CONSTRUCTION PLAN

SIMPSON MILL

CEDAR LANE, ROUTE 32 RAMP AND GRACE DRIVE IMPROVEMENTS

GENERAL NOTES

1.) THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF ANY WORK.

2.) THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

3.) THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.

5.) COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 3511 AND 3512.

6.) THE EXISTING TOPOGRAPHY ON-SITE SHOWN WAS FIELD SURVEYED BY SILL, ADCOCK AND ASSOCIATES, INC. IN MAY, 2007. THE EXISTING TOPOGRAPHY FOR RAMP IMPROVEMENTS AND TURNAROUND ON GRACE DRIVE WAS FIELD SURVEYED BY BENCHMARK ENGINEERING, INC. IN APRIL, 2011 WITH 2-FOOT CONTOUR INTERVALS

7.) AN APFO TRAFFIC STUDY WAS PREPARED BY LEE CUNNINGHAM & ASSOCIATES, INC. DATED FEBRUARY, 2005 AND APPROVED UNDER SP-05-008. IT WAS AMENDED BY TRAFFIC CONCEPTS IN JUNE, 2007 AND THE TRAFFIC GROUP ON JUNE 6, 2008 AND APPROVED ON JULY 29, 2008. THE TRAFFIC REPORT HAS BEEN BROUGHT TO DATE IN ACCORDANCE WITH THE COMMENTS GENERATED UNDER THE SDP-12-015 REVIEW.

8.) NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100YR FLOODPLAIN.

9.) TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERY LOCATIONS WITHIN THIS AREA.

10.) THERE ARE NO HISTORIC SITES/FEATURES LOCATED WITHIN THIS AREA.

11.) STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE STORMWATER MANAGEMENT ACT OF 2007. ENVIRONMENTAL SITE DESIGN (ESD) HAS BEEN IMPLEMENTED TO THE MAXIMUM EXTENT PRACTICAL (MEP), THERE IS NO NEW IMPERVIOUSNESS. ALL FACILITIES ARE PUBLICLY OWNED AND MAINTAINED.ALL STORMWATER MANAGEMENT FACILITIES WITHIN THE PUBLIC ROADS (ONTS-OF-WAY ARE PUBLICLY OWNED AND MAINTAINED EITHER BY MARYLAND HIGHWAY ADMINISTRATION, THE OWNERS OF THE RIGHT-OF-WAY OR BY HOMEOWNERS ASSOCIATION.

12.) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.

13.) THE DEVELOPER SHALL PROVIDE A MACADAM PATHWAY IN PART OF THE STATE RIGHT-OF-WAY OF CEDAR LANE. THE PATH SHALL CONNECT THE SIMPSON MILL SUBDIVISION TO THE ROBINSON NATURE CENTER BY CROSSING THE EXISTING BRIDGE AT HARRIET TUBMAN LANE AND GOING UNDER THE BRIDGE OF CEDAR LANE (NORTH OF THE RUINS).

14.) TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.

15.) STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)". A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.

16.) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, QUICK PUNCH, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2.5" GALVANIZED STEEL, QUICK PUNCH, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST (MD 802.04). THE ANCHOR SHALL NOT EXTEND MORE THAN TWO QUICK PUNCH HOLES ABOVE THE GROUND.

17.) ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

18.) EXISTING UTILITIES HAVE BEEN SHOWN FROM UTILITY DRAWINGS AND FIELD RUN TOPOGRAPHY AS SHOWN ON THE PRELIMINARY PLAN SP-05-008.

19.) THIS PLAN IS FOR THE PUBLIC ROAD IMPROVEMENTS ASSOCIATED WITH THE SIMPSON MILL DEVELOPMENT (SDP-12-015) AS APPROVED UNDER THE RIVERDALE PRELIMINARY EQUIVALENT PLAN (SP-05-008).

20.) APPLICABLE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING FILE NUMBERS: S-05-008, P-06-015, SP-08-002, WP-07-072, ECP-11-058, WP-12-020, WP-12-029, SDP-12-015, F-12-025

21.) THE FOREST CONSERVATION OBLIGATION FOR ANY CLEARING UNDER THIS PLAN WAS SATISFIED UNDER SDP-12-025.

22.) THE SUBJECT PROPERTY IS ZONED R-SA-8 AND POR PER THE 2-2-2004 COMPREHENSIVE ZONING PLAN AND THE "COMP-LITE" ZONING AMENDMENTS EFFECTIVE 2-28-2006.

23.) WATER FOR THE SIMPSON MILL SUBDIVISION IS PUBLIC, CONTRACT NUMBERS 34-4373-D AND 34-4739-D. THE DRAINAGE AREA IS THE LITTLE PATUXENT WATER RECLAMATION PLANT.

24.) SEWER FOR THE SIMPSON MILL SUBDIVISION S PUBLIC, CONTRACT NUMBERS 34-4373-D AND 34-4739-D. THE DRAINAGE AREA IS THE LITTLE PATUXENT WATER RECLAMATION PLANT.

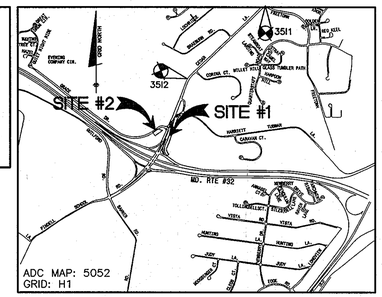
25.) THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY KIDDE CONSULTANTS, INC., DATED JUNE 23, 1978 FOR HOWARD COUNTY MARYLAND AND UPGRADED BY AB CONSULTANTS, INC., FOR SP-08-002. THE FLOODPLAIN STUDY WAS APPROVED ON JUNE 9, 2008.

26.) THE WETLAND DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY AB CONSULTANTS, INC., DATED AUGUST 26, 2004. THE WETLAND DELINEATION STUDY WAS APPROVED ON JUNE 9, 2008.

27.) SIMPSON MILL DRIVE ENTRANCE, EMERGENCY ENTRANCE OFF CEDAR LANE, MACADAM PATHWAY AND STORM DRAINS WITH IN THE PUBLIC ROAD RIGHT-OF-WAY WILL BE OWNED AND MAINTAINED BY EITHER SIMPSON MILL HOMEOWNERS ASSOCIATION, BY THE STATE HIGHWAY ADMINISTRATION OR THE OWNERS OF THE RIGHT-OF-WAY.

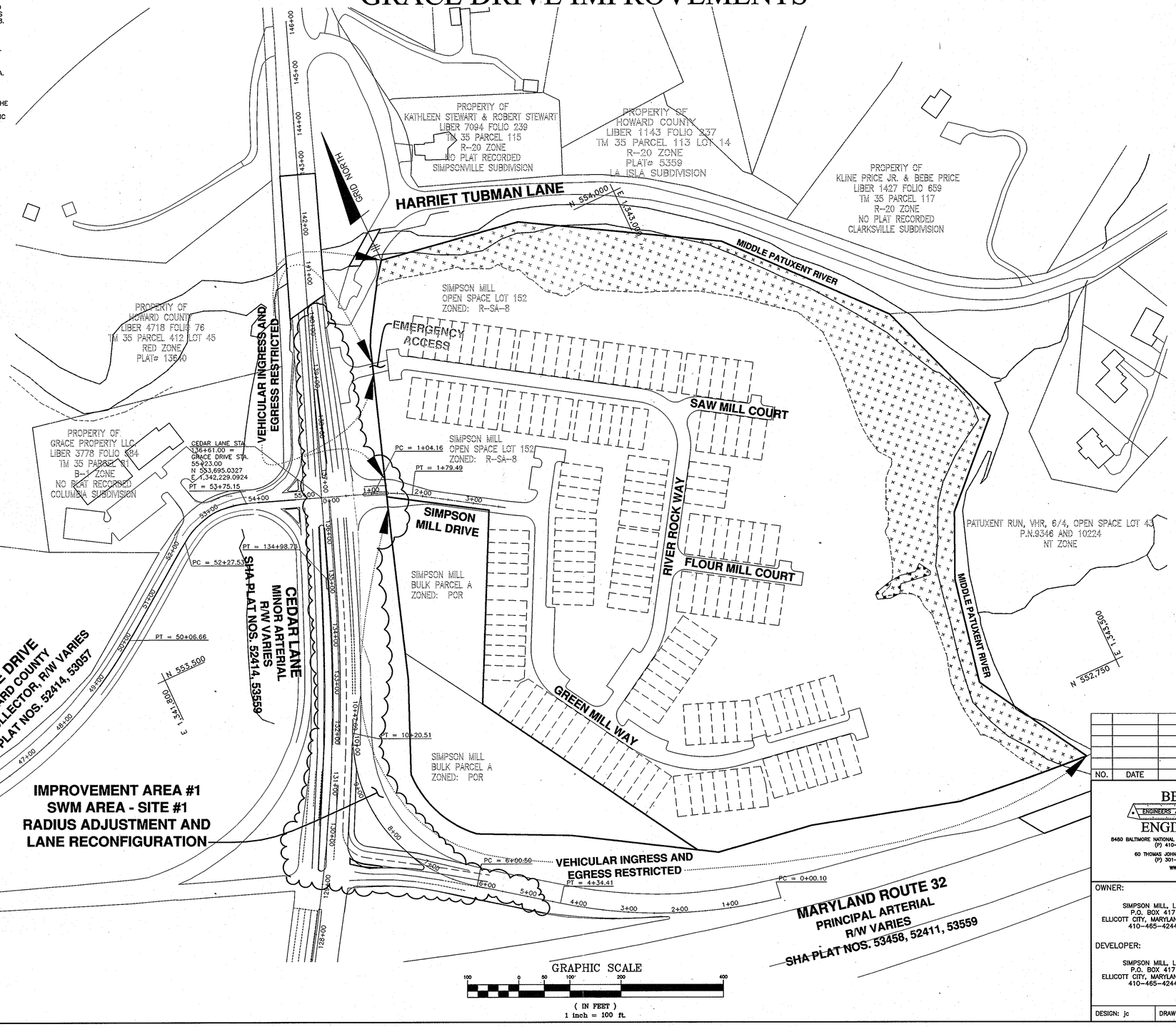
28.) THE EXISTING TRAFFIC LIGHTS AND HAND BOXES WILL BE RELOCATED BY THE DEVELOPER. THE RELOCATION WILL BE IN ACCORDANCE WITH THE STATE HIGHWAY ADMINISTRATION'S ACCESS PERMIT.

BENCH MARKS NAD'83	
HO. CO. #3511	
STAMPED DISC SET ON TOP OF A 3' DEEP COLUMN OF CONCRETE 2" BELOW SURFACE.	
N 557110.3963'	E 1344893.6204'
ELEV. 400.034'	
HO. CO. #3512	
STAMPED DISC SET ON TOP OF A 3' DEEP COLUMN OF CONCRETE 2" BELOW SURFACE.	
N 555100.7743'	E 1342732.9971'
ELEV. 329.719'	



VICINITY MAP
SCALE: 1" = 2000'

SHEET INDEX	
SHEET	TITLE
1	TITLE SHEET
2 - 3	CEDAR LANE AND ROUTE 32 RAMP ROAD CONSTRUCTION PLAN
4 - 5	CEDAR LANE AND ROUTE 32 RAMP GRADING AND SEDIMENT & EROSION CONTROL PLAN
6	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
7	CEDAR LANE AND ROUTE 32 RAMP SIGHT DISTANCE ANALYSIS PLAN AND PROFILE
8	CEDAR LANE AND ROUTE 32 RAMP STRIPING PLAN AND OVERLAY PLAN
9	SWM PLAN, NOTES AND DETAILS
10 - 11	MAINTENANCE OF TRAFFIC PLAN
12	SIGNING



THESE PLANS SHOW WORK WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION THAT WILL REQUIRE AN ACCESS PERMIT FROM MSHA, REFER TO PERMIT PLANS FOR CONSTRUCTION, DETAILS, SPECIFICATIONS AND LIMITS.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Diane Schwarz, Acting — 8/27/12
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Kent Sheubrooks — 8/27/12
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

NO.	DATE	REVISION

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
60 THOMAS JOHNSON DRIVE ▲ FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3506
WWW.BEI-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. 29355, Expiration Date: 7-22-2013.

