DOWNTOWN COLUMBIA MULTI-USE PATH

SITE DEVELOPMENT PLAN SDP-13-020

HOWARD COUNTY, MARYLAND

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY AND MD-SHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. 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 START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
4. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MARYLAND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD).
5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY DATA WITH 2' CONTOUR INTERVALS PREPARED BY GUTSCHICK LITTLE AND WEBER, PA. DATED AUGUST 2007 AND AUGMENTED WITH FIELD SURVEY DATED APRIL 2013.
7. SUBSURFACE DATA IS PROVIDED BY AIDATA, INC ON DECEMBER 2012.
8. COORDINATES ARE BASED ON NAD '83/ NAVD 88 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 30 GA AND 36 AA.
9. ALL PROPOSED IMPROVEMENTS SHALL MEET ALL APPLICABLE HOWARD COUNTY, AASHTO, MDMUTCD AND THE US ACCESS BOARD SHARED-USE PATH ACCESSIBILITY GUIDELINES PROPOSED RULE MAKING (3/2010).
10. EXISTING UTILITIES ARE BASED ON AVAILABLE PUBLIC RECORDS AND FIELD LOCATIONS BY GUTSCHICK LITTLE AND WEBER, PA. AND SUBSURFACE UTILITIES LOCATED BY AIDATA ON DECEMBER 7, 2012. THE CONTRACTOR SHALL DIG TEST PITS BY HAND AT ALL EXISTING WITH PROPOSED UTILITY CROSSINGS AND CONNECTION POINTS TO VERIFY EXACT UTILITY LOCATIONS AS IDENTIFIED ON DEMOLITION AND TRAIL PLANS.
11. WETLANDS, STREAMS, AND FLOODPLAINS WITHIN OR ADJACENT TO THE SITE HAVE BEEN FIELD VERIFIED BY BIOHABITATS INC. ON SEPTEMBER 25, 2012..
12. NO HISTORIC STRUCTURES OR CEMETERIES ARE IMPACTED BY THIS SITE.
13. NO TRAFFIC, SIGHT DISTANCE, SOILS INVESTIGATION OR NOISE STUDIES ARE REQUIRED FOR THIS PROJECT.
14. THE SUBJECT PROPERTIES ARE ZONED NT/POR AND R-12 PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN. THE PROJECT IS SUBJECT TO THE DOWNTOWN COLUMBIA PLAN - A GENERAL PLAN AMENDMENT, EFFECTIVE APRIL 6, 2010.
15. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, AND 100 YEAR FLOODPLAIN.
16. THIS PLAN HAS BEEN PREPARED BY A REGISTERED LANDSCAPE ARCHITECT AND IS CERTIFIED TO CONFORM TO THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL
17. PHASE 1 FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF $24,400 FOR 9 SHADE TREES, 0 EVERGREEN TREES, 19 SHRUBS, 495 LF OF FENCE, AND 809 LF OF WALL.
18. PHASE 2 FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF $33,643 FOR 15 SHADE TREES, 0 EVERGREEN TREES, 145 SHRUBS, 826 LF OF FENCE, AND 827 LF OF WALL.
19. PHASE 3 FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF $5,180 FOR 0 SHADE TREES, 0 EVERGREEN TREES, 47 SHRUBS, AND 377 LF OF FENCE.
20. PHASE 4 FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF $8,580 FOR 9 SHADE TREES, 0 EVERGREEN TREES, 151 SHRUBS, AND 135 LF OF FENCE.
21. IN ACCORDANCE WITH SUBSECTION 16.1202(b)(1)(iv) THIS PROJECT IS EXEMPT FROM THE REQUIREMENT OF SECTION 16.1200 OF HOWARD COUNTY CODE FOR FOREST CONSERVATION SINCE IT IS PART OF A PLANNED UNIT DEVELOPMENT WHICH HAD PRELIMINARY PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.
22. STORM WATER MANAGEMENT REQUIREMENTS SHALL BE FULFILLED WITH THE USE OF PERMEABLE ASPHALT, GRASS SWALE, AND BIOSWALES.
23. APPLICABLE DPZ FILES: SYMPHONY WOODS PARK FDP-DC-MSW-1.
24. IMPACTS TO EXISTING FOREST CONSERVATION AREA 'D' ON THE HOWARD COMMUNITY COLLEGE PROPERTY WILL BE MITIGATED BY 2:1 ONSITE REPLACEMENT PLANTINGS FOR THE TREE REMOVED.
25. PATH DEVELOPER: HOWARD HUGHES CORPORATION
PATH OWNER:: HOWARD COUNTY
PATH MAINTENANCE: DOWNTOWN PARTNERSHIP
26. ON AUGUST 18, 2014 THE DIRECTOR OF DPZ APPROVED THE ALTERNATIVE LIGHTING PLAN REQUEST OF AUGUST 5, 2014 FOR THE FOLLOWING PROPERTIES:
    - THE FERGUSON PROPERTY IMMEDIATELY EAST OF THE PEDESTRAIN BRIDGE CROSSING OVER US ROUTE 29, ZONED R-12, ALLOWABLE LIGHT TRESPASS 0.1 FOOT-CANDLE;
    - THE COLUMBIA TOWN CENTER APARTMENTS PROPERTY AT THE INTERSECTION OF SOUTH ENTRANCE ROAD AND SWIFT STREAM PLACE, ZONED NT, ALLOWABLE LIGHT TRESPASS OF 0.5 FOOT-CANDLE;
    - THE STEVENS FOREST APARTMENTS PROPERTY AT THE INTERSECTION OF STEVENS FOREST ROAD AND WHITE ACRE ROAD, ZONED NT, ALLOWABLE LIGHT TRESPASS 0.5 FOOT-CANDLE;
    - THE SHADOW OAK CONDOMINIUM PROPERTY ALONG WHITE ACRE ROAD BETWEEN STEVENS FOREST ROAD AND THUNDER HILL ROAD, ZONED NT, ALLOWABLE LIGHT TRESPASS 0.5 FOOT-CANDLE;
    - THE EMERSON HILL TOWNHOMES PROPERTY AT THE INTERSECTION OF WHITE ACRE ROAD AND THUNDER HILL ROAD, ZONED NT, ALLOWABLE LIGHT TRESPASS 0.5 FOOT-CANDLE.

BASED ON SECTION 134.0.E OF THE ZONING REGULATIONS AND MEASURES TO CONTROL LIGHT TRESPASS.

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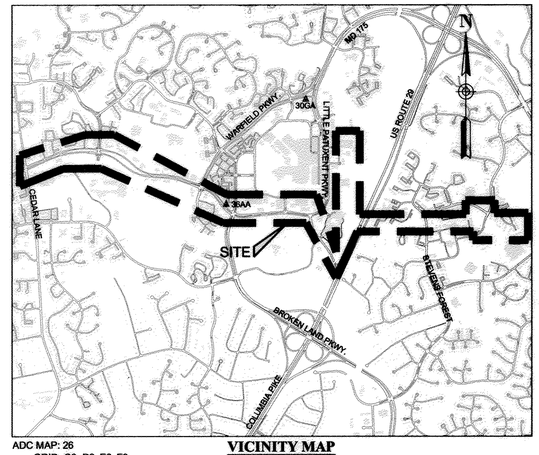
167	C11.26: WAYFINDING SIGN SPECIFICATIONS PHASE 4
167a	C11.27 RETAINING WALL DETAILS AND SECTIONS

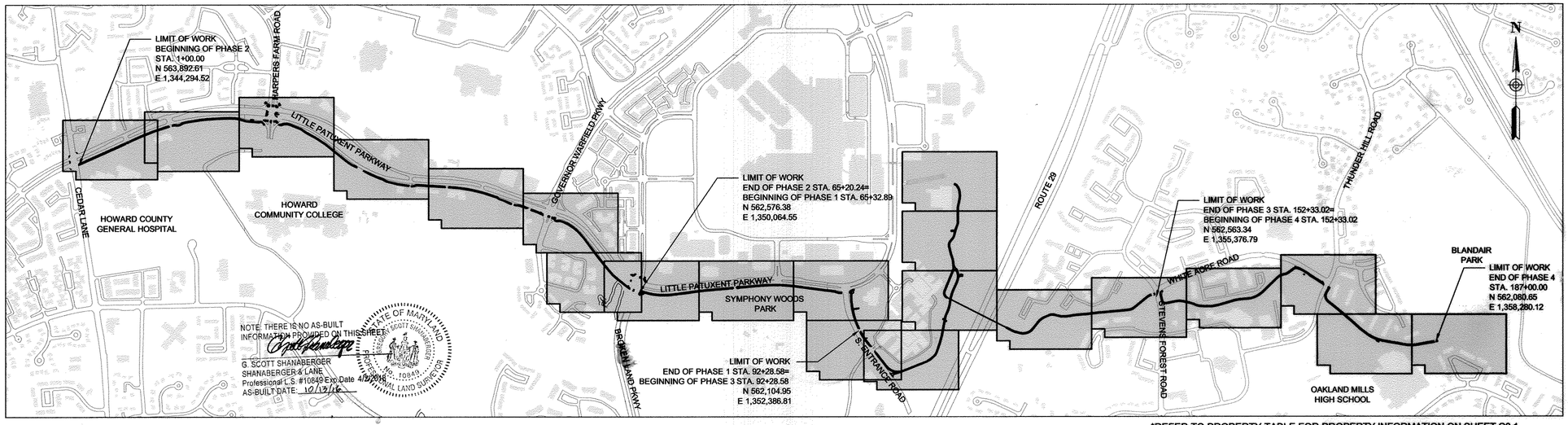


ADC MAP: 26
GRID: C8, D8, E8, F8
ADC MAP: 28
GRID: E8
ADC MAP: 32
GRID: D1, E1, F1, F2
ADC MAP: 33
GRID: A1, A2, B1, B2, C1, C2, D1, D2

