

SHEET INDEX	
NO.	DESCRIPTION
1	EXISTING CONDITIONS PLAN
2	STORMWATER MANAGEMENT PLAN

# ENVIRONMENTAL CONCEPT PLAN

## DORSEY BUSINESS CENTER

### PARCEL A

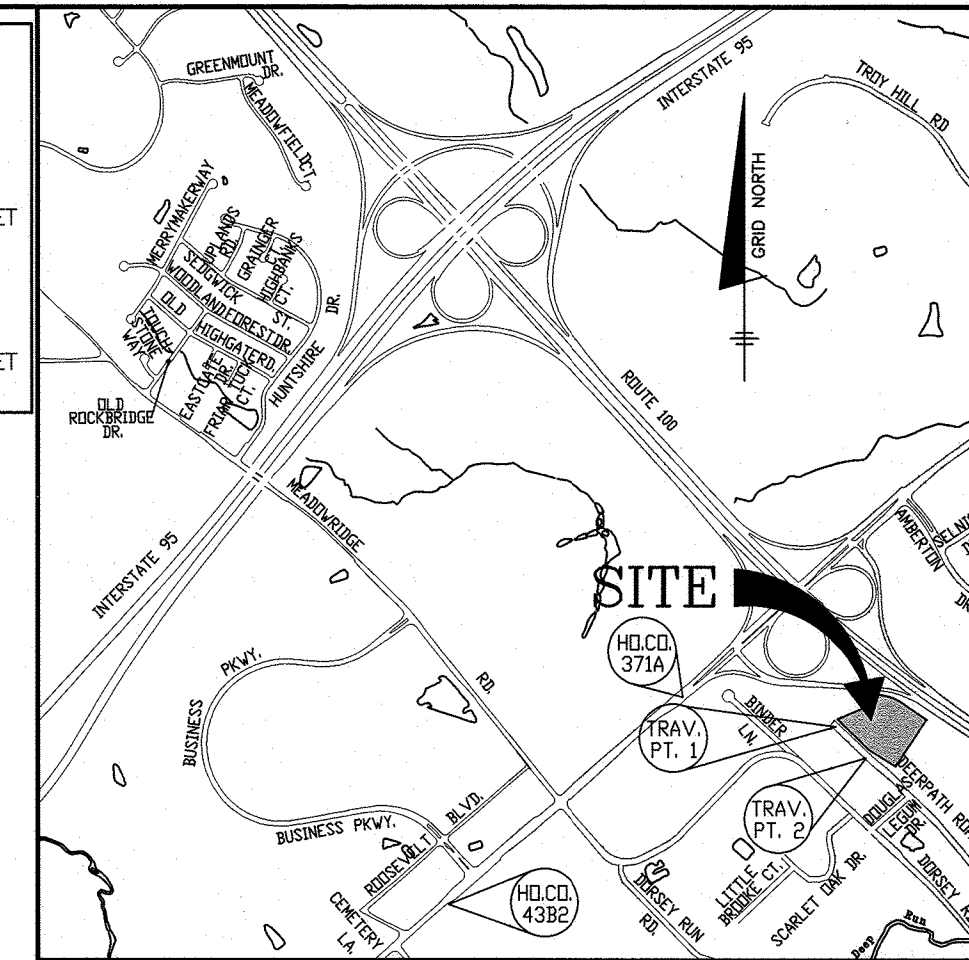
#### RESIDENTIAL APARTMENT BUILDING

#### 1ST ELECTION DISTRICT

#### HOWARD COUNTY, MARYLAND

**BENCH MARKS--(NAD'83)**

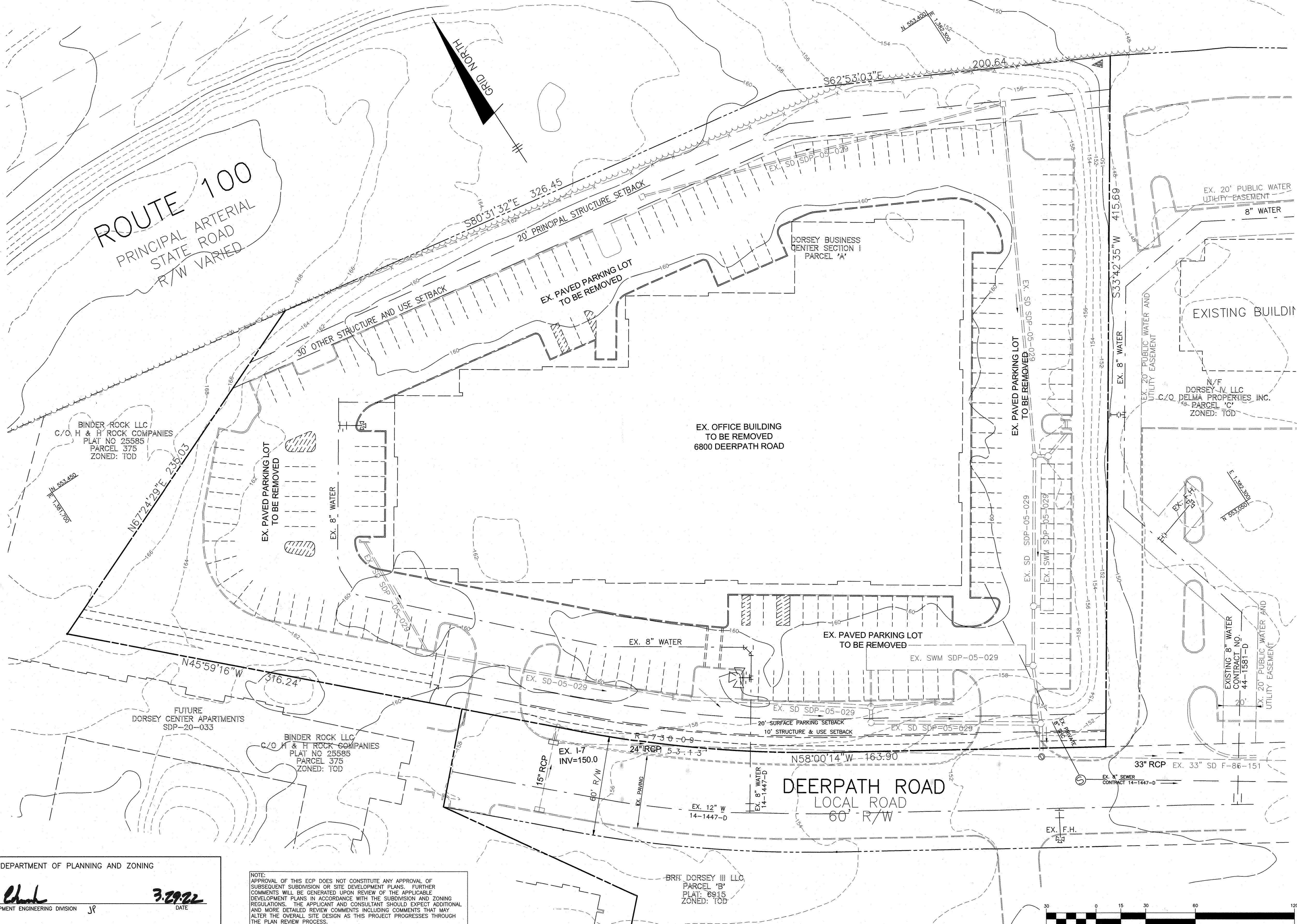
TRAV. PT. 1	EL: 157.73
TRV. MAG: 18.0' NORTHEAST OF CONC. CURB OF SOUTHEASTBOUND LANE OF DEERPATH ROAD; 20.3' NORTH OF EX. INLET	
N 553,149.12	E 1,381,844.44
TRAV. PT. 2	EL: 154.64
TRV. MAG: 3.1' NORTHEAST OF CONC. CURB OF SOUTHEASTBOUND LANE OF DEERPATH ROAD; 20.3' NORTH OF EX. INLET	
N 553,037.81	E 1,381,953.48