STATE OF MARYLAND — BRIAN F. CLEARY — REG. NO. 29355 — PROFESSIONAL ENGINEER — 8/15/2012

OWNER:	SIMPSON MILL CEDAR LANE AND GRACE DRIVE IMPROVEMENTS
SIMPSON MILL, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244	RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE TAX MAP 35, GRID 23 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND
DEVELOPER:	TITLE SHEET
SIMPSON MILL, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244	DATE: JULY 31, 2012 — BEI PROJECT NO: 2189
DESIGN: jc — DRAWN: jc	SCALE: AS SHOWN — SHEET 1 OF 12

F-12-059

P:\2189 Riverdale\dwg\7009-offsite.dwg, sht1, 8/13/2012 10:26:17 AM, cdd

THESE PLANS ARE FOR THE WORK WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION RIGHT-OF-WAY ONLY. FOR ON-SITE WORK SEE SDP-12-015.

THESE PLANS SHOW WORK WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION THAT WILL REQUIRE AN ACCESS PERMIT FROM MSHA, REFER TO PERMIT PLANS FOR CONSTRUCTION, DETAILS, SPECIFICATIONS AND LIMITS.

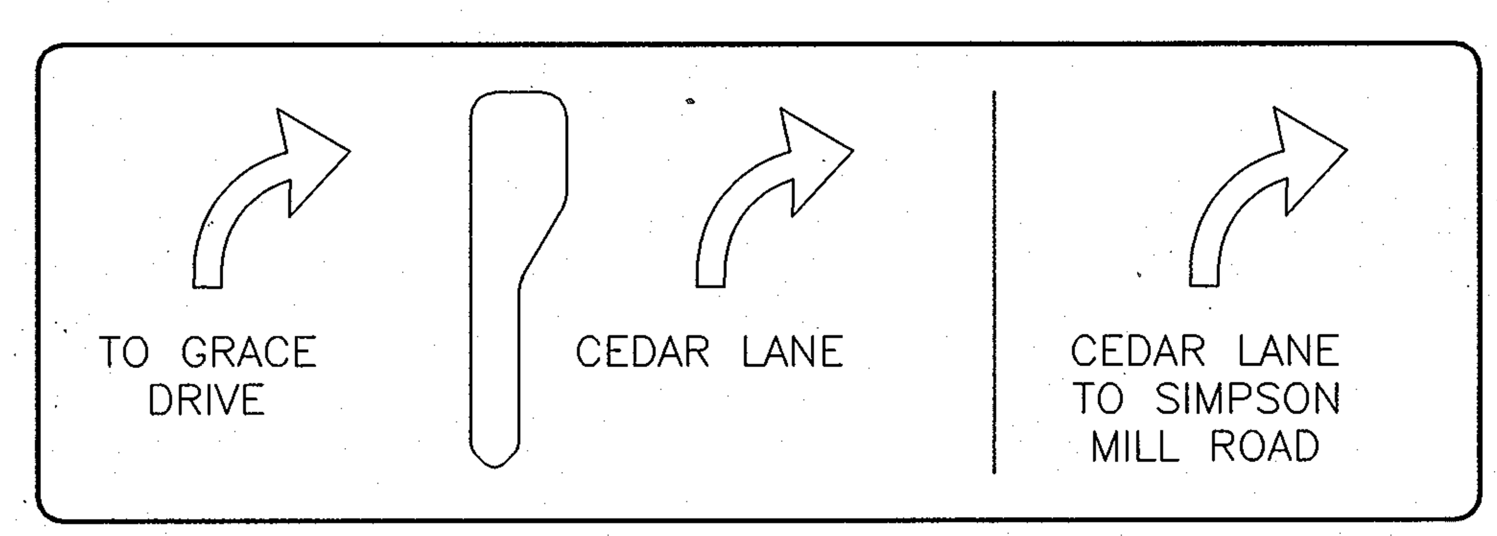
PROPOSED CONDITIONS

SCALE: 1" = 30'

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.



PROPOSED OVERHEAD SIGN TURN DIRECTIONS FOR NORTH BOUND CEDAR LANE

SEE MdMUTCD FOR DETAILS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
Diane Schwarz, Acting — CHIEF, BUREAU OF HIGHWAYS	8/22/12 DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING	
[illegible] — CHIEF, DIVISION OF LAND DEVELOPMENT	8/27/12 DATE
[illegible] — CHIEF, DEVELOPMENT ENGINEERING DIVISION	8/24/12 DATE

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
60 THOMAS JOHNSON DRIVE ▲ FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3506
WWW.BEI-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. 28559, Expiration Date: 7-22-2013.

STATE OF MARYLAND BRIAN F. CLEARY No. 28559 REGISTERED PROFESSIONAL ENGINEER

8/15/2012

OWNER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

DEVELOPER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

SIMPSON MILL

CEDAR LANE AND GRACE DRIVE IMPROVEMENTS

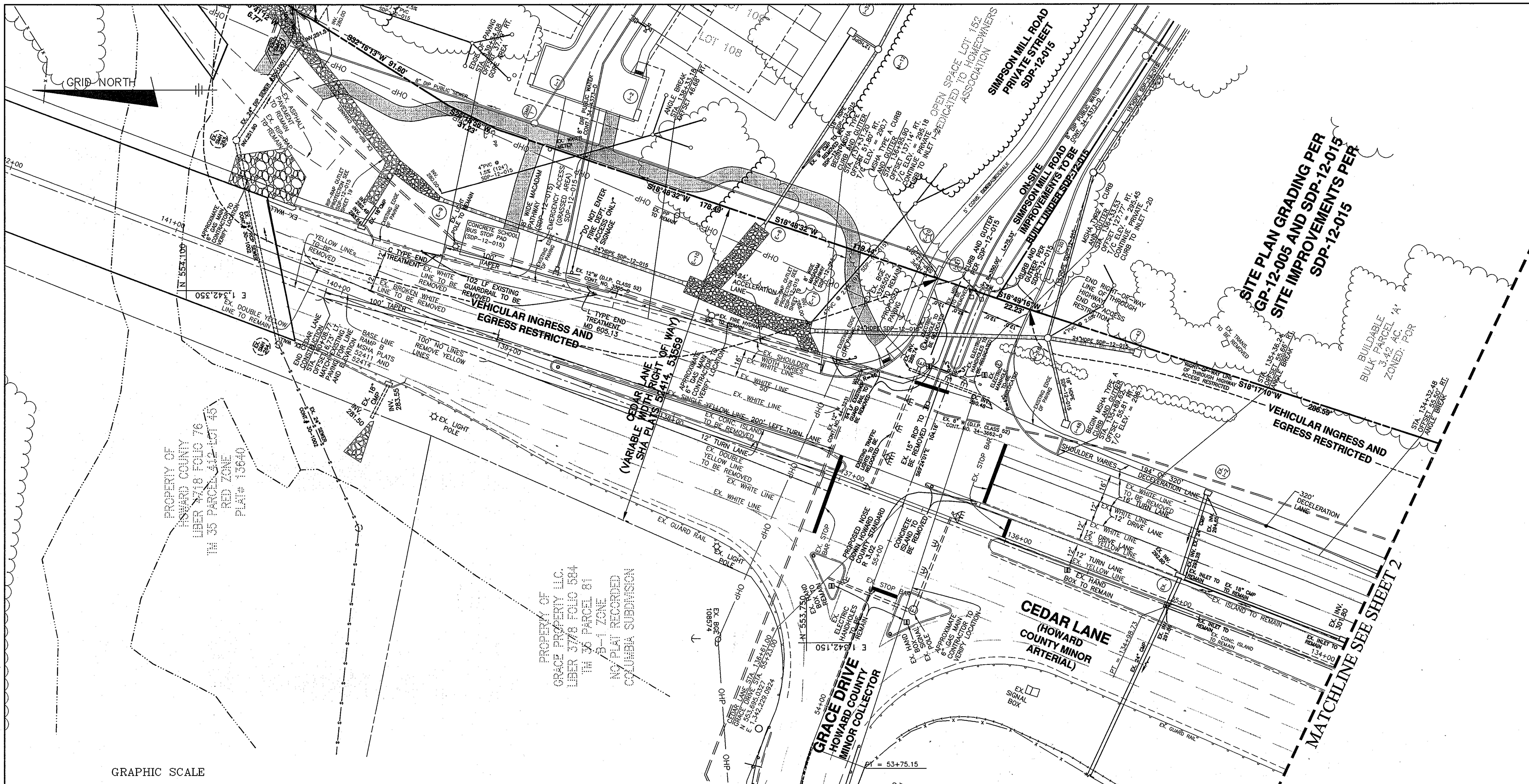
RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE
TAX MAP 35, GRID 23
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

TITLE: CEDAR LANE AND ROUTE 32 RAMP ROAD CONSTRUCTION PLAN

DATE: JULY 31, 2012	BEI PROJECT NO: 2189
SCALE: AS SHOWN	SHEET 2 OF 12

DESIGN: jc DRAWN: jc

F-12-059



PROPOSED CONDITIONS

SCALE: 1" = 30'

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

LEGEND

- PROJECT BOUNDARY
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING LANE USE ARROW
- PROPOSED LANE USE ARROW

THESE PLANS SHOW WORK WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION THAT WILL REQUIRE AN ACCESS PERMIT FROM MSHA, REFER TO PERMIT PLANS FOR CONSTRUCTION, DETAILS, SPECIFICATIONS AND LIMITS.

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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Diane Schwarzman, Acting — 8/22/12
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

[signature] — 8/27/12
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

[signature] — 8/24/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

NO.	DATE	REVISION

BENCHMARK
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STATE OF MARYLAND — BRIAN F. CLEARY — No. 28559 REGISTERED — PROFESSIONAL ENGINEER — 8/15/2012

OWNER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

DEVELOPER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

SIMPSON MILL

CEDAR LANE AND GRACE DRIVE IMPROVEMENTS

RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE
TAX MAP 35, GRID 23
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

TITLE: CEDAR LANE AND ROUTE 32 RAMP ROAD CONSTRUCTION PLAN

DATE: JULY 31, 2012	BEI PROJECT NO: 2189
SCALE: AS SHOWN	SHEET 3 OF 12

DESIGN: jc DRAWN: jc

F-12-059

WEB SOILS SURVEY		
Symbol	Soils Group	Map Unit Name
Co	C	Codorus and Hatboro silt loams, 0 to 3 percent slopes
GgB	B	Glenelg loam, 3 to 8 percent slopes
GoB	C	Glenville-Codorus silt loams, 0 to 8 percent slopes
GuB	C	Glenville-Urban Land-Udorthents complex, 0 to 8 percent slopes
MaB	B	Manor loam, 3 to 8 percent slopes
MaC	B	Manor loam, 8 to 15 percent slopes
MaD	B	Manor loam, 15 to 25 percent slopes
MkF	B	Manor-Brinklow complex, 25 to 65 percent slopes, very rocky

LEGEND

- PROJECT BOUNDARY
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- SF — SILT FENCE
- SSF — SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- SIP — STANDARD INLET PROTECTION

MATCHLINE SEE SHEET 5

CEDAR LANE (HOWARD COUNTY MINOR ARTERIAL)

MARYLAND ROUTE 32 RAMP PRINCIPAL ARTERIAL

SITE PLAN GRADING PER GP-12-005 AND SDP-12-015
SITE IMPROVEMENTS PER SDP-12-015

RAMP PAVING IS TO REMAIN BUT BE REMOVED FROM USE BY PLACEMENT OF GUARDRAILS

VEHICULAR INGRESS AND EGRESS RESTRICTED

GRID NORTH

GgB 'B' soil

MaC 'B' soil

BUILDABLE BULK PARCEL 'A' 3.42 AC±

M-6 MICRO-BIO RETENTION #85 SDP-12-015

LOT 9 LOT 10 LOT 11 LOT 12 LOT 13 LOT 14 LOT 15 LOT

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GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

PROPOSED CONDITIONS
SCALE: 1" = 30'

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER 8/15/2012 DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Simpson Mill LLC
By: 8/14/12
DEVELOPER (STEVEN K. BREEDA) MEMBER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John L Robertson 8/13/12
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Diane Schwarz, Acting 8/22/12
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

8/27/12
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

8/28/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	DATE	REVISION

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
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60 THOMAS JOHNSON DRIVE ▲ FREDERICK, MARYLAND 21702
(P) 301-371-3005 (F) 301-371-3506
WWW.BEI-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. 28559, Expiration Date: 7-22-2013.