VICINITY MAP
SCALE 1" = 2000'

SITE ANALYSIS DATA CHART

AREA OF PLAN SUBMISSION: 10.29 ACRES
LIMIT OF DISTURBED AREA: 10.29 ACRES
PRESENT ZONING DESIGNATION: NT, POR
CEPA NUMBER:12
PROPOSED USE: MULTI-USE PATH



NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/30/2018
AS-BUILT DATE: 10/19/16

*REFER TO PROPERTY TABLE FOR PROPERTY INFORMATION ON SHEET C0.1

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 01/06/16, 01/21/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16
Chief, Division of Land Development — Date 3-22-16
Chief, Development Engineering Division — Date 3-18-16

HOWARD COUNTY CONTROL STATIONS

30GA	36AA
NORTHING: 566,053.5979	NORTHING: 562,804.8537
EASTING: 1,352,177.5307	EASTING: 1,349,906.1701
ELEVATION: 339.878	ELEVATION: 359.151
(LATEST ADJ. NOV. 2008)	(LATEST ADJ. NOV. 2008)

NOTE:THE PURPOSE OF THIS SDP IS FOR THE MULTI-USE PATHWAY SYSTEM FOR DOWNTOWN COLUMBIA REVITALIZATION IN COMPLIANCE AND FOR APPROVAL WITH THE CEPPA IMPLEMENTATION CHART ADOPTED UNDER CB-58-2010 RELATIVE TO CEPPA #12 REQUIRING GGP (HHC) TO COMPLETE AT ITS EXPENSE THE PEDESTRIAN AND BICYCLE PATHWAY BETWEEN THE HOWARD COUNTY GENERAL HOSPITAL THROUGH TOWN CENTER ACROSS ROUTE 29 AND THE CONNECT TO THE BLANDAIR PARK.

LOCATION MAP
SCALE 1" = 600'

THE PURPOSE OF SITE PLAN REVISION NO. 1 (DATED 8/25/2015) IS TO ACCOMMODATE A FUTURE RIGHT TURN LANE ON LITTLE PATUXENT PARKWAY (EASTBOUND) AT THE ENTRANCE TO THE FUTURE HOWARD COMMUNITY COLLEGE EAST PARKING GARAGE.

THE PURPOSE OF SITE PLAN REVISION NO. 2 (DATED 3/4/2016) IS TO EXTEND THE EXISTING RIGHT TURN LANE INTO THE EXXON STATION AT LITTLE PATUXENT PARKWAY AND BANNEKER ROAD APPROXIMATELY 75 FEET TO THE WEST.

PERMIT INFORMATION CHART

PROJECT NAME: DOWNTOWN COLUMBIA MULTI-USE PATH			SECTION/AREA SEE SHEET 02		PARCEL SEE SHEET 02
L/F N/A	ZONE NT /POR/R-12	TAX MAP 35 & 36	BLOCK MULTIPLE	ELEC. DIST. 5	CENSUS TRACT 6054

COVER SHEET C0.0

ToolеDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

I:\2005\02027-Blandair Trail\Site Development Plan General\[C00Plan1].ai - Cover Sheet.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/17

3/4/16

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
AS SHOWN	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
03/07/16	36	01 OF 167

SDP-13-020

PROPERTY INFORMATION PHASE 2, SDP-13-020

Prop. Number	Zone	Account ID	Property Ownership	Legal Description / Address	Deed Liber	Deed Folio	Tax Map	Tax Map Grid	Parcel	Lot	Easement
1	POR	N/A	HOWARD COUNTY GENERAL HOSPTIAL	N/A / 5755 CEDAR LANE	N/A	N/A	N/A	N/A	N/A	N/A	EASEMENT REQUIRED
2	NT	1415052260	HOWARD COUNTY	IMPSPAR 3 4.233ARS 8AR2 / 11085 LITTLE PATUXENT PKWY	00532	0072	0035	0005	0276	15	EASEMENT REQUIRED
3	POR	15111356	HOWARD COUNTY ACQUISITION CORP C/O HOWARD COUNTY GENERAL HOSPITAL	PAR A 1.739A 11065 LITTLE PATUXENT PK TOWNCENTER	04340	0316	0035	0005	0035	PAR A	EASEMENT REQUIRED
4	POR	1415045868	BD OF TRUSTEES OF HO CO/COMM. COLLEGE	IMPSPAR B 97.4669 A / 10901 LITTLE PATUXENT PKWY	00486	0224	0035	0047	0047	PAR B	EASEMENT REQUIRED
5	NT	1415129913	HOWARD RESEARCH AND DEVELOPMENT	LOT 1 16.277 A OPENS / N/A	02234	0240	0036	0001	0081	1	EASEMENT REQUIRED
6	NT	1415016663	PATUXENT PARKWAY LLC	IMPSPAR C-1 S 6 AR 2 / 10741 LITTLE PATUXENT PKWY	11919	0293	0035	0006	0275	C 1	EASEMENT REQUIRED
7	NT	1415027436	PEVERLEY GEORGE C III	IMPSPAR C 2 S 6 A 2 / 10735 LITTLE PATUXENT PKWY	11171	0250	0035	0006	0275	C 2	EASEMENT REQUIRED
8	NT	1415019212	BJG LAND INC	IMPSPAR D S 6 AR 2 / 10715 LITTLE PATUXENT PKWY	07623	0212	0035	0006	0275	D	EASEMENT REQUIRED
9	NT	1415129913	HOWARD RESEARCH AND DEVELOPMENT	LOT 1 16.277 A OPENS / N/A	02234	0240	0036	0001	0081	1	EASEMENT REQUIRED
10	NT	1415013834	EXXON CORPORATION	IMPSPARCEL 8 2.344 A / 10611 LITTLE PATUXENT PKWY	N/A	N/A	0036	0001	0448	PAR B	NONE
11	NT	1415045841	HOWARD COUNTY	IMPSLOT 12 1.551 A / 5815 BANNEKER RD	00560	0402	0036	0002	0297	12	NONE
12	NT	1415104422	COLUMBIA ASSOCIATION INC	LOT 2 3.165 A OPSP / TOWN CENTER SEC3 AR2 LITTLE PATUXENT PKWY	03548	0622	0036	0001	0304	2	MODIFICATION OF EXISTING EASEMENT

PROPERTY INFORMATION PHASE 1, SDP-13-020

Prop. Number	Zone	Account ID	Property Ownership	Legal Description / Address	Deed Liber	Deed Folio	Tax Map	Tax Map Grid	Parcel	Lot	Easement
13	NT	1415019921	HOWARD RESEARCH AND DEVELOPMENT	65.2808 / N/A	02234	0240	0036	0001	0527	N/A	EASEMENT REQUIRED/ N/A
14	NT	1415010959	COLUMBIA ASSOCIATION INC	LOT 9B S 1 1.134 A / TOWN CENTER LITTLE PATUXENT PKWY	03324	0191	0036	0001	0293	9 B	EASEMENT REQUIRED
15	NT	1415010940	COLUMBIA ASSOCIATION INC	LOT 23 36.2326 AR / 10475 SOUTH ENTRANCE ROAD	03324	0191	0036	0001	0452	23	NONE
16	NT	1415019948	HOWARD COUNTY MARYLAND	LOT 4 .128 A / TOWN CENTER SYMPHONY WOODS RD	03245	2514	0036	0002	0389	4	NONE
20	NT	1415019956	STATE HIGHWAY ADMINISTRATION	P/O LOT 3 1.728 A / TOWN CENTER S1 A3 ROUTE 29	04094	0636	0036	0002	0389	3	EASEMENT REQUIRED/ N/A
17	NT	1415019972	HOWARD COUNTY MARYLAND	IMPSLOT 5 3.2166 A / 10375 LITTLE PATUXENT PKWY	01879	0257	0036	0002	0389	5	EASEMENT REQUIRED/ N/A
18	NT	1415019980	API COLUMBIA TOWN CENTER LLC	IMPSPAR A1 11.7687 A / TOWN CENTER LITTLE PATUXENT PKWY	06132	0200	0036	0002	0389	N/A	NONE

