

ROCKBURN HILL PUMP STATION

CAPITAL PROJECT S-6260 CONTRACT NO. 14-4715 ECP-12-043 HOWARD COUNTY, MARYLAND

ENVIRONMENTAL DESIGN NARRATIVE

THE SITE WAS EVALUATED FOR STORMWATER MANAGEMENT, AS REQUIRED BY THE STORMWATER MANAGEMENT ACT OF 2007 AND THE HOWARD COUNTY DESIGN MANUAL VOLUME 1. THESE REGULATIONS REQUIRE THAT THE ENVIRONMENTAL SITE DESIGN (ESD) BE IMPLEMENTED TO THE MAXIMUM EXTENT POSSIBLE FOR EVERY NEW PROJECT. BY IMPLEMENTING ESC, THE ULTIMATE GOAL IS TO MAINTAIN THE RUNOFF CHARACTERISTICS OF THE SITE TO MIMIC PREDEVELOPMENT WOODS IN GOOD CONDITION. ENVIRONMENTAL SITE DESIGN COMPONENTS AND HOW THEY WERE INCORPORATED FOR THE PROJECT INCLUDE:

- NATURAL RESOURCE PROTECTION AND ENHANCEMENT: A BIO-SWALE IS PROPOSED TO MORE EFFECTIVELY DETAIN AND TREAT THE STORMWATER RUNOFF ON THE SITE. THE TREE REMOVAL IS MINIMIZED AND THE ALIGNMENT OF THE PROPOSED ACCESS ROAD IS LOCATED TO MINIMIZE DISTURBANCE TO EXISTING NATURAL FEATURES.
- MAINTENANCE OF NATURAL FLOW PATTERNS: THE PROJECT UTILIZES THE NATURAL DRAINAGE PATTERNS WITH MINIMAL MODIFICATIONS IN ORDER TO MORE EFFECTIVELY DRAIN THE ACCESS ROAD TO THE LOCATION OF THE BIO-SWALE.
- REDUCTION OF IMPERVIOUS AREAS THROUGH BETTER SITE DESIGN, ALTERNATIVE SURFACES AND NON-STRUCTURAL PRACTICES: IN THIS PROJECT THE LIMIT OF DISTURBANCE WAS MINIMIZED BY ELIMINATING ANY ABOVE-GRADE BUILDING STRUCTURES AND PLACING ESD PRACTICES NEXT TO THE ROAD. THE ELIMINATION OF ABOVE GRADE BUILDINGS AND ANY PAVED PARKING AREAS GREATLY REDUCED THE IMPERVIOUS AREAS FOR THE PROJECT. ALTERNATIVE SURFACES WERE CONSIDERED, BUT DUE TO HEAVY DUTY TRAFFIC, PERVIOUS PAVEMENTS ARE NOT FEASIBLE. NON-ROOFTOP DISCONNECTION IS UTILIZED.

THE SITE WILL MAXIMIZE THE USE OF ESD PRACTICES BY INCORPORATING A BIO-SWALE WHERE ALLOWABLE. EROSION AND SEDIMENT CONTROLS WERE INTEGRATED INTO THE DESIGN.

TO SIZE THE ESD PRACTICES, RCN VALUES ARE DETERMINED BASED ON A SITE AREA'S LAND USE OF WOODS IN GOOD CONDITION. PE TARGETS ARE THEN ESTABLISHED FROM THE VALUES SET IN TABLE 5.3 OF THE ENVIRONMENTAL SITE DESIGN CRITERIA. A TARGET ESD VOLUME IS THEN CALCULATED FOR THE DRAINAGE AREA BASED ON THE PE AND THE PROPOSED SITE IMPERVIOUS AREA. NON-ROOFTOP DISCONNECTION IS UTILIZED WHERE POSSIBLE.

INDIVIDUAL ESD PRACTICES ARE THEN LOCATED WITHIN THE DRAINAGE AREA AND SIZED BASED ON THE DRAINAGE AREA AND IMPERVIOUS AREA FLOWING TO THE PRACTICE. THE TOTAL OF THE ESD VOLUMES CAPTURED BY EACH ESD PRACTICE WITHIN THE DRAINAGE AREA SHOULD MEET THE TARGET ESD VOLUME INITIALLY CALCULATED FOR THE ENTIRE DRAINAGE AREA.

