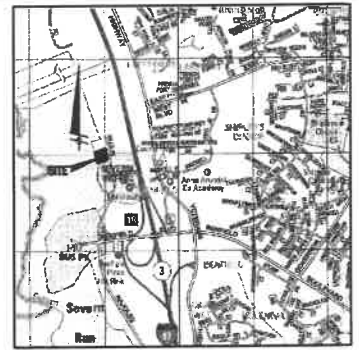
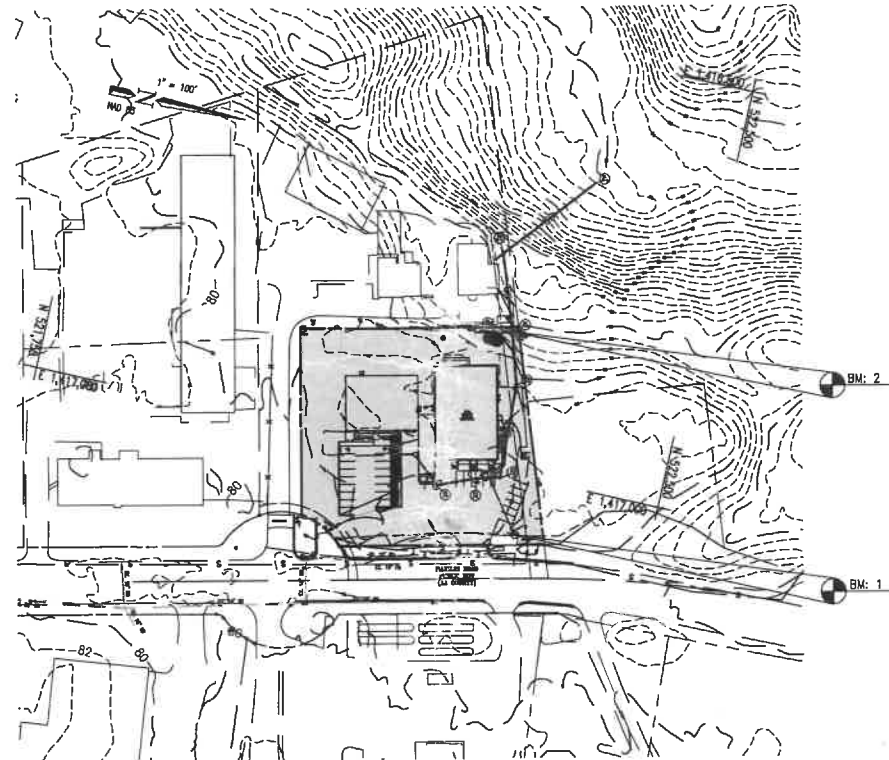


NAJOLLES LLC PROPERTY SITE DEVELOPMENT PLAN



VICINITY MAP
SCALE: 1"=2,000'

AA CO. MAP PAGE: 5172 GRDS: J4 & K4
Map Copyright © Kappa Map Group LLC, (800) 829-8277.
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LOCATION MAP
SCALE: 1"=100'

GENERAL NOTES

- PROPERTY DATA: SEVERN INDUSTRIAL PARK
PREMISES ADDRESS: 210 NAJOLLES ROAD, MILLERSVILLE, MD 21108
SITE AREA: 1.58 AC.
4TH ASSESSMENT DISTRICT
PLAT REFERENCE: 7710
ZONING DISTRICT: W1 - INDUSTRIAL PARK
MASTER WATER PLANS - MAP W-4, NO PUBLIC SERVICE (RURAL)
MASTER SEWER PLANS - MAP S-4, NO PUBLIC SERVICE (RURAL)
- PROPOSED USE: WAREHOUSE
- THIS SITE IS LOCATED IN ZONE 'X' (AREA DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP 24063C012E WHICH DOES NOT CONTAIN THE 100 YEAR FLOODPLAIN, EFFECTIVE DATE OCT 16, 2012.
- SURVEY DATA:
THE TOPOGRAPHIC AND BOUNDARY INFORMATION IS BASED ON A FIELD RUN SURVEY PERFORMED BY CHARLES P. JOHNSON IN AUGUST OF 2016.
HORIZONTAL DATUM IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM, NAD 83 (0811), THE VERTICAL DATUM IS BASED ON NAVD 88.
- THERE ARE NO NON-TIDAL WETLANDS ON THIS SITE PER THE OBSERVATIONS MADE DURING THE FOREST STAND DELINEATION FIELD VISIT.
- A FOREST STAND DELINEATION WAS CONDUCTED ON OCTOBER 3, 2016 & FEBRUARY 28, 2017 BY KEVIN C. HAINES OF CHARLES P. JOHNSON AND ASSOCIATES.
- THIS PROPERTY DOES NOT LIE WITHIN THE CRITICAL AREA ZONE.
- THERE ARE NO CULTURAL OR HISTORICAL FEATURES EVIDENT
- BENCHMARKS - AS SHOWN ON LOCATION PLAN

BM#1 - EX. SEWER MH RIM N: 52343.1095 E: 1417668.5538 ELEV: 80.09	BM#2 - EX. STORM DRAIN MH RIM N: 52287.2977 E: 1416836.3161 ELEV: 74.78
--	--

SITE TABULATIONS

ADDRESS: 210 NAJOLLES RD
MILLERSVILLE, MD 21108

PARCEL #	SIZE	DEED REFERENCE	TAX ACCOUNT
563	1.58 AC. or 68,824 SF	12635/04377	64-699-90028663

RELEVANT PERMITTED USES IN W1 OFFICES, PROFESSIONAL AND GENERAL, WHOLESALE TRADE, WAREHOUSING AND STORAGE ESTABLISHMENTS

W1 ZONING: BASE REQUIREMENTS 18-4-601
MINIMUM LOT SIZE: 40,000 S.F.

MAXIMUM COVERAGE BY STRUCTURES & PARKING: 75%
EXISTING COVERAGE BY STRUCTURES & PARKING: 43% (29,756 SF or 0.68 AC.)
PROPOSED COVERAGE BY STRUCTURES & PARKING: 58% (39,899 SF or 0.92 AC.)

MINIMUM WIDTH AT FRONT B.R.L.: 90'
SETBACKS FOR PRINCIPAL STRUCTURES:
FRONT 50'
REAR 30'
SIDE 50'
ROW 50'

SETBACKS FOR ACCESSORY STRUCTURES:
REAR 25'
SIDE 25'

EXISTING BUILDINGS

Floor	Office (SF)	Warehouse (SF)
1st	786	7316
2nd	2920	4174
TOTAL	3706	11688

PROPOSED BUILDING

	Office (SF)	Warehouse (SF)
TOTAL	1500	5500

TOTAL PROPOSED USE

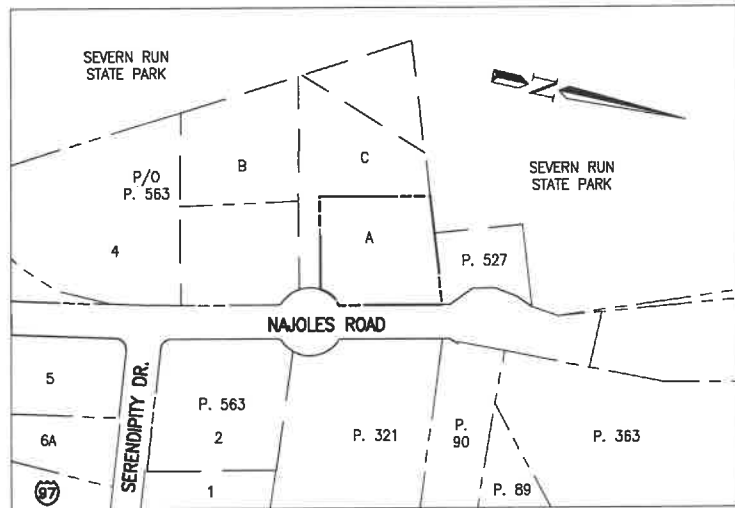
	Office (SF)	Warehouse (SF)
TOTAL	5206	17188

PARKING REQUIREMENTS:
WAREHOUSE: 1 SPACE FOR EVERY 1,000 SF
OFFICE: 1 SPACE FOR 200 SF

PROPOSED REQUIREMENTS:
WAREHOUSE (17,188 x 75% / 1,000 SF) = 12.9 SPACES
OFFICE (5206 x 75% / 200) = 19.5 SPACES

TOTAL PROPOSED PARKING REQUIREMENTS:
33 SPACES
PROPOSED SPACES:
33 SPACES

MODIFICATION #
THE DEVELOPER IS SEEKING MODIFICATIONS FOR RELIEF OF TWO BUFFERYARD WIDTHS, PLANTING UNITS IN ONE BUFFERYARD, THE REMOVAL OF ONE SPECIMEN TREE AND RELIEF FROM THE FOREST CONSERVATION AREA AND WIDTH REQUIREMENTS.
APPROVED ON



TAX MAP LAYOUT
SCALE: 1"=200'

POINT OF INVESTIGATION (POI)

	SITE	POI
TOTAL DRAINAGE AREA	1.58 Ac.	388 Ac.
TOTAL RUNOFF 10 YR.	13.23 CFS	484.38 CFS
RATIO OF SITE TO POI	$Q_{site} / Q_{poi} \leq 10\%$ 13.23 / 484.38 = 2.73% < 10%	
TC	0.486 Hr	2.189 Hr
RCN	85	71

OUTFALL STATEMENT
THE OUTFALL OF THE SITE HAS BEEN INVESTIGATED BY CHARLES P. JOHNSON & ASSOCIATES ON OCTOBER 10, 2016. IN PROPOSED CONDITIONS THERE IS 1 SITE OUTFALL AT THE NORTH EASTERN PROPERTY CORNER. FLOWS FROM THE SITE ARE COLLECTED ENTIRELY WITHIN A CLOSED STORM DRAIN SYSTEM AND OUTFALL AT EX MH-1. FLOWS EVENTUALLY MAKE THEIR WAY THROUGH THE CLOSED STORM DRAIN AND DISCHARGE INTO A TRIBUTARY OF SEVERN RUN. DURING THE INVESTIGATION THERE WERE NO SIGNS OF EROSION AT THE SITE OUTFALL OR AT ANY POINT BETWEEN THE OUTFALL AND THE POI.

- SHEET INDEX**
- SHEET 1 - COVER SHEET
 - SHEET 2 - POI DRAINAGE AREA MAP
 - SHEET 3 - EXISTING CONDITIONS AND DEMO PLAN
 - SHEET 4 - DEVELOPMENT PLAN
 - SHEET 5 - STORMWATER MANAGEMENT AND STORM DRAIN PLAN
 - SHEET 6 - FINAL FOREST CONSERVATION PLAN
 - SHEET 7 - FINAL LANDSCAPE PLAN
 - SHEET 8 - FOREST CONSERVATION/LANDSCAPE DETAILS
 - SHEET 9 - 10 YEAR SITE DRAINAGE AREA MAP
 - SHEET 10 - ON-SITE STORM DRAIN DRAINAGE AREA MAP

OWNER
NAJOLLES LLC
12530 FAIRWOOD PKWY, #103
BOWIE, MD 20720
ATTN: TAMLA KIRKLAND
PH: (301) 938-0080
EMAIL: TK@NAJOLLES.COM

DEVELOPER
NAJOLLES LLC
12530 FAIRWOOD PKWY, #103
BOWIE, MD 20720
ATTN: TAMLA KIRKLAND
PH: (301) 938-0080
EMAIL: TK@NAJOLLES.COM

NO.	REVISIONS	APP'D BY	DATE



SIGMA ENGINEERING, INC.
A DIVISION OF
CHARLES P. JOHNSON & ASSOC.
45 OLD SOLOMONS ISLAND ROAD
SUITE 204
ANNAPOLIS, MARYLAND 21401
TELEPHONE (410) 266-3599
FAX (410) 266-3871
jdawson@cpja.com

SCALE: AS SHOWN
DATE: 4-09-18
DRAWN BY: JA
DESIGNED BY: JAD/JCH
CHECKED BY: JAD
JOB NO. 16-5027
SHEET 1 OF 10

PROJ. NO. C2016-0054-00 PP
SUBD. NO. -
COVER SHEET
NAJOLLES LLC PROPERTY
SEVERN INDUSTRIAL CENTER - W1 INDUSTRIAL
210 NAJOLLES ROAD
MILLERSVILLE, MARYLAND 21108
T4: 22 BLC: 17 PARCEL: 563
4th ASSESSMENT DISTRICT
ANNE ARUNDEL COUNTY, MARYLAND 21108
V:\16-5027 210 Najoles Rd\DWG\PRELIM-SHT01 COV.dwg