PROPERTY INFORMATION PHASE 3, SDP-13-020

Prop. Number	Zone	Account ID	Property Ownership	Legal Description / Address	Deed Liber	Deed Folio	Tax Map	Tax Map Grid	Parcel	Lot	Easement
18	NT	1415019980	API COLUMBIA TOWN CENTER LLC	IMPSPAR A1 11.7687 A / TOWN CENTER LITTLE PATUXENT PKWY	06132	0200	0036	0002	0389	A1	EASEMENT REQUIRED
19	NT	1415019964	HOWARD RESEARCH AND DEVELOPMENT	LOT 2 S 1 A R 3 / TOWN CENTER ROUTE 29	03245	2514	0036	0002	0389	2	EASEMENT REQUIRED
20	NT	N/A	STATE HIGHWAY ADMINISTRATION	ROUTE 29	N/A	N/A	N/A	N/A	N/A	N/A	EASEMENT REQUIRED
21	NT	1415019956	STATE HIGHWAY ADMINISTRATION	P/O LOT 3 1.513 A / TOWN CENTER S1 A3 ROUTE 29	04094	0636	0036	0002	0389	3	EASEMENT REQUIRED
21A	NT	1415126981	STATE HIGHWAY ADMINISTRATION	2.894 A / ROUTE 29	04094	0636	0036	0002	0517	N/A	EASEMENT REQUIRED
22	NT	1415010657	COLUMBIA ASSOCIATION INC	LOT 14 S 1 39.806 A / TOWN CENTER LAKE KITTAMAQUNDI	03324	0191	0036	0002	0210	14	NONE
23	NT	15019352	ACB PARKING BUSINESS TRUST C/O HOWARD HUGHES CORP	IMPSP/O L 17-18 7.2848 A / TOWN CTR S 1 LITTLE PATUXENT PKW	07720	0559	0036	0002	0321	17/18	EASEMENT REQUIRED
24	NT	1415010983	COLUMBIA ASSOCIATION INC	LOT 7 S 1 4.427 ACRE / TOWN CENTER SUBDV	03324	0191	0036	0001	0293	7	MODIFICATION OF EXISTING EASEMENT
25	NT	1415019352	ACB PARKING BUSINESS TRUST	IMPSP/O LOT 17 LOT 18 / RSB LOTS 15 16 LITTLE PATUXENT PKV	07793	0683	0036	0002	0321	17/18	NONE
26	NT	1416213934	COLUMBIA ASSOCIATION INC	PARCEL B SEC 2 AREA 3 PB.17 PN.90 / OAKLAND MILLS	03324	0191	0036	0003	0310	3	NONE
27	NT	1416071048	VILLAGE OF OAKLAND MILLS	PARCEL C SEC 2 AREA 3 PB.17 PN.90 / OAKLAND MILLS	04969	0572	0036	0003	0310	PAR C	MODIFICATION OF EXISTING EASEMENT
28	NT	1416073970	COLUMBIA ASSOCIATION INC	OPEN SPACE LOT 2 SEC 2 AREA 3 PB..17 PN.90 / OAKLAND MILLS	03324	0191	0036	0003	0310	2	MODIFICATION OF EXISTING EASEMENT
28A	NT	1416074020	COLUMBIA ASSOCIATION INC	OPEN SPACE LOT 3 SEC 2 AREA 3 PB.17 PN.90 / OAKLAND MILLS	03324	0191	0036	0003	0310	3	MODIFICATION OF EXISTING EASEMENT
29	NT	1416074500	STEVENS FOREST LIMITED PARTNERSHIP	PARCEL D SEC 2 AREA 3 PN.15746 & 15747 / OAKLAND MILLS	11235	0295	0036	0003	0310	PAR D	NONE
30	NT	N/A	PUBLIC RIGHT OF WAY	STEVENS FOREST ROAD	N/A	N/A	N/A	N/A	N/A	N/A	NONE

PROPERTY INFORMATION PHASE 4, SDP-13-020

Prop. Number	Zone	Account ID	Property Ownership	Legal Description / Address	Deed Liber	Deed Folio	Tax Map	Tax Map Grid	Parcel	Lot	Easement
30	NT	N/A	PUBLIC RIGHT OF WAY	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NONE
31	NT	1416084263	LAVIN AMANDA	LOT 12 PB.15 PN.82 / VILLAGE OF OAKLAND MILLS	10153	0416	0036	0003	0364	UN A4	EASEMENT REQUIRED
32	NT	1416197734	CLOVERLAND FARMS DAIRY INC	IMPSLOT 15 .401 A SEC 2 AREA 2 / 5801 STEVENS FOREST RD	02076	0155	0036	0003	300	15	NONE
33	NT	1416073369	COLUMBIA ASSOCIATION INC	LOT 10 S2 AR 2 / VILLAGE OF OAKLAND MILLS	03324	0191	0036	0010	0300	10	NONE
34	NT	1416074152	OAKLAND MILLS BUSINESS TRUST	IMPSLOT 18 4.3544 A / 5882 ROBERT OLIVER PL	06102	0381	0036	0003	300	18	NONE
35	NT	1416073334	COLUMBIA ASSOCIATION INC	IMPSLOT 13 S 2 AR 2 / VILLAGE OF OAKLAND MILLS	03324	0191	0036	0010	0300	13	NONE
36	NT	1416074403*	VARIOUS OWNERS*	IMPSP/O LOT 14 S 2 5866 THUNDER HILL RD	05592	0526	0036	0003	370	UN B4	MODIFICATION OF EXISTING EASEMENT
37	NT	N/A	VILLAGE OF OAKLAND MILLS (COOKE CEMETERY)*	LOT 14 VILLAGE CENTER PB.15 PN.82	N/A	N/A	N/A	N/A	N/A	N/A	MODIFICATION OF EXISTING EASEMENT
38	NT	N/A	PUBLIC RIGHT OF WAY	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NONE
39	NT	1416111139	PROSPECT WALK STEVENS FOREST	P/O L T D 101 S 2 A / VILLAGE OF OAKLAND MILLS	00559	0055	0036	0004	0328	D 101	EASEMENT REQUIRED
40	NT	1416166197	BOARD OF EDUCATION OAKLAND MILLS	IMPSLOT 1 S 2 AR 5 / VILLAGE OF OAKLAND MILLS	00590	0012	0036	0009	0336	1	EASEMENT REQUIRED
41	NT	1416074063	COLUMBIA ASSOCIATION INC	OPEN SPACE LOT 6 SEC2 AREA 4 PB.18 PN.35 / VIL OF OAKLAND M	03324	0191	0036	0010	0320	6	MODIFICATION OF EXISTING EASEMENT
42	RD-DEO	1406425151	HOWARD COUNTY DEPT OF PARKS AND REC	IMPS298.083 A	04391	0055	0036	0005	0003	N /A	NONE
43	NT	1416124702	TARELTON COMMUNITY ASSOC INC	LOT E 74 S 2 AR 4	00554	0414	0036	0010	0333	E 74	NONE

LIGHTING LEGEND

- 3" SCHEDULE 40 PVC CONDUIT
- EXISTING COBRA LIGHT FIXTURE 250W OR 400W
- PROPOSED POST TOP LIGHT FIXTURE 100W
- POST TOP LIGHT FIXTURE ISOLINES
- X.XX HAND BOX

SIGN LEGEND

ALL SIGNS SHOWN ARE EXISTING AND ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.

- - EXISTING OR RELOCATED U POST
- - EXISTING SIGN
- - EXISTING SIGN TO BE REMOVED
- - EXISTING SIGN TO BE RELOCATED
- - RELOCATED LOCATION OF EXISTING SIGN
- - NEW SIGN TO BE INSTALLED
- - NEW SIGN TO BE INSTALLED ON EXISTING MAST ARM
- - WAYFINDING SIGN
- #XX - WAYFINDING SIGN NUMBER

MEASURES IMPLEMENTED TO CONTORL LIGHT TRESPASS

Property	Existing Physical Features Reducing Light Trespass Effects	Measures Implemented to Control Light Trespass
Ferguson Property	• Property is heavily wooded • Existing residence is more than 250 feet from nearest trail light fixture	• Full-cutoff directional fixtures • Fixtures oriented so that lighting is directed downward and away from property line and residences
Columbia Town Center Apartments	• Existing tree buffer between apartment complex and trail • Apartment complex is elevated above the trail by 10 feet or more, in most areas the embankment is higher than the trail's 12-foot light fixtures • Existing parking lot lighting around the apartment complex	• Full-cutoff directional fixtures • Fixtures oriented so that lighting is directed downward and away from property line and residences
Stevens Forest Apartments	• Existing buildings are approximately 60 feet from the closest trail light fixtures • Existing parking lot lighting around the apartment complex	• Full-cutoff directional fixtures • Fixtures oriented so that lighting is directed downward and away from property line and residences
Shadow Oak Condominiums	• Existing mature trees between nearest buildings and trail • Nearest existing building is approximately 40 feet from the closest trail light fixtures • Existing parking lot lighting around the apartment complex, predominantly located between trail and buildings	• Full-cutoff directional fixtures • Fixtures oriented so that lighting is directed downward and away from property line and residences
Emerson Hill Townhomes	• Existing mature trees between nearest buildings and trail • Existing buildings are approximately 40 feet from the closest trail light fixtures • Existing parking lot lighting around the apartment complex	• Full-cutoff directional fixtures • Fixtures oriented so that lighting is directed downward and away from property line and residences

DEMOLITION LEGEND

- EXISTING TREE TO BE REMOVED
- EXISTING PAVEMENT/CONCRETE TO BE REMOVED (APPOXIMATE 30" DEPTH)
- REMOVED BY OTHERS
- EXISTING TREE PROTECTION (REFER TO DETAIL 77)

E & S LEGEND

- SF — SILT FENCE
- SSF — SUPER SILT FENCE
- DF — DIVERSION FENCE
- DA — DRAINAGE AREA
- LIMITS OF DISTURBANCE
- LOD — LIMITS OF SOIL TYPES
- STABILIZED CONSTRUCTION ENTRANCE
- XX — PROPERTY INFORMATION NUMBER REFERS TO SHEET C0.1 TABLE
- PROPERTY BOUNDARY
- PERMANENT EASEMENTS
- TEMPORARY EASEMENTS

