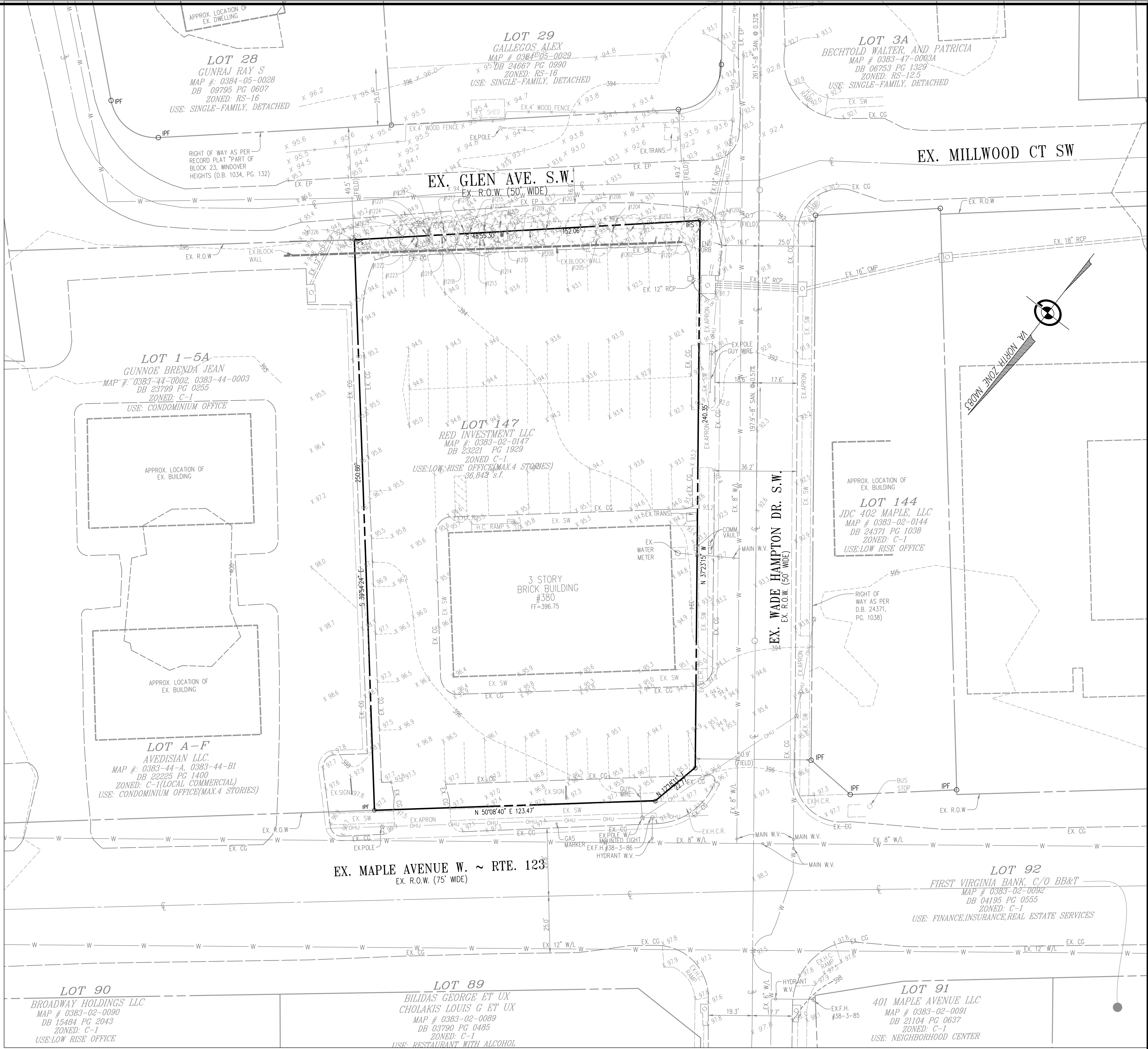


GREENWAY ENG. - Z:\N131 - 380 W Maple Avenue\Engineering\Site Plan\N131-05-EX CONDITIONS.dwg Mar 19, 2019 - 12:51pm mhofman