STATE OF MARYLAND BRIAN F. CLEARY No. 28559 REGISTERED PROFESSIONAL ENGINEER 8/15/2012

OWNER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

DEVELOPER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

SIMPSON MILL
CEDAR LANE AND GRACE DRIVE IMPROVEMENTS

RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE
TAX MAP 35, GRID 23
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

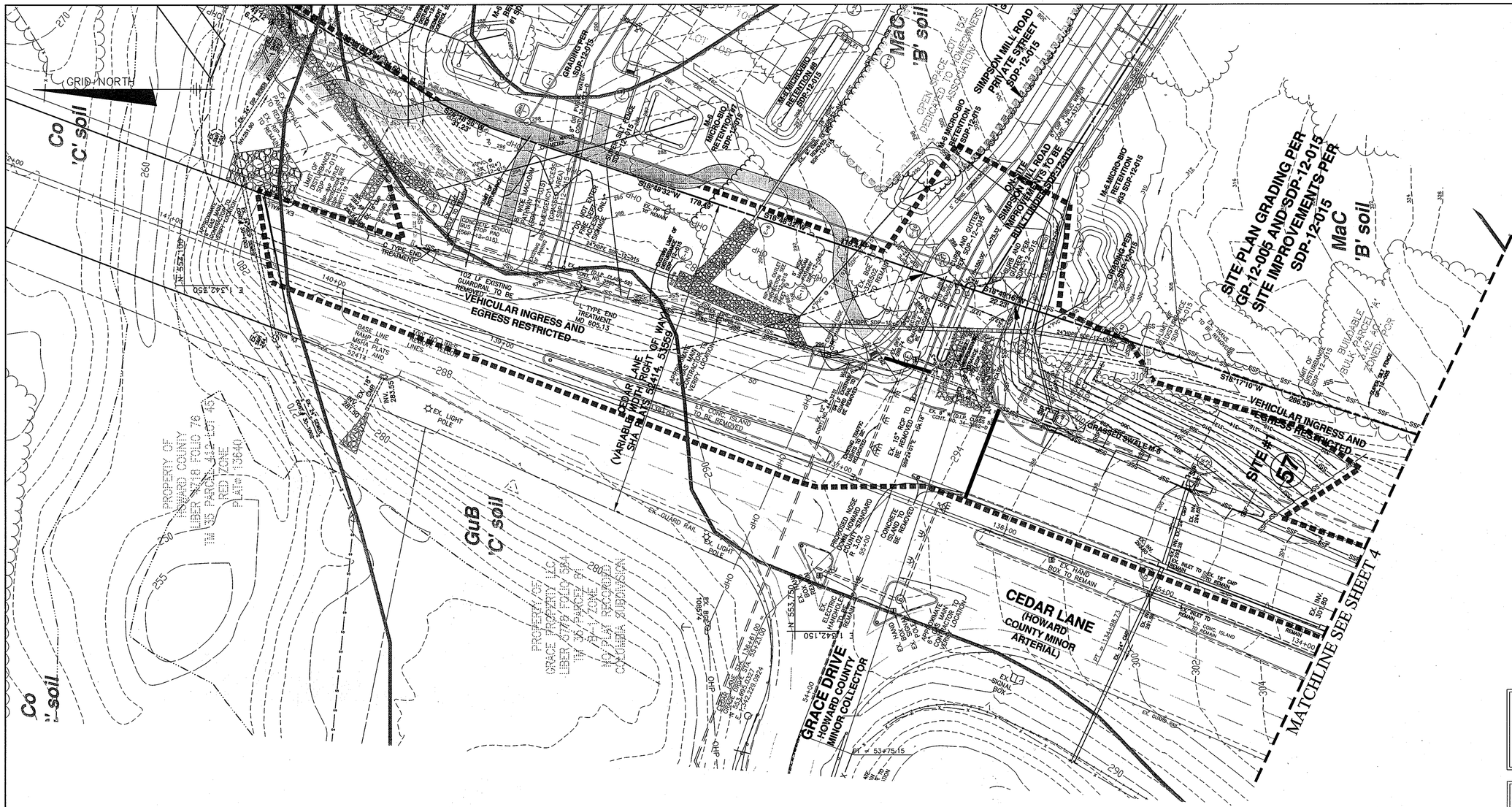
TITLE: CEDAR LANE AND ROUTE 32 RAMP GRADING AND SEDIMENT & EROSION CONTROL PLAN

DESIGN: Jc	DRAWN: Jc	DATE: JULY 31, 2012	BEI PROJECT NO: 2189
		SCALE: AS SHOWN	SHEET 4 OF 12

F-12-059

P:\2189 Riverdale\dwg\7017-offsite SHEET 3 revision 4.dwg, SHT 4 RAMP Grading 1, 8/13/2012 10:31:40 AM, cdd

WEB SOILS SURVEY		
Symbol	Soils Group	Map Unit Name
Co	C	Codorus and Hatboro silt loams, 0 to 3 percent slopes
GgB	B	Glenelg loam, 3 to 8 percent slopes
GoB	C	Glenville-Codorus silt loams, 0 to 8 percent slopes
GuB	C	Glenville-Urban Land-Udorthents complex, 0 to 8 percent slopes
MaB	B	Manor loam, 3 to 8 percent slopes
MaC	B	Manor loam, 8 to 15 percent slopes
MaD	B	Manor loam, 15 to 25 percent slopes
MkF	B	Manor-Brinklow complex, 25 to 65 percent slopes, very rocky



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PROPOSED CONDITIONS

SCALE: 1" = 30'

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER _____ DATE 8/15/2012

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIMPSON MILL LLC

BY: _____ 8/14/12

DEVELOPER STEVEN K. BREEDEN MEMBER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson 8/13/12

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Diane Schwarz, Acting 8/22/12

CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Kent Sheubrooks 8/27/12

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

8/24/12

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

LEGEND

- PROJECT BOUNDARY
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- SF — SILT FENCE
- SSF — SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- SIP — STANDARD INLET PROTECTION

NO.	DATE	REVISION

BENCHMARK
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8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418 ▲ ELLICOTT CITY, MARYLAND 21043
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WWW.BEI-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. 29550, Expiration Date: 7-22-2013.

STATE OF MARYLAND BRIAN F. CLEARY No. 29550 REGISTERED PROFESSIONAL ENGINEER

8/15/2012

OWNER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

DEVELOPER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

SIMPSON MILL

CEDAR LANE AND GRACE DRIVE IMPROVEMENTS

RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE
TAX MAP 35, GRID 23
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

TITLE: CEDAR LANE AND ROUTE 32 RAMP GRADING AND SEDIMENT & EROSION CONTROL PLAN

DESIGN: jc	DRAWN: jc	DATE: JULY 31, 2012	BEI PROJECT NO: 2189
		SCALE: AS SHOWN	SHEET 5 OF 12

F-12-059

P:\2189 Riverdale\dwg\7017-offsite SHEET 3 revision 4.dwg, SHT 5 RAMP Grading 2, 8/13/2012 10:32:23 AM, cdd

TEMPORARY SEEDBED PREPARATIONS

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDBED PREPARATIONS

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ON OF THE FOLLOWNG SCHEDULES:

1. PREFERRED – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0- UREAFORM FERTILIZER (9 LBS/1000 SQ FT).

2. ACCEPTABLE – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK

1. Obtain grading permit. (day 1)

2. Install stabilized construction entrance, super silt fence and inlet protection. Utilize sediment control features installed under GP-12-005 and SDP-12-015. Adjust and replace controls where indicated on the plans, where necessary or in need of repair. (days 2-7)

3. Upon approval of the Howard County Sediment Control Inspector, remove curb and gutter as indicated on the plans and bring new road beds to subgrade. Stabilize slopes in accordance with the temporary seedbed notes. (days 8-20)

4. Install new curb & gutter and base paving. (days 21-30)

5. Stabilize all areas in accordance with the temporary seedbed notes. (days 31-35)

6. Construct swales leading to inlet I-48 and existing inlet I-2. (day 36-40)

7. Stabilized the disturbed areas per the permanent seedbed notes and upon approval from the Howard County Sediment Control Inspector, remove sediment controls. (day 41-45)

8. Upon Approval of the Howard County Sediment Control Inspector, remove all remaining sediment control devices and stabilize any remaining areas in accordance with the permanent seedbed notes. (day 46)

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER _____ DATE 8/15/2012

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIMPSON MILL LLC

BY: _____ 8/14/12

DEVELOPER STEVEN K. BREEDEN MEMBER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

John K Robertson 8/13/12

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Diane Schwarz, Acting 8/22/12

CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Kent Sheubrooks 8/27/12

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 8/24/12

LEGEND

- PROJECT BOUNDARY
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- SSF — SUPER SILT FENCE
- LIMIT OF DISTURBANCE

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1850).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL", REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	NA (MSHA ROW ONLY)	ACRES
AREA DISTURBED	3.1	ACRES
AREA TO BE ROOFED OR PAVED	2.1	ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.0	ACRES
TOTAL CUT	850	CY
TOTAL FILL	0	CY
OFFSITE WASTE AREA LOCATION	A SITE WITH AN ACTIVE GRADING PERMIT	

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

30.0 DUST CONTROL

Definition

Controlling dust blowing and movement on construction sites and roads.

Purpose

To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Conditions Where Practice Applies

This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications

Temporary Methods

1. Mulches – See standards for vegetative stabilization with mulches only. Mulch should be crimped or tracked to prevent blowing.
2. Vegetative Cover – See standards for temporary vegetative cover.
3. Tillage – To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12" apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
4. Irrigation – This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.
5. Barriers – Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
6. Calcium Chloride – Apply at rates that will keep surface moist. May need retreatment.

Permanent Methods

1. Permanent Vegetation – See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
2. Topsoiling – Covering with less erosive soil materials. See standards for topsoiling.
3. Stone – Cover surface with crushed stone or coarse gravel.

References

1. Agriculture Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.
2. Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA-ARS.

TOPSOIL SPECIFICATIONS

I. Topsoil salvaged from the existing site may be used provided that it meets that standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications – Soil to be used as topsoil must meet the following:

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting texture subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1-1/2" in diameter.

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nutsedge, poison ivy, thistle, or others as specified.

iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

III. For sites having disturbed areas under 5 acres:

i. ,Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization – Section I – Vegetative Stabilization Methods and Materials.

IV. For sites having disturbed areas over 5 acres:

i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

b. Organic content or topsoil shall be not less than 1.5 percent by weight.