VICINITY MAP  
SCALE: 1" = 2000'  
ADC MAP NO. 17 GRID C-11

**LEGEND**

SOILS CLASSIFICATION	UcD
SOILS DELINEATION	-288 -290
EXISTING CONTOURS	-288 -290
EXISTING TREELINE	(Symbol)
PROPOSED CONTOURS	-292
EX. SANITARY MANHOLE	(Symbol)



- GENERAL NOTES**
- SUBJECT PROPERTY IS ZONED TOD PER THE 10-6-2013 COMPREHENSIVE ZONING PLAN.
  - THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, DATED OCTOBER 7, 2007.
  - THE BOUNDARY SHOWN IS BASED ON A BOUNDARY SURVEY CONDUCTED BY MILDBERG BOENDER & ASSOCIATES, INC. ENTITLED DORSEY BUSINESS CENTER DATED SEPTEMBER 2003.
  - TOPOGRAPHY SHOWN HEREON IS BASED ON SDP-05-029.
  - THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. BENCHMARKS FOR THIS SITE ARE TRAVERSE POINT NO. 1 AND TRAVERSE POINT #2.
  - THERE ARE NATURAL STEEP SLOPES LOCATED ON THIS SITE. THE SITE HAS BEEN PREVIOUSLY DISTURBED UNDER F-86-151 AND SDP-05-029.
  - THERE IS NO FLOODPLAIN, STREAMS OR WETLANDS LOCATED ON THE PROPERTY BASED ON A SITE ANALYSIS BY ECO-SCIENCE PROFESSIONALS DATED NOVEMBER 23, 2021.
  - TO THE BEST OF OUR KNOWLEDGE THERE ARE NO CEMETERIES OR HISTORIC STRUCTURES LOCATED ON THIS SITE.
  - A NOISE STUDY IS REQUIRED FOR THIS DEVELOPMENT AND WILL BE PROVIDED AT THE NEXT PHASE OF THE DEVELOPMENT.
  - THIS SITE IS LOCATED WITHIN THE METROPOLITAN DISTRICT AND THE PLANNED SERVICE AREA. WATER AND SEWER WILL BE PUBLIC.
  - THIS SITE IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS SINCE IT HAS BEEN PREVIOUSLY DISTURBED PRIOR TO THE FOREST CONSERVATION REQUIREMENTS.
  - THE FOREST STAND DELINEATION AND WETLANDS STUDY WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED NOVEMBER 2021.
  - EXISTING UTILITIES SHOWN ARE BASED ON A FIELD SURVEY, HOWARD COUNTY GIS, AND INFORMATION OF RECORD.
  - STORMWATER MANAGEMENT METHODS WERE DESIGNED BASED ON THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II. STORMWATER MANAGEMENT 100 YEAR STORAGE IS PROVIDED BY UNDERGROUND PIPE STORAGE WITHIN THE PARKING STRUCTURE. THIS DEVELOPMENT PROPOSES ESDV UTILIZING MICRO-BORRENTATION FACILITIES, TROPICAL POINT BIOTRILLATION SYSTEMS (M-6) AND PERMEABLE PAVING (A-2). ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
  - A GEOTECHNICAL ANALYSIS WILL BE PROVIDED AT THE NEXT STAGE OF THE DEVELOPMENT.
  - IT IS ANTICIPATED THAT THERE WILL BE NO ALTERNATIVE COMPLIANCE REQUESTS OR DESIGN MANUAL WAIVERS FOR THIS DEVELOPMENT AT THIS TIME.
  - THE PROPOSED SITE ENTRY DRIVES ARE WITHIN THE SAME GENERAL LOCATION AS THE EXISTING ENTRY DRIVES. THEREFORE, THE SIGHT DISTANCE AS APPROVED UNDER SDP-05-029 SHALL BE ADEQUATE FOR THIS PROPOSED DEVELOPMENT. THE EXISTING TREE TURN-AROUND AT THE MAIN ENTRANCE TO THE LOBBY AREA WILL REMAIN. MAINTENANCE OF THE ENTRANCE TO BE PROVIDED BY THE OWNER OF PARCEL A.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 3/29/22  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