TREE TABULATION	
DL= DENOTES APPROX. DRIP LINE RADIUS	
NO.	DESCRIPTION
1200	16" LOCUST 16' DL
1201	12" LOCUST 12' DL
1202	18" LOCUST 16' DL
1203	12" LOCUST 12' DL
1204	8" LOCUST 10' DL
1205	18" TREE 14' DL
1206	8" LOCUST 10' DL
1207	6" LOCUST DEAD
1208	6" LOCUST DEAD
1209	6" LOCUST 8' DL
1210	6" LOCUST 8' DL
1211	8" LOCUST 8' DL
1212	8 LOCUST DEAD
1213	16 LOC 16DL
1214	16 LOC 16DL
1215	10" LOCUST 8' DL
1216	10" TREE 10' DL
1217	12" CHERRY 16' DL
1218	10" LOCUST 10' DL
1219	8 LOCUST 10' DL
1220	8" LOCUST 8' DL
1221	8" LOCUST 8' DL
1222	8" LOCUST 8' DL
1223	8" LOCUST 8' DL
1224	8" LOCUST 8' DL
1225	12" LOCUST 14' DL
1226	10" LOCUST 12' DL

NOTE: THERE ARE NO EXISTING UTILITY EASEMENTS ON-SITE



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EXISTING CONDITIONS

380 W MAPLE AVE - OPTION 1
MAC ZONING PLAN

HUNTER MILL TOWN OF VIENNA, TRANSPORT
TOWN OF VIENNA, VIRGINIA

No.	DATE	DESCRIPTION	REVISIONS

PLAN DATE
03/15/2019

DATE: FEB 2019

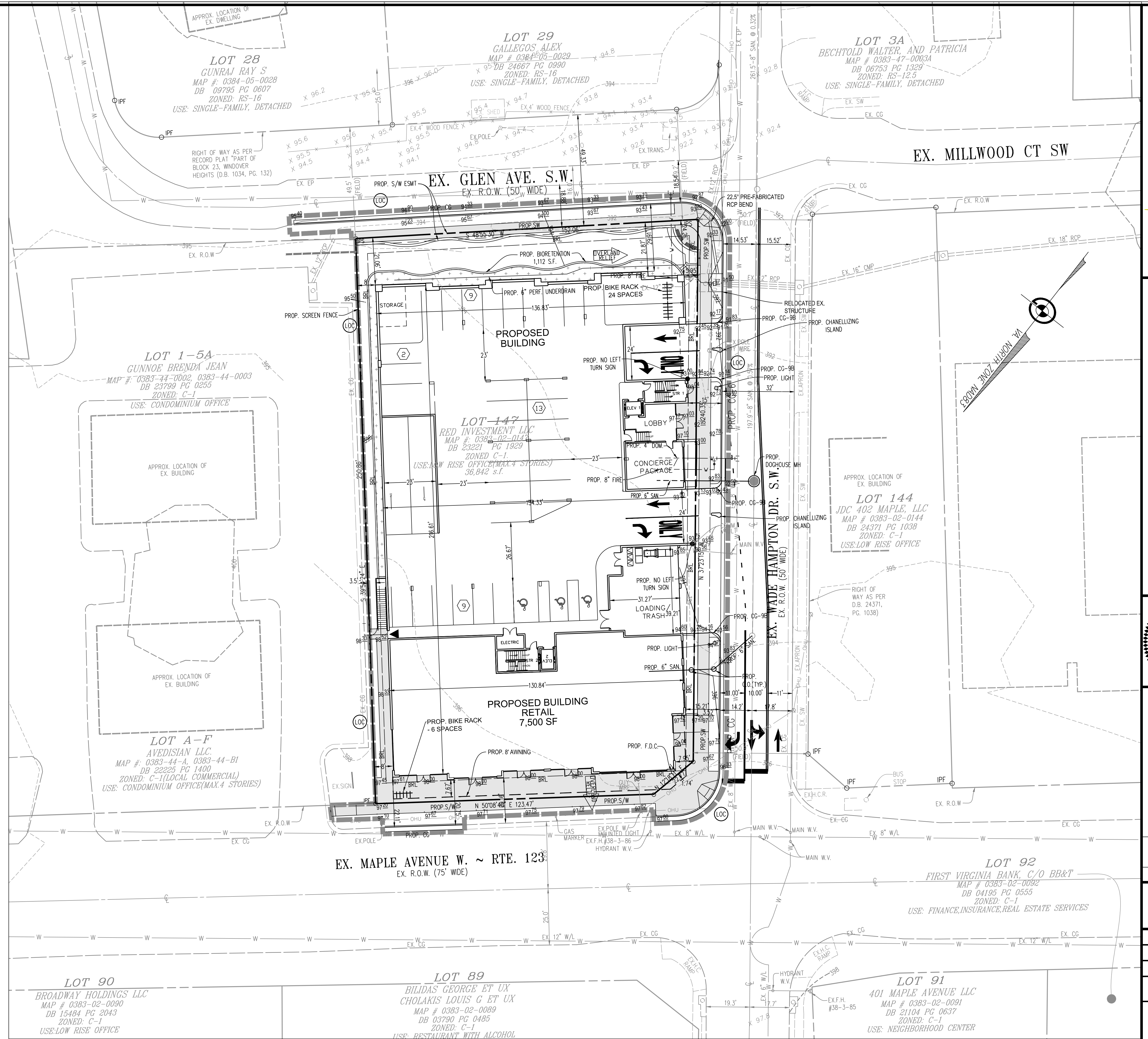
C.I.= 2'