Forest Conservation Worksheet 2.2

Project: 210 Najoles Rd

Net Tract Area		A = 1.58
A. Total Tract Area		B = 0.58
B. Deductions (Ex. Impervious Area in Priority Funding Area)		C = 0.90
C. Net Tract Area		

Land Use Category

Input the number "1" under the appropriate land use zoning, and limit to only one entry

ARA	MOR	IDA	HDR	MPO	CIA
0	0	0	0	0	1

D. Afforestation Threshold (Net Tract Area x 15%) D = 0.14
 E. Conservation Threshold (Net Tract Area x 15%) E = 0.14

Existing Forest Cover

F. Existing Forest Cover within the Net Tract Area F = 0.45
 G. Area of Forest Above Conservation Threshold G = 0.32

Break Even Point

H. Break Even Point H = 0.20
 I. Forest Clearing Permitted Without Mitigation I = 0.25

Proposed Forest Clearing

J. Total Area of Forest to be Cleared J = 0.26
 K. Total Area of Forest to be Retained K = 0.19

Planting Requirements

L. Reforestation for Clearing Above the Conservation Threshold L = 0.07
 M. Reforestation for Clearing Below the Conservation Threshold M = 0.00
 N. Credit for Reforestation above the Conservation Threshold N = 0.06
 O. Total Reforestation Required O = 0.01
 P. Total Afforestation Required P = 0.00
 Q. Total Planting Requirement Q = 0.01
 R. Total Planting Requirement R = 0.01

Forest Conservation Areas
Per MD DNR Forest Conservation Manual, 1997

Area Name	Area (sq ft)	Retention, Reforestation, Afforestation?
A	8,156	Retention
B	960	Reforestation
Total Retention =		0.19
Total Reforestation =		0.02
Total Afforestation =		0
Total Conservation Area =		0.21

Area Name	Area (sq ft)	Reforestation, Afforestation?	Stock Sizing (Bare root, seedling tubes, 1/2/3 gal, 5/7 gal, 1.5-2" cal)	Required Planting
B	960	Afforestation	1.5 - 2" cal	2
Total Planting Requirement =				2

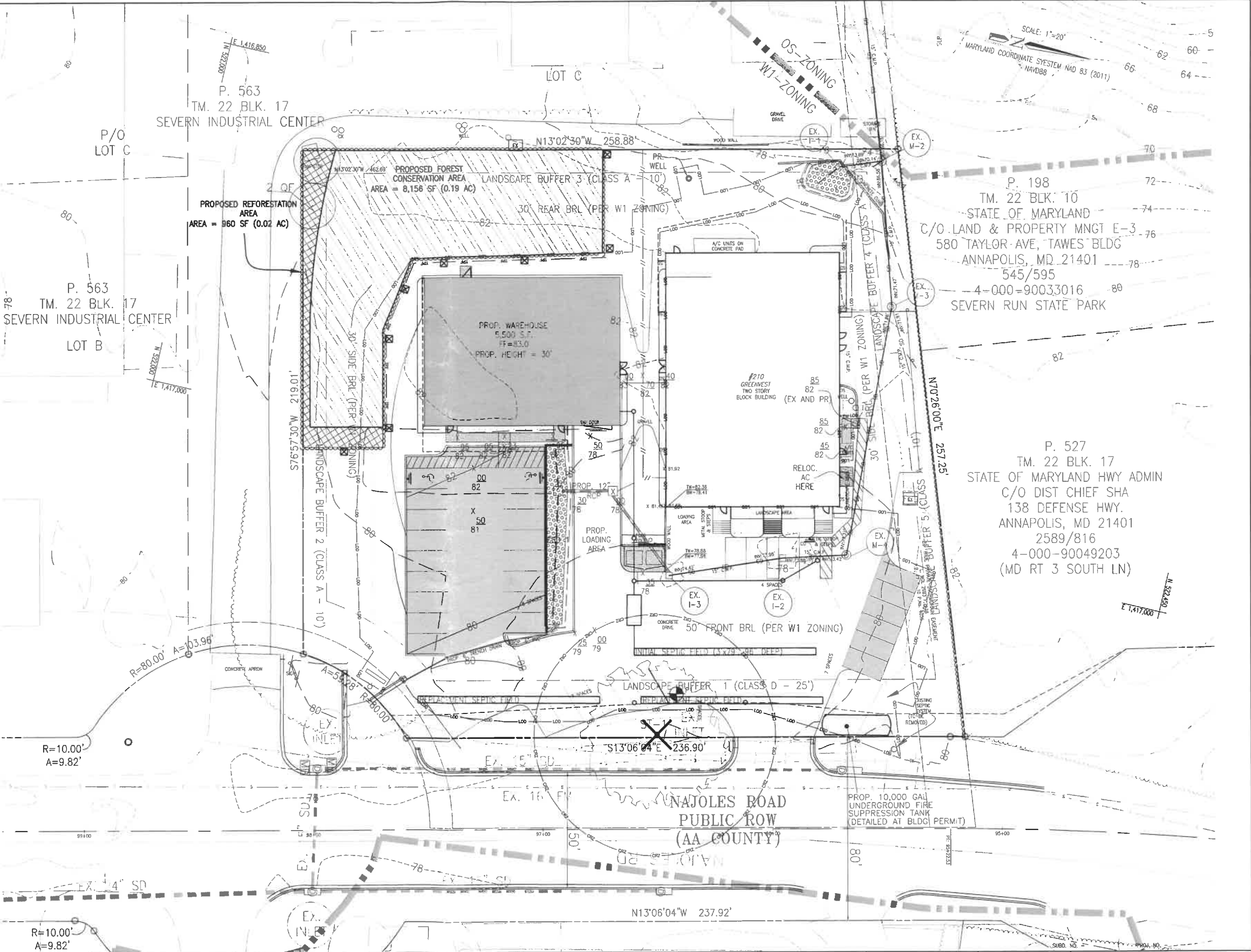
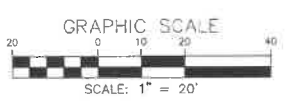
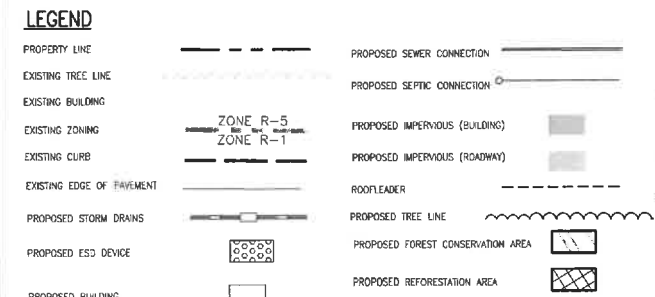
SPECIMEN TREE LIST

ID	Common Name	Scientific Name	DBH	Condition	Notes
J	Southern Red Oak	<i>Quercus falcata</i>	35"	Good	

* TO BE REMOVED

Forest Reporting Summary

Project Name:	210 Najoles
Project #:	16-5027
Location:	Millersville, MD
Critical Area:	No
Prepared by:	KCH
Computation	
Floodplain Area	0
Forested Floodplain	0
Unforested Floodplain	0
Offsite Planted Forest	0
Onsite Planted Forest	960
Conserved 100' Stream Buffer Length	0
Conserved 100' Stream Buffer Area	0
Newly Established 100' Stream Buffer Length	0
Newly Established 100' Stream Buffer Area	0
Retained Forest onsite minus floodplain	8,156
Retained Forest offsite minus floodplain	0
Onsite Planted Forest (reforestation under easement)	960
Offsite Planted Forest (reforestation under easement)	0
Area under long term protection	9,116
Collected fee-in-lieu (amount of payment, in dollars and cents)	\$0.00
Bond Amount (Security collected, in dollars and cents)	\$428.00



OWNER/DEVELOPER
NAJOLE'S, LLC
ATTN: TAMLA KIRKLAND
12530 FAIRWOOD PKY.
SUITE 103
BOWIE, MD 20720
PH: 301-938-0820
EMAIL: tk@najoles.com

NO.	REVISIONS	APP'D BY	DATE

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME AND THAT I AM A LICENSED PROFESSIONAL UNDER THE REQUIREMENTS OF COMAR 08.18.02.01, AND THAT I AM A DESIGN PROFESSIONAL UNDER THE REQUIREMENTS OF ANNE ARUNDEL COUNTY FOR LANDSCAPE PLANS

4-09-18
DATE



SIGMA ENGINEERING, INC.
A DIVISION OF
CHARLES P. JOHNSON & ASSOC.
45 OLD SOLOMONS ISLAND ROAD
SUITE 204
ANNAPOLIS, MARYLAND 21401
TELEPHONE (410) 266-5599
FAX (410) 266-3871
jdawson@cpja.com

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SCALE: AS SHOWN	FINAL FOREST CONSERVATION PLAN
DATE: 4-09-18	NAJOLE'S LLC PROPERTY
DRAWN BY: JAD	SEVERN INDUSTRIAL CENTER - W1 INDUSTRIAL
DESIGNED BY: JAD	210 NAJOLE'S ROAD
CHECKED BY: JAD	MILLERSVILLE, MARYLAND 21108
JOB NO. 16-5032	TM 22 BLK 17 PARCEL: 563
SHEET 6 OF 10	AN ASSESSMENT DISTRICT
	ANNE ARUNDEL COUNTY, MARYLAND 21108

V:\16-5027 210 Najoles RA\DWG\PRELIM-SHT06 FCP revised.dwg

DRAINAGE AREA TABLE

POINT OF INVESTIGATION(POI) SUMMARY & COMPARISON		
	DRAINAGE AREA TO POI	DRAINAGE AREA FROM SITE TO POI
AREA (Ac.)	388	1.58
RCN	71	85
Tc (Hrs)	2.189	0.486
Q ₁₀ (CFS)	484.38	13.23 (2.73%)

DRAINAGE AREA FROM SITE TO POI-Tc

Tc Path Summary Table

- 100' of sheet flow, slope = 0.01 ft/ft, n=0.40
- 107' of shallow concentrate, slope = 0.01 ft/ft unpaved
- 21' of channel flow, v = 2.00 ft/s

TOTAL DRAINAGE AREA TO POI-Tc

Tc Path Summary Table

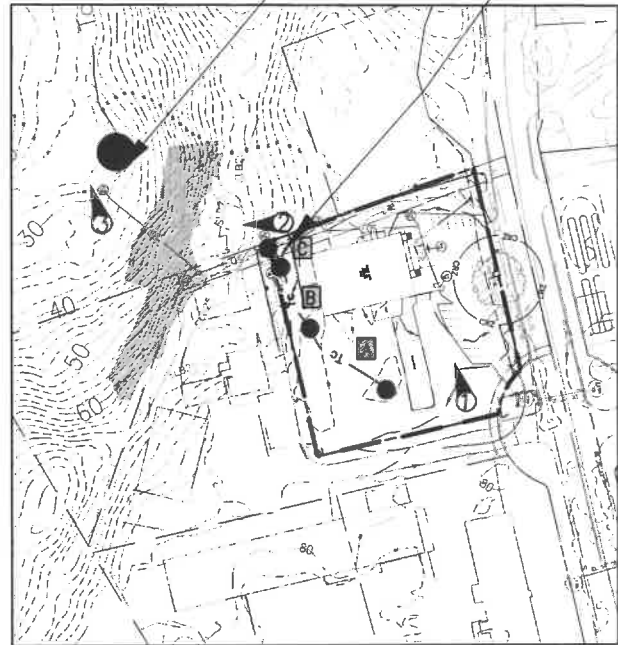
- 100' of sheet flow, slope = 0.002 ft/ft, n=0.80
- 1119' of shallow concentrate, slope = .002 ft/ft unpaved
- 5193' of channel, v = 6.650 ft/s

LEGEND

- PROPERTY LINE
- EXISTING TREE LINE
- EXISTING BUILDING
- EXISTING ZONING
- EXISTING CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING STORM DRAINS
- EXISTING SEWER
- EXISTING WATER
- SDI LINE
- WALKING PHOTO TOUR LOCATION
- Tc SEGMENT
- DRAINAGE AREA TO POI
- DRAINAGE AREA TO POI FROM SITE
- Tc PATH
- Tc FLOW REGIME CHANGE POINT