BY MEETING ESD VOLUMES, WATER QUALITY VOLUME (WQV) AND RECHARGE VOLUME (REV) AND CHANNEL PROTECTION VOLUME (CPV) ARE SATISFIED.

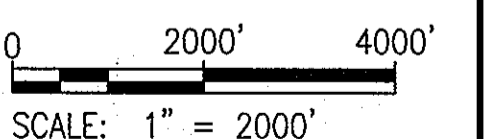
FOR THIS PROJECT, ONE INDIVIDUAL ESD PRACTICE IS PROPOSED AND NON-ROOFTOP DISCONNECTION.

GENERAL NOTES

- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN DOES NOT CONSTITUTE APPROVAL OF ASSOCIATED SUBDIVISION OR SITE DEVELOPMENT PLANS. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION AND SITE PLAN STAGES.
- THE DISTURBANCE TO THE 100-YR FLOODPLAIN AND STEEP SLOPES IS CONSIDERED ESSENTIAL DISTURBANCE AND NECESSARY FOR THE PROJECT AND TO INSTALL UTILITIES.
- FOREST CONSERVATION OBLIGATION OF 1.75 ACRES OF REFORESTATION FOR THE PROJECT WILL BE FULFILLED BY THE PAYMENT OF FEE-IN-LIEU OF \$57,172.50.
- OTHER DPZ FILE REFERENCES RELATED TO THIS PROJECT: WP-12-144, PERTAINING TO SECTION 16.1205(a) OF THE REGULATIONS (REMOVAL OF SPECIMEN TREES). THIS WAIVER WAS APPROVED MARCH 23, 2012.

LEGEND

	EXISTING	PROPOSED
SLOPES 15% TO <25%		
SLOPES >25%		
CONTOUR	145	—145—
SANITARY SEWER		
SANITARY SEWER MANHOLE		
STORM DRAIN		
TREE LINE		
TREE		
SPECIMEN TREE MARKED FOR REMOVAL		
TREES TO BE REMOVED		
STREAM BUFFER		
SILT FENCE		
SUPER SILT FENCE		
STABILIZED CONSTRUCTION ENTRANCE		
BIO-SWALE/PLANTING BED		
IMPERVIOUS AREA		
LIMIT OF DISTURBANCE		



LIST OF DRAWINGS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS - PLAN
3	ENVIRONMENTAL SITE DESIGN CONCEPT - PLAN
4	SEDIMENT, EROSION, AND STORMWATER CONTROL - PLAN