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization – Section I – Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment traps and basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained albeit 4" – 8" higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4" – 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. Alternative for Permanent Seeding – Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

i. Composted Sludge Material for use as a soil conditioner for sites having distributed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

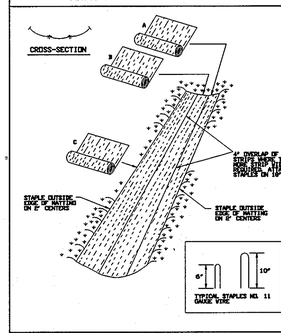
c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

ii. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guidelines Specifications, Soil Preparation and Sodding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1973.

THESE PLANS SHOW WORK WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION THAT WILL REQUIRE AN ACCESS PERMIT FROM MSHA, REFER TO PERMIT PLANS FOR CONSTRUCTION, DETAILS, SPECIFICATIONS AND LIMITS.

DETAIL 30 – EROSION CONTROL MATTING



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE G - 22 - 2 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 – EROSION CONTROL MATTING

Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".

2. Staple the 4" overlap in the channel center using an 18" spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.

4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.

5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4', shingle fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.

6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

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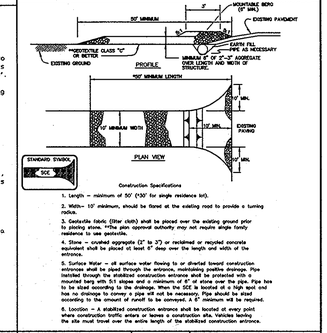
DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE



Construction Specifications

1. Length – minimum of 50' (*50' for single residence lot).
2. Width– 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. *The plan approval authority may not require single family residence to use geotextile.
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

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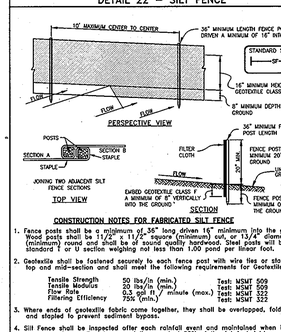
DETAIL 22 – SILT FENCE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1-1/2" x 1-1/2" square (minimum) cut, or 1-3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pond per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

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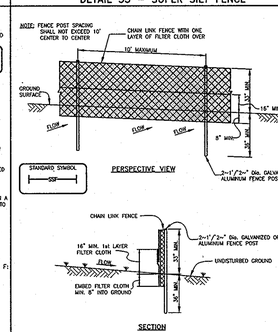
DETAIL 33 – SUPER SILT FENCE



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE H - 26 - 3 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SUPER SILT FENCE

CONSTRUCTION SPECIFICATIONS

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

SUPER SILT FENCE DESIGN CRITERIA

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 – 10%	0 – 10:1	Unlimited	Unlimited
10 – 20%	10:1 – 5:1	200 feet	1,500 feet
20 – 33%	5:1 – 3:1	100 feet	1,000 feet
33 – 50%	3:1 – 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

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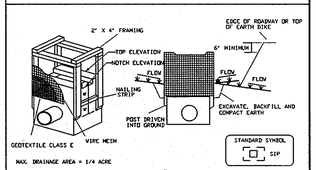
DETAIL 23A – STANDARD INLET PROTECTION



Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.
2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
4. Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

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NO.	DATE	REVISION

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60 THOMAS JOHNSON DRIVE ▲ FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3506
WWW.BEI-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. 25668, Expiration Date: 7-22-2013.

STATE OF MARYLAND BRIAN F. CLEARY REG. NO. 25668 REGISTERED PROFESSIONAL ENGINEER 8/15/2012.

OWNER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

DEVELOPER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

SIMPSON MILL
CEDAR LANE AND GRACE DRIVE IMPROVEMENTS

RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE
TAX MAP 35, GRID 23
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

DESIGN: jc	DRAWN: jc	DATE: AUGUST, 2012	BEI PROJECT NO: 2189
		SCALE: AS SHOWN	SHEET 6 OF 12

F-12-059

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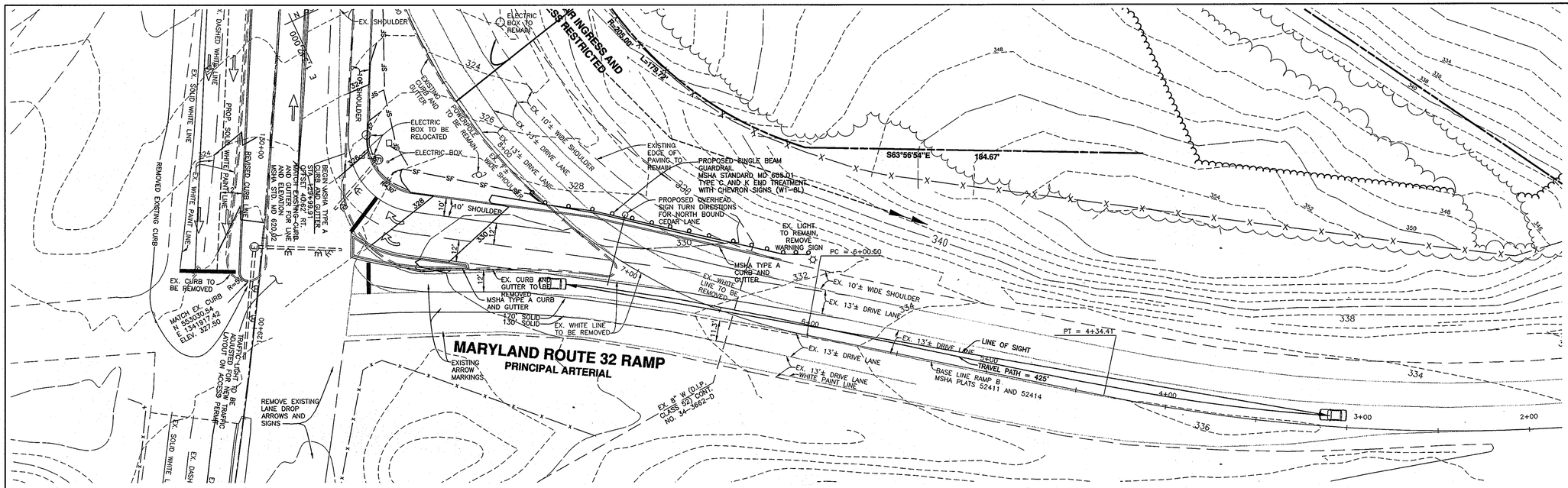


PLAN VIEW

SCALE: 1" = 30'

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

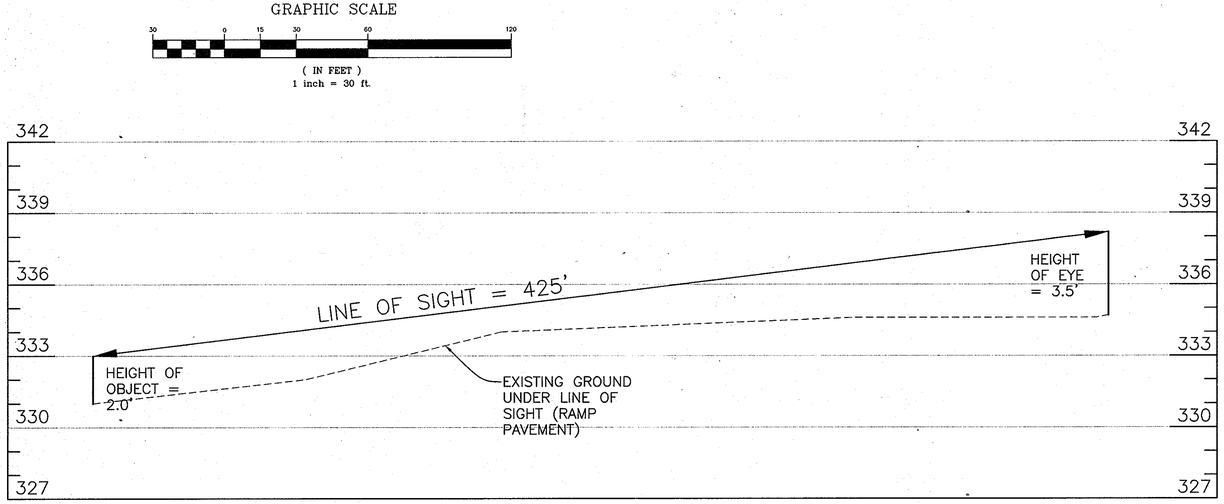
SIGHT DISTANCE ANALYSIS:
THIS SIGHT DISTANCE ANALYSIS WAS DONE TO DETERMINE IF A VEHICLE STOPPED ON THE RAMP FROM WEST BOUND ROUTE 32 COULD BE SEEN BY A TRAVEL TRAVELING ON THE RAMP IN ENOUGH TIME TO STOP. THIS STUDY IS BASED ON A SPEED OF 50 MPH FOR THE VEHICLE THAT HAS EXITED ROUTE 32 ONTO THE RAMP. THE LOCATION OF THE STOPPED VEHICLE IS NEAR THE TRAFFIC LIGHT AT THE SPOT WHERE THE SLOPE IS MINIMIZED. THIS WOULD BE THE WORSE CASE SCENARIO LOCATION AS IS WOULD RESULT IN THE MOST LIKELY INTERFERENCE OF THE LINE OF SIGHT.

THIS STUDY IS BASED ON AN ASSUMED SPEED OF 50 MPH. ACCORDING TO AASHTO, A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, EXHIBIT 5-1, THIS SPEED RESULTS IN A STOPPING SIGHT DISTANCE REQUIREMENT OF 425'. THIS STUDY IS BASED ON INFORMATION PURCHASED FOR HOWARD COUNTY GEOGRAPHICAL INFORMATION SYSTEMS.

BASED ON THE PLAN VIEW THERE ARE NO HORIZONTAL OBSTRUCTIONS TO THE LINE OF SIGHT BETWEEN THE VEHICLE AT REST AND THE TRAVELING VEHICLE.

BASED ON THE VERTICAL PROFILE THERE ARE NO VERTICAL OBSTRUCTIONS TO THE LINE OF SIGHT BETWEEN THE VEHICLE AT REST AND THE TRAVELING VEHICLE.

THE LOCATION OF THE TRAFFIC LIGHT, THE HORIZONTAL GEOMETRY AND THE VERTICAL GEOMETRY DO NOT CREATE A HAZARDOUS CONDITION.



SIGHT DISTANCE ANALYSIS

HOR.: 1" = 30'
VERT.: 1" = 3'

THESE PLANS SHOW WORK WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION THAT WILL REQUIRE AN ACCESS PERMIT FROM MSHA, REFER TO PERMIT PLANS FOR CONSTRUCTION, DETAILS, SPECIFICATIONS AND LIMITS.

THESE PLANS ARE FOR THE WORK WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION RIGHT-OF-WAY ONLY. FOR ON-SITE WORK SEE SDP-12-015.

LEGEND

- PROJECT BOUNDARY
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE

Metric					US Customary				
			Stopping sight distance					Stopping sight distance	
Design speed (km/h)	Brake reaction distance (m)	Braking distance on level (m)	Calculated (m)	Design (m)	Design speed (mph)	Brake reaction distance (ft)	Braking distance on level (ft)	Calculated (ft)	Design (ft)
20	13.9	4.6	18.5	20	15	55.1	21.6	76.7	80
30	20.9	10.3	31.2	35	20	73.5	38.4	111.9	115
40	27.8	18.4	46.2	50	25	91.9	60.0	151.9	155
50	34.8	28.7	63.5	65	30	110.3	86.4	196.7	200
60	41.7	41.3	83.0	85	35	129.8	117.6	246.2	250
70	48.7	56.2	104.9	105	40	147.0	153.6	300.6	305
80	55.6	73.4	129.0	130	45	165.4	194.4	359.8	360
90	62.6	92.8	155.5	160	50	183.8	240.0	423.8	425
100	69.5	114.7	184.2	185	55	202.1	290.3	492.4	495
110	76.5	138.8	215.3	220	60	220.5	345.5	566.0	570
120	83.4	165.2	248.6	250	65	238.9	405.5	644.4	645
130	90.4	193.8	284.2	285	70	257.3	470.3	727.6	730
					75	275.6	539.9	815.5	820
					80	294.0	614.3	908.3	910

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 3.4 m/s² [11.2 ft/s²] used to determine calculated sight distance.