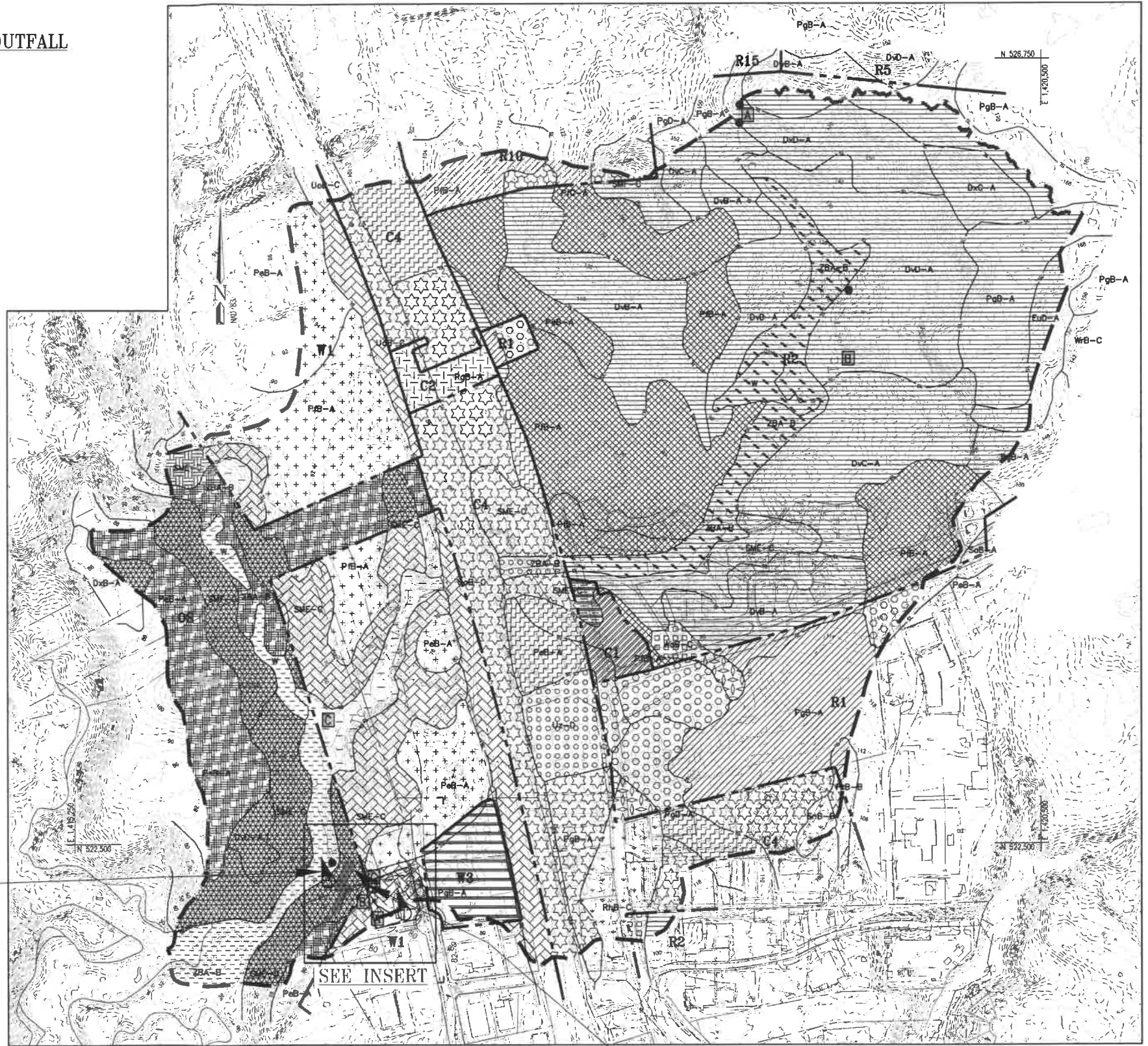
RCN - C1 ZONING - HSG A		RCN - R2 ZONING - HSG A	
RCN - C1 ZONING - HSG B		RCN - R2 ZONING - HSG B	
RCN - C2 ZONING - HSG B		RCN - R2 ZONING - HSG C	
RCN - C4 ZONING - HSG A		RCN - R2 ZONING - HSG D	
RCN - C4 ZONING - HSG B		RCN - R5 ZONING - HSG B	
RCN - C4 ZONING - HSG C		RCN - R12 ZONING - HSG A	
RCN - C4 ZONING - HSG D		RCN - R10 ZONING - HSG B	
RCN - O5 ZONING - HSG A		RCN - R15 ZONING - HSG B	
RCN - O5 ZONING - HSG B		RCN - W1 ZONING - HSG A	
RCN - O5 ZONING - HSG C		RCN - W1 ZONING - HSG B	
RCN - O5 ZONING - HSG D		RCN - W1 ZONING - HSG D	
RCN - R1 ZONING - HSG A		RCN - W3 ZONING - HSG B	
RCN - R1 ZONING - HSG B			
RCN - R1 ZONING - HSG C			

POINT OF INVESTIGATION (POI)



SITE PLAN VIEW INSERT
SCALE: 1"=100'

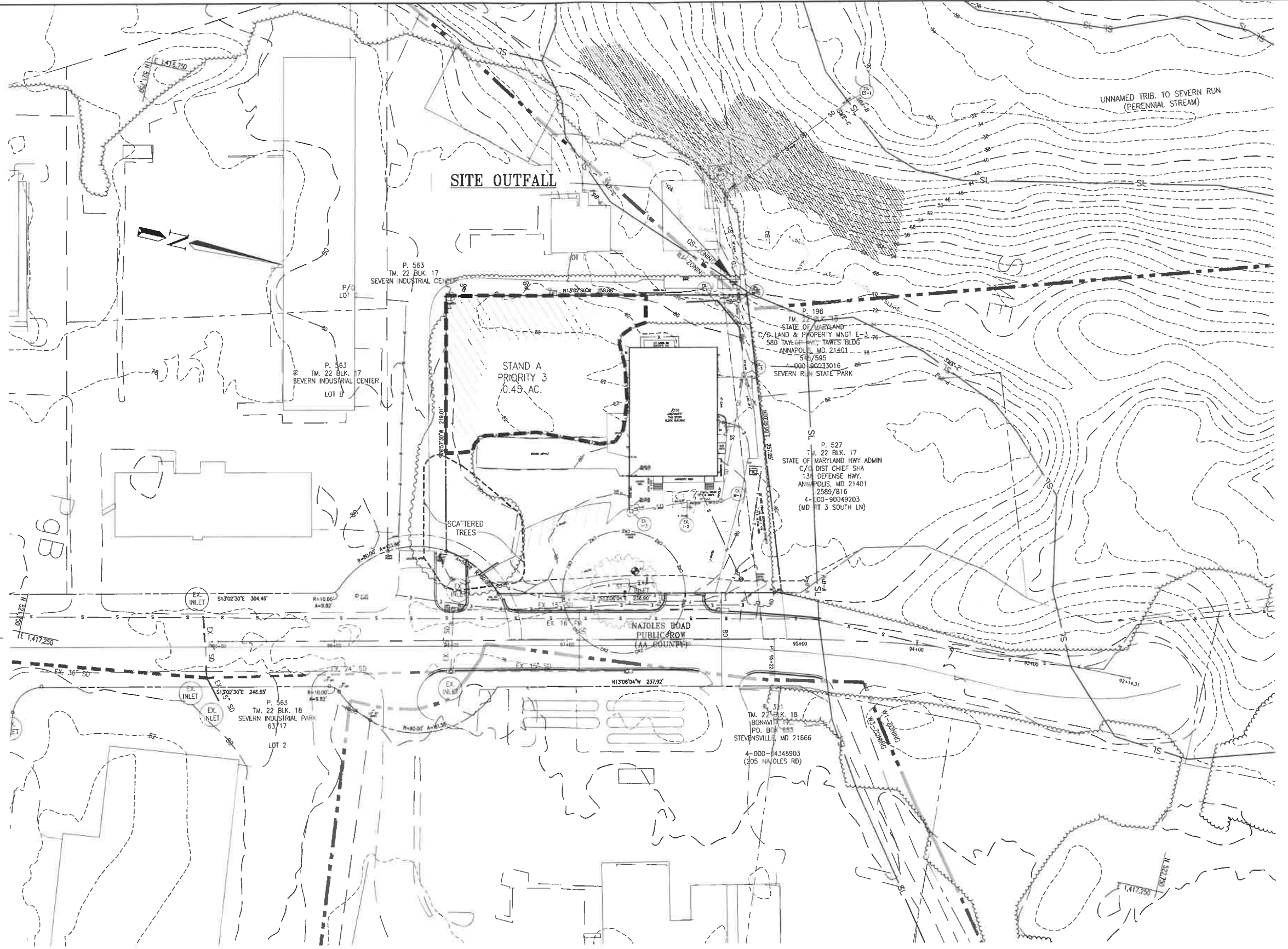
POINT OF INVESTIGATION (POI)



GRAPHIC SCALE
SCALE: 1"=300'

SITE OUTFALL

<p>OWNER NAJOLLES LLC 12530 FAIRWOOD PKWY, #103 BOWIE, MD 20720 ATTN: TAMLA KIRKLAND PH: (301) 938-0080 EMAIL: TK@NAJOLLES.COM</p>	<p>DEVELOPER NAJOLLES LLC 12530 FAIRWOOD PKWY, #103 BOWIE, MD 20720 ATTN: TAMLA KIRKLAND PH: (301) 938-0080 EMAIL: TK@NAJOLLES.COM</p>	<table border="1"> <thead> <tr> <th>NO.</th> <th>REVISIONS</th> <th>APP'D BY</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	REVISIONS	APP'D BY	DATE															<p>SIGMA ENGINEERING, INC. A DIVISION OF CHARLES P. JOHNSON & ASSOC. 45 OLD SOLOMONS ISLAND ROAD SUITE 204 ANNAPOLIS, MARYLAND 21401 TELEPHONE (410) 266-5599 FAX (410) 265-3871 jdawson@cpja.com</p>	<p>© 2018 Sigma Engineering a division of Charles P. Johnson & Assoc. These drawings are the property of Sigma Engineering, Inc. a division of Charles P. Johnson & Assoc. Unauthorized reproduction for any purpose is an infringement upon copyright laws. Violators will be subject to prosecution to the fullest extent of the law.</p>	<p>SCALE: AS SHOWN DATE: 4-09-18 DRAWN BY: JA DESIGNED BY: JAC/JCH CHECKED BY: JAD JOB NO. 16-5027 SHEET 2 OF 10</p>	<p>DRAINAGE AREA MAP - POI NAJOLLES LLC PROPERTY SEVERN INDUSTRIAL CENTER - W1 INDUSTRIAL 210 NAJOLLES ROAD MILLERSVILLE, MARYLAND 21108 TWP 22 BLK 17 PARCEL: 563 4th ASSESSMENT DISTRICT ANNE ARUNDEL COUNTY, MARYLAND 21108 V:\16-5027 210 Najolles Rd\DWG\PRELIM-SHT02 P04.dwg</p>
			NO.	REVISIONS	APP'D BY	DATE																		
<p>PRJ. NO. C7016-0054-00 PP</p>																								



CERTIFICATION NOTE

LOCATION OF TOPOGRAPHY AND EXISTING FEATURES WERE FIELD VERIFIED BY SIGMA / CPJ ON 10-10-16.