TRAIL LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- FENCE
- EASEMENTS
- FCE AREA
- IMPACTED FCE AREA

LANDSCAPE LEGEND

- MULCH LINE
- SWALE
- SEED AND MULCH
- XX / XX — REFERS TO PLANT MATERIAL / REFERS TO PLANT QUANTITY

TV	CATV BOX		STORM DRAIN CLEANOUT
TV	CATV HANDBOX		STORM DRAIN DOWNSPOUT
TV	CATV PEDESTAL	SD	STORM DRAIN MANHOLE
E	ELECTRIC BOX	T	TELEPHONE BOX
E	ELECTRIC HANDBOX	T	TELEPHONE HANDBOX
E	ELECTRIC PEDESTAL	T	TELEPHONE MANHOLE
E	ELECTRIC MANHOLE	T	TELEPHONE PEDESTAL
	ELECTRIC SWITCHGEAR		CALL BOX
	ELECTRIC TRANSFORMER	CR	CARD READER
	STREET LIGHT	T	TRAFFIC CONTROL CABINET
	LANDSCAPE LIGHT	TC	TRAFFIC CONTROL HANDBOX
TC	TRAFFIC CONTROL HANDBOX		UTILITY POLE
FO	FIBER OPTIC BOX		VENT PIPE
FO	FIBER OPTIC HANDBOX		FIRE HYDRANT
FO	FIBER OPTIC MANHOLE	W	WATER MANHOLE
	FILL CAP		WATER METER
F	FUEL TANK MANHOLE		WATER VALVE
G	GAS MANHOLE		WATER WELL
	GAS METER		IRRIGATION CONTROL VALVE
	GAS VALVE	ABAND	ABANDONED UTILITY
	MONITORING WELL	CMP	CORRUGATED METAL PIPE
	SANITARY CLEANOUT	EOI	END OF ELECTRONIC INFORMATION
SS	SANITARY MANHOLE	NAU	NO ASSOCIATED UTILITY DETECTED
ST	STEAM MANHOLE	NFL	NOT FIELD LOCATABLE

TV — TV		CABLE TV LINE (QL-B)
TV — TV		CABLE TV LINE (QL-C OR QL-D)
E — E		ELECTRIC LINE (QL-B)
E — E		ELECTRIC LINE (QL-C OR QL-D)
FO — FO		FIBER OPTIC LINE (QL-B)
FO — FO		FIBER OPTIC LINE (QL-C OR QL-D)
G — G		GAS LINE (QL-B)
G — G		GAS LINE (QL-C OR QL-D)
T — T		TELECOMMUNICATIONS LINE (QL-B)
T — T		TELECOMMUNICATIONS LINE (QL-C OR QL-D)
UK — UK		UNKNOWN DETECTED UTILITY/ CONDUCTOR (QL-B)
W — W		WATER LINE (QL-B)
W — W		WATER LINE (QL-C OR QL-D)
FP — FP		FLOOD PLAIN LINE
SVB — SVB — SVB		STREAM VALLEY BUFFER LINE
VB — VB — VB		VEGETATION BUFFER LINE
WUS — WUS		WATER OF US LINE
WB — WB — WB		WETLAND BUFFER LINE
W — W		WETLAND EDGE LINE

ABBREVIATIONS

GU - GUTTER
TC - TOP OF CURB
TW - TOP OF WALL
BW - BOTTOM OF WALL
EOT - EDGE OF TRAIL
EL - ELEVATION
SW - SIDEWALK

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

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05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB

DATE	REVISION	BY	APP'R.

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MICHAEL J. WORKOSKI — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

11/1/14

INDEX SHEET C0.1

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
AS SHOWN	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	02 OF 17

SDP-13-020

G:\ACTIVE PROJECTS\5282 CEP-Blandair Trail\Site Development Plan General\CAD\Plans\C0 - Cover Sheet.dwg, PLOTTED:11/20/2014 2:31 PM, LAST SAVED:11/4/2014 4:50 PM, PLOTTED BY: Andrew Gudgeon

CONSTRUCTION NOTES

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM WITH THESE DRAWINGS, PROJECT SPECIFICATIONS, AND WITH THE CURRENT EDITION OF THE HOWARD COUNTY, AND THE MARYLAND STATE HIGHWAY ADMINISTRATION (SHA) STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS AND LICENSES AND KEEP COPIES OF THE SAME ON SITE DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL REVIEW THE PLANS FOR THIS PROJECT PRIOR TO WORK.
4. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS. ANY DISCREPANCIES FOUND SHALL BE CALLED TO THE ATTENTION OF THE PROJECT DESIGNER AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
5. ALL INFORMATION SHOWN ON THESE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL REPORT IMMEDIATELY TO THE PROJECT DESIGNER ANY CONDITIONS CONFLICTING WITH THE DRAWINGS. FIELD MODIFICATIONS TO THE DRAWINGS SHALL NOT BE MADE WITHOUT THE CONSENT OF THE PROJECT DESIGNER.
6. THE CONTRACTOR SHALL MAINTAIN A CLEAN WORK SITE, FREE FROM TRASH AND DEBRIS AT ALL TIMES.
7. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING THE HOWARD COUNTY OR SHA RIGHT-OF-WAY. IT IS THE CONTRACTORS RESPONSIBILITY TO CLEAN ALL STREETS, ALLAY DUST AND TO TAKE WHATEVER MEASURES NECESSARY TO ENSURE THE ROAD(S) ARE MAINTAINED IN A CLEAN, MUD, AND DUST FREE CONDITIONS AT ALL TIMES.
8. THE CONTRACTOR SHALL KEEP AND MAINTAIN A SET OF APPROVED PROJECT PLANS AND SPECIFICATIONS ON THE SITE AT ALL TIMES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WITH MATCHING MATERIALS ANY PAVEMENT, UTILITIES, PAVEMENT MARKINGS, ETC. THAT MUST BE CUT OR REMOVED, OR THAT ARE DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST. TEMPORARY OR PERMANENT PAVEMENT PATCHES ARE TO BE PLACED IN ALL ROADWAY CUTS WITH COLD MIX THE SAME DAY THE CUT IS MADE IN ACCORDANCE WITH HOWARD COUNTY REQUIREMENTS.

COORDINATION

1. CONSTRUCTION WILL TAKE PLACE ADJACENT TO ONGOING TRAFFIC OPERATIONS. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH HOWARD COUNTY AND SHA, AS APPLICABLE.
2. THE CONTRACTOR SHALL SUBMIT A PROPOSED CONSTRUCTION SCHEDULE FOR REVIEW AND APPROVAL BY THE PROJECT DESIGNER IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ARRANGE A MEETING WITH THE OWNER REPRESENTATIVE TO DISCUSS COORDINATION OF CONSTRUCTION ACTIVITIES AND RELATED PROJECTS. THE CONTRACTOR SHALL PARTICIPATE IN PERIODIC PROGRESS MEETINGS AND SHALL SUBMIT A SCHEDULE UPDATE AT THESE MEETINGS.