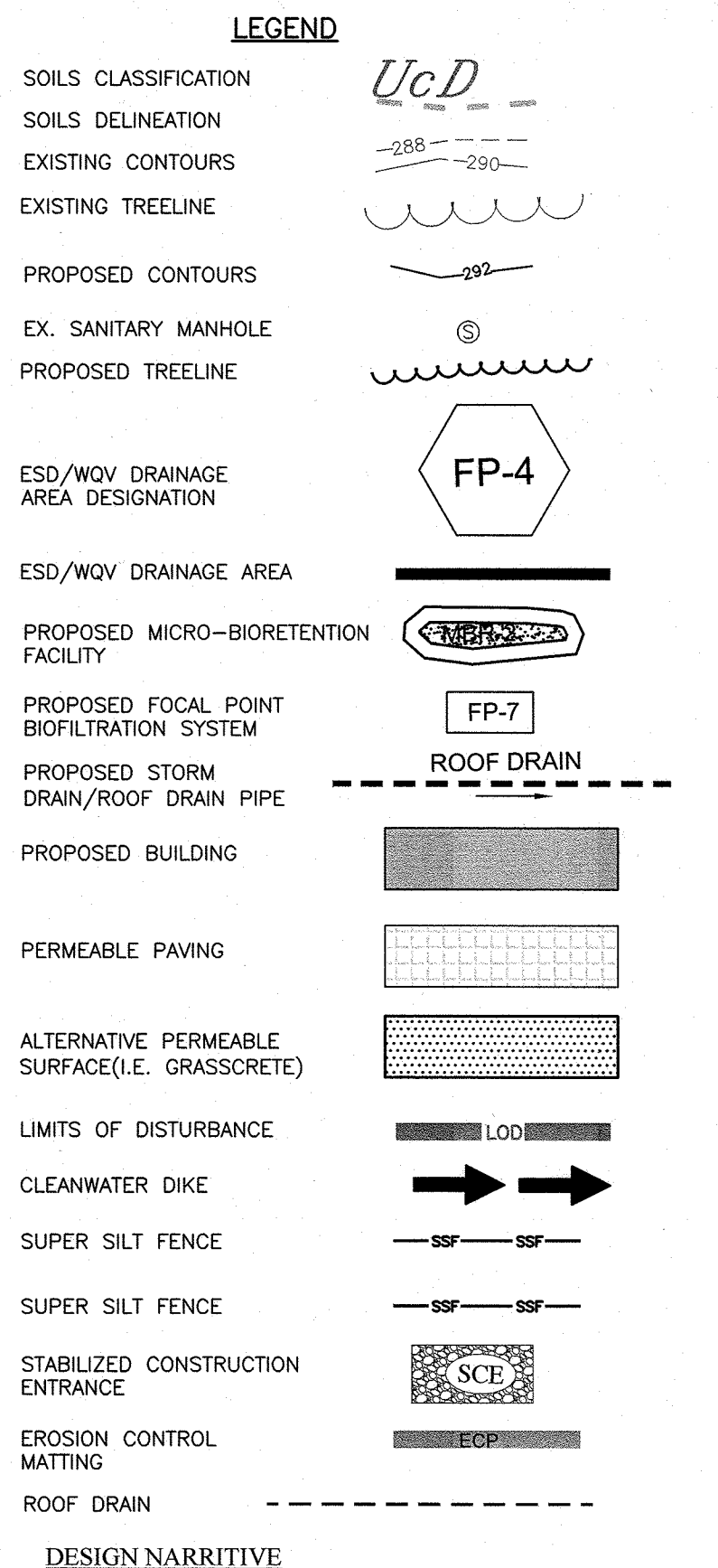
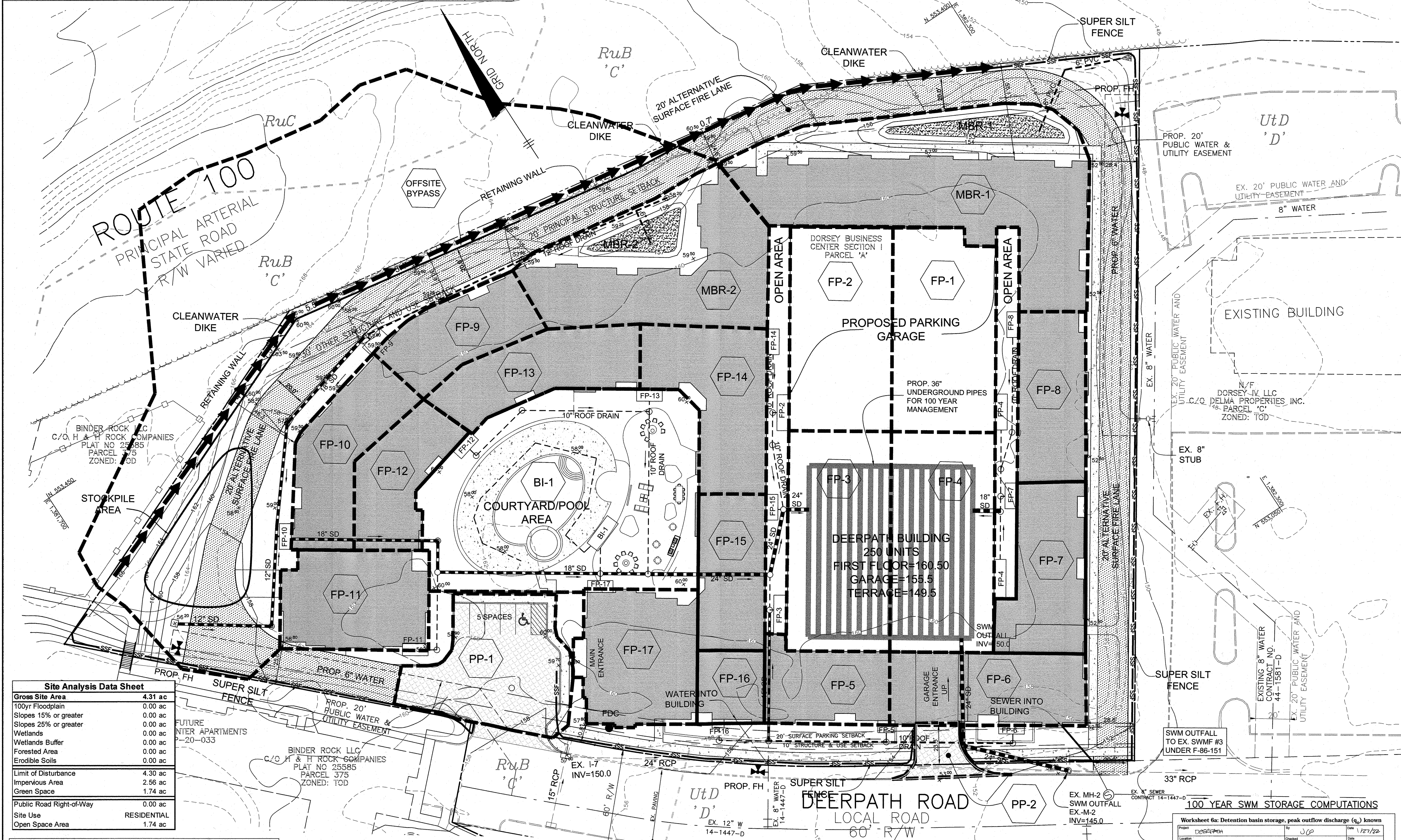
*[Signature]* 3/29/22  
CHIEF, DIVISION OF LAND DEVELOPMENT