JACK A. DAWSON, P.E. MD. P.E. LICENSE #336548

4-09-18 DATE

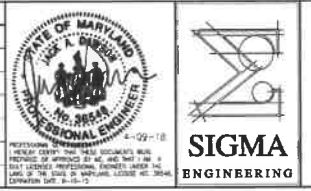
LEGEND

- PROPERTY LINE
- EXISTING TREE LINE
- EXISTING BUILDING
- EXISTING ZONING
 - ZONE R-5
 - ZONE R-1
- EXISTING CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING STORM DRAINS
- EXISTING SEWER
- EXISTING WATER
- FOREST STAND BOUNDARY
- RESOURCES TO BE RETAINED
- SOILS LINE AND DESIGNATION
 - PeB-A
 - PgB-A



<p>OWNER NAJILES LLC 12530 FAIRWOOD PKWY, #103 BOWIE, MD 20720 ATTN: TAMLA KIRKLAND PH: (301) 938-0080 EMAIL: TK@NAJILES.COM</p>	<p>DEVELOPER NAJILES LLC 12530 FAIRWOOD PKWY, #103 BOWIE, MD 20720 ATTN: TAMLA KIRKLAND PH: (301) 938-0080 EMAIL: TK@NAJILES.COM</p>
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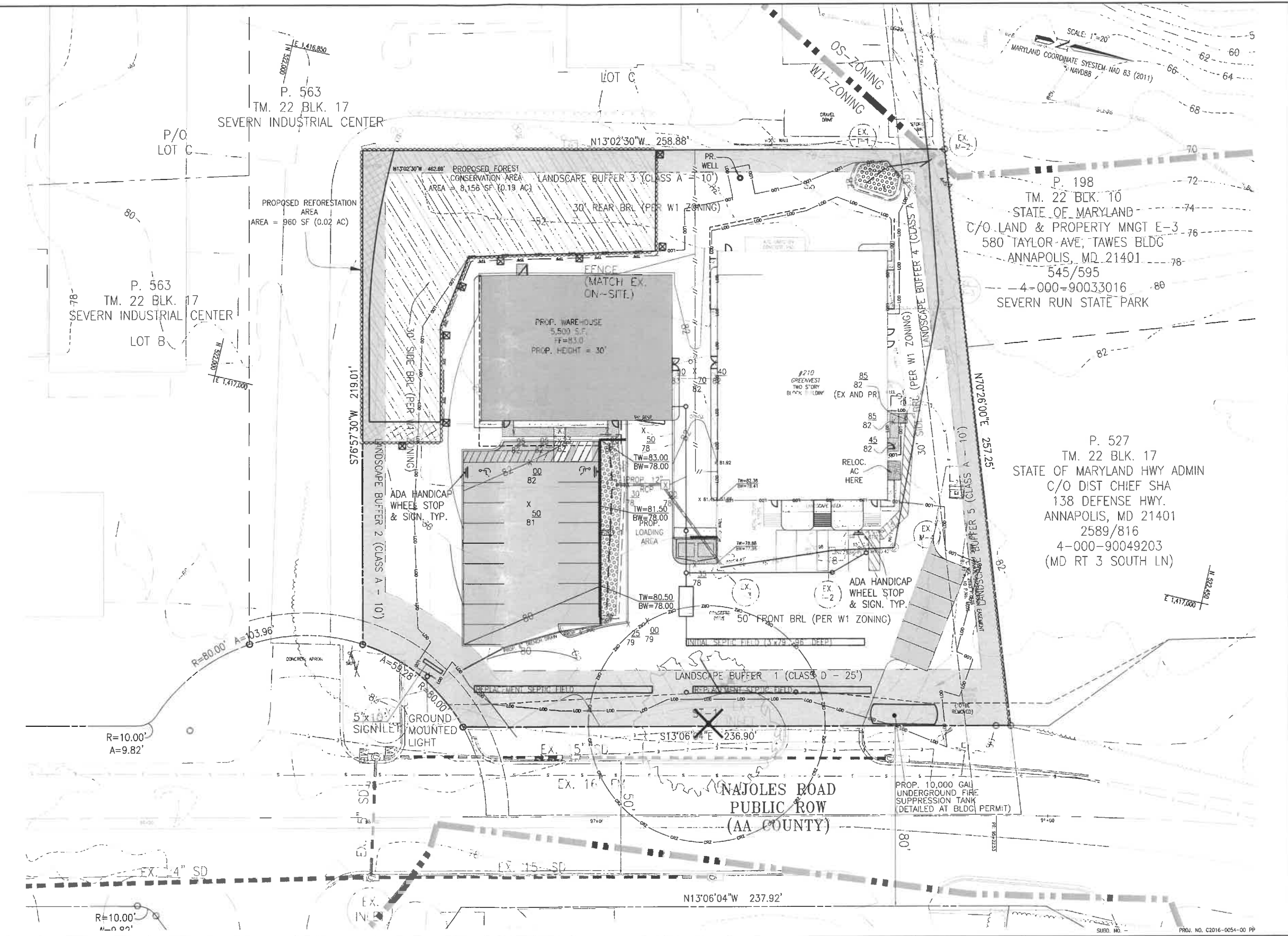
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SCALE: AS SHOWN	EXISTING CONDITIONS & DEMO PLAN
DATE: 4-09-18	NAJILES LLC PROPERTY
DRAWN BY: JA	SEVERN INDUSTRIAL CENTER - W1 INDUSTRIAL
DESIGNED BY: JAD/KCH	210 NAJILES ROAD
CHECKED BY: JAD	MILLERSVILLE, MARYLAND 21108
JOB NO. 16-5027	TM 22 BLK 17 PARCEL: 563
SHEET 3 OF 10	4th ASSESSMENT DISTRICT
	ANNE ARUNDEL COUNTY, MARYLAND 21108
	VA16-5027 210 Najiles Rd\DWG\PRELIM-SHT03 EX COND.dwg

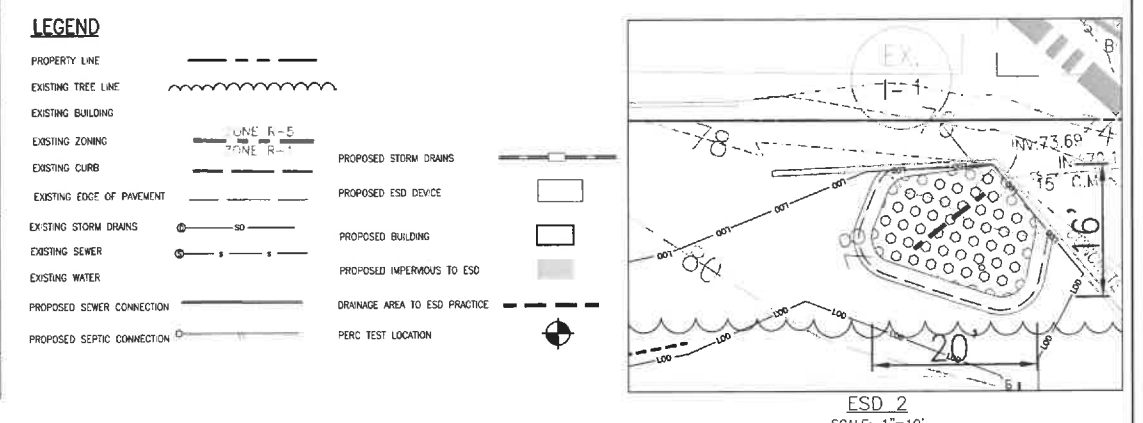
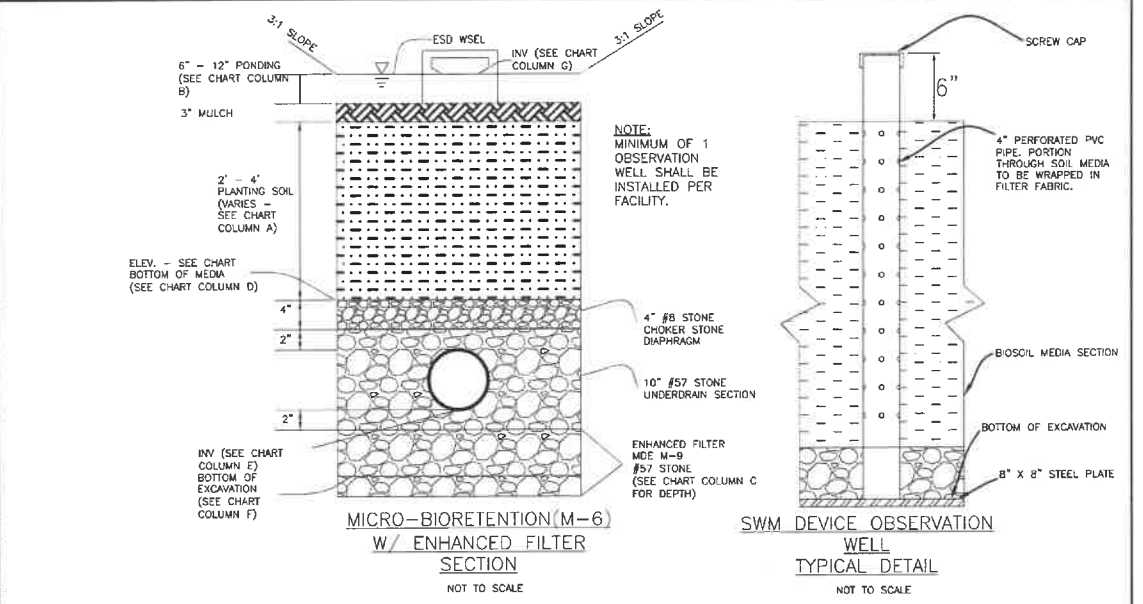
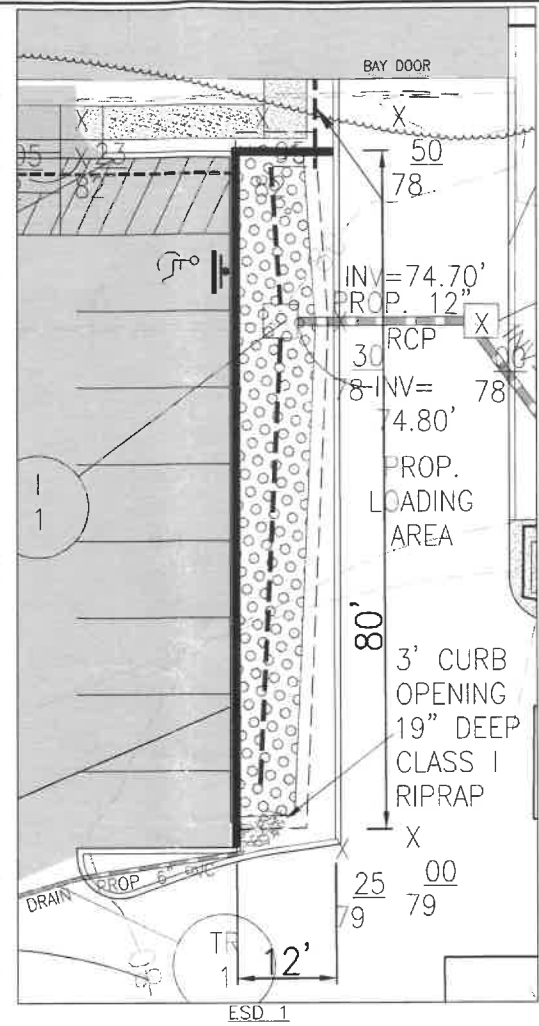
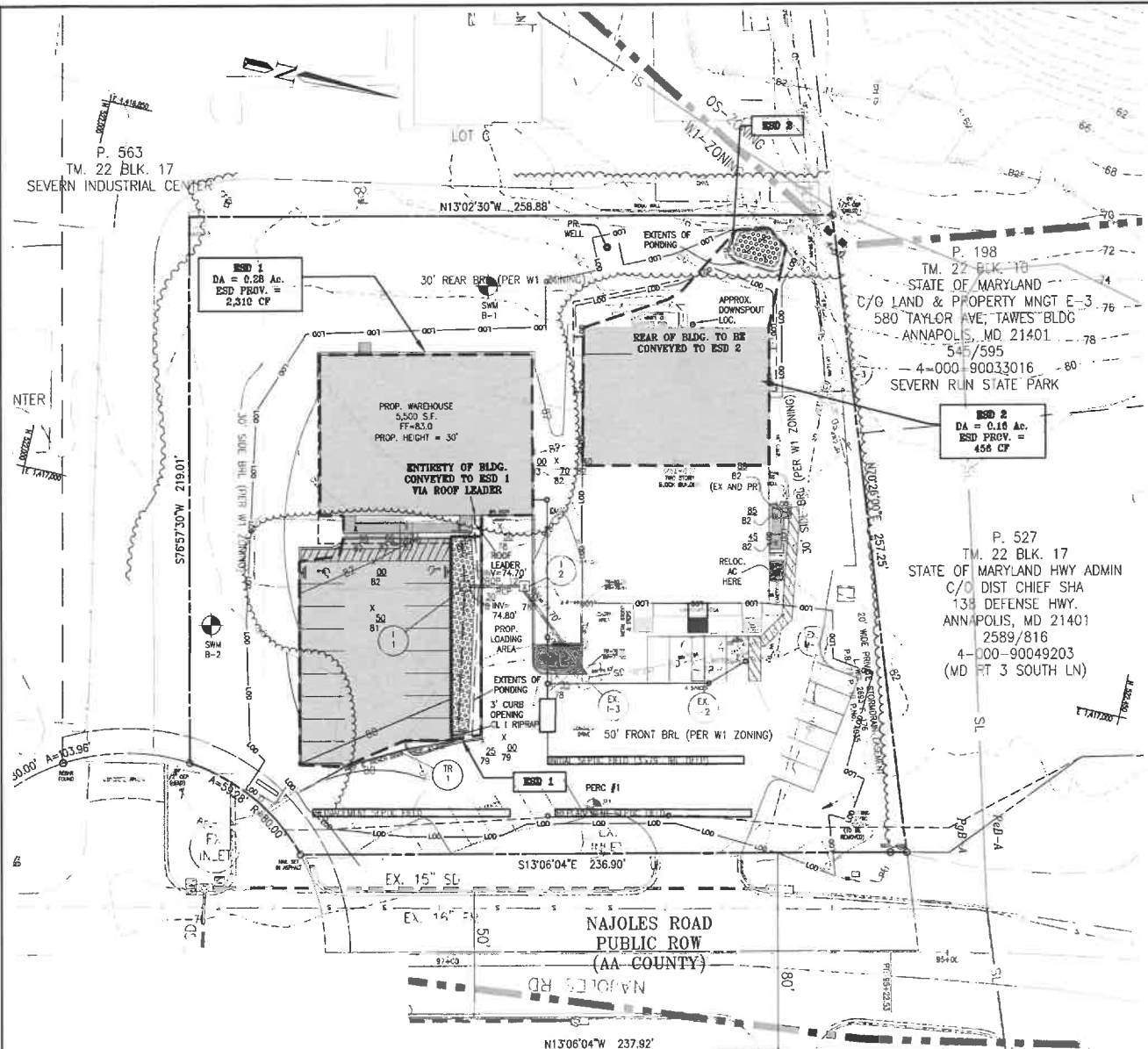
SITE TABULATION SUMMARY	
	AREA
TOTAL SITE	1.58 AC.
SOILS	PgB (HSG A) - 1.58 AC.
EXISTING IMPERVIOUS & RATIO TO SITE AREA	0.68 AC. (43.0%)
PROPOSED IMPERVIOUS & RATIO TO SITE AREA	0.58 AC. (58.2%)