SCALE: 1"=20'

FILE No.
N131

SHEET
02
OF
13

NOTES:
-THIS APPLICATION PROPOSES A SIDEWALK EASEMENT ALONG
GLEN AVENUE.
-THERE AREA NO KNOWN ENVIRONMENTAL OR HISTORICAL
FEATURES ON SITE



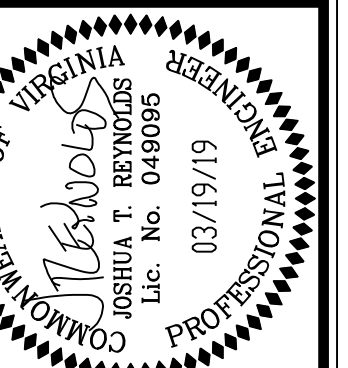
GREENWAY ENG. - Z:\N131 - 380 W Maple Avenue\Engineering\Site Plan\Option 1\N131-06-CONCEPT.dwg Mar 19, 2019 - 12:51pm LKim

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380 W MAPLE AVE - OPTION 1
MAC ZONING PLAN
HUNTER MILL TOWN OF VIENNA TRANSPORT
TOWN OF VIENNA, VIRGINIA



		DESCRIPTION		
		No.	DATE	
		REVISIONS		
03/19/2019				
DATE: FEB 2019				
SCALE: 1"=2'				
FILE No. N131				
SHEET 03 OF 13				

Project Title: 380 West Maple
Date: 43537

Total Rainfall (in):	43
Total Disturbed Acreage:	1.01

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.08	0.08	0.16	16
Impervious Cover (acres)	0.00	0.00	0.16	0.69	0.85	84
					1.01	100

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.10	0.05	0.15	15
Impervious Cover (acres)	0.00	0.00	0.14	0.72	0.86	85
					1.01	100

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post- ReDevelopment	Post- Development (New Impervious)	Adjusted Pre- ReDevelopment
Site Rv	0.84	0.84	0.95	0.84
Treatment Volume (ft ³)	3,091	3,056	34	3,056
TP Load (lb/yr)	1.94	1.92	0.02	1.92

Total TP Load Reduction Required (lb/yr)	0.40	0.38	0.02
--	------	------	------

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre-ReDevelopment
TN Load (lb/yr)	13.89	13.79

Drainage Area A Land Cover (acres)

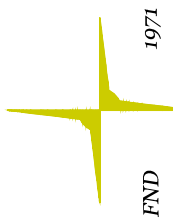
	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)					0.00	0.00
Managed Turf (acres)			0.03		0.03	0.22
Impervious Cover (acres)			0.10	0.39	0.49	0.95
Total					0.52	

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft³)	Runoff Reduction (ft³)	Remaining Runoff Volume (ft³)	Total BMP Treatment Volume (ft³)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
6. Bioretention (RR)													
6.a. Bioretention #1 or Micro-Bioretention #1 or Urban Bioretention (Spec #9)	40	0.03	0.49	0	685	1,028	1,714	25	0.00	1.08	0.59	0.48	

Maximum % Reduction Required Below Pre-ReDevelopment Load	20%
---	-----

Total Runoff Volume Reduction (ft ³)	685
Total TP Load Reduction Achieved (lb/yr)	0.59
Total TN Load Reduction Achieved (lb/yr)	4.92
Remaining Post Development TP Load (lb/yr)	1.35
Remaining TP Load Reduction (lb/yr) Required	0.00

**** TARGET TP REDUCTION EXCEEDED BY 0.19 LB/YEAR ****

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BEST MANAGEMENT PRACTICES - COMPUTATIONS