UTILITIES

1. PRIOR TO CONSTRUCTION OR EXCAVATION, THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF LOCATING ANY AND ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST OR CROSS THROUGH THE AREA OF CONSTRUCTION, WHETHER OR NOT THEY ARE SHOWN ON THE PLANS BEFORE DIGGING. TO AVOID THE UTILITIES, THE CONTRACTOR SHALL CALL MISS UTILITY OF MARYLAND AT 1-800-257-7777. STATE LAW MANDATES THE NOTIFICATION OF UTILITY OWNERS 48-HOURS IN ADVANCE OF EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT NOT EXPENSE TO THE OWNER, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
2. THIS PLAN DOES NOT GUARANTEE, THE EXISTENCE, NON-EXISTANCE, SIZE, TYPE, LOCATION, ALIGNMENT, OR DEPTH OF ANY OR ALL UNDERGROUND UTILITIES OR OTHER FACILITIES. WHERE SURFACE FEATURES (MANHOLES, CATCH BASINS, VALVES, ETC.) ARE UNAVAILABLE OR INCONCLUSIVE, INFORMATION SHOWN MAY BE FROM UTILITY OWNERS RECORD AND/OR ELECTRONIC LINE TRACING. THE RELIABILITY OF WHICH IS UNCERTAIN. THE CONTRACTOR SHALL PERFORM TEST EXCAVATION OR OTHER REINVESTIGATION AS NECESSARY TO VERIFY LOCATION AND CLEARANCES.
3. UNLESS OTHERWISE NOTED, UTILITY MANHOLES, COVERS, METER BOXES, AND HANDHOLES ARE TO BE ADJUSTED BY THE CONTRACTOR PRIOR TO PLACING FINAL SURFACE PAVEMENT. THE TOP ELEVATION OF EXISTING MANHOLES SHALL BE ADJUSTED TO MEET THE FINAL PAVEMENT ELEVATION AT THE TIME OF FINAL PAVING OPERATIONS. ALL MANHOLES ARE TO BE PROTECTED FROM THE TRAVELING PUBLIC. NO MANHOLE IS TO BE RAISED ABOVE THE TOP ELEVATION OF THE FINISH GRADE WITHOUT THE APPROPRIATE TRANSITION.
4. CONTRACTOR SHALL CONFORM TO THE "OVERHEAD HIGH VOLTAGE ACT" (EFFECTIVE JULY 1, 2003) AND SHALL CONTACT THE NECESSARY AUTHORITIES PRIOR TO THE START OF CONSTRUCTION.
5. HOWARD COUNTY'S UTILITY DEPARTMENT INSPECTOR SHALL BE NOTIFIED WHEN ANY IMPROVEMENT PERTINENT TO HIS INSPECTION DUTIES ARE BEING INSTALLED. SPECIFIC REQUIREMENTS ARE:
   A. SITE INSPECTION OR AREA SUPERVISOR IS TO BE NOTIFIED ATLEAST 5 DAYS PRIOR TO START OF CONSTRUCTION.
   B. A MINIMUM OF 24 HOURS NOTICE IS REQUIRED WHEN REQUESTING COMPACTION TESTS AND RESIDENTIAL OR NON-RESIDENTIAL USE PERMITS.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM THE BEST AVAILABLE RECORDS AND MUST BE CONSIDERED TO BE APPROXIMATE. WHEN CONSTRUCTION ACTIVITY REACHES PROXIMITY TO EXISTING UTILITIES, TRENCH(ES) FOR THE PROPOSED UTILITIES SHALL BE OPENED TO A SUFFICIENT DISTANCE AHEAD OF THE WORK OR TEST PITS SHALL BE MADE TO VERIFY THE EXACT LOCATION, SIZE, AND INVERT OF THE EXISTING UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES, IF ANY, TO THE EXISTING UTILITIES AND RELATED STRUCTURES.
8. THE CONTRACTOR SHALL TAKE ALL REASONABLE STEPS TO AVOID DAMAGE, DISLOCATE, OR DISTURB ANY UTILITY LINES. THE FOLLOWING FIVE STEP PROCESS SHALL BE FOLLOWED:
   - THE EXCAVATOR SHALL PLAN THE EXCAVATION IN SUCH A MANNER TO AVOID DAMAGE TO AND MINIMIZE INTERFERENCE WITH UNDERGROUND UTILITY LINES IN AND NEAR THE CONSTRUCTION AREAS.
   - THE EXCAVATOR SHALL EXPOSE THE UNDERGROUND UTILITY LINE TO ITS EXTREMITIES BY HAND DIGGING WITHIN THE EXCAVATION AREA WHEN EXCAVATION IS EXPECTED TO COME WITHIN TWO FEET OF THE MARKED LOCATION OF THE UNDERGROUND UTILITY LINE.
   - THE EXCAVATOR SHALL NOT UTILIZE MECHANIZED EQUIPMENT WITHIN TWO FEET OF EXTREMITIES OF ALL EXPOSED UTILITY LINES.
   - THE EXCAVATOR SHALL MAINTAIN A REASONABLE CLEARANCE, TO INCLUDE THE WIDTH OF THE UTILITY LINE, IF KNOWN, PLUS 24 INCHES BETWEEN THE MARKED OR STAKED LOCATION IF AN UNDERGROUND UTILITY LINE AND THE CUTTING EDGE OR POINT OF ANY MECHANIZED EQUIPMENT, CONSIDERING THE KNOWN LIMIT OF CONTROL OF THE CUTTING EDGE OR POINT TO AVOID DAMAGE TO THE UILITY LINE.
   - THE EXCAVATOR SHALL PROVIDE PROPER SUPPORT FOR UNDERGROUND UTILITY LINES DURING EXCAVATION ACTIVITIES, DURING BACKFILL OPERATIONS; THE EXCAVATOR SHALL USE THE SAME OR SIMILAR BACKFILL MATERIAL THAT WAS ORIGINALLY AROUND THE UTILITY LINE ENSUREINING THAT THERE IS PROPER COMPACTION AROUND THE UTILITY LINE, PROTECT ALL TRACER WIRES, AND PROTECT AND REPLACE WARNING TAPES.

9. PRIMARY UTILITY COMPANIES:

	EMERGENCY
BALTIMORE GAS AND ELECTRIC (BG&E)	1-877-778-2222
VERIZON MARYLAND	1-888-611-3005
COMCAST MARYLAND	1-866-749-2649

OTHER POTENTIAL UTILITY COMPANIES:

AMERICAN TELEPHONE & TELEGRAPH CO/ AT&T.	1-800-241-3624/ 1-888-634-1840
COLONIAL PIPELINE CO.	1-800-926-2728
MCI INTERNATIONAL	1-800-852-6700
MCI WORLD	1-972-656-5474
TRANSCO GAS PIPELINE CO.	1-800-440-8475 (24 HRS)
VERIZON (BELL ATLANTIC)	1-800-275-2355
VERIZON SOUTH	1-800-745-1944
ABOVENET COMMUNICATIONS	1-888-636-2778
ELANTIC TELECOM/ CAVALIER TELEPHONE	1-888-662-5700
FIBERLIGHT, LLC	1-800-672-0181
QUEST GOVERNMENT SERVICES	1-800-388-6460
SPRINT	1-800-521-0579
YIPES COMMUNICATIONS, INC.	1-877-740-6600
XPEDIUS COMMUNICATIONS	1-800-937-7423
XO COMMUNICATIONS	1-866-295-9696

GRADING, DRAINAGE & PAVEMENT

1. STABLE SUBGRADE SHALL COMPRISE SOLID, WELL DRAINED, UNDISTURBED EARTH CAPABLE OF SUPPORTING STREET LOADING WITHOUT RESULTING IN ANY DAMAGE SETTLEMENT AS DETERMINED BY THE PROJECT DESIGNER/ GEOTECHNICAL REPORT.
2. UNLESS MORE STRINGENT COMPACTION REQUIREMENTS ARE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS, THE BACKFILL OF EMBANKMENT MATERIAL, THE INSTALLATION OF TRENCH BACKFILL AND THE RESTORATION OF DISTURBED AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS. ALL COMPACTION SHALL BE AT +/- 2% OF THE OPTIMUM MOISTURE CONTENT.
3. ALL SUBGRADE, SUBBASE, BASE, AND SHOULDER MATERIAL SHALL BE PLACED AND COMPACTED TO THE DENSITY SPECIFIED IN THE CURRENT EDITION OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS. ALL COMPACTION SHALL BE AT +/- 2% OF THE OPTIMUM MOISTURE CONTENT.
4. UNLESS MORE STRINGENT COMPACTION REQUIREMENTS ARE NOTED ON THE PLANS, THE SUBGRADE FOR ALL WALKWAYS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THEORETICAL MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.
5. WHERE UNSUITABLE SUBGRADE, AS DETERMINED BY HOWARD COUNTY, IS ENCOUNTERED, IT SHALL BE MADE STABLE BY DRAINING, COMPACTING AND/OR REPLACING AS REQUIRED TO THE SATISFACTION OF THE INSPECTION REPRESENTATIVE.
6. WHERE EXISTING NATURAL DRAINAGE DITCHES OR STREAM BANKS ARE DISTURBED DURING CONSTRUCTION, THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL ALIGNMENT, GRADE AND INVERT.
7. PROPOSED TOP OF CURB GRADES SHALL BE FIELD ADJUSTED AS REQUIRED TO CONFORM TO THE INTENT OF THE TYPICAL SECTION. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE BASELINE TO THE PROPOSED EDGE OF PAVEMENT OR FACE OF CURB TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF WATER ON THE TRAIL BUFFERS OR ROADWAY. THE EXISTING PAVEMENT SHALL BE RECAPPED AND/OR REMOVED AND REPLACED AS REQUIRED TO ACCOMPLISH THIS REQUIREMENT. ALL CURB FORMS SHALL BE INSPECTED FOR HORIZONTAL AND VERTICAL ALIGNMENT BY HOWARD COUNTY OR THEIR AUTHORIZED REPRESENTATIVES PRIOR TO PLACING OF CONCRETE.
8. ALL CONCRETE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE HOWARD COUNTY OR SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, UNLESS SPECIFIED OTHERWISE.
9. ALL ASPHALT PAVEMENT COURSES SHALL BE IN CONFORMANCE WITH SHA SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED BY THE OWNER AND/OR AS SHOWN ON THE APPROVED PLANS.
10. THE LOCATION AND INVERTS OF ALL DRAINAGE STRUCTURES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY, AND THE CONTRACTOR SHALL VERIFY THIS DATA. IF DURING CONSTRUCTION, THE LOCATION AND INVERT ELEVATIONS FOR EXISTING STRUCTURES ARE FOUND TO DIFFER SIGNIFICANTLY FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE PROJECT DESIGNER PRIOR TO INSTALLATION OF THE DRAINAGE STRUCTURE.
11. THE CONTRACTOR SHALL RESTORE ALL DRIVEWAYS DISTURBED DURING CONSTRUCTION. RESTORATION SHALL CONSIST OF THE FOLLOWING (IF APPLICABLE).
    - GRAVEL DRIVEWAY - PROVIDE A MINIMUM 6" COMPACTED 21A.
    - ASPHALT DRIVEWAY - PROVIDE 6" COMPACTED 21A WITH MINIMUM 2" OVERLAY.
    - CONCRETE DRIVEWAY - PROVIDE A NEAT SAWCUT CONNECTION, MINIMUM 4" COMPACTED 21A AND 5' CLASS A3 CONCRETE WITH WWF 6X6 - W2.9 X W2.9.
12. THE PAVEMENT DESIGN IN THE CONSTRUCTION PLANS WAS PREPARED BASED ON AVAILABLE SUBSURFACE INFORMATION, INCLUDING LABORATORY CALIFORNIA BEARING RATIO (C.B.R) TESTS THAT ARE PERFORMED DURING THE DESIGN SUBSUFACE INVESTIGATION. WHEN THE CONTRACTOR REACHES THE SUBGRADE ELEVATION, ADDITIONAL C.B.R TEST LOCATIONS MAY BE DIRECTED BY THE PROJECT DESIGNER FOR SELECTED LOCATIONS, BASED ON ACTUAL FIELD CONTROL OBSERVATIONS. THE C.B.R SAMPLES AND TESTS SHALL BE PERFORMED BY A GEOTECHNICAL FIRM. THE RESULTS OF THE ENGINEER'S EVALUATION OF THE C.B.R LABORATORY TESTS SHALL BE OBTAINED IN WRITING PRIOR TO THE PLACEMENT OF ANY SUBBASE OR BASE MATERIAL IN THE AREA(S) UNDER CONSIDERATION. THE PROPOSED PAVEMENT DESIGN FOR THE AREAS UNDER CONSIDERATION WILL EITHER BE CONFIRMED OR ADJUSTED BY THE ENGINEER BASED ON THE RESULT OF THE C.B.R. THE CONTRACTOR SHALL COOPERATE BY MODIFYING CONSTRUCTION ACTIVITIES AND/OR SCHEDULING IN ORDER TO PERMIT THE ADDITIONAL CBR TESTING. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY MONETARY DAMAGES WHATSOEVER FOR ANY DELAYS RESULTING FROM THIS TESTING.