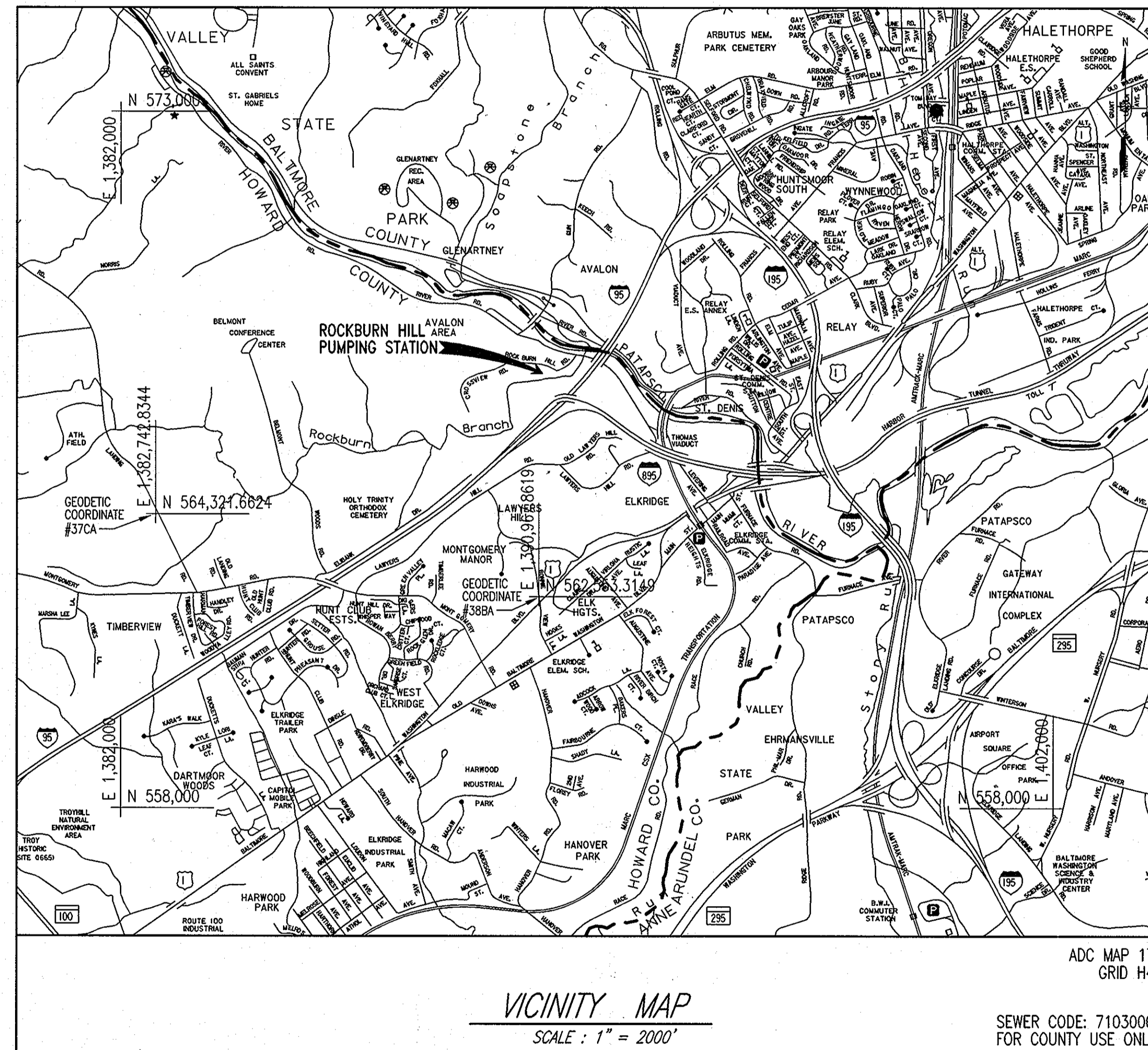
LIST OF WAIVER REQUESTS

WAIVER TO SECTION *	WAIVER DESCRIPTION SUMMARY
16.1205(a)	REMOVAL OF LARGE AND CHAMPION TREES

* FROM HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

SITE ANALYSIS DATA CHART

SITE AREA.....	0.25 AC.
WETLANDS.....	0 AC.
WETLAND BUFFER.....	0 AC.
FOREST.....	0 AC.
SLOPES 15% TO <25%.....	586 SF.
SLOPES 25%>.....	981 SF.
PROPOSED SITE USE.....	PUMPING STATION
PROPOSED IMPERVIOUS AREA.....	0.06 AC.
FLOOD PLAIN AND BUFFER.....	0.16 AC.
TOTAL PROJECT AREA (LOD).....	0.25 AC.
GREEN AREA.....	0 AC.
ERODIBLE SOILS.....	0.03 AC.



DIRECTIONS: FROM BALTIMORE TAKE I-895 SOUTH TO EXIT 1, TRAVEL NORTH ON LEVERING AVE, CONTINUE NORTH/NORTHWEST ON RIVER ROAD, JUST PAST I-95 BRIDGE, TRAVEL WEST/SOUTHWEST ON AN ACCESS DRIVE, BEFORE ROCKBURN HILL ROAD.