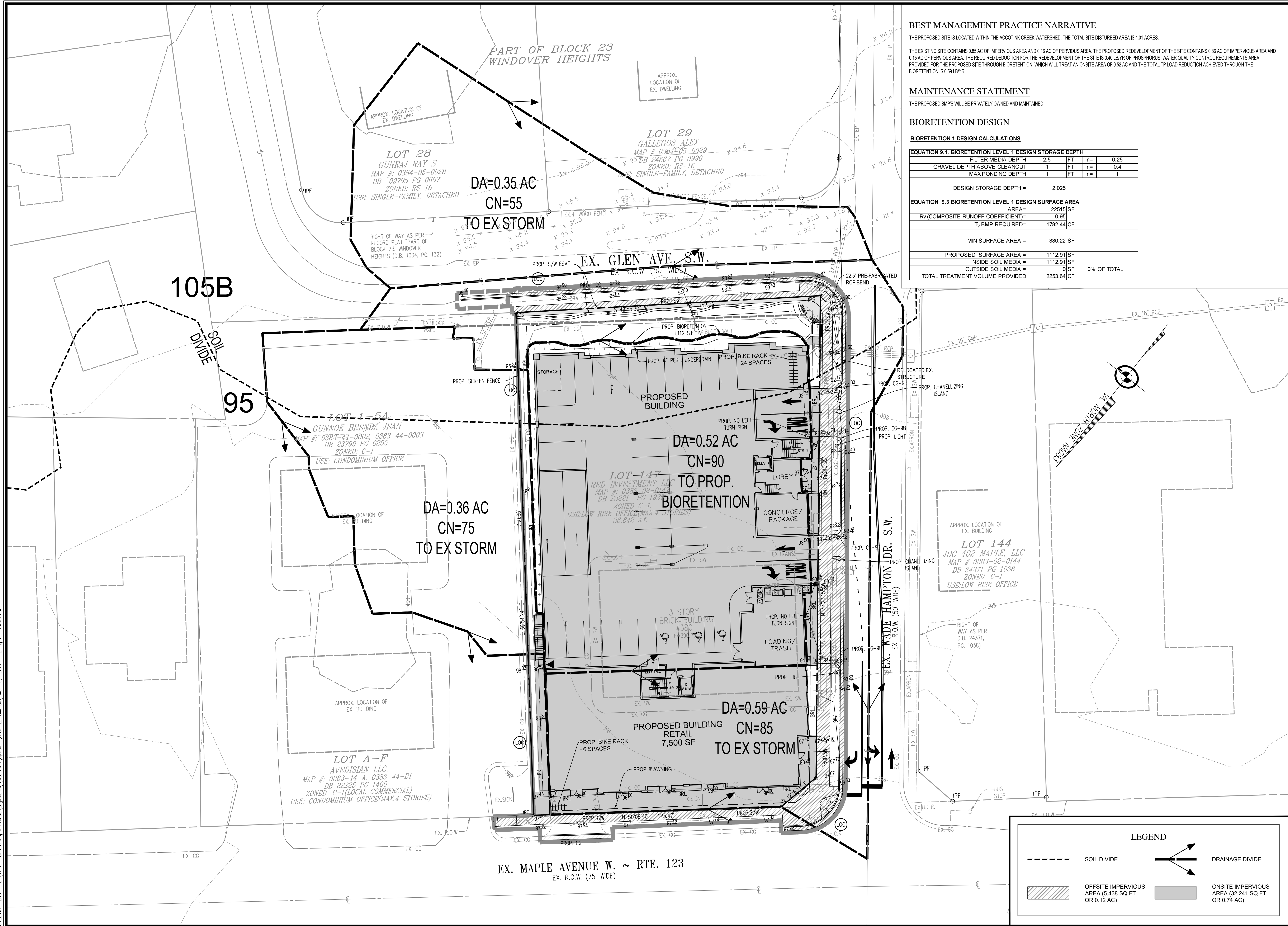
380 W MAPLE AVE - OPTION 1

MAC ZONING PLAN

HUNTER MILL TOWN OF VIENNA TRANSPORT
TOWN OF VIENNA, VIRGINIA

[illegible]

PLAN DATE	03/19/2019
DATE: FEB 2019	
C.I.= N/A	
SCALE: N/A	
FILE No. N 131	
SHEET 07 OF 13	



BEST MANAGEMENT PRACTICE NARRATIVE

THE PROPOSED SITE IS LOCATED WITHIN THE ACCOTINK CREEK WATERSHED. THE TOTAL SITE DISTURBED AREA IS 1.01 ACRES.