Exhibit 3-1. Stopping Sight Distance

AASHTO—Geometric Design of Highways and Streets

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE 8/22/12

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/27/12

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/24/12

NO.	DATE	REVISION

BENCHMARK
ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
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BRIAN F. CLEARY — STATE OF MARYLAND — NO. 22858 — REGISTERED PROFESSIONAL ENGINEER — 8/16/2012

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SIMPSON MILL
CEDAR LANE AND GRACE DRIVE IMPROVEMENTS

RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE
TAX MAP 35, GRID 23
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

TITLE: CEDAR LANE AND ROUTE 32 RAMP SIGHT DISTANCE ANALYSIS PLAN AND PROFILE

DATE: JULY 31, 2012 | BEI PROJECT NO: 2189
DESIGN: jc | DRAWN: jc | SCALE: AS SHOWN | SHEET 7 OF 12

F-12-059

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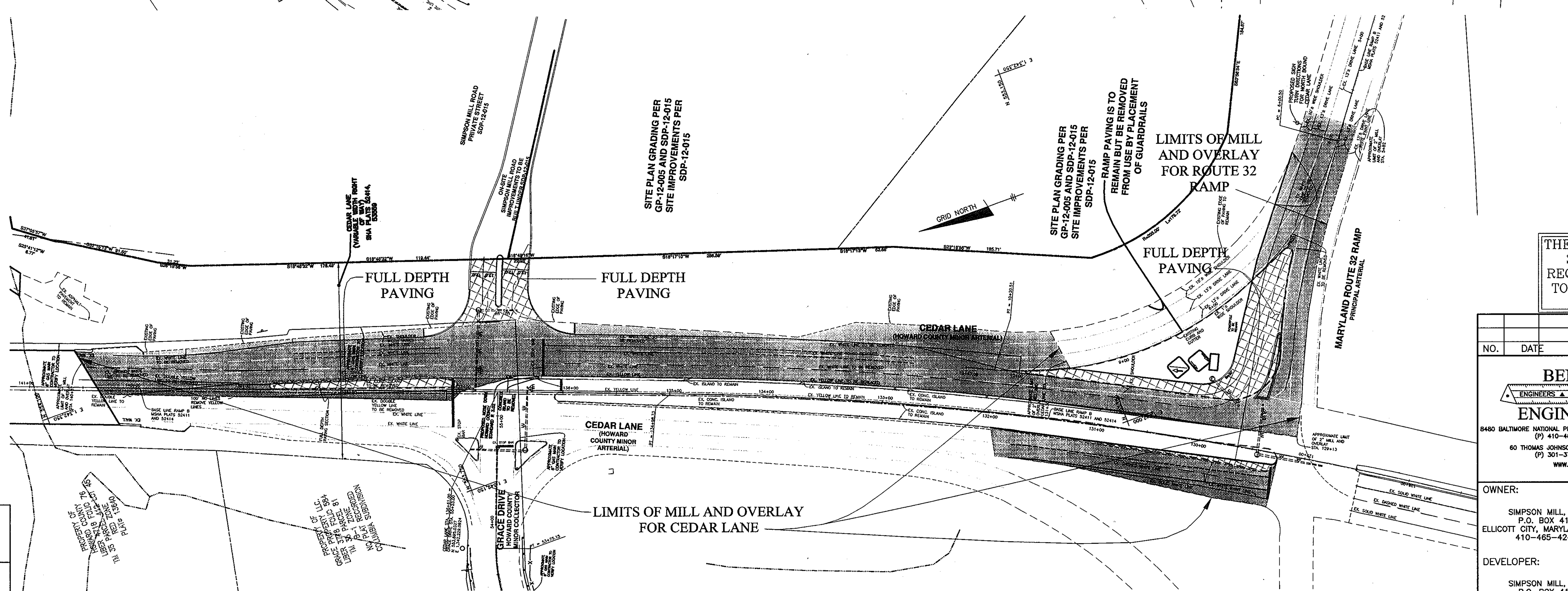
STRIPING PLAN

SCALE: 1" = 50'



MILL AND OVERLAY PLAN

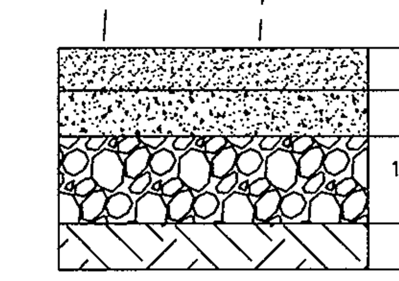
SCALE: 1" = 60'

LEGEND

- PROJECT BOUNDARY
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- MILL AND OVERLAY PAVING
- FULL DEPTH PAVING SECTION
- EXISTING LANE USE ARROW TRAFFIC MOVEMENT
- PROPOSED LANE USE ARROW TRAFFIC MOVEMENT

LINE LEGEND

- (A) SINGLE YELLOW LINE 5" WIDE
- (B) WHITE SOLID LINE (5" WIDE)
- (C) WHITE TYPE I DOTTED LINE (5" WIDE) (3' MARK, 9' GAP)
- (D) STOP BAR (24" WIDE – WHITE) (THERMOPLASTIC)
- (E) WHITE STANDARD BROKEN LINE (5" WIDE) (10' LONG / 30' GAP)
- (G) WHITE LANE EXTENSION (5" WIDE) (2' MARK, 6' GAP)
- (H) DOUBLE YELLOW (5" WIDE) SOLID
- (I) THERMOPLASTIC ARROWS
- EXISTING LANE USE ARROW TRAFFIC MOVEMENT
- PROPOSED LANE USE ARROW TRAFFIC MOVEMENT



2.0" – HMA SURFACE
6" – HMA BASE (2–3" LIFTS)
12" – COMPACTED GRADED AGGREGATE BASE (GAB) (2–6" LIFTS)
APPROVED SUBGRADE

HEAVY DUTY PAVING SECTION

NOTE:

1. ALL UTILITY PATCHING SHALL UTILIZE THE ABOVE FULL DEPTH PAVEMENT SECTION FOR REPAIRS.

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THESE PLANS SHOW WORK WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION THAT WILL REQUIRE AN ACCESS PERMIT FROM MSHA, REFER TO PERMIT PLANS FOR CONSTRUCTION, DETAILS, SPECIFICATIONS AND LIMITS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
Diane Schwarz, Acting — CHIEF, BUREAU OF HIGHWAYS	8/22/12 DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING	
Kent Sheubrooks — CHIEF, DIVISION OF LAND DEVELOPMENT	8/27/12 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	8/24/12 DATE

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418 ▲ ELLICOTT CITY, MARYLAND 21043
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STATE OF MARYLAND — BRIAN F. CLEARY — No. 28559 REGISTERED — PROFESSIONAL ENGINEER — 8/15/2012

OWNER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

DEVELOPER:
SIMPSON MILL, LLC
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ELLICOTT CITY, MARYLAND 21041
410-465-4244

SIMPSON MILL

CEDAR LANE AND GRACE DRIVE IMPROVEMENTS

RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE
TAX MAP 35, GRID 23
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

TITLE: CEDAR LANE AND ROUTE 32 RAMP STRIPING PLAN AND OVERLAY PLAN

DATE: JULY 31, 2012	BEI PROJECT NO: 2189
DESIGN: jc / DRAWN: jc / SCALE: AS SHOWN	SHEET 8 OF 12

F-12-059

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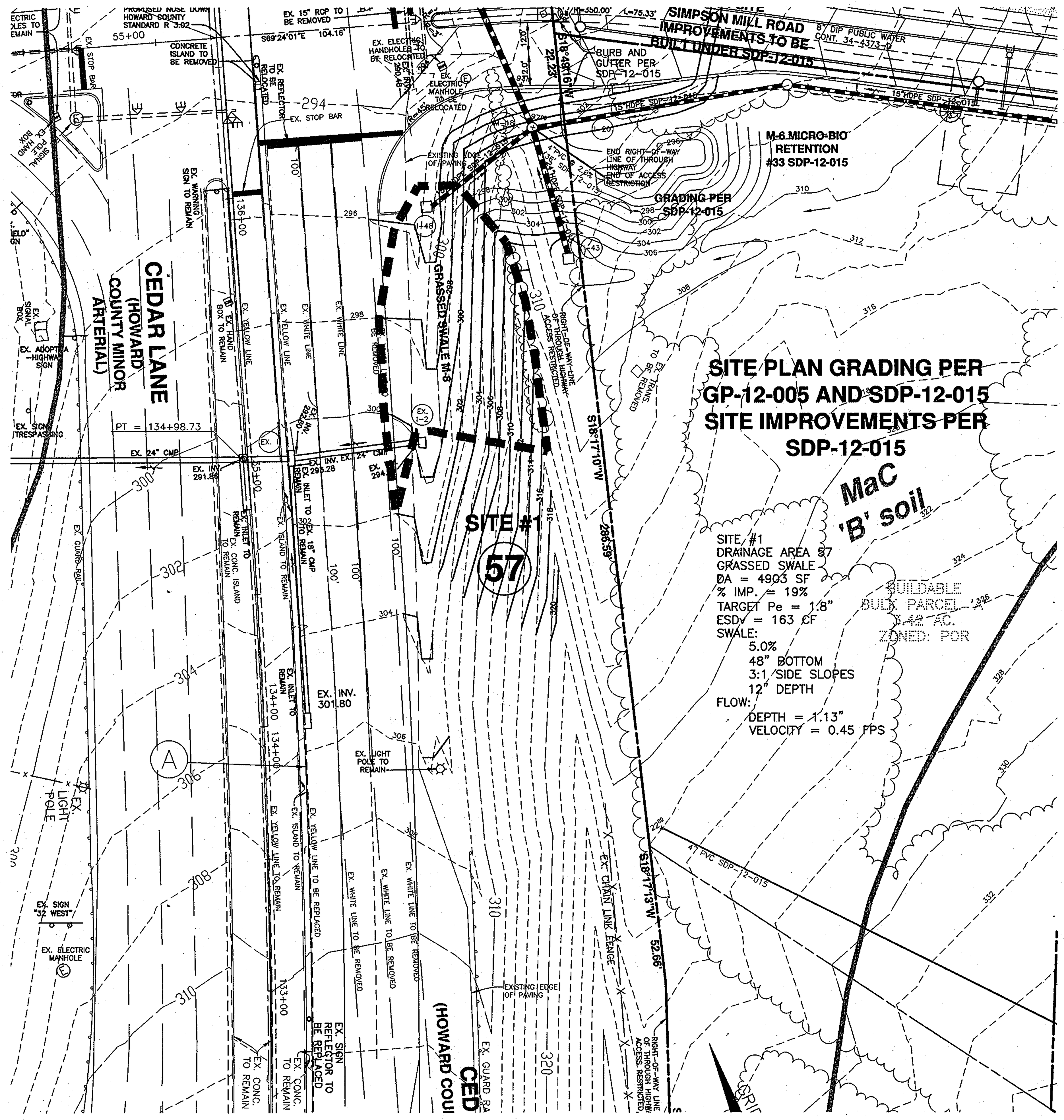
LEGEND

- PROJECT BOUNDARY
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE

OPERATION AND MAINTENANCE SCHEDULE
FOR OPEN CHANNEL SYSTEMS

1. THE OPEN CHANNEL SYSTEM SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
2. THE OPEN CHANNEL SHALL BE MOWED A MINIMUM OF AS NEEDED DURING THE GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 6 INCHES.
3. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
4. VISIBLE SIGNS OF EROSION IN THE OPEN CHANNEL SYSTEM SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
5. REMOVE SILT IN THE OPEN CHANNEL SYSTEM WHEN IT EXCEEDS 25% OF THE ORIGINAL WQv.
6. INSPECT CHECK DAMS TWICE A YEAR FOR STRUCTURAL INTEGRITY. RESTORE CHECK DAMS TO ORIGINAL CONDITIONS AS APPLICABLE.