TRANSPORTATION MANAGEMENT PLAN

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY TRAFFIC CONTROL, SUCH AS LANE CLOSURES, FLAGGERS, DRIVEWAY ENTRANCES, ETC. TO PROPERLY MAINTAIN TRAFFIC THROUGHOUT THE PROJECT AREA.
2. ALL TRAFFIC MAINTENANCE SHALL CONFORM TO THE LATEST REVISIONS THERETO: MARYLAND WORK AREA PROTECTION MANUAL, SHA SPECIFICATIONS AND CONSTRUCTION DETAILS, AND THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. ALL EXISTING SIGNS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAY ENTRANCES DURING CONSTRUCTION.
5. TEMPORARY CLOSURE AFFECTING EGRESS TO ADJACENT PROPERTIES SHALL BE COORDINATED WITH AFFECTED PARTIES.
6. PEDESTRIAN DETOURS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACCORDING TO THE MARYLAND WORK ZONE SAFETY GUIDELINES AND THE MARYLAND MUTCD GUIDELINES.

STORM SEWER

1. LENGTHS OF PIPES SHOWN ON THE DRAWINGS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
2. INVERT ELEVATIONS SHOWN ON THE DRAWINGS ARE TAKEN AT THE FACE OF THE STRUCTURE.
3. MINOR FIELD ADJUSTMENTS IN THE ELEVATION AND ALIGNMENT OF STORM SEWER AND STRUCTURE MIGHT BE NECESSARY TO MEET EXISTING CONDITIONS AND PROPOSED FINAL GRADING. THE CONTRACTOR SHALL NOTIFY THE PROJECT DESIGNER PRIOR TO MAKING ANY NECESSARY ADJUSTMENTS.
4. TOP OF STRUCTURES SHALL BE SET TO MATCH CURB AND GUTTER, SIDEWALK AND/OR DITCH CONSTRUCTION.

SIDEWALKS AND MULTI-USE PATHS

1. A MINIMUM OF 2 FOOT CLEARANCE IS REQUIRED BETWEEN THE WALKWAY EDGE AND ANY VERTICAL CONSTRUCTION SUCH AS TREES, UTILITY POLES, SIGNS, ETC., UNLESS OTHERWISE SPECIFICALLY NOTED ON THE PLANS AT EACH LOCATION.
2. A MINIMUM 4 FOOT UTILITY STRIP IS REQUIRED BETWEEN THE EDGE OF THE WALKWAY AND THE BACK OF THE CURB AND GUTTER, UNLESS OTHERWISE NOTED ON THE PLAN.
3. A MINIMUM 10 FOOT SEPARATION IS REQUIRED BETWEEN THE EDGE OF THE SIDEWALK AND THE EDGE OF THE PAVEMENT FOR NON CURB AND GUTTER ROADS, UNLESS OTHERWISE NOTED ON THE PLANS.
4. SHARED USE PATHS SHALL BE A MINIMUM OF 10 FEET WIDTH, UNLESS OTHERWISE NOTED.
5. ALL VEGETATIVE MATERIAL WITHIN 10 FEET OF VERTICAL CLEARANCE FROM THE PROPOSED PATHWAY SHALL BE REMOVED PRIOR TO PATH CONSTRUCTION. THE HORIZONTAL CLEARING LIMITS SHALL BE IN ACCORDANCE WITH THE DETAILS ON THE DETAIL SHEET. AN EXCEPTION TO THIS REQUIREMENT SHALL BE TO SAVE ANY TREES THAT ARE DESIGNATED ON THE CONSTRUCTION PLANS.
6. ALL GRADES FOR PROPOSED SIDEWALK SHALL BE IN ACCORDANCE WITH CONSTRUCTION PLANS. ANY FIELD ADJUSTMENT OF THE PROPOSED SIDEWALK GRADES SHALL BE APPROVED BY THE PROJECT DESIGNER. THE FOLLOWING GRADE CRITERIA SHALL BE ADHERED TO FOR FIELD ADJUSTMENTS:
   - MINIMUM: 1% EXCEPT IN SAGS WITH ADEQUATE DRAINAGE
   - MAXIMUM: ROADWAY GRADE OR 5% WHICHEVER IS GREATER

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

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G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/3/16

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

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STATE OF MARYLAND — ROBERT EDWARD JENKINS — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 2/7/14

GENERAL NOTES C1.0

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

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N/A	NT/POR /R-12	5282
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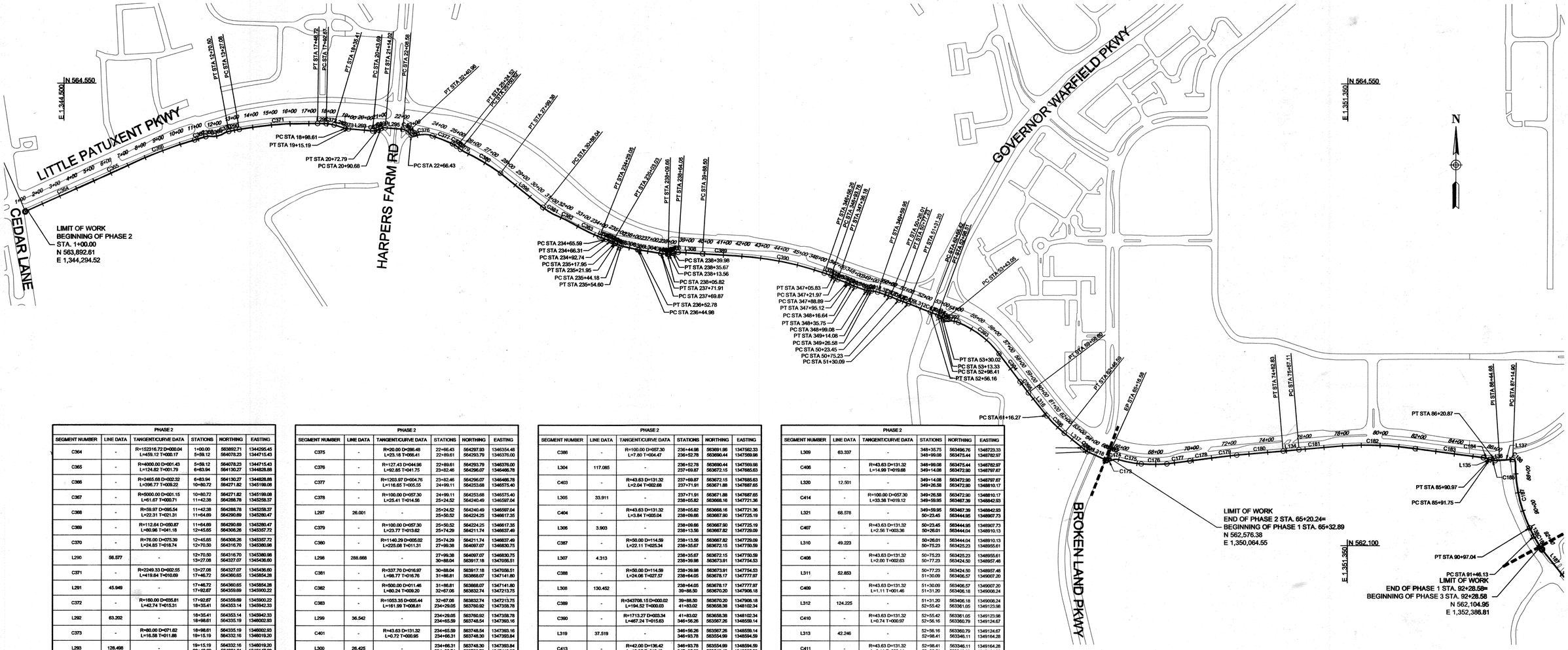
SDP-13-020

G:\ACTIVE PROJECTS\5282 GDP-Blandair Trail\Site Development Plan General\CAD\Plans\C1-0 - General Notes.dwg, PLOTTED:11/20/2014 2:31 PM, LAST SAVED:8/3/2014 7:56 AM, PLOTTED BY: Andrew Gudgeon