THE EXISTING SITE CONTAINS 0.85 AC OF IMPERVIOUS AREA AND 0.16 AC OF PERVIOUS AREA. THE PROPOSED REDEVELOPMENT OF THE SITE CONTAINS 0.86 AC OF IMPERVIOUS AREA AND 0.15 AC OF PERVIOUS AREA. THE REQUIRED DEDUCTION FOR THE REDEVELOPMENT OF THE SITE IS 0.40 LB/YR OF PHOSPHORUS. WATER QUALITY CONTROL REQUIREMENTS AREA PROVIDED FOR THE PROPOSED SITE THROUGH BIORETENTION, WHICH WILL TREAT AN ONSITE AREA OF 0.52 AC AND THE TOTAL TP LOAD REDUCTION ACHIEVED THROUGH THE BIORETENTION IS 0.59 LB/YR.

MAINTENANCE STATEMENT

THE PROPOSED BMP'S WILL BE PRIVATELY OWNED AND MAINTAINED.

BIORETENTION DESIGN

BIORETENTION 1 DESIGN CALCULATIONS

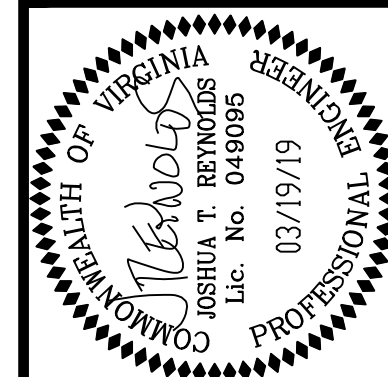
EQUATION 9.1. BIORETENTION LEVEL 1 DESIGN STORAGE DEPTH				
FILTER MEDIA DEPTH	2.5	FT	$\eta =$	0.25
GRAVEL DEPTH ABOVE CLEANOUT	1	FT	$\eta =$	0.4
MAX PONDING DEPTH	1	FT	$\eta =$	1

DESIGN STORAGE DEPTH = 2.025

EQUATION 9.3 BIORETENTION LEVEL 1 DESIGN SURFACE AREA

AREA=	22515	SF
Rv (COMPOSITE RUNOFF COEFFICIENT)=	0.95	
T _v BMP REQUIRED=	1782.44	CF

MIN SURFACE AREA =	880.22 SF	
PROPOSED SURFACE AREA =	1112.91 SF	
INSIDE SOIL MEDIA =	1112.91 SF	
OUTSIDE SOIL MEDIA =	0 SF	0% OF TOTAL
TOTAL TREATMENT VOLUME PROVIDED	2253.64 CF	

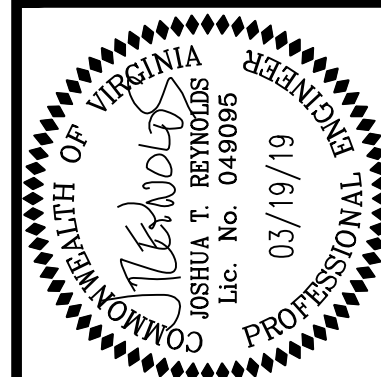
[illegible]