CEDAR LANE

SCALE: 1" = 30'

SUMMARY TABLE (SITE 1)														
Pe=	1.8	inches												
D.A.	MDE Type	Total DA	Impervious Area	Qe	Af				ESDv			REv	
					Required	Provided	2% DA	Depth (in)	Required	Provided	75% ESDv	Required	Provided
57	(M-8)	4,903	937	0.40	98	332	PASS	1.1	163	163	PASS	5.31	5.31
Totals		4,903	937		98	332			163	163		5	5

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

WEB SOILS SURVEY		
Symbol	Soils Group	Map Unit Name
Co	C	Codorus and Hatboro silt loams, 0 to 3 percent slopes
GgB	B	Glenelg loam, 3 to 8 percent slopes
GoB	C	Glenville-Codorus silt loams, 0 to 8 percent slopes
GuB	C	Glenville-Urban Land-Udorthents complex, 0 to 8 percent slopes
MaB	B	Manor loam, 3 to 8 percent slopes
MaC	B	Manor loam, 8 to 15 percent slopes
MaD	B	Manor loam, 15 to 25 percent slopes
MkF	B	Manor-Brinklow complex, 25 to 65 percent slopes, very rocky

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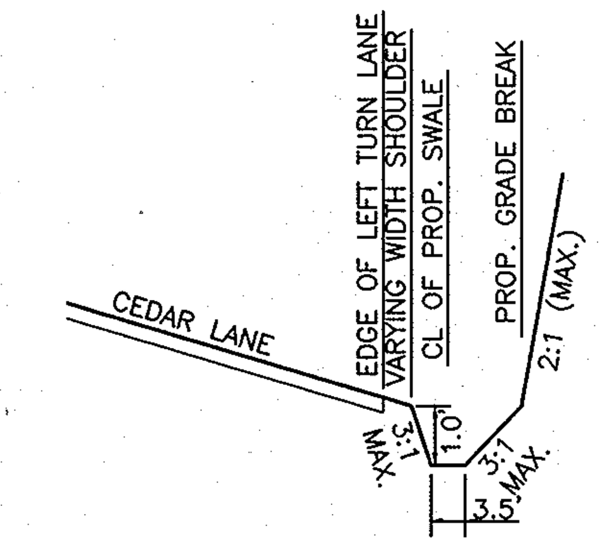

SWALE COMPUTATIONS
SITE #1 – SWM #57
Q = 0.17 CFS
S = 0.05 FT/FT
N = 0.15

W = 4.0'
H = 1.0'
SIDE SLOPE = 3:1

D = 1.13 IN
V = 0.45 FPS

TYPICAL SWALE SECTION

SITE #1

NO.	DATE	REVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Diane Schwarz, Acting — CHIEF, BUREAU OF HIGHWAYS — 8/22/12 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Kent Sheubrooks — CHIEF, DIVISION OF LAND DEVELOPMENT — 8/27/12 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 8/24/12 DATE

BENCHMARK
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DEVELOPER:
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410-465-4244

SIMPSON MILL

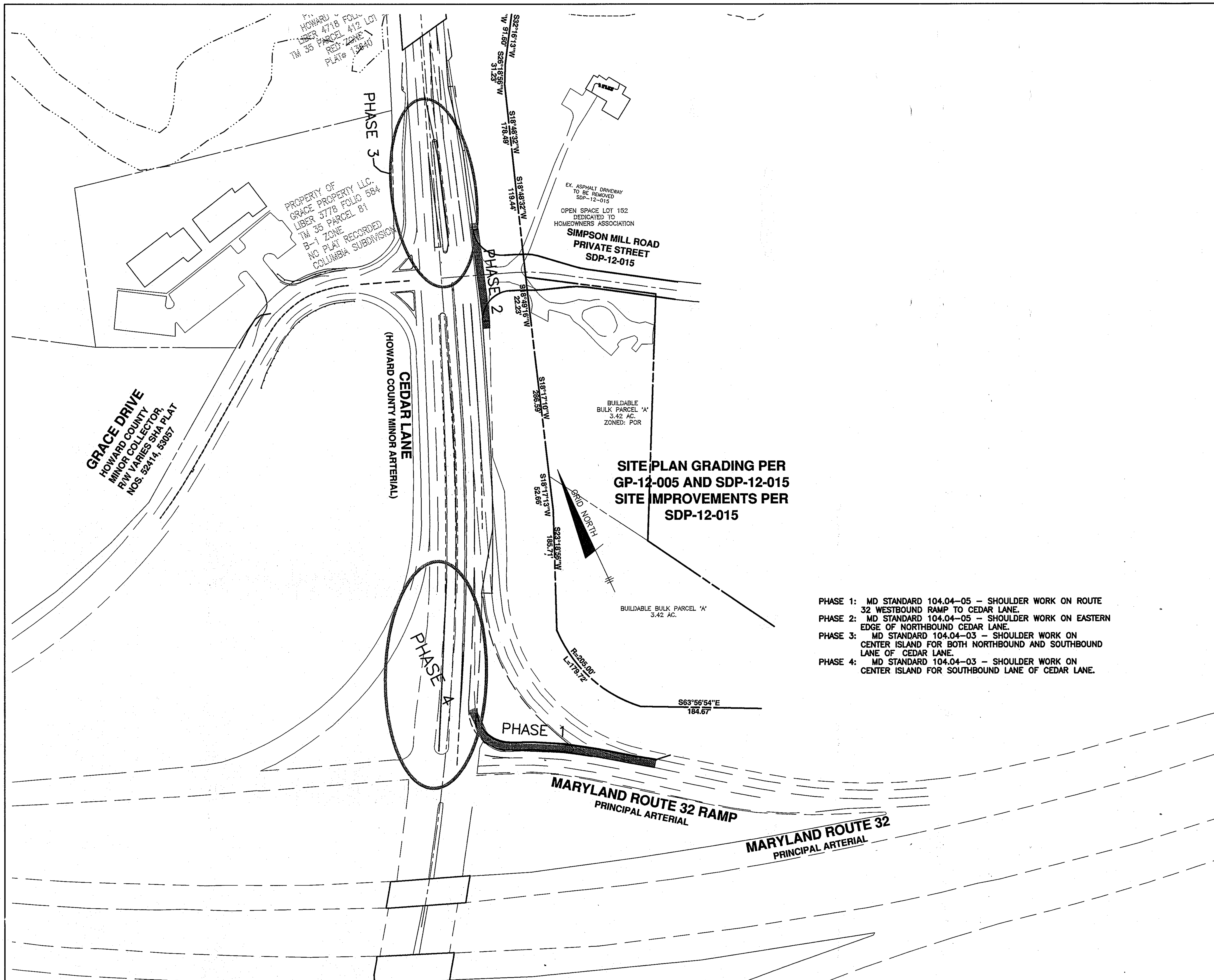
CEDAR LANE AND GRACE DRIVE IMPROVEMENTS

RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE
TAX MAP 35, GRID 23
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

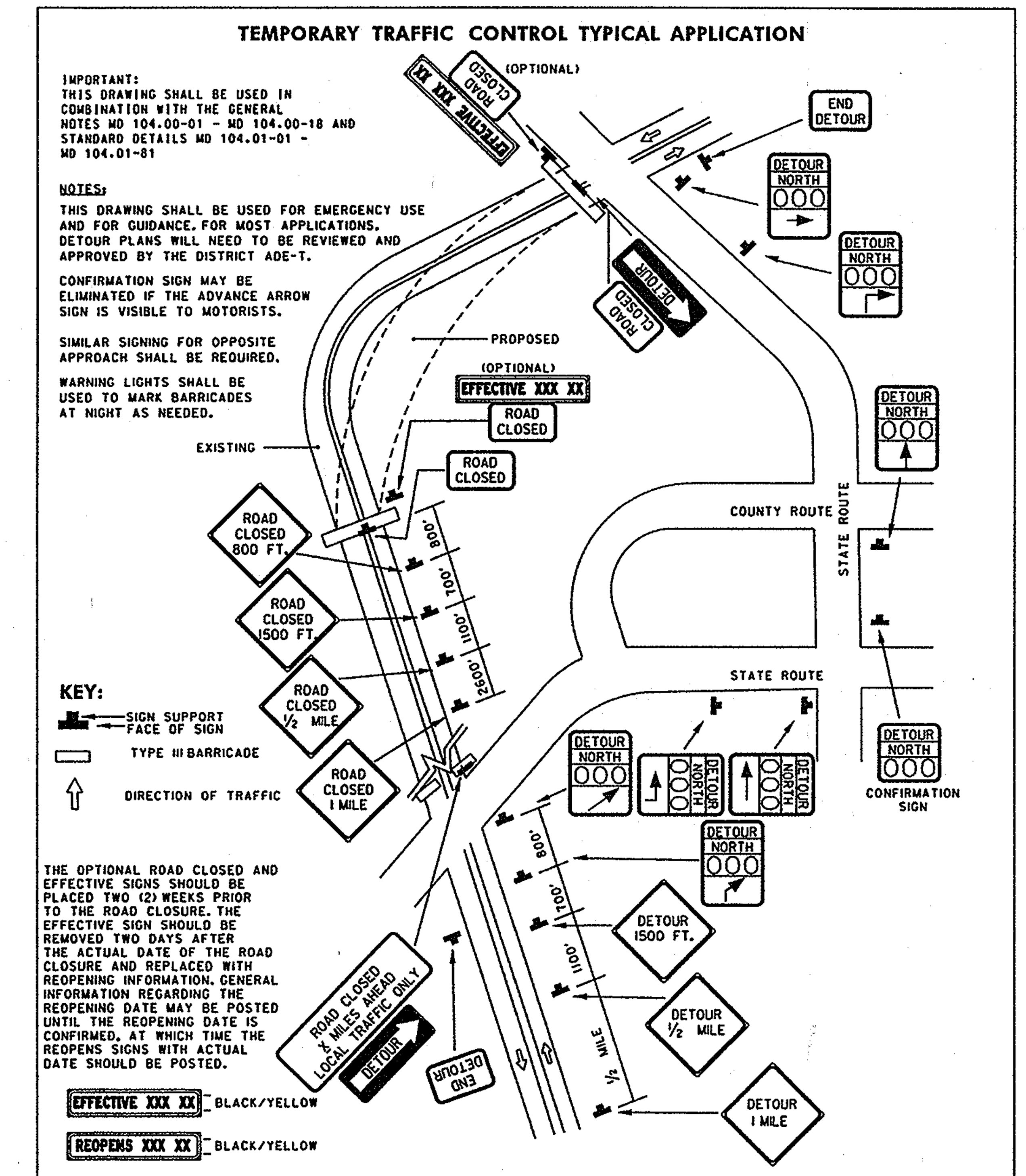
TITLE: STORMWATER MANAGEMENT PLAN, NOTES AND DETAILS

DATE:	AUGUST, 2012	BEI PROJECT NO:	2189
DESIGN: jc	DRAWN: jc		
SCALE:	AS SHOWN	SHEET	9 OF 12

F-12-059


HOWARD COUNTY
LIBER 4718 FOLIO
TM 35 PARCEL 412 LOT
RED ZONE
PLAT# 13840
PROPERTY OF
GRACE PROPERTY LLC.
LIBER 3778 FOLIO 584
TM 35 PARCEL 81
B-1 ZONE
NO PLAT RECORDED
COLUMBIA SUBDIVISION
PHASE 3
PHASE 2
PHASE 4
PHASE 1
S32°16'13"W 91.60'
S26°18'56"W 31.23'
S18°48'32"W 178.49'
S18°48'32"W 119.44'
S18°49'16"W 22.23'
S18°17'10"W 286.59'
S18°17'13"W 52.66'
S23°18'56"W 185.71'
R=205.00'
L=179.72'
S63°56'54"E
184.67'
EX. ASPHALT DRIVEWAY TO BE REMOVED SDP-12-015
OPEN SPACE LOT 152 DEDICATED TO HOMEOWNERS ASSOCIATION
SIMPSON MILL ROAD
PRIVATE STREET
SDP-12-015
BUILDABLE BULK PARCEL 'A' 3.42 AC. ZONED: POR
SITE PLAN GRADING PER
GP-12-005 AND SDP-12-015
SITE IMPROVEMENTS PER
SDP-12-015
GRID NORTH
BUILDABLE BULK PARCEL 'A' 3.42 AC.
GRACE DRIVE
HOWARD COUNTY
MINOR COLLECTOR,
R/W VARIES SHA PLAT
NOS. 52414, 53057
CEDAR LANE
(HOWARD COUNTY MINOR ARTERIAL)
MARYLAND ROUTE 32 RAMP
PRINCIPAL ARTERIAL
MARYLAND ROUTE 32
PRINCIPAL ARTERIAL