LEGEND

- PROPERTY LINE
- EXISTING TREE LINE
- EXISTING BUILDING
- EXISTING ZONING
- EXISTING CURB
- EXISTING EDGE OF PAVEMENT
- PROPOSED STORM DRAINS
- PROPOSED ESD DEVICE
- PROPOSED BUILDING
- PROPOSED SEWER CONNECTION
- PROPOSED SEPTIC CONNECTION
- PROPOSED IMPERVIOUS (BUILDING)
- PROPOSED IMPERVIOUS (ROADWAY)
- ROOFLEADER
- PROPOSED FOREST CONSERVATION AREA
- PROPOSED REFORESTATION AREA
- PROPOSED FACADE LANDSCAPE AREA
- REQUIRED LANDSCAPE BUFFER AREA
- PROPOSED STREET TREE
- PROPOSED TREE LINE
- EXISTING STORM DRAINS
- EXISTING SEWER
- EXISTING WATER



<p>OWNER NAJOLE'S LLC 12530 FAIRWOOD PKWY, #103 BOWIE, MD 20720 ATTN: TAMLA KIRKLAND PH: (301) 938-0080 EMAIL: TK@NAJOLE'S.COM</p>	<p>DEVELOPER NAJOLE'S LLC 12530 FAIRWOOD PKWY, #103 BOWIE, MD 20720 ATTN: TAMLA KIRKLAND PH: (301) 938-0080 EMAIL: TK@NAJOLE'S.COM</p>	NO.	REVISIONS	APP'D BY	DATE			<p>SIGMA ENGINEERING, INC. A DIVISION OF CHARLES P. JOHNSON & ASSOC. 45 OLD SOLOMONS ISLAND ROAD SUITE 204 ANNAPOLIS, MARYLAND 21401 TELEPHONE (410) 266-5599 FAX (410) 266-3871 jdawson@cpja.com</p>	<p>SCALE: AS SHOWN DATE: 4-09-18 DRAWN BY: JA DESIGNED BY: JAD/KCH CHECKED BY: JAD JOB NO. 16-5027 SHEET 4 OF 10</p>	<p>PROJ. NO. C2016-0054-00 PP DEVELOPMENT PLAN NAJOLE'S LLC PROPERTY SEVERN INDUSTRIAL CENTER - W1 INDUSTRIAL 210 NAJOLE'S ROAD MILLERSVILLE, MARYLAND 21108 THE 22 BLK 17 PARCEL: 563 4th ASSESSMENT DISTRICT ANNE ARUNDEL COUNTY, MARYLAND 21108 V:\16-5027 210 Najoles Rd\DWG\PRELIM-SHT04.DWG</p>
		<p>NO. REVISIONS APP'D BY DATE</p>								



STORMWATER MANAGEMENT DATA

Project Table for Each Drainage Area

Permit Number	Project Name	Structure Address	Structure City	State	Structure Zip	Total Drainage Area (Acres)	RCN - Pre Construction	RCN - Post Construction	RCN - Woods	Total Number of BMPs	PE Required (see Note 1)	PE Addressed (see Note 2)	MD 8-Digit HUC (see Note 4)	USGS 12-Digit HUC
C2015-0054-00 PP	Najoles LLC Property	210 Najoles Rd	Millersville, MD	MD	21108	1.58	n/a	n/a	n/a	2	1.00*	2.00*	260003	Blank - County Use

STORM DRAIN COMPUTATION SHEET

Structure ID	Drainage Area (A)	Runoff (C)	A x C	To Pond	Rain (B)	Runoff to Inlet (Q) (in)	Upstream	Total Inlet (Q) (in)	Total Inlet (in)	Flow Velocity (ft/s)	Structure	Efficiency	Pipe Dia (in)	Full	Design	Invert Elevation (ft)	Length (ft)	Slope (#/ft)		
I-1	0.28	0.77	0.2156	5	7	1.81	0	1.81	1.81	0.00	EX-1-2	100%	12	2.90	3.18	74.90	74.70	20.00	0.0265	
I-2	0.16	0.46	0.0736	5	7	0.62	0	0.62	2.03	0.00	EX-1-3	100%	12	2.90	3.99	74.70	74.42	41.60	0.0267	
EX-1-3	0.16	0.46	0.0736	5	7	0.62	0	0.62	2.78	0.00	EX-1-2	100%	15	6.22	5.07	73.98	74.42	73.98	47.00	0.0044
EX-1-2	0.44	0.58	0.2552	5	7	1.72	0.00	1.72	4.47	0.00	EX-MH	100%	15	8.90	7.17	73.88	73.42	24.50	0.0188	
EX-MH	0.44	0.58	0.2552	5	7	1.72	0.00	1.72	4.47	0.00	EX-MH	0%	15	7.43	8.05	73.37	71.98	105.00	0.0134	
EX-MH	0.16	0.46	0.0736	5	7	0.62	0.00	0.62	6.94	0.00	EX-MH	0%	15	16.52	14.89	73.70	71.47	88.50	0.0815	
EX-1-1	0.16	0.46	0.0736	5	7	0.62	0.00	0.62	0.45	0.00	EX-LINE	100%	15	30.70	25.00	8.80	73.88	70.14	15.50	0.2290
EX-MH	0.12	0.33	0.0396	5	7	0.62	0.00	0.62	0.39	0.00	EX-MH	0%	15	18.17	14.81	73.88	70.14	59.00	0.0902	
EX-MH	0.12	0.33	0.0396	5	7	0.62	0.00	0.62	0.39	0.00	ES	0%	15	28.19	22.87	73.88	70.14	139.00	0.1830	

STORM DRAIN STRUCTURE SCHEDULE

Inlet ID	Junction Type	Grnd. Gate, Weir, Rim Elev	Invert Dn	Invert Up	Invert Up	Invert Up	Northing	Easting	Notes
I-1	D-28 (D-Type Inlet)	78.57	74.80	-	-	-	522182.35	1417007.59	
I-2	D-40 (D-Type Inlet)	78.00	74.70	74.60	-	-	522205.51	1417002.05	

ESD COMPUTATIONS - Maryland Stormwater Design Manual Chapter 5

BMP ID	Type	Contributing Drainage Area (SF)	Imp Area (SF)	Imp %	Pv	C Factor	C1 (CFS)	C2 (CFS)	(3) Required ESDV (CF)	(4) PE Provided (CF)	(5) Water Surface Elev (ft)	WSEL Area (SF)	(6) ESDV Provided (CF)	(7) ESDV Provided (CF)	(8) PE Provided (CF)	A	B	C	D	E	F	G	Approx. Groundwater Elevation																							
																								PE Prox (AVG)	PE Prox (Cumulative)	PE Prox (Cumulative)	PE Prox (Cumulative)	PE Prox (Cumulative)	PE Prox (Cumulative)	PE Prox (Cumulative)	PE Prox (Cumulative)	PE Prox (Cumulative)	PE Prox (Cumulative)	PE Prox (Cumulative)	PE Prox (Cumulative)											
1	M-6	12,342	10,716	86.83%	0.831	0.77	0.96	1.52	2.80	2.34	28851.21	846	790	1,999	2209	OK	76.07	3	0.5	2.6	75.49	74.82	78.74	78.00	78.57	N/A																				
2	M-6	7,387	4,182	56.63%	0.580	0.57	0.41	0.85	2.80	1.85	13088.87	220	284	632	922	OK	77.2	2	0.5	2	74.62	73.95	77.79	71.79	77.70	N/A																				
CUMULATIVE																							19,409	14,878	76.66%	0.740				5	4,192.08			2,631												

NOTE: PE Prox (AVG) is the sum of column 5 divided by the sum of column 1.
 PE Prox (Cumulative) is calculated from the sum of column 6 in column 1.
 PE Prox (Cumulative) is calculated from the sum of column 6 in column 1.
 PE Prox (Cumulative) is calculated from the sum of column 6 in column 1.

For Each Practice in the Drainage Area

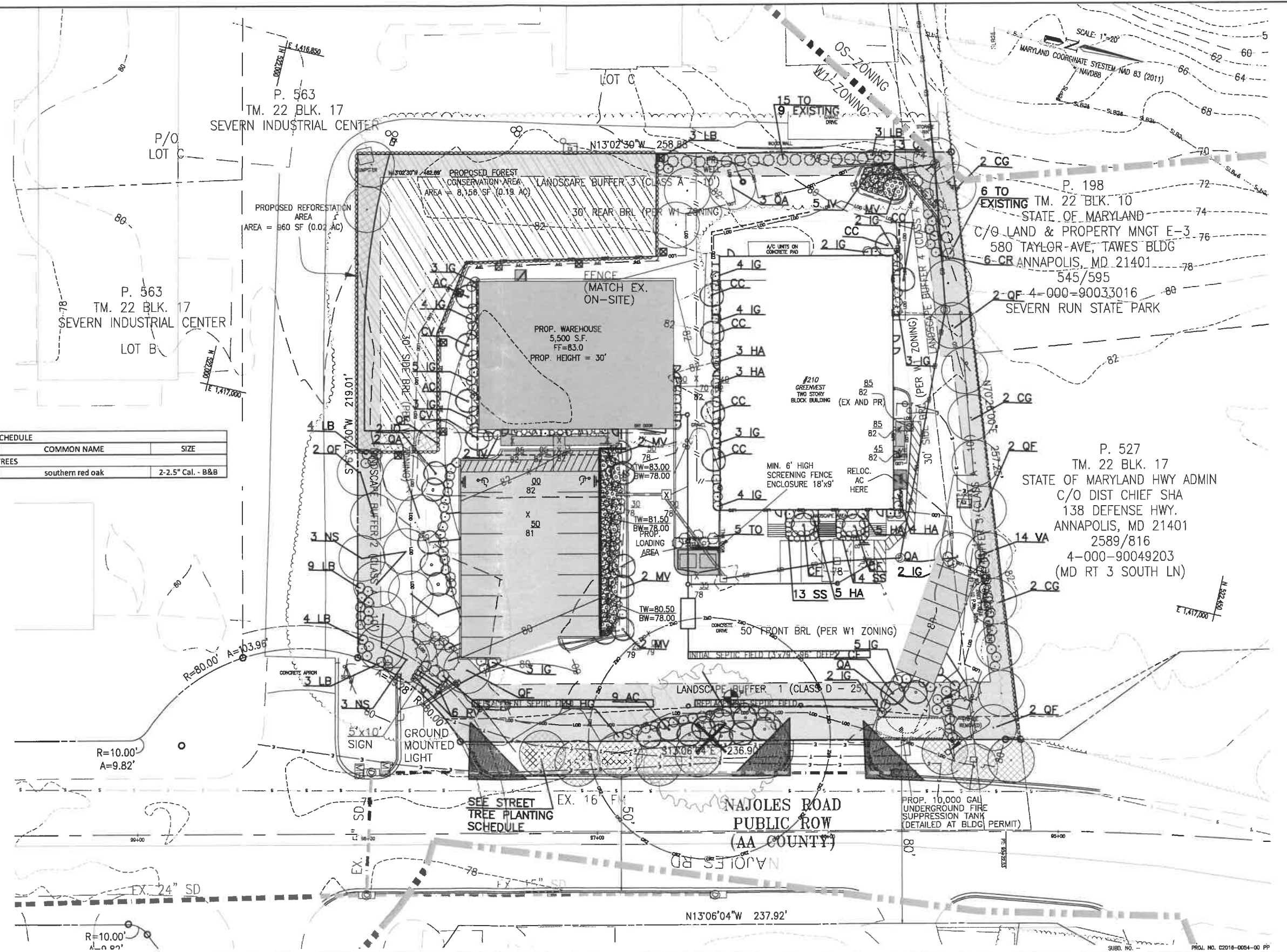
STORM ID	STRU. NAME	MDE BMP CLASS	MDE BMP TYPE	CONSTRUCTION PURPOSE	ON or OFF SITE	LAND USE	DEVICES DRAINAGE AREA (acres)	IMPERVIOUS AREA DRAINING TO DEVICES (acres)	IMPERVIOUS ACRES RESTORED (See Note 3)	MD NORTH COORD (NAD83 - FT)	MD EAST COORD (NAD83 - FT)	WG (ft-ft)	WQ (See Note 5)
Blank - County Use													
ESD 1		E	MMBR	REDE	ON		14	0.28	0.25	522186.856	1417031.039	0.05	
ESD 2		E	MMBR	REDE	ON		14	0.16	0.10	522268.457	1416948.391	0.01	