PLAN DATE	03/19/2019
DATE: FEB 2019	
C.I.= 2'	
SCALE: 1"=20'	
FILE No. N131	
SHEET 08 OF 13	

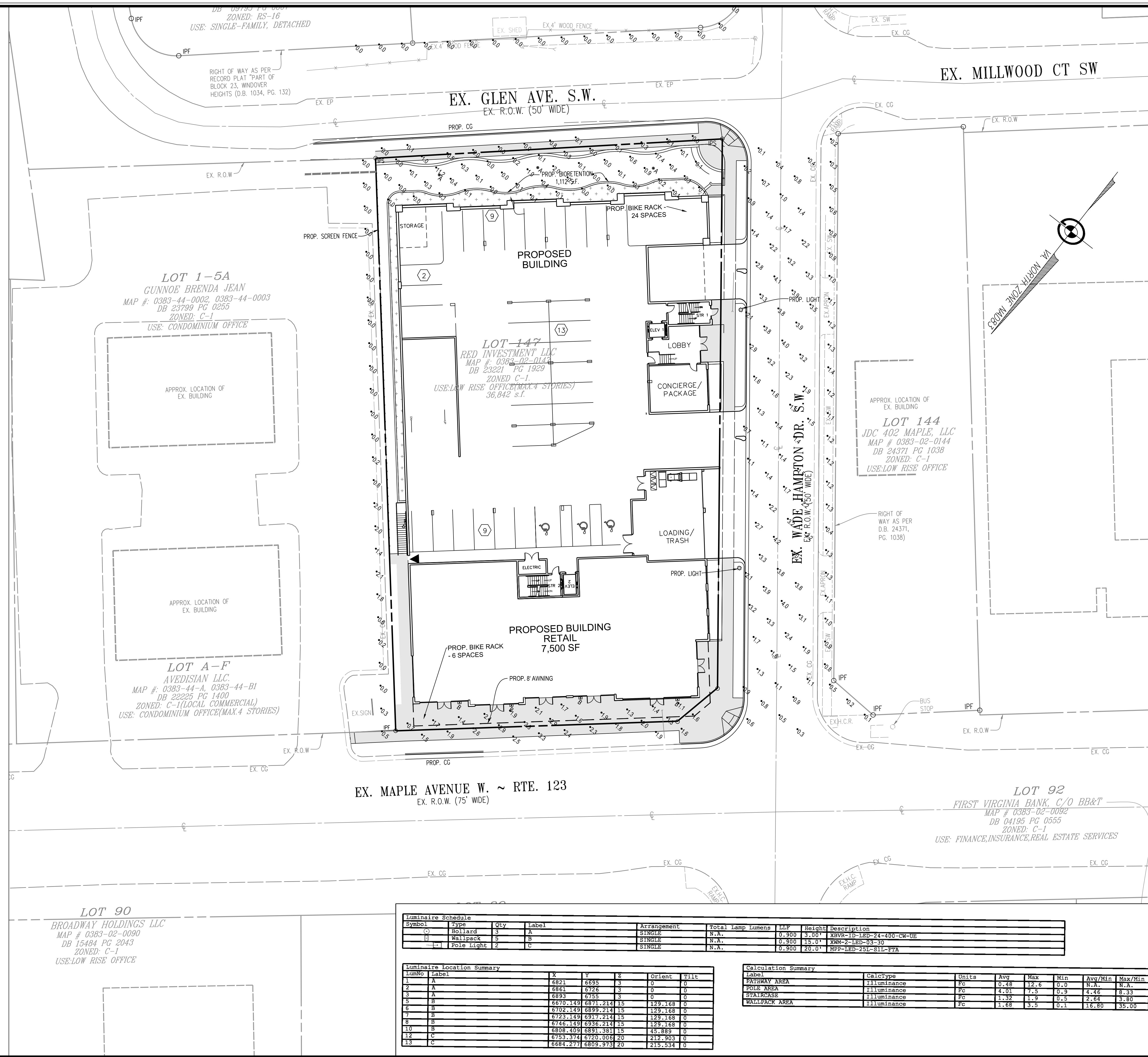
PROP. OPEN SPACE

[illegible][illegible]

AUTOTURN EXHIBIT



PLAN DATE 03/19/2019		DATE		DESCRIPTION		REVISIONS	
DATE: FEB 2019							
C.I.= 2'							
SCALE: 1"=20'							
FILE No. N131							
SHEET 10 OF 13							



Luminaire Schedule							
Symbol	Type	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Height/Description
⊙	Bollard	3	A	SINGLE	N.A.	0.900	3.60' XBVR-ID-LED-24-400-CW-UE
⊞	Wallpack	5	B	SINGLE	N.A.	0.900	15.0' XWM-2-LED-03-30
⊞-1	Pole Light	2	C	SINGLE	N.A.	0.900	20.0' MPP-LED-25L-SIL-FTA

Luminaire Location Summary						
LumNo	Label	X	Y	Z	Orient	Tilt
1	A	6821	6695	3	0	0
2	A	6861	6726	3	0	0
3	A	6893	6755	3	0	0
5	B	6670.149	6911.214	15	129.168	0
6	B	6702.149	6899.214	15	129.168	0
7	B	6723.149	6917.214	15	129.168	0
8	B	6746.149	6936.214	15	129.168	0
10	B	6808.393	6891.381	15	15.885	0
12	C	6753.374	6700.028	20	214.903	0
13	C	6684.277	6809.973	20	215.534	0

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PATHWAY AREA	illuminance	fc	0.48	12.6	0.0	N.A.	N.A.
POLE AREA	illuminance	fc	7.5	9.9	0.0	4.46	8.33
STAIRCASE	illuminance	fc	1.32	1.9	0.5	2.64	3.80
WALLPACK AREA	illuminance	fc	1.68	3.5	0.1	16.80	35.00