PHASE 2					
SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
C364	-	R=15231.72 D=000.04 L=459.12 T=000.17	1+00.00 5+59.12	563892.71 564078.23	1344295.45 1344715.43
C365	-	R=4000.00 D=001.43 L=124.82 T=001.79	5+59.12 6+83.94	564078.23 564130.27	1344715.43 1344828.88
C366	-	R=2465.68 D=002.32 L=396.77 T=009.22	6+83.94 10+80.72	564130.27 564271.82	1344828.88 1345199.08
C367	-	R=5000.00 D=001.15 L=61.67 T=000.71	10+80.72 11+42.38	564271.82 564288.78	1345199.08 1345258.37
C368	-	R=59.97 D=095.54 L=22.31 T=021.31	11+42.38 11+64.69	564288.78 564290.69	1345258.37 1345280.47
C369	-	R=112.64 D=050.87 L=80.96 T=041.18	11+64.69 12+45.65	564290.69 564308.26	1345280.47 1345357.72
C370	-	R=76.00 D=075.39 L=24.85 T=018.74	12+45.65 12+70.50	564308.26 564316.70	1345357.72 1345380.98
L290	56.577	-	12+70.50 13+27.08	564316.70 564327.07	1345380.98 1345436.60
C371	-	R=2249.33 D=002.55 L=419.64 T=010.69	13+27.08 17+46.72	564327.07 564360.65	1345436.60 1345854.28
L291	45.949	-	17+46.72 17+92.67	564360.65 564359.69	1345854.28 1345900.22
C372	-	R=180.00 D=035.81 L=42.74 T=015.31	17+92.67 18+35.41	564359.69 564353.14	1345900.22 1345942.33
L292	63.202	-	18+35.41 18+98.61	564353.14 564335.19	1345942.33 1346002.93
C373	-	R=80.00 D=071.62 L=16.58 T=011.88	18+98.61 19+15.19	564335.19 564332.16	1346002.93 1346019.20
L293	128.498	-	19+15.19 20+43.69	564332.16 564321.81	1346019.20 1346147.28
C374	-	R=51.84 D=110.52 L=29.10 T=022.15	20+43.69 20+72.79	564321.81 564327.04	1346147.28 1346175.52
L294	17.894	-	20+72.79 20+90.68	564327.04 564334.46	1346175.52 1346191.80
C399	-	R=45.70 D=125.37 L=23.34 T=029.26	20+90.68 21+14.02	564334.46 564338.41	1346191.80 1346214.54
L295	94.561	-	21+14.02 22+08.58	564338.41 564330.54	1346214.54 1346308.78
C400	-	R=43.63 D=131.32 L=32.38 T=042.53	22+08.58 22+40.96	564330.54 564316.65	1346308.78 1346337.21
L296	25.468	-	22+40.96 22+66.43	564316.65 564297.93	1346337.21 1346354.48

PHASE 2					
SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
C375	-	R=20.00 D=286.48 L=23.18 T=066.41	22+66.43 22+89.61	564297.93 564293.79	1346354.48 1346376.00
C376	-	R=127.43 D=044.96 L=82.85 T=041.75	22+89.61 23+72.46	564293.79 564296.07	1346376.00 1346466.78
C377	-	R=1203.97 D=004.76 L=116.65 T=055.55	23+72.46 24+99.11	564296.07 564253.68	1346466.78 1346575.40
C378	-	R=100.00 D=057.30 L=25.41 T=014.56	24+99.11 25+24.52	564253.68 564240.49	1346575.40 1346597.04
L297	26.001	-	25+24.52 25+50.52	564240.49 564224.25	1346597.04 1346617.35
C379	-	R=100.00 D=057.30 L=23.77 T=013.62	25+50.52 25+74.29	564224.25 564211.74	1346617.35 1346637.49
C380	-	R=1140.29 D=005.02 L=225.08 T=011.31	25+74.29 27+99.38	564211.74 564097.07	1346637.49 1346830.75
L298	288.668	-	27+99.38 30+88.04	564097.07 563917.18	1346830.75 1347059.51
C381	-	R=337.70 D=016.97 L=98.77 T=016.76	30+88.04 31+86.81	563917.18 563868.07	1347059.51 1347141.80
C382	-	R=500.00 D=011.46 L=80.24 T=009.20	31+86.81 32+67.06	563868.07 563832.74	1347141.80 1347213.75
C383	-	R=1053.35 D=005.44 L=161.89 T=008.81	32+67.06 34+29.05	563832.74 563760.92	1347213.75 1347338.78
L299	36.542	-	34+29.05 34+65.59	563760.92 563748.54	1347338.78 1347363.16
C401	-	R=43.63 D=131.32 L=0.72 T=000.95	34+65.59 34+66.31	563748.54 563748.30	1347363.16 1347393.84
L300	26.425	-	34+66.31 34+92.74	563748.30 563738.76	1347393.84 1347418.85
C384	-	R=50.00 D=114.59 L=10.30 T=011.80	34+92.74 35+03.03	563739.76 563735.46	1347418.85 1347428.18
L301	14.911	-	35+03.03 35+17.95	563735.46 563727.86	1347428.18 1347441.01
C402	-	R=43.63 D=131.32 L=4.00 T=005.26	35+17.95 35+21.95	563727.86 563725.98	1347441.01 1347444.54
L302	22.232	-	35+21.95 35+44.18	563725.98 563716.45	1347444.54 1347464.62
C385	-	R=50.00 D=114.59 L=10.42 T=011.94	35+44.18 35+54.60	563716.45 563712.89	1347464.62 1347474.43
L303	90.381	-	35+54.60 36+44.98	563712.89 563691.96	1347474.43 1347562.33

PHASE 2					
SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
C386	-	R=100.00 D=057.30 L=7.60 T=004.47	236+44.98 236+52.78	563691.96 563690.44	1347562.33 1347569.98
L304	117.085	-	236+52.78 237+69.87	563690.44 563672.15	1347569.98 1347685.63
C403	-	R=43.63 D=131.32 L=2.04 T=002.68	237+69.87 237+71.91	563672.15 563671.88	1347685.63 1347687.65
L305	33.911	-	237+71.91 238+05.82	563671.88 563668.16	1347687.65 1347721.36
C404	-	R=43.63 D=131.32 L=3.84 T=005.04	238+05.82 238+09.66	563668.16 563667.90	1347721.36 1347725.19
L306	3.903	-	238+09.66 238+13.56	563667.90 563667.82	1347725.19 1347729.09
C387	-	R=50.00 D=114.59 L=22.11 T=025.34	238+13.56 238+35.67	563667.82 563672.15	1347729.09 1347750.59
L307	4.313	-	238+35.67 238+39.98	563672.15 563673.91	1347750.59 1347754.53
C388	-	R=50.00 D=114.59 L=24.06 T=027.57	238+39.98 238+64.05	563673.91 563678.17	1347754.53 1347777.97
L308	130.452	-	238+64.05 39+88.50	563678.17 563670.20	1347777.97 1347908.18
C389	-	R=343708.15 D=000.02 L=194.52 T=000.03	39+88.50 41+83.02	563670.20 563658.38	1347908.18 1348102.34
C390	-	R=1713.27 D=003.34 L=467.24 T=015.63	41+83.02 346+56.26	563658.38 563567.26	1348102.34 1348559.14
L319	37.519	-	346+56.26 346+93.78	563567.26 563554.99	1348559.14 1348594.59
C413	-	R=42.00 D=136.42 L=12.05 T=016.43	346+93.78 347+05.83	563554.99 563549.48	1348594.59 1348605.26
L322	16.145	-	347+05.83 347+21.97	563549.48 563540.10	1348605.26 1348618.40
C415	-	R=50.00 D=114.59 L=14.21 T=016.28	347+21.97 347+36.18	563540.10 563533.58	1348618.40 1348630.97
L323	52.709	-	347+36.18 347+88.89	563533.58 563516.21	1348630.97 1348680.74
C416	-	R=50.00 D=114.59 L=6.23 T=007.14	347+88.89 347+95.12	563516.21 563513.79	1348680.74 1348686.47
L324	21.523	-	347+95.12 348+16.64	563513.79 563504.23	1348686.47 1348705.76
C405	-	R=163.00 D=035.15 L=19.11 T=009.72	348+16.64 348+35.75	563504.23 563496.76	1348705.76 1348723.33

PHASE 2					
SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
L309	63.337	-	348+35.75 348+99.08	563496.76 563475.44	1348723.33 1348782.97
C406	-	R=43.63 D=131.32 L=14.99 T=018.88	348+99.08 349+14.08	563475.44 563472.90	1348782.97 1348797.67
L320	12.501	-	349+14.08 349+26.58	563472.90 563472.90	1348797.67 1348810.17
C414	-	R=100.00 D=057.30 L=33.38 T=019.12	349+26.58 349+59.95	563472.90 563467.39	1348810.17 1348842.93
L321	68.578	-	349+59.95 350+23.45	563467.39 563444.85	1348842.93 1348907.73
C407	-	R=43.63 D=131.32 L=2.56 T=003.36	350+23.45 350+26.01	563444.85 563444.04	1348907.73 1348910.13
L310	49.223	-	50+26.01 50+75.23	563444.04 563425.23	1348910.13 1348955.61
C408	-	R=43.63 D=131.32 L=2.00 T=002.63	50+75.23 50+77.23	563425.23 563424.50	1348955.61 1348957.49
L311	52.853	-	50+77.23 51+30.09	563424.50 563406.57	1348957.49 1349007.20
C409	-	R=43.63 D=131.32 L=1.11 T=001.46	51+30.09 51+31.20	563406.57 563406.18	1349007.20 1349008.24
L312	124.225	-	51+31.20 52+55.42	563406.18 563361.05	1349008.24 1349123.98
C410	-	R=43.63 D=131.32 L=0.74 T=000.97	52+55.42 52+56.16	563361.05 563360.79	1349123.98 1349124.67
L313	42.246	-	52+56.16 52+98.41	563360.79 563346.11	1349124.67 1349164.28
C411	-	R=43.63 D=131.32 L=0.11 T=000.14	52+98.41 52+98.51	563346.11 563346.08	1349164.28 1349164.36
L314	14.813	-	52+98.51 53+13.33	563346.08 563340.96	1349164.36 1349178.28
C412	-	R=24.59 D=233.03 L=16.70 T=038.91	53+13.33 53+30.02	563340.96 563330.51	1349178.28 1349190.90
L315	13.028	-	53+30.02 53+43.05	563330.51 563319.32	1349190.90 1349197.59
C391	-	R=20.00 D=286.48 L=21.71 T=062.18	53+43.05 53+64.76	563319.33 563312.44	1349197.59 1349217.06
C392	-	R=100.00 D=057.30 L=58.12 T=033.30	53+64.76 54+22.87	563312.44 563307.38	1349217.06 1349274.13
C393	-	R=505.56 D=011.33 L=275.74 T=031.25	54+22.87 56+98.61	563307.38 563162.23	1349274.13 1349490.67