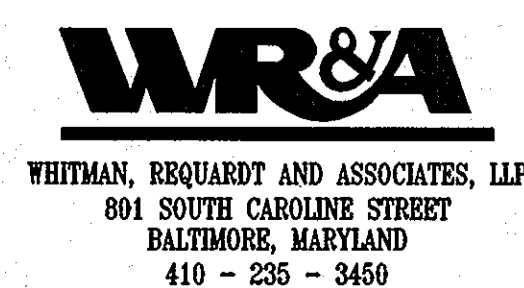
NOTE: HORIZONTAL AND VERTICAL INFORMATION SHOWN HEREON BASED ON HOWARD COUNTY GEODETIC CONTROLS AS ESTABLISHED BY A GPS SURVEY PERFORMED BY WHITMAN, REQUARDT AND ASSOCIATES FROM THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL POINTS (MARYLAND STATE REFERENCE SYSTEM NAD '83 & NAVD '88)

	NORTH	EAST	ELEVATION
HOWARD COUNTY #38BA	562,553.3149	1,390,967.8619	166.177
HOWARD COUNTY #37CA	564,321.6624	1,382,742.8344	256.964

DEVELOPMENT ENGINEERING DIVISION HOWARD COUNTY, MARYLAND	DIVISION OF LAND DEVELOPMENT HOWARD COUNTY, MARYLAND
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 6/11/12	 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/07/12

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. 24478, EXPIRATION DATE: 10/28/2013.

OWNER:	PERMIT INFORMATION CHART												
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 9250 BENDIX ROAD COLUMBIA, MD 21045 ATTN: MR. BOB DIAZ VOICE 410-313-6153	<table border="1"> <tr> <td>WATER CODE: PUBLIC</td> <td>SEWER CODE: PUBLIC</td> <td>BUILDING: N/A</td> <td>STREET ADDRESS: ROCKBURN HILL RD/RIVER RD</td> </tr> <tr> <td colspan="2">PROJECT NAME: ROCKBURN HILL SEWER/PUMP STATION AND CROSSVIEW ROAD WATER EXTENSION</td> <td>TAX MAP/GRID: 32/10</td> <td>PARCEL NO.: 61/80</td> </tr> <tr> <td>L/F: 6318/663 568/616</td> <td>ZONING: Red</td> <td>TAX MAP BLOCK: 32</td> <td>ELEC. DIST: 6 CENSUS TRACT: 6068903</td> </tr> </table>	WATER CODE: PUBLIC	SEWER CODE: PUBLIC	BUILDING: N/A	STREET ADDRESS: ROCKBURN HILL RD/RIVER RD	PROJECT NAME: ROCKBURN HILL SEWER/PUMP STATION AND CROSSVIEW ROAD WATER EXTENSION		TAX MAP/GRID: 32/10	PARCEL NO.: 61/80	L/F: 6318/663 568/616	ZONING: Red	TAX MAP BLOCK: 32	ELEC. DIST: 6 CENSUS TRACT: 6068903
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DES: F.B.			
DRN: F.B.			
CHK: W.H.			
JAN. 2011	BY NO.	REVISION	DATE