NOTE: APPROVAL OF THIS ECP DOES NOT CONSTITUTE ANY APPROVAL OF SUBSEQUENT SUBDIVISION OR SITE DEVELOPMENT PLANS. FURTHER DEVELOPMENT PLANS IN ACCORDANCE WITH THE SUBDIVISION AND ZONING REGULATIONS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.

<p><b>BENCHMARK</b> ENGINEERS &amp; LAND SURVEYORS &amp; PLANNERS <b>ENGINEERING, INC.</b> 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELICOTT CITY, MARYLAND 21043 (P) 410-465-6108 (F) 410-465-6644 WWW.BEI-CIVILENGINEERING.COM</p>		<p>Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 22524. Review Date: 04-15-22</p> <p><i>[Signature]</i> 3/18/22</p>
<p>OWNER: SPEEDWAY ROCK LLC C/O ROCK REALTY INC. 6800 DEERPATH ROAD ELKRIDGE, MD 21075 410-579-2442</p>	<p><b>DORSEY BUSINESS CENTER, PARCEL A</b> 250 UNIT APARTMENT BUILDING</p>	
<p>DEVELOPER: ROCK REALTY LLC 6800 DEERPATH ROAD ELKRIDGE, MD 21075 410-579-2442</p>	<p>TAX MAP: 37 GRID: 24 PARCEL: 634 ZONED: TOD ELECTION DISTRICT NO. 1ST HOWARD COUNTY, MARYLAND</p>	
<p><b>ENVIRONMENTAL CONCEPT PLAN</b> EXISTING CONDITIONS PLAN</p>		
<p>DESIGN: JCO</p>	<p>DRAFT: JCO</p>	<p>DATE: MARCH 2022 SCALE: 1"=30'</p>
<p>BEI PROJECT NO. 3077</p>		<p>SHEET 1 OF 2</p>



SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
RuB		C	C	RUSSETT AND BELTSVILLE SOIL, 2 TO 5 PERCENT SLOPES	0.43
UID		D	C	URBAN LAND-UDORTMENTS COMPLEX 0 TO 15 PERCENT SLOPES	



This report includes preliminary stormwater management for the project known as Dorsey Business Center, Parcel A located in Tax Map 37, Parcel 634 and is approximately 4.3 acres. The parcel is zoned TOD and is the current location of a commercial building known as 6800 Deep Path Road. The site consists of type 'C' soils per the NRCS soils classification and contains approximately 2.9 acres (68%) of impervious surface that includes the one-story building and parking lot. This site falls within the Patuxent River Lower North Branch (2139966) watershed designation 02-13-09.

Dorsey Business Center Parcel 'A' is part of the development known as Dorsey Business Center. This parcel was previously designed in F-86-151, Dorsey Business Center Phase II and assumed that the development would be Industrial (95% impervious). The storm drain system within Deep Path Road was designed to accommodate this runoff and ultimately drain into the offsite SWM Area #3 Pond as shown on the F-86-151 plans. Existing SWM Area #3 Pond was designed for water quantity. Subsequently the parcel was developed in 2004 under SDP-05-029 for the construction of an office building and an associated parking lot. This development provided only Water Quality by methods of a grass swale and underground sand filters.

The developer is proposing removal of the building and parking lot constructed under SDP-05-029 and construct a new apartment building and parking garage. Since the site currently contains 2.93 acres of impervious area (68%) and that there will be a reduction of the impervious area under the new development (59%), this site qualifies as redevelopment. Since the existing onsite Water Quality devices are to be removed it is the goal that Water Quality for all of the proposed impervious will be treated onsite. Therefore, redevelopment methods are not fully implemented for water quality for the new development.

The target Pe for this site is 2.0 inches based on the impervious area of the proposed conditions. The target water quality (1.0") and/or the Pe was treated using Environmental Site Design practices as outlined in Chapter 5 of the 2000 Maryland Stormwater Design Manual, as amended by Maryland's Stormwater Management Act of 2007. Focal Point facilities treat the full Pe.

The proposed Water Quality methods for the building and parking garage will be Micro-bioretention Facilities and focal points and Biofiltration system (M-6). Downspouts will be directed to these facilities via roof scuppers and roof drains. The courtyard pool area will utilize trench drains to collect runoff and direct to Stormwater Biofilter Inlet (M-6). The proposed paving for the main entrance and garage/terrace level entrances will utilize permeable paving (A-2). Additionally, the fire lane loop around the rear of the building will be permeable pavement utilizing material similar to 'grasscrete' that will sustain the required load ratings for fire vehicles while providing a grass surface.