OWNER
NAJOLLES LLC
12530 FAIRWOOD PKWY, #103
BOWIE, MD 20720
ATTN: TAMLA KIRKLAND
PH: (301) 938-0080
EMAIL: TK@NAJOLLES.COM

DEVELOPER
NAJOLLES LLC
12530 FAIRWOOD PKWY, #103
BOWIE, MD 20720
ATTN: TAMLA KIRKLAND
PH: (301) 938-0080
EMAIL: TK@NAJOLLES.COM

SIGMA ENGINEERING, INC.
A DIVISION OF
CHARLES P. JOHNSON & ASSOC.
45 OLD SOLOMONS ISLAND ROAD
SUITE 204
ANNAPOLIS, MARYLAND 21401
TELEPHONE (410) 266-5599
FAX (410) 266-3871
jdawson@cpjo.com

SWM & STORM DRAIN PLAN
NAJOLLES LLC PROPERTY
SEVERN INDUSTRIAL CENTER - W1 INDUSTRIAL
210 NAJOLLES ROAD
MILLERSVILLE, MARYLAND 21108
TMC BLK 17 PARCEL: 563
4th ASSESSMENT DISTRICT
ANN ARUNDEL COUNTY, MARYLAND 21108
V:\16-5027 210 Najoles Rd\DWG\PRELIM-SHM05 SWM.dwg

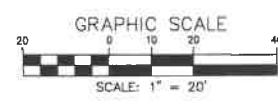


STREET TREE PLANTING SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE
MAJOR DECIDUOUS TREES				
CG	8	<i>Quercus falcata</i>	southern red oak	2-2.5" Cal. - B&B

LEGEND

- PROPERTY LINE
- EXISTING TREE LINE
- EXISTING BUILDING
- EXISTING ZONING
- EXISTING CURB
- EXISTING EDGE OF PAVEMENT
- PROPOSED STORM DRAINS
- PROPOSED ESD DEVICE
- PROPOSED BUILDING
- PROPOSED SEWER CONNECTION
- PROPOSED SEPTIC CONNECTION
- PROPOSED IMPERVIOUS (BUILDING)
- PROPOSED IMPERVIOUS (ROADWAY)
- ROOFLEADER
- PROPOSED FOREST CONSERVATION AREA
- PROPOSED REFORESTATION AREA
- REQUIRED LANDSCAPE BUFFER AREA
- PROPOSED STREET TREE
- PROPOSED TREE LINE
- EXISTING STORM DRAINS
- EXISTING SEWER
- EXISTING WATER



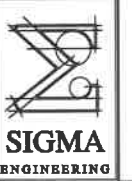
OWNER
 NAJILES LLC
 12530 FAIRWOOD PKWY, #103
 BOWIE, MD 20720
 ATTN: TAMLA KIRKLAND
 PH: (301) 938-0080
 EMAIL: TK@NAJILES.COM

DEVELOPER
 NAJILES LLC
 12530 FAIRWOOD PKWY, #103
 BOWIE, MD 20720
 ATTN: TAMLA KIRKLAND
 PH: (301) 938-0080
 EMAIL: TK@NAJILES.COM

NO.	REVISIONS	APP'D BY	DATE

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS
 WERE PREPARED BY ME, AND THAT I AM A
 LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
 IN THE STATE OF MARYLAND, AND THAT I AM A
 MEMBER OF THE MARYLAND SOCIETY OF
 PROFESSIONAL LANDSCAPE ARCHITECTS AND
 THE I.A.A. I AM A PERSON PROFESSIONAL UNDER
 THE REQUIREMENTS OF ANNE ARUNDEL COUNTY FOR
 LANDSCAPE PLANS

[Signature]
 DATE 4-09-18
 JOHN C. HANES



SIGMA ENGINEERING, INC.
 A DIVISION OF
CHARLES P. JOHNSON & ASSOC.
 45 OLD SOLOMONS ISLAND ROAD
 SUITE 204
 ANNAPOLIS, MARYLAND 21401
 TELEPHONE (410) 266-5599
 FAX (410) 266-3871
 jdawson@cpja.com

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 purpose is an infringement upon
 copyright laws. Violators will be subject
 to prosecution to the fullest extent of
 the law.

SCALE: AS SHOWN
 DATE: 4-09-18
 DRAWN BY: JA
 DESIGNED BY: JAD/KCH
 CHECKED BY: JAD
 JOB NO. 16-5027
 SHEET 7 OF 10

FINAL LANDSCAPE PLAN
NAJILES LLC PROPERTY
SEVERN INDUSTRIAL CENTER - W1 INDUSTRIAL
 210 NAJILES ROAD
 MILLERSVILLE, MARYLAND 21108
 TM: 22 BLK: 17 PARCEL: 563
 4th ASSESSMENT DISTRICT
 ANNE ARUNDEL COUNTY, MARYLAND 21106
 V:\16-5027 210 Najiles RA\DWG\PRELIM-SHT07 LAND.dwg

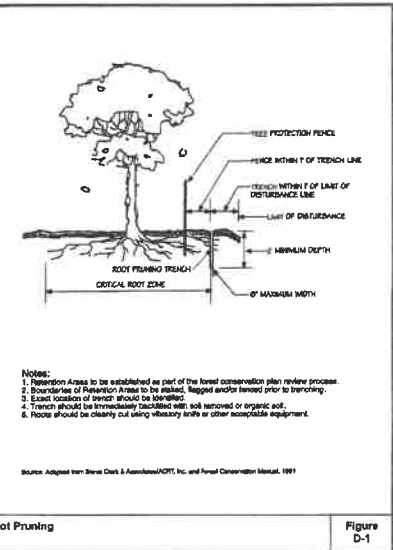
P. 198
 EXISTING TM. 22 BLK. 10
 STATE OF MARYLAND
 C/O LAND & PROPERTY MNGT E-3
 580 TAYLOR AVE, TAWES BLDG
 ANNAPOLIS, MD 21401
 545/595
 2 OF 4-000-90033016
 SEVERN RUN STATE PARK

P. 527
 TM. 22 BLK. 17
 STATE OF MARYLAND HWY ADMIN
 C/O DIST CHIEF SHA
 138 DEFENSE HWY.
 ANNAPOLIS, MD 21401
 2589/816
 4-000-90049203
 (MD RT 3 SOUTH LN)

210 NAJILES RD

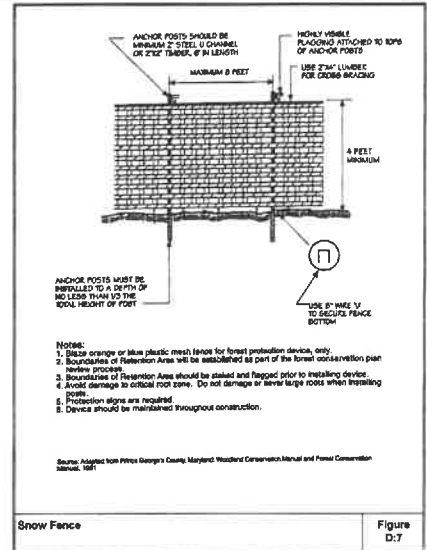
Central Business Center

5'x10' SITE ENTRY SIGN (OR SIMILAR)



Notes:
 1. Protection Area to be established as part of the forest conservation plan review process.
 2. Boundaries of Protection Area to be marked. Suggest stakes lowest prior to trenching.
 3. Exact location of trench should be marked with stakes and/or spray paint.
 4. Trench should be immediately backfilled with soil removed or organic soil.
 5. Fences should be clearly cut using necessary tools or other installing equipment.

Root Pruning Figure D-1



Notes:
 1. Stakes orange or blue plastic mesh fence for forest protection fence, only.
 2. Boundaries of Protection Area will be established as part of the forest conservation plan review process.
 3. Boundaries of Protection Area should be staked and flagged prior to installing device.
 4. Avoid damage to critical root zone. Do not damage or sever large roots when installing posts.
 5. Protection signs are required.
 6. Devices should be maintained throughout construction.

Snow Fence Figure D-7

ROOT PRUNE DETAIL SIGNAGE

TREE PROTECTION & PRESERVATION GENERAL NOTES

- GENERAL NOTES
 - PRIOR TO ANY CLEARING & GRUBBING TAKING PLACE THE TREE PROTECTION AND PRESERVATION MEASURES MUST BE IN PLACE, OPERATING CORRECTLY, AND APPROVED BY THE CITY ENVIRONMENTAL AEST.
 - ALL TREE PRESERVATION MEASURES SHALL BE IMPLEMENTED BY A MARYLAND LICENSED TREE EXPERT.
 - ANY SUBSTITUTION IN MATERIAL OR METHOD SHALL BE APPROVED BY THE COUNTY INSPECTOR AND PROJECT FORESTER.
- TREE PROTECTION FENCING
 - HAVE ORANGE BLOW FENCE WITH WOODEN (2"x4") CROSS BEAMS SHALL BE 1 1/2' AS TREE PROTECTION FENCE FOR THIS PROJECT.
 - SEE DETAIL FOR FURTHER INFORMATION
 - DAMAGED TREE PROTECTION FENCING SHALL BE REPAIRED OR REPLACED AS NEEDED IMMEDIATELY, BEFORE ANY WORK CONTINUES.
 - THE FENCING SHALL BE PLACED IN THE ROOT PRUNING DITCH ONCE ROOT PRUNING HAS BEEN COMPLETED, IF ROOT PRUNING IS TO TAKE PLACE.
 - FENCING SHALL REMAIN IN PLACE UNTIL FINAL LANDSCAPING AND CLEAN UP HAS BEEN COMPLETED AND UPON APPROVAL OF THE COUNTY FORESTER/GRADING INSPECTOR.
- ROOT PRUNING
 - THE EXACT LOCATION OF THE ROOT PRUNING TRENCH WILL BE FINALIZED AT THE PRE-CONSTRUCTION MEETING AND FLAGGED IN THE FIELD AT THAT TIME.
 - TRACK MOUNTED BAWES, VIBRATORY PLOW, OR CHAIN TRACER ARE ALL ACCEPTABLE EQUIPMENT TO BE USED FOR ROOT PRUNING. FOR LARGE ROOTS (1.5") AIR EXCAVATION AND PRUNING BY HAND MAY BE REQUIRED IN ORDER TO OBTAIN A CLEAN CUT.
 - ROOT PRUNING TRENCH SHALL BE FILLED WITH NATIVE SOIL, COMPOST, OR A MIXTURE OF BOTH AT THE END OF EACH WORK DAY WHEN ROOT PRUNING IS OCCURRING.
- FERTILIZATION
 - ALL FERTILIZATION SHALL TAKE PLACE AS SPECIFIED ON THE FOREST CONSERVATION AND TREE PRESERVATION PLAN.
 - EXACT AREAS TO BE FERTILIZED SHALL BE VERIFIED AT THE PRE-CONSTRUCTION MEETING BY THE COUNTY INSPECTOR AND PROJECT FORESTER.
 - ALL FERTILIZATION SHALL FOLLOW THE METHODS SPECIFIED BY ANSI A-309 PART 2, TREE, SHRUB, AND OTHER WOOD PLANT MAINTENANCE - STANDARD PRACTICES/FERTILIZATION, 2004.
- TREE CONDITIONS DURING CONSTRUCTION
 - IF AT ANY TIME DURING CONSTRUCTION IT IS NOTED THAT TREES ARE IN A STATE OF STRESS OR DECLINE THE PROJECT ARBORIST AND COUNTY FORESTER/GRADING INSPECTOR SHALL BE CONTACTED. ADDITIONAL TREE PRESERVATION MEASURES MAY BE REQUIRED AT THAT TIME.
 - ANY UNAUTHORIZED ENTRANCE INTO THE FOREST CONSERVATION AREA DURING CONSTRUCTION MAY REQUIRE ADDITIONAL TREE PRESERVATION MEASURES TO MITIGATE POSSIBLE DAMAGES.
- MULCHING IN TREE PRESERVATION AREAS
 - PROCESSED WOOD CHIPS OR MULCH FROM OFFSITE MAY BE USED IN THE TREE PRESERVATION AREAS. SEE SPECIFICATIONS FOR FURTHER INFORMATION.