PHASE 1: MD STANDARD 104.04–05 – SHOULDER WORK ON ROUTE 32 WESTBOUND RAMP TO CEDAR LANE.
PHASE 2: MD STANDARD 104.04–05 – SHOULDER WORK ON EASTERN EDGE OF NORTHBOUND CEDAR LANE.
PHASE 3: MD STANDARD 104.04–03 – SHOULDER WORK ON CENTER ISLAND FOR BOTH NORTHBOUND AND SOUTHBOUND LANE OF CEDAR LANE.
PHASE 4: MD STANDARD 104.04–03 – SHOULDER WORK ON CENTER ISLAND FOR SOUTHBOUND LANE OF CEDAR LANE.


TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION
IMPORTANT:
THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES MD 104.00-01 - MD 104.00-18 AND STANDARD DETAILS MD 104.01-01 - MD 104.01-81
NOTES:
THIS DRAWING SHALL BE USED FOR EMERGENCY USE AND FOR GUIDANCE. FOR MOST APPLICATIONS, DETOUR PLANS WILL NEED TO BE REVIEWED AND APPROVED BY THE DISTRICT ADE-T.
CONFIRMATION SIGN MAY BE ELIMINATED IF THE ADVANCE ARROW SIGN IS VISIBLE TO MOTORISTS.
SIMILAR SIGNING FOR OPPOSITE APPROACH SHALL BE REQUIRED.
WARNING LIGHTS SHALL BE USED TO MARK BARRICADES AT NIGHT AS NEEDED.
(OPTIONAL)
EFFECTIVE XXX XX
ROAD CLOSED
END DETOUR
DETOUR NORTH
DETOUR
PROPOSED
EXISTING
ROAD CLOSED 800 FT.
ROAD CLOSED 1500 FT.
ROAD CLOSED 1/2 MILE
ROAD CLOSED 1 MILE
800'
700'
1100'
2600'
COUNTY ROUTE
STATE ROUTE
CONFIRMATION SIGN
KEY:
SIGN SUPPORT
FACE OF SIGN
TYPE III BARRICADE
DIRECTION OF TRAFFIC
DETOUR 1500 FT.
DETOUR 1/2 MILE
DETOUR 1 MILE
1/2 MILE
ROAD CLOSED X MILES AHEAD LOCAL TRAFFIC ONLY
THE OPTIONAL ROAD CLOSED AND EFFECTIVE SIGNS SHOULD BE PLACED TWO (2) WEEKS PRIOR TO THE ROAD CLOSURE. THE EFFECTIVE SIGN SHOULD BE REMOVED TWO DAYS AFTER THE ACTUAL DATE OF THE ROAD CLOSURE AND REPLACED WITH REOPENING INFORMATION. GENERAL INFORMATION REGARDING THE REOPENING DATE MAY BE POSTED UNTIL THE REOPENING DATE IS CONFIRMED, AT WHICH TIME THE REOPENS SIGNS WITH ACTUAL DATE SHOULD BE POSTED.
EFFECTIVE XXX XX - BLACK/YELLOW
REOPENS XXX XX - BLACK/YELLOW

SPECIFICATION 104	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED	DIRECTOR – OFFICE OF TRAFFIC AND SAFETY	DETOUR SIGNING FOR ROADWAY CLOSURE /2-LANE,2-WAY GREATER THAN 40 MPH /OVER 12 HRS. OR NIGHTTIME USE
APPROVAL • SHA REVISIONS APPROVAL 8-20-03 REVISED 8-11-10 REVISED REVISED	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION APPROVAL 9-23-03 REVISED 10-5-10 REVISED REVISED	STANDARD NO. MD 104.06-05

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GRAPHIC SCALE

80 0 40 80 160 320

(IN FEET)
1 inch = 80 ft.

MAINTENANCE OF TRAFFIC SCHEMATIC

SCALE: 1" = 80'

LEGEND

⊥	SIGN LOCATION
PHASE 6	CONSTRUCTION PHASE
TA 5	TEMPORARY APPLICATION
W20–1	SIGN TYPE
⇨	EXISTING LANE DIRECTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Diane Schwarz, Acting 8/22/12
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

[illegible] 8/27/12
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

[illegible] 8/24/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

NO.	DATE	REVISION

BENCHMARK
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SIMPSON MILL

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RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE
TAX MAP 35, GRID 23
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

TITLE: MAINTENANCE OF TRAFFIC PLAN

DATE: AUGUST, 2012	BEI PROJECT NO: 2189
DESIGN: jc / DRAWN: jc / SCALE: AS SHOWN	SHEET 10 OF 12

F-12-059

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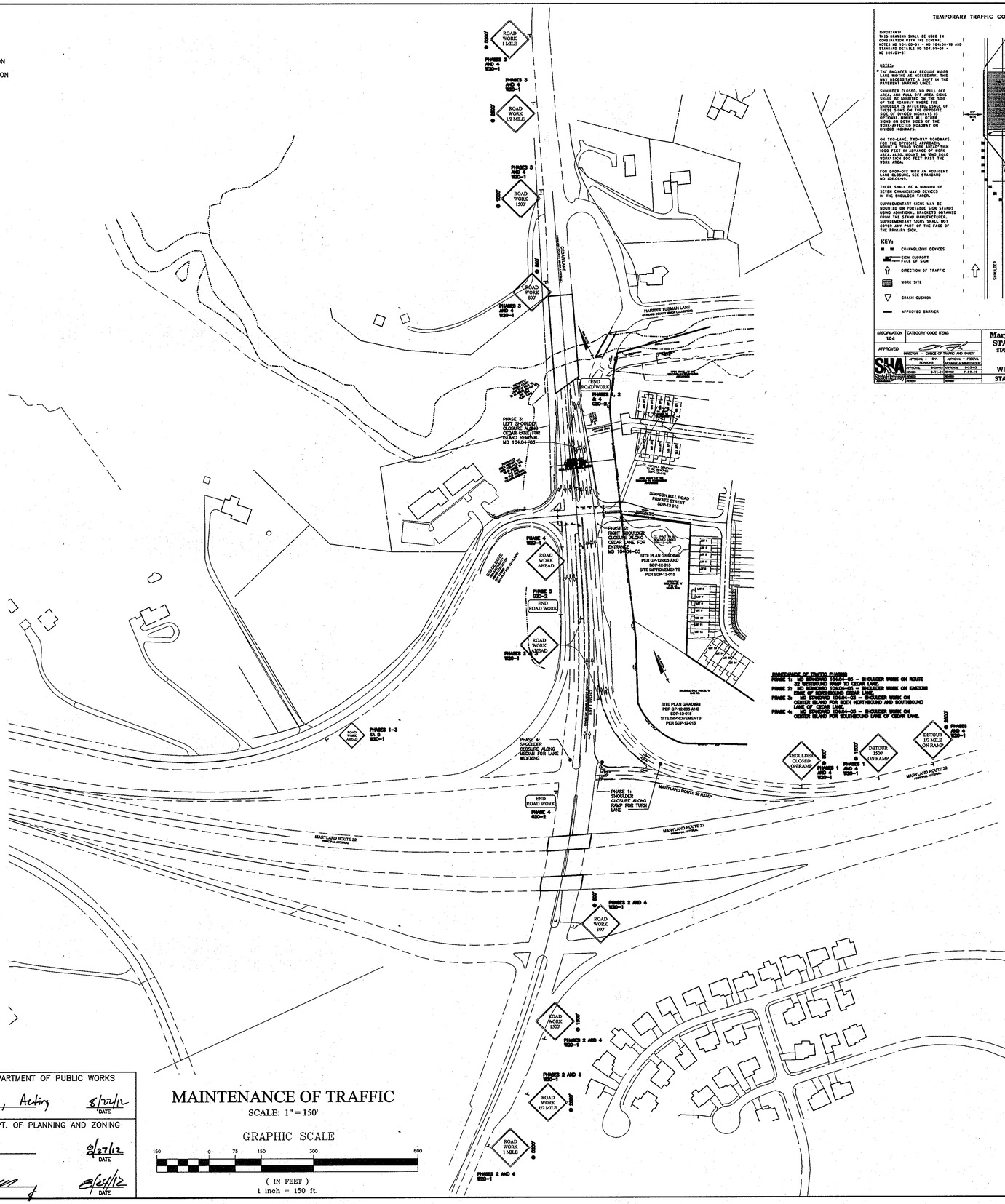
LEGEND

⊥ SIGN LOCATION
PHASE 6 CONSTRUCTION PHASE
TA 5 TEMPORARY APPLICATION
W20-1 SIGN TYPE
=> EXISTING LANE DIRECTION



MAINTENANCE OF TRAFFIC

SCALE: 1" = 150'

GRAPHIC SCALE

150 0 75 150 300 600

(IN FEET)
1 inch = 150 ft.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE 8/22/12

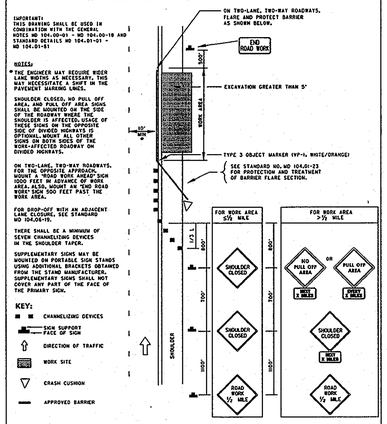
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/27/12

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/24/12

THESE PLANS SHOW WORK WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION THAT WILL REQUIRE AN ACCESS PERMIT FROM MSHA, REFER TO PERMIT PLANS FOR CONSTRUCTION, DETAILS, SPECIFICATIONS AND LIMITS.