For the 10-100 year management under the redevelopment criteria, only 50% of the proposed required volume will be managed. This will be provided by an underground facility within the parking structure. The system will outfall to an existing storm drain system within Deep Path Road. This system outfalls into the existing SWM #3 designed under F-86-151. This facility is assumed to manage the 2 year and 10 year storms. The existing facility may be analyzed at the SDP stage for adequacy to accommodate the 10-100 year storms for this development.

To protect natural resources, it is important to minimize and adequately treat the stormwater runoff. The final design will incorporate adequate treatment and storage in order to create the least possible stormwater runoff in general design to comply with this concept plan. The runoff will be treated on-site using approved methods.

The existing storm drain outfall will be utilized for the development outfall, therefore there is no additional impacts to any existing drainage patterns.

As a result of fully addressing Water Quality onsite by use of bio-retention (M-6), porous paving (A-2) and along with the offsite quality controls, the proposed site provides better control than existing. Therefore, also considering the reduction in impervious areas, we have provided the ESD to the maximum extent practicable for this site.

Sediment and erosion control shall comply with the latest edition of the MDE Standards and Specifications for Erosion Control and has been limited to the areas necessary to conduct ESD practices and onsite functionality.

This site was previously developed under F-86-151 and SDP-05-029; therefore, the site is exempt from the requirements of section 16.1200 of the Howard County Code for forest conservation.

It is concluded that all onsite Water Quality requirements as defined in the Stormwater Management Act of 2007 have been met for the proposed development. The Water Quality has been provided by the implementation of bio-retention (M-6) and porous paving (A-2) to treat the proposed impervious onsite and the 100 year onsite management by retention within the 30" pipes.

Gross Site Area	4.31 ac
100yr Floodplain	0.00 ac
Slopes 15% or greater	0.00 ac
Slopes 25% or greater	0.00 ac
Wetlands	0.00 ac
Wetlands Buffer	0.00 ac
Forested Area	0.00 ac
Erodible Soils	0.00 ac
Limit of Disturbance	4.30 ac
Impervious Area	2.56 ac
Green Space	1.74 ac
Public Road Right-of-Way	0.00 ac
Site Use	RESIDENTIAL
Open Space Area	1.74 ac

THE STORMWATER MANAGEMENT SYSTEM SHOWN ON THESE PLANS IS AN APPROXIMATION OF THE SIZE, SHAPE AND LOCATION. IT IS UNDERSTOOD THAT THIS SYSTEM HAS NOT BEEN DESIGNED AND THE ACTUAL DESIGN MAY CHANGE. ALTERING THE NUMBER OF UNITS ALLOCATED FOR THIS DEVELOPMENT. ADDITIONALLY, THE EXISTING FACILITY MAY BE ANALYZED AT THE SDP STAGE FOR ADEQUACY TO ACCOMMODATE THE 10-100 YEAR STORMS FOR THIS DEVELOPMENT.

FACILITY TYPE	STORM	EXISTING RUNOFF	PROPOSED RUNOFF**	STORAGE REQUIRED	STORAGE PROVIDED
UG STORAGE PIPES	100 YEAR	33.25 cfs	44.38 cfs	11,762 cf	11,807 cf ±

\*\* DEVELOPED RUNOFF BEFORE ROUTING THROUGH FACILITY.

SINCE THE ORIGINAL DESIGN OF SWM AREA #3 POND (F-86-151) WAS TO ACCOMMODATE PARCEL A AT 95% IMPERVIOUS AREA AND THE PROPOSED SITE WILL GENERATE A 59% IMPERVIOUS AREA THERE WILL BE NO ADVERSE EFFECTS ON THE EXISTING STORM DRAIN SYSTEM OR THE EXISTING SWMF.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 3/29/22  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 3/29/22  
 CHIEF, DIVISION OF LAND DEVELOPMENT