TREE PROTECTION FENCE

LANDSCAPE PLANTING NOTES AND SPECIFICATIONS

- ALL PLANTS TO BE NURSERY GROWN AND FURNISHED IN ACCORDANCE WITH ASH "AMERICAN STANDARDS FOR NURSERY STOCK" ANSI Z60.1 LATEST EDITION.
- ALL TREES TO BRANCH SYMMETRICALLY AROUND CENTRAL LEADER. NO FORKED LEADER STOCK WILL BE ACCEPTED.
- ANY SUBSTITUTIONS ARE TO BE OF EQUIVALENT TYPE AND SIZE AND MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
- CONTAINER STOCK MAY BE SUBSTITUTED FOR BALLED AND BURLAPPED STOCK UPON APPROVAL BY THE LANDSCAPE ARCHITECT/ENGINEER.
- INSTALLATION OF PINES AND OAKS SHALL BE DURING SPRING PLANTING SEASON ONLY UNLESS OTHERWISE APPROVED BY LANDSCAPE ARCHITECT/ENGINEER.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES FIVE (5) DAYS PRIOR TO INSTALLATION AND/OR CONSTRUCTION.
- ANY DAMAGE TO EXISTING UTILITIES, BUILDINGS, PAVING, CURB, WALKS, AND EXISTING VEGETATION SHALL BE REPAIRED TO PREVIOUS CONDITION OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- ALL AREAS TO BE PLANTED SHALL BE FINISHED WITH A MINIMUM 3" FINE TEXTURED, SHREDED HARDWOOD MULCH UNLESS OTHERWISE NOTED ON PLAN.
- ALL AREAS DISTURBED DURING INSTALLATION SHALL BE SEEDED UNLESS OTHERWISE NOTED.
- POTABLE WATER SHALL BE MADE AVAILABLE TO ALL PLANT MATERIALS AS REQUIRED FOR GROWTH.
- BACKFILL MATERIAL FOR BACKFILLING AROUND ROOT BALLS SHALL BE A MIXTURE BY VOLUME OF THE FOLLOWING MATERIALS IN QUANTITIES SPECIFIED: 1/3 PEAT MOSS, 1/3 TOPSOIL, ADD 15 LBS. OF 20-10-5 FERTILIZER PER CUBIC YARD OF BACKFILL. BACKFILL MATERIAL BY ANALYSIS SHALL HAVE AT LEAST 15% ORGANIC MATTER.
- IF PLANT MATERIAL CANNOT BE INSTALLED IN ACCORDANCE WITH THIS PLAN, THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT/ENGINEER FOR RESOLUTION PRIOR TO INSTALLATION.

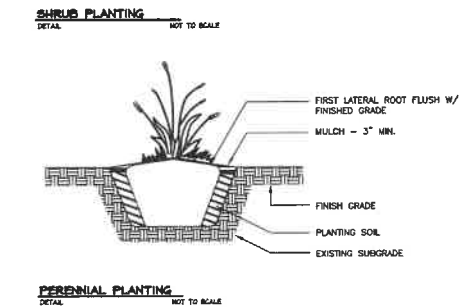
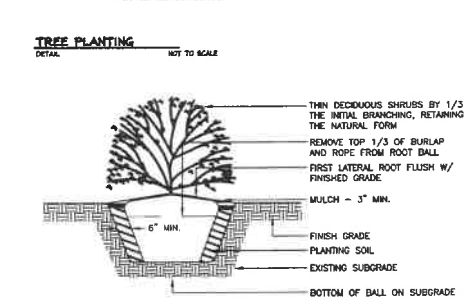
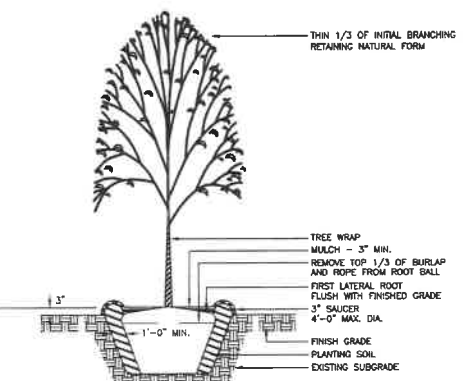
LANDSCAPE PLANTING SCHEDULE				
KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE
MAJOR DECIDUOUS TREES				
CG	6	<i>Carya glabra</i>	pignut hickory	2-2.5" Cal. - B&B
NS	6	<i>Nyssa sylvatica</i>	black gum	2-2.5" Cal. - B&B
QF	14	<i>Quercus falcata</i>	southern red oak	2-2.5" Cal. - B&B
QA	5	<i>Quercus alba</i>	white oak	2-2.5" Cal. - B&B
MINOR DECIDUOUS TREES				
AC	11	<i>Amelanchier canadensis</i>	shadbush	1.5-1.75" Cal. B&B
CF	4	<i>Cornus florida</i>	flowering dogwood	1.5-1.75" Cal. B&B
CC	6	<i>Cercis canadensis</i>	Eastern redbud	1.5-1.75" Cal. B&B
CV	2	<i>Chionanthus virginicus</i>	fringe tree	1.5-1.75" Cal. B&B
EVERGREEN TREES				
IO	5	<i>Ilex opaca</i>	American holly	6-8" Ht. B&B
JV	3	<i>Juniperus virginiana</i>	eastern red cedar	6-8" Ht. B&B
PS	3	<i>Pinus strobus</i>	eastern white pine	6-8" Ht. B&B
TO	14	<i>Thuja occidentalis</i>	northern white-cedar	6-8" Ht. B&B
SHRUBS				
IG	44	<i>Ilex glabra 'Maryland Dwarf'</i>	Maryland dwarf holly	24-30" Ht.
HA	26	<i>Hydrangea arborescens 'Annabelle'</i>	Annabelle hydrangea	24-30" Ht.
HG	40	<i>Itea virginica 'Henry Garnet'</i>	Henry Garnet sweetspire	24-30" Ht.
LB	20	<i>Lindera benzoin</i>	spicebush	24-30" Ht.
VA	14	<i>Vaccinium angustifolium</i>	lowbush blueberry	24-30" Ht.
PERENNIALS & GRASSES				
SS	15	<i>Schizachyrium scoparium</i>	little bluestem	1 Gal.

SWM PLANTING SCHEDULE				
KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
MV	9	<i>Magnolia virginiana</i>	sweetbay magnolia	5-7' multi-stem-B&B
SHRUBS				
CR	17	<i>Cornus sericea</i>	red osier dogwood	24-30" Ht.
IV	15	<i>Ilex verticillata</i>	common winterberry	24-30" Ht.
PERENNIALS & GRASSES				
CS	45	<i>Carex stricta</i>	Tussock sedge	1 Quart Cont.
TL	14	<i>Typha latifolia</i>	broad-leaved cattail	1 Quart Cont.

A.A. County Landscape Manual Project Requirements						
Project:	210 Najoles Rd	AA County #:	N/A	Location:	Millersville, MD	
CP#:	16-5027	Date Created:	6/7/2017	Date edited:	12/13/2017	
Prepared by:	KCH	Date edited:	12/13/2017			
SITE REQUIREMENTS						
REDEVELOPMENT:	YES	AREA REQUIRED TO COMPLY:		SITE		
50% INCREASE FLOOR /PARK?	Yes					
BUFFER YARD REQUIREMENTS						
BUFFER YARD ID	CLASS/LENGTH (FT)	PU'S REQ'D	PU'S PROV	REQ'D WIDTH	PROV. WIDTH(FT)	MOD?
1	D/ 277'	28	14*	25'	10	Y
2	A/ 186' (119' FORESTED)	3	3	10	10	N
3	A/ 230' (121' FORESTED)	5	5	10	10	N
4	A/ 80'	5	5	15	15	N
5	A/ 143'	7	7	10	10	N
STREET TREES						
ROAD NAME	LINEAR FEET	PU'S REQ'D	TREES PROV	MOD ?		
NAJILES RD	303	8	8	NO		
INTERIOR PARKING						
PARKING LOT ID	PARKING AREA	AREA REQ'D	AREA PROV	PU'S REQ'D	PU'S PROV'D	MOD ?
LOT A	15439	1544	1560	6	6	NO
DUMPSTERS						
DUMPSTER AREA ID	PERIMETER (FT)	CLASS	PU'S REQ'D	PU'S PROV'D	FENCE? FENCE TYPE	MOD ?
A	37	A	2	2	Y - 6' HIGH SHADOWBOX	NO
BUILDING FAÇADE						
BLDG ID	FAÇADE LENGTH	REQ'D PLANTING	PROV PLANTING	MOD ?		
PROP. BLDG	300	150'	160	NO		
EX. BLDG	377	188.5'	190	NO		

*ADDITIONAL 12 PLANTING UNITS ADDED THROUGHOUT SITE TO MITIGATE DEFICIENCY WITHIN BUFFER.

PLANTING DETAILS



FOREST CONSERVATION PROTECTION, PLANTING & PRESERVATION SPECIFICATIONS		
Material	Specification	Size
Tree Tubes/Slacks	UV Stabilized polypropylene. Light green or light blue color.	4" Dia. & 36" Tall
Mulch	Coarse, ground from tree or woody brush.	3/8" (25% or less of total vol.) to 1 1/2" (20% or less of total vol.)
Herbicide	Glyphosate 41.5%	n/a
Compost	pH: 5.5-8.0, Moisture: 30-60% by weight, soil salt: 5 dS/m maximum. Blended & ground leaf and other woody debris. Composted for a minimum of 9 months.	n/a
Tree Protection/Safety Fence	High Density Polyethylene, Bright Orange	4" Tall

OWNER
 NAJILES LLC
 12530 FAIRWOOD PKWY, #103
 BOWIE, MD 20720
 ATTN: TAMLA KIRKLAND
 PH: (301) 938-0080
 EMAIL: TK@NAJILES.COM

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 BOWIE, MD 20720
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 PH: (301) 938-0080
 EMAIL: TK@NAJILES.COM

NO.	REVISIONS	APP'D BY	DATE

PROFESSIONAL CERTIFICATION:
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME, AND THAT I AM A QUALIFIED PROFESSIONAL UNDER THE REQUIREMENTS OF COMAR 08.18.02.01, AND THAT I AM A LICENSED PROFESSIONAL UNDER THE REQUIREMENTS OF ANNE ARUNDEL COUNTY FOR LANDSCAPE PLANS.