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



SPECIFICATION	CATEGORY CODE ITEMS
104	

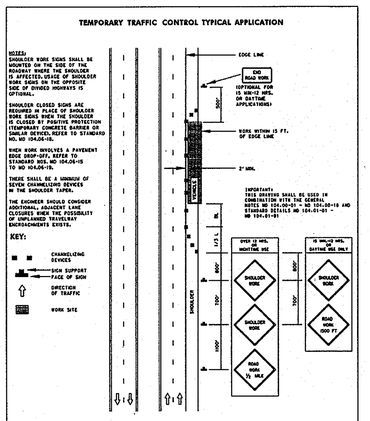
APPROVED — DIRECTOR – OFFICE OF TRAFFIC AND SAFETY

APPROVAL + DIV. REVISION	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 6-20-03	APPROVAL 9-23-03
REVISED 8-11-10	REVISED 7-19-10
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PAVEMENT EDGE DROP-OFF
" GREATER THAN 5 INCHES
WITHOUT AN ADJACENT LANE CLOSURE

STANDARD NO. MD 104.06-18

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



SPECIFICATION	CATEGORY CODE ITEMS
104	

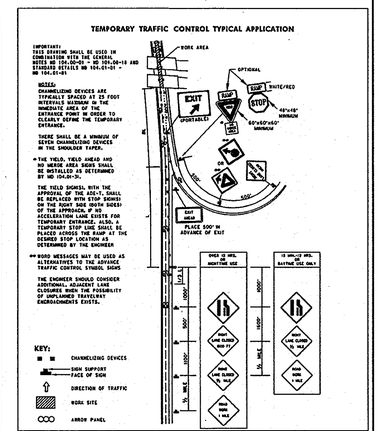
APPROVED — DIRECTOR – OFFICE OF TRAFFIC AND SAFETY

APPROVAL + DIV. REVISION	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 6-20-03	APPROVAL 9-23-03
REVISED 8-11-10	REVISED 7-19-10
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SHOULDER WORK /DIVIDED UNCON. GREATER THAN 40 MPH

STANDARD NO. MD 104.04-01

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



SPECIFICATION	CATEGORY CODE ITEMS
104	

APPROVED — DIRECTOR – OFFICE OF TRAFFIC AND SAFETY

APPROVAL + DIV. REVISION	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 6-20-03	APPROVAL 9-23-03
REVISED 8-11-10	REVISED 7-19-10
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
RIGHT LANE CLOSURE /EXP-FREEWAY AT EXIT AND ENTRANCE RAMPS GREATER THAN 40 MPH

STANDARD NO. MD 104.05-14

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION

SPECIFICATION	CATEGORY CODE ITEMS
104	

APPROVED — DIRECTOR – OFFICE OF TRAFFIC AND SAFETY

APPROVAL + DIV. REVISION	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 6-20-03	APPROVAL 9-23-03
REVISED 8-11-10	REVISED 7-19-10
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
LEFT LANE CLOSURE/DIVIDED UNCON. GREATER THAN 40 MPH

STANDARD NO. MD 104.04-03

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION

SPECIFICATION	CATEGORY CODE ITEMS
104	

APPROVED — DIRECTOR – OFFICE OF TRAFFIC AND SAFETY

APPROVAL + DIV. REVISION	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 6-20-03	APPROVAL 9-23-03
REVISED 8-11-10	REVISED 7-19-10
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
RIGHT LANE CLOSURE/DIVIDED UNCON. GREATER THAN 40 MPH

STANDARD NO. MD 104.04-05

NO.	DATE	REVISION

BENCHMARK
ENGINEERING
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 416 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
60 THOMAS JOHNSON DRIVE ▲ FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3506
WWW.BEI-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. 28562, Expiration Date: 7-22-2013.

STATE OF MARYLAND — BRIAN F. CLARK — REG. NO. 28562 — REGISTERED PROFESSIONAL ENGINEER — 8/15/2012

OWNER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

DEVELOPER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

SIMPSON MILL
CEDAR LANE AND GRACE DRIVE IMPROVEMENTS

RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE
TAX MAP 35, GRID 23
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

TITLE: MAINTENANCE OF TRAFFIC PLAN

DATE: AUGUST, 2012 | BEI PROJECT NO: 2189
DESIGN: jc | DRAWN: jc | SCALE: AS SHOWN | SHEET 11 OF 12

F-12-059

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SIGNS

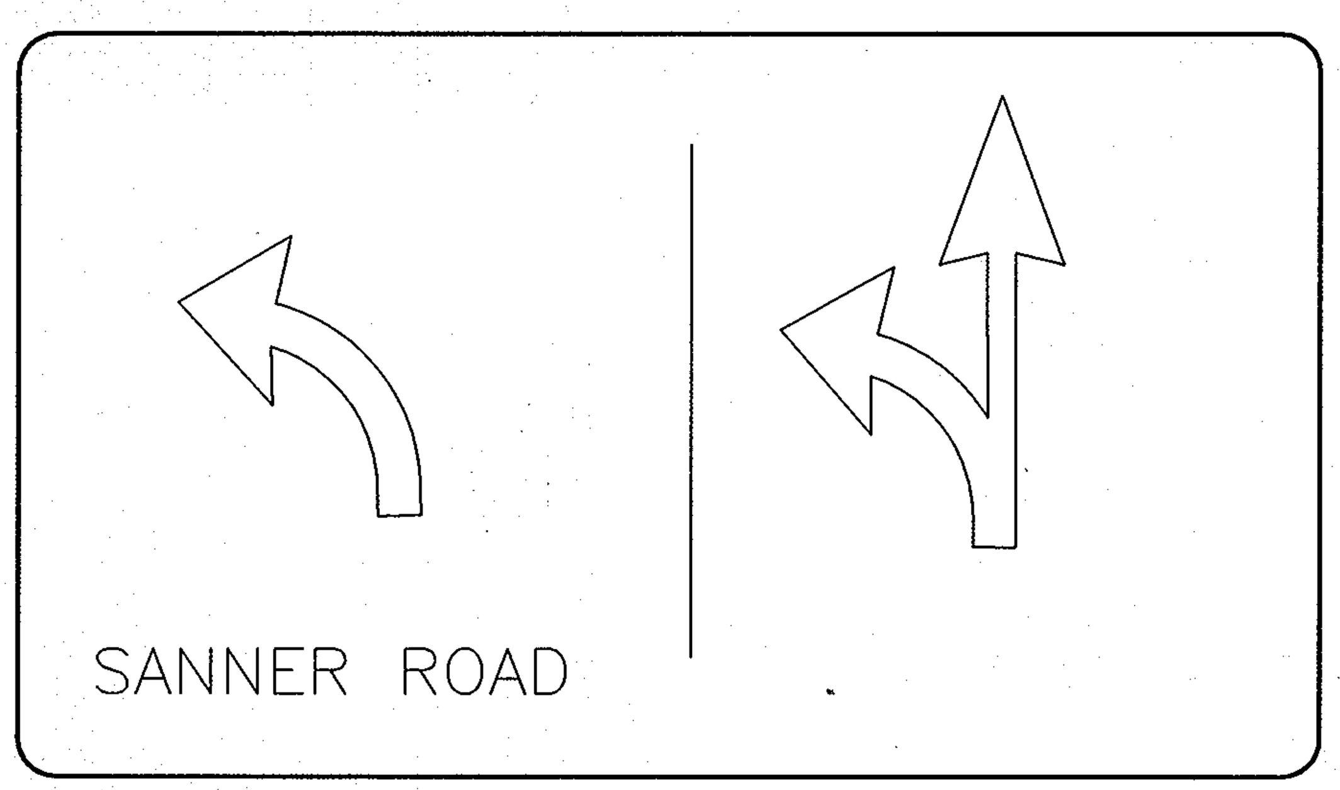
SCALE: 1" = 50'

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

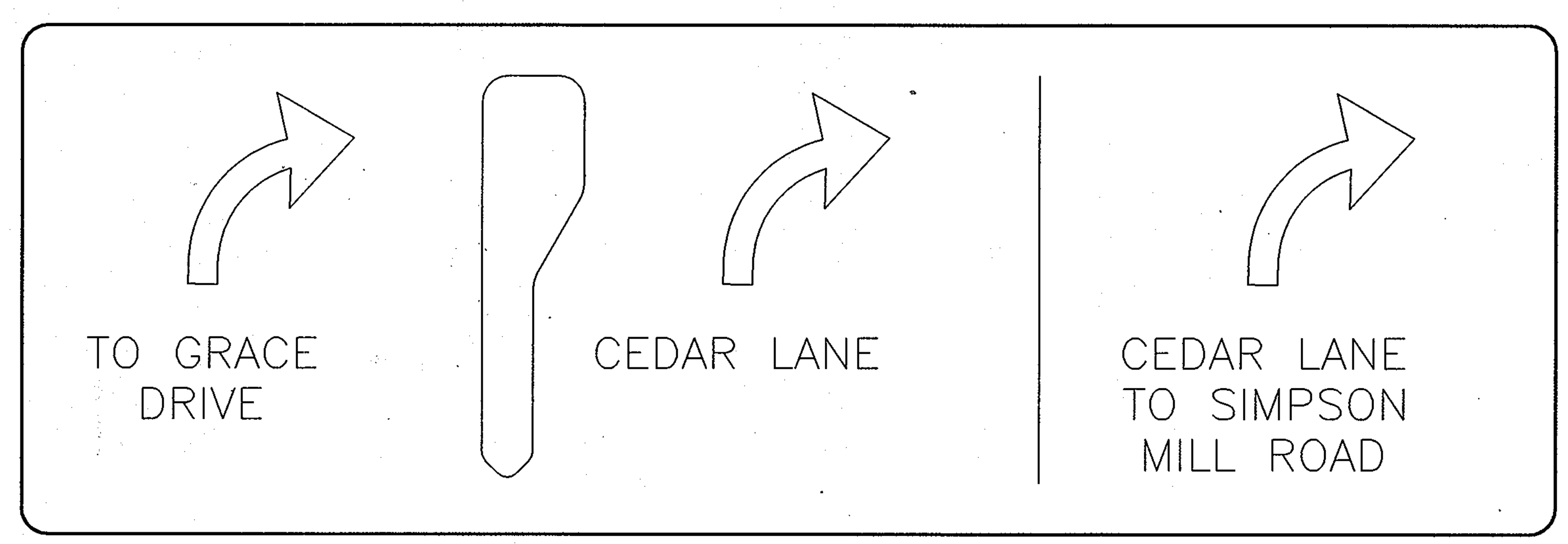
THESE PLANS SHOW WORK WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION THAT WILL REQUIRE AN ACCESS PERMIT FROM MSHA, REFER TO PERMIT PLANS FOR CONSTRUCTION, DETAILS, SPECIFICATIONS AND LIMITS.

THESE PLANS ARE FOR THE WORK WITHIN THE MARYLAND STATE HIGHWAY ADMINISTRATION RIGHT-OF-WAY ONLY. FOR ON-SITE WORK SEE SDP-12-015.



SIGN TURN DIRECTIONS FOR SOUTH BOUND CEDAR LANE

SEE MdMUTCD FOR DETAILS



PROPOSED SIGN TURN DIRECTIONS FOR NORTH BOUND CEDAR LANE

SEE MdMUTCD FOR DETAILS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Diane Schwarz, Acting — CHIEF, BUREAU OF HIGHWAYS — 8/22/12 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

[signature] — CHIEF, DIVISION OF LAND DEVELOPMENT — 8/27/12 DATE

[signature] — CHIEF, DEVELOPMENT ENGINEERING DIVISION — 8/24/12 DATE

NO.	DATE	REVISION

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
60 THOMAS JOHNSON DRIVE ▲ FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3506
WWW.BEI-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. 28559, Expiration Date: 7-22-2013.

STATE OF MARYLAND — BRIAN F. CLEARY — No. 28559 REGISTERED — PROFESSIONAL ENGINEER — 8/15/2012

OWNER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

DEVELOPER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

SIMPSON MILL
CEDAR LANE AND GRACE DRIVE IMPROVEMENTS

RAMP FROM 32 WESTBOUND TO CEDAR LANE NORTHBOUND AND CEDAR LANE
TAX MAP 35, GRID 23
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

TITLE: SIGNING PLAN

DATE:	AUGUST, 2012	BEI PROJECT NO:	2189
SCALE:	AS SHOWN	SHEET	12 OF 12

DESIGN: jc DRAWN: jc

F-12-059

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