FACILITY	Drainage Area	Impervious	I (%)	Rv	ESDv (cf)	Volume Stored	Pe Treated
FP-1	7067	7067	100%	0.950	559	147 cf	1.051
FP-2	7158	7158	100%	0.950	567	147 cf	1.038
FP-3	7779	7779	100%	0.950	616	161 cf	1.046
FP-4	7825	7825	100%	0.950	619	161 cf	1.040
FP-5	3241	3241	100%	0.950	257	70 cf	1.091
FP-6	4872	4872	100%	0.950	386	105 cf	1.089
FP-7	4466	4466	100%	0.950	354	105 cf	1.188
FP-8	3951	3951	100%	0.950	313	105 cf	1.343
FP-9	3547	3547	100%	0.950	281	105 cf	1.496
FP-10	4337	4337	100%	0.950	343	105 cf	1.223
FP-11	4936	4936	100%	0.950	391	105 cf	1.075
FP-12	3419	3419	100%	0.950	271	105 cf	1.552
FP-13	4276	4276	100%	0.950	339	105 cf	1.241
FP-14	5209	5209	100%	0.950	412	105 cf	1.018
FP-15	3597	3597	100%	0.950	285	105 cf	1.475
FP-16	1678	1678	100%	0.950	133	35 cf	1.054
FP-17	5265	5265	100%	0.950	417	105 cf	1.008

Pe	2	inches	Impervious Area (SF)	Qe	ESDv Required	ESDv Provided	RV	Pe
MBR 1	(M-6)	14,719	10,102	1.34	1228	1279	PASS	0.67
MBR 2	(M-6)	9,774	7,033	1.40	852	979	PASS	0.70
Totals		24,493	17,135		2,081	2,258		

REQUIRED:	PROVIDED:
Designation	Use MWS-L-8-16
Total Drainage Area (sf)	17309
PE (in)	2
ESD Volume (cf)	1535
Required Surface Area (sf)	158
Required Pre-storage (cf)	1151.3

FACILITY	MDE Type	Total DA	Impervious Area	Rv	Af (SF)	Min. Stone Depth	Provided Stone Depth	ESDv (CF)	Pe Treated
PP-1	A-2	5,470	5,470	0.95	5470	866	1126.8	541.5	2.6
PP-2	A-2	1,880	1,880	0.95	1880	PASS	1.0	298	2.6
TOTAL TREATED		7,350	7,350					2,241.8	

1. Data: Detention basin storage (acre feet)	0.14
2. Frequency	100
3. Peak inflow discharge (cfs)	134.26
4. Peak outflow discharge (cfs)	128.29
5. Compute	0.75
6. V <sub>1</sub>	0.02
7. Runoff Q <sub>1</sub>	0.66
8. Peak outflow discharge (cfs)	134.26
9. Storage volume (ac-ft)	0.54
10. Maximum storage E <sub>max</sub>	0.54

**BENCHMARK**  
ENGINEERS & LAND SURVEYORS & PLANNERS  
**ENGINEERING, INC.**  
8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043  
(P) 410-465-1105 (F) 410-465-6644  
WWW.BE-CIVILENGINEERING.COM

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 142398, EXPIRES 09/30/25.

*[Signature]*  
Professional Engineer

OWNER:  
SPEEDWAY ROCK LLC  
C/O ROCK REALTY INC.  
6800 DEERPATH ROAD  
ELKRIDGE, MD 21075  
410-579-2442

DEVELOPER:  
ROCK REALTY LLC  
6800 DEERPATH ROAD  
ELKRIDGE, MD 21075  
410-579-2442

**DORSEY BUSINESS CENTER, PARCEL A**  
250 UNIT APARTMENT BUILDING

TAX MAP: 37 GRD 24 PARCEL: 634  
ZONED: TOD  
ELECTION DISTRICT NO. 1ST HOWARD COUNTY, MARYLAND

**ENVIRONMENTAL CONCEPT PLAN**  
**STORMWATER MANAGEMENT PLAN**

DATE: MARCH 2022 BEI PROJECT NO. 3077

DESIGN: JCO DRAFT: JCO SCALE: 1"=30' SHEET 2 OF 2