[Signature]
 4-09-18
 KEVIN C. HANES
 DATE

SIGMA ENGINEERING

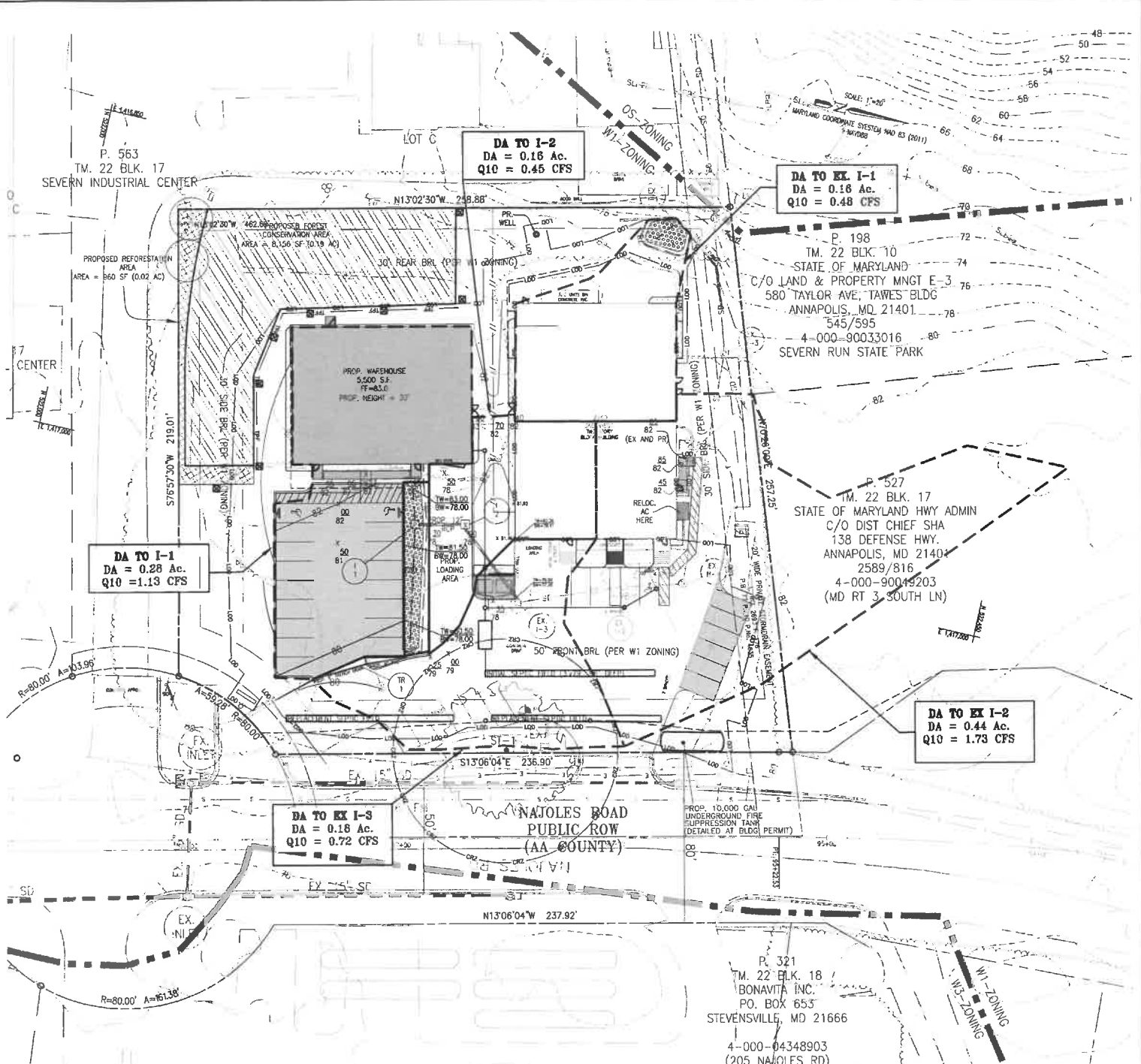
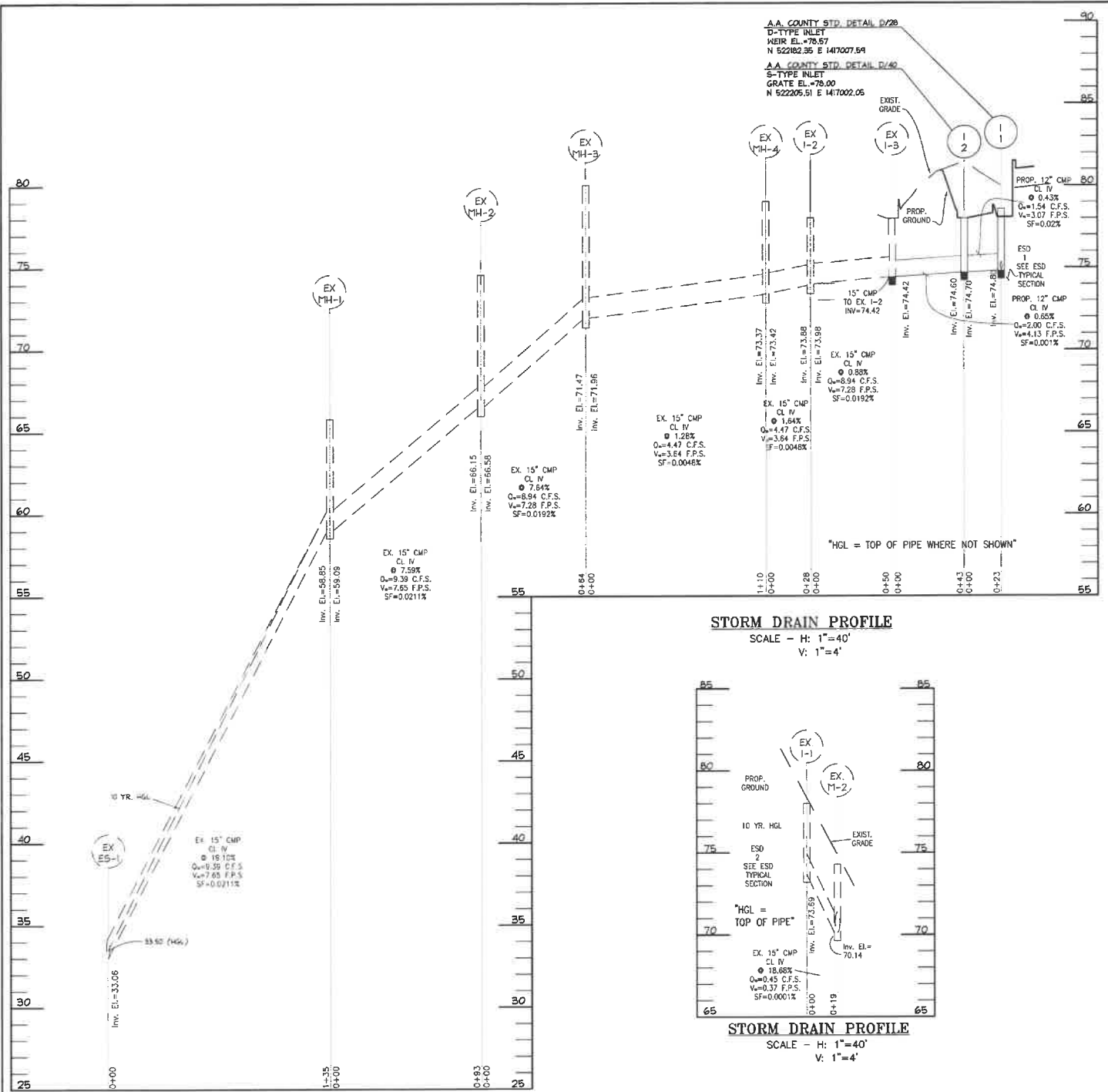
SIGMA ENGINEERING, INC.
 A DIVISION OF
CHARLES P. JOHNSON & ASSOC.
 45 OLD SOLOMONS ISLAND ROAD
 SUITE 204
 ANNAPOLIS, MARYLAND 21401
 TELEPHONE (410) 266-5599
 FAX (410) 266-3871
 jdowson@cpja.com

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SCALE: AS SHOWN	LANDSCAPE AND FOREST CONSERVATION DETAILS
DATE: 4-09-18	NAJILES LLC PROPERTY
DRAWN BY: JA	SEVERN INDUSTRIAL CENTER - W1 INDUSTRIAL
DESIGNED BY: JAD/KCH	210 NAJILES ROAD
CHECKED BY: JAD	MILLERSVILLE, MARYLAND 21108
JOB NO. 16-5027	THE 22 Bk: 17 PARCEL: 553
SHEET 8 OF 10	4th ASSESSMENT DISTRICT ANNE ARUNDEL COUNTY, MARYLAND 21108

SUBD. NO. - PROJ. NO. C2016-0054-00 PP

Y:\16-5027 210 Najiles Rd\DWG\PRELIM-SHT08-LAND FC DET.dwg



MARYLAND STATE HIGHWAY ADMINISTRATION
HYDRAULIC GRADIENT FOR STORM SEWERS

SHEET: 2 OF 2
DATE: 3/10/2018

TITLE: Najoles Center

DESIGNED BY: JD
CHECKED BY: JD
RAINFALL FACTOR:

Structure		Pipe														Structure		Description of Loss	Crown Elevation	HGL Elevation		
FROM	TO	TC	Tc	I (ft/hr)	Q (cfs)	Size (in)	n	Start Invert	So (ft/ft)	Ss (ft/ft)	d _c	A (ft ²)	WP (ft)	R (ft)	Vt (ft/s)	L (ft)	d _s (ft)				H _s (ft)	K _e
ES1	EX MH1			9.39	15	0.01	33.08	0.193	0.02113	1.2172	1.2396	1.2272	3.9270	0.313	7.652	133.60		2.923	0.15	0.14	34.31	33.50
EX MH1	EX MH2			9.39	15	0.01	59.09	0.08	0.02113	1.2172	1.2396	1.2272	3.9270	0.313	7.652	68.00		1.854	0.50	0.45	60.09	60.09
EX MH2	EX MH3			9.94	15	0.01	66.58	0.082	0.01915	1.1877	1.2189	1.2272	3.9270	0.313	7.284	60.00		1.149	0.15	0.12	72.72	72.72
EX MH3	EX MH4			4.47	15	0.01	71.96	0.013	0.00478	0.8396	1.0449	1.2272	3.9270	0.313	3.943	20.00		0.0858	0.56	0.12	73.48	73.48
EX MH4	EX I-2			2.75	15	0.01	73.98	0.009	0.00181	0.8587	0.9544	1.2272	3.9270	0.313	2.24	47.00		0.0851	1.50	0.12	75.67	75.67
EX I-2	EX I-3			2.03	12	0.01	74.42	0.007	0.00326	0.5984	0.7892	0.7854	3.1416	0.25	2.586	41.50		0.1349	0.50	0.05	75.70	75.85
EX I-3	I-1			1.51	12	0.01	74.70	0.005	0.0018	0.5181	0.7581	0.7854	3.1416	0.25	1.925	20.00		0.036	1.50	0.08	75.80	75.80
EX MH2	EX I-1			0.45	15	0.01	70.14	0.229	0.00005	0.2885	0.7583	1.2272	3.9270	0.313	0.372	15.50		0.0008	0.50	0.00	74.94	74.94

LEGEND

- PROPERTY LINE
- EXISTING TREE LINE
- EXISTING BUILDING
- EXISTING ZONING
- EXISTING CURB
- EXISTING EDGE OF PAVEMENT
- PROPOSED STORM DRAINS
- PROPOSED ESD DEVICE
- PROPOSED BUILDING
- PROPOSED SEWER CONNECTION
- PROPOSED SEPTIC CONNECTION
- PROPOSED IMPERVIOUS (BUILDING)
- PROPOSED IMPERVIOUS (ROADWAY)
- DA TO STORM DRAIN
- PROPOSED FOREST CONSERVATION AREA
- PROPOSED REFORESTATION AREA
- PROPOSED FACADE LANDSCAPE AREA
- REQUIRED LANDSCAPE BUFFER AREA
- PROPOSED STREET TREE
- PROPOSED TREE LINE



SEE SHEET 5 FOR STORM DRAIN TABULATION COMPUTATIONS

SUBD. NO. - PROJ. NO. C2016-0054-00 PP

OWNER
NAJOLLES LLC
12530 FAIRWOOD PKWY, #103
BOWIE, MD 20720
ATTN: TAMLA KIRKLAND
PH: (301) 938-0080
EMAIL: TK@NAJOLLES.COM

DEVELOPER
NAJOLLES LLC
12530 FAIRWOOD PKWY, #103
BOWIE, MD 20720
ATTN: TAMLA KIRKLAND
PH: (301) 938-0080
EMAIL: TK@NAJOLLES.COM

NO.	REVISIONS	APP'D BY	DATE

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jdawson@cpja.com

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SCALE: AS SHOWN
DATE: 4-09-18
DRAWN BY: JA
DESIGNED BY: JND/WCH
CHECKED BY: JND
SHEET 10 OF 10

ON-SITE STORM DRAIN DA MAP
NAJOLLES LLC PROPERTY
SEVERN INDUSTRIAL CENTER - W1 INDUSTRIAL
210 NAJOLLES ROAD
MILLERSVILLE, MARYLAND 21108
TM: 22 BLK 17 PARCEL: 563
4th ASSESSMENT DISTRICT
ANN ARUNDEL COUNTY, MARYLAND 21108
V:\16-5027 210 Najoles Rd\DWG\PRELIM-SHT10 SD.dwg