COVER SHEET

600 SCALE MAP NO. BLOCK NO.

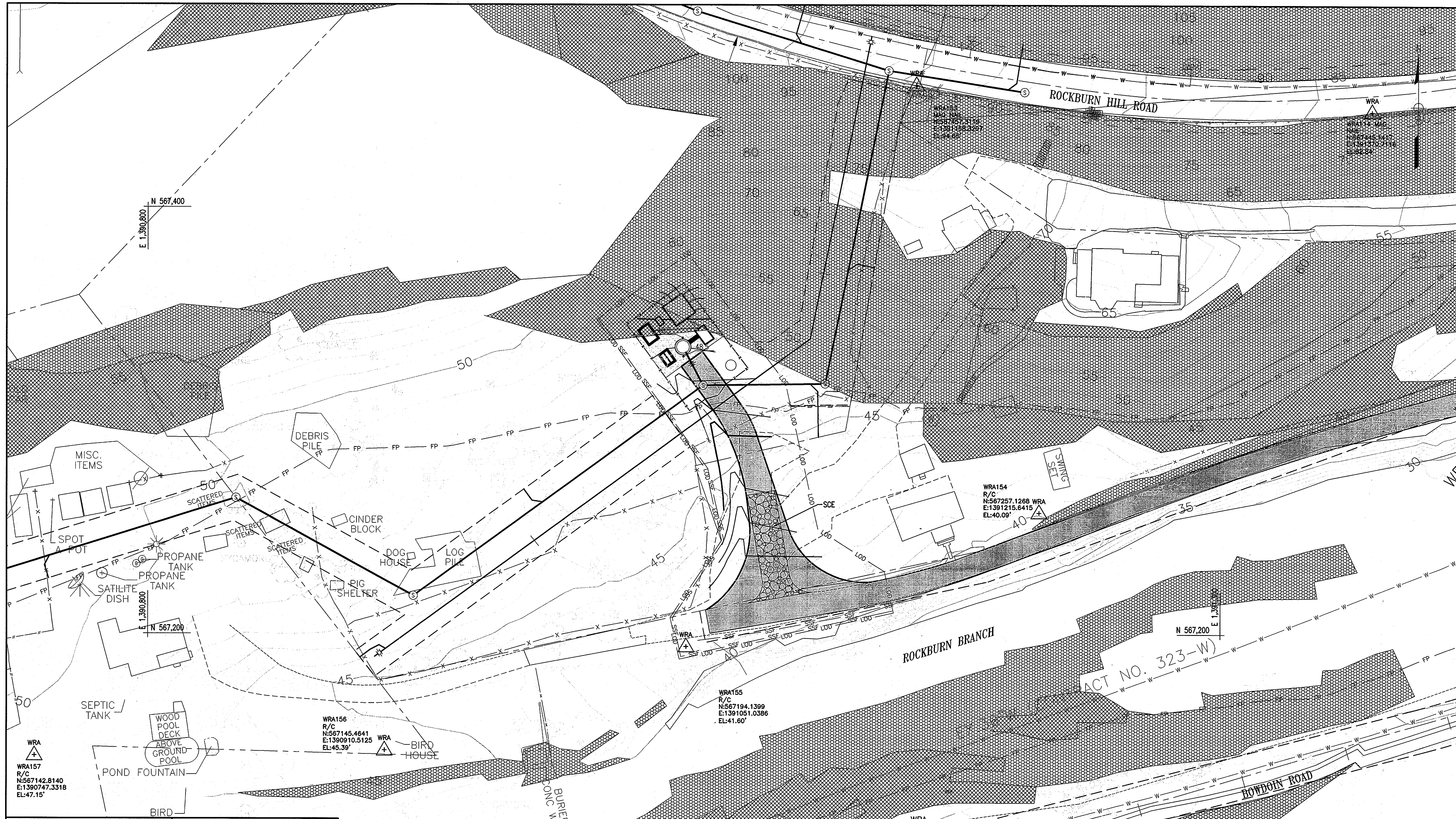
ROCKBURN HILL PUMP STATION

CAPITAL PROJECT NO. S-6260
CONTRACT NO. 14-4715
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

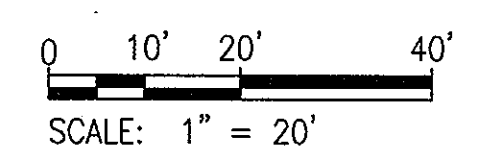
ECP-1

SCALE AS SHOWN

SHEET 1 OF 4



PLAN
SCALE: 1" = 20'



DEVELOPMENT ENGINEERING DIVISION HOWARD COUNTY, MARYLAND	DIVISION OF LAND DEVELOPMENT HOWARD COUNTY, MARYLAND
<i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	<i>[Signature]</i> CHIEF, DIVISION OF LAND DEVELOPMENT
DATE	DATE

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L/F: 6316/663 568/616	ZONING: Red	TAX MAP BLOCK: 32	ELEC. DIST. 6	CENSUS TRACT: 606903

WR&A
WHITMAN, REQUARDT AND ASSOCIATES, LLP
801 SOUTH CAROLINE STREET
BALTIMORE, MARYLAND
410 - 235 - 3450



DES:			
DRN:			
CHK:			
JAN. 2011	BY	NO.	REVISION
			DATE

SEDIMENT, EROSION AND STORMWATER CONTROL PLAN
600 SCALE MAP NO. BLOCK NO.

ROCKBURN HILL PUMP STATION
CAPITAL PROJECT NO. S-6260
CONTRACT NO. 14-4715
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

ECP-4
SCALE AS SHOWN
SHEET 4 OF 4

NO. 13882-0001 CADD VFP-03828000-04.dwg
MAY 21, 2012 - 10:11am