Cub Run. In response to staff's earlier concerns regarding the proposed stormwater management approach, the applicant has revised their stormwater plan and addressed concerns related to detention capacity, outfall adequacy, and revegetation of outfall areas, to the satisfaction of Park Authority staff. Staff may have additional comments on the proposed stormwater management approach when a more detailed stormwater management plan is provided at the time of site plan.

*Diesel generator yard.* Option 1 would permit the construction of a diesel generator yard to support the data center use. Staff previously noted concerns regarding contamination of FCPA's adjacent and downstream properties and the Cub Run watercourse in the event of a diesel spill. The applicant has provided additional details regarding diesel fuel handling, storage, spill containment, and operational safeguards. Further, the draft proffer statement includes new commitments to safety features and the use of an oil/water separator to contain any potential leaks onsite and prevent contamination of the adjacent RPA or stormwater facilities.

#### **Cultural Resources Impact:**

The parcel was subject to archival cultural resources review. The parcel has high potential for both historic and Native American sites. The applicant has conducted a Phase I archaeological survey, and found the sites disturbed and unlikely significant or eligible for inclusion on the

Suzanne Wright RZ-2022-SU-00019 & SE-2022-00038 Chantilly Premier Page 3

National Register of Historic Places. Park Authority Archaeology staff has reviewed the report and concurs with the consultant that no additional archaeological work is warranted. There are no additional cultural resources issues.

#### Dedication of Land to the Park Authority:

The applicant's draft Proffer Statement includes an option to dedicate the remaining 67 acres of the subject parcel that are not subject to this entitlement request to the Park Authority. The Comprehensive Policy Plan (Parks and Recreation Element, Objective 6, Policy e) supports "the dedication of appropriate lands to the Fairfax County Park Authority that meet the criteria for Resource Protection Areas and parkland adjacent to stream valleys..." **Staff continues to support the dedication of the onsite Cub Run stream valley RPA to the Park Authority.** 

Draft Proffer #6 commits to either 1) dedicate the RPA area to the Park Authority, or 2) provide a contribution to the Park Authority consistent with other non-residential development projects in designated Suburban Centers. If the dedication option is exercised, the draft proffer includes reasonable commitments on the part of the applicant to remove and control of any running bamboo that may occur onsite, remove any known trash and/or hazardous materials, and retain maintenance responsibilities for offsite stormwater outfalls within the RPA area. Park Authority staff considers this draft proffer a considerable improvement over the previous draft but continues to prefer a firmer commitment to the land dedication option to ensure that the above-referenced plan policy is met. Nonetheless, Park Authority staff appreciates the applicant's consideration of a parkland dedication and remains willing and available to coordinate such a land conveyance as the land development process moves forward.

#### Trails:

The Comprehensive Countywide Trails Plan Map includes a planned stream valley trail along the eastern bank of Cub Run. In the event that the applicant does not elect to dedicate the RPA area to the Park Authority, Park Authority staff previously requested that the applicant grant a 20-foot stream valley trail easement to allow the establishment of a trail within the RPA open space. Sheets C-100 and C-101 of the GDP depict a "20" wide stream valley trail easement (to be located at site plan)," while draft Proffer #6 similarly commits to grant this trail easement in the event that the property is not dedicated to the Park Authority.

#### **SUMMARY OF RECOMMENDATIONS**

The Park Authority recommends the following:

 Commit to dedicating the RPA-encumbered portions of the site to the Park Authority, in accordance with the Parks and Recreation element of the Comprehensive Plan and subject to the aforementioned development conditions, to enable the expansion of FCPA's Cub Run Stream Valley Park.

Please note the Park Authority would like to review and comment on proffers and/or development conditions related to park and recreation issues. Please send draft and final proffers and/or development conditions to the assigned reviewer noted below for review and comment prior to completion of the staff report and prior to final Board of Supervisors approval.

Suzanne Wright RZ-2022-SU-00019 & SE-2022-00038 Chantilly Premier Page 4

FCPA Reviewer: Randall Farren DPD Coordinator: Emma Estes

eCopy: Brendon Hanafin, Director, Planning & Development Division

Samantha Hudson, Assistant Division Director for Planning & Real Estate, PDD

John Burke, Manager, Natural Resources Branch

Yudhie Brownson, Project Coordinator, Real Estate Services Branch

Chris Blough, Development Review Section Supervisor, Park Planning Branch

James Corcoran, Trails Manager, PDD

Emma Estes, Zoning Coordinator, DPD

Randall Farren, Park Planning Branch

Lynne Johnson, Planning Tech, Park Planning Branch

File Copy



## County of Fairfax, Virginia

## M E M O R A N D U M

**DATE:** August 8, 2023

**TO:** Emma Estes, Staff Coordinator

Zoning Evaluations Division, DPD

FROM: Rachel Jackson-Roth, Urban Forester II

Forest Conservation Branch, LDS

**SUBJECT:** PDCREF 2 Chantilly LLC

RZ-2022-00019 SE-2022-SU-00038

I have reviewed the Proffered Conditions dated August 2, 2023 the following comment and recommendation is a based on this review.

1. Comment: All outstanding FCON comments have been addressed.

**Recommendation**: FCON supports this application.

RJR/

UFMDID #: 318746 & 318745





NOT FOR CONSTRUCTION

SHEET NUMBER EX-1