PHASE 1					
SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
C173	-	R=38.00 D=150.78 L=29.66 T=044.73	65+32.89 65+62.55	562576.52 562576.76	1350064.52 1350093.44
C174	-	R=60.00 D=095.49 L=39.84 T=038.05	65+62.55 66+02.40	562576.76 562579.37	1350093.44 1350132.46
C175	-	R=573.58 D=009.99 L=120.17 T=012.00	66+02.40 67+22.57	562579.37 562557.31	1350132.46 1350250.37
C176	-	R=721.65 D=007.94 L=136.78 T=010.86	67+22.57 68+59.33	562557.31 562557.40	1350250.37 1350386.93
C177	-	R=6738.92 D=000.86 L=123.41 T=000.81	68+59.33 69+82.74	562557.40 562573.19	1350386.93 1350509.33
C178	-	R=5351.94 D=001.07 L=129.80 T=001.39	69+82.74 71+12.54	562573.19 562590.10	1350509.33 1350638.02
C179	-	R=2091.20 D=002.74 L=122.63 T=003.36	71+12.54 72+35.18	562590.10 562603.69	1350638.02 1350759.88
C180	-	R=39621.44 D=000.14 L=247.65 T=000.36	72+35.18 74+82.83	562603.69 562625.22	1350759.88 1351006.59
L134	84.285	-	74+82.83 75+67.11	562625.22 562632.63	1351006.59 1351090.55
C181	-	R=20873.83 D=000.27 L=163.24 T=000.45	75+67.11 77+30.36	562632.63 562646.78	1351090.55 1351253.18

PHASE 1					
SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
C182	-	R=1851.21 D=003.10 L=459.06 T=014.21	77+30.36 81+89.42	562646.78 562638.19	1351253.18 1351710.98
C183	-	R=206117.56 D=000.03 L=368.30 T=000.10	81+89.42 85+55.71	562638.19 562590.43	1351710.98 1352074.15
C184	-	R=120.00 D=047.75 L=35.26 T=018.84	85+55.71 85+90.97	562590.43 562580.97	1352074.15 1352107.99
L135	0.775	-	85+90.97 85+91.75	562580.97 562580.86	1352107.99 1352108.70
C185	-	R=60.00 D=095.49 L=29.12 T=027.81	85+91.75 86+20.87	562580.86 562575.59	1352108.70 1352137.09
L136	23.803	-	86+20.87 86+44.68	562575.59 562577.16	1352137.09 1352160.84
L137	70.221	-	86+44.68 87+14.90	562577.16 562581.72	1352160.84 1352230.91
C186	-	R=14.99 D=382.11 L=23.15 T=088.45	87+14.90 87+38.04	562581.72 562566.80	1352230.91 1352245.36
C187	-	R=800.00 D=007.16 L=358.99 T=025.71	87+38.04 90+97.04	562566.80 562218.80	1352245.36 1352321.29
L138	49.091	-	90+97.04 91+46.13	562218.80 562175.03	1352321.29 1352343.53
C188	-	R=800.00 D=007.16 L=82.45 T=005.91	91+46.13 92+28.58	562175.03 562104.87	1352343.53 1352386.76

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/13/16, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16

Chief, Division of Land Development — Date 3-22-16

Chief, Development Engineering Division — Date 3-18-16

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

0' 250' 500'
SCALE: 1" = 250'

GEOMETRIC PLAN C2.0

ToolеDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

I:\2013\13012 CDP-Blandair Trail\Site Development Plan Cases\C2.0 Plans\C2-0 - ALL PHASES.dwg | DES. DPB | DRN. AG | CHK. EM

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — MICHAEL JOHN WICK — 35022 — REGISTERED PROFESSIONAL ENGINEER

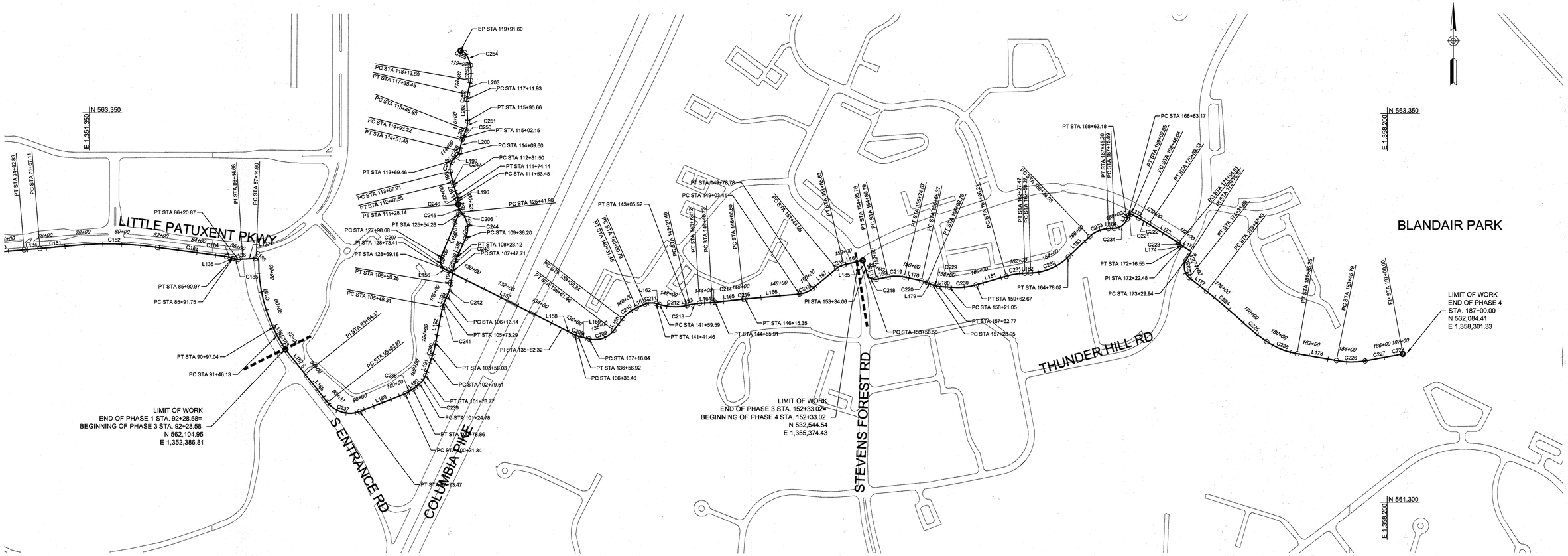
3/4/16

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 250'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
03/07/16	36	04 OF 17

SDP-13-020



PHASE 3

SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
L187	165.792	-	92+28.58 93+94.37	562104.87 561975.68	1352386.76 1352490.67
L188	189.500	-	93+94.37 95+83.87	561975.68 561826.96	1352490.67 1352608.14
C237	-	R=150.00 D=038.20 L=189.60 T=072.42	95+83.87 97+73.47	561826.96 561779.66	1352608.14 1352778.94
L189	257.863	-	97+73.47 100+31.34	561779.66 561673.73	1352778.94 1353019.04
C238	-	R=150.00 D=038.20 L=47.53 T=018.15	100+31.34 100+78.86	561673.73 561897.73	1353019.04 1353059.83
L190	45.915	-	100+78.86 101+24.78	561897.73 561926.96	1353059.83 1353095.24
C239	-	R=100.00 D=057.30 L=54.00 T=030.94	101+24.78 101+78.77	561926.96 561970.66	1353095.24 1353125.82
L191	100.739	-	101+78.77 102+79.51	561970.66 562065.61	1353125.82 1353159.48
C240	-	R=500.00 D=011.46 L=78.52 T=009.00	102+79.51 103+58.03	562065.61 562141.37	1353159.48 1353179.81
L192	190.281	-	103+58.03 105+48.31	562141.37 562328.45	1353179.81 1353214.55
C241	-	R=100.00 D=057.30 L=24.98 T=014.31	105+48.31 105+73.29	562328.45 562352.18	1353214.55 1353222.12
L193	39.849	-	105+73.29 106+13.14	562352.18 562388.35	1353222.12 1353238.85
C242	-	R=250.00 D=022.92 L=67.12 T=015.38	106+13.14 106+80.25	562388.35 562452.29	1353238.85 1353258.57
L194	67.459	-	106+80.25 107+47.71	562452.29 562518.84	1353258.57 1353269.65

PHASE 3

SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
C243	-	R=300.00 D=019.10 L=75.41 T=014.40	107+47.71 108+23.12	562518.84 562590.89	1353269.65 1353291.20
L195	113.080	-	108+23.12 109+36.20	562590.89 562694.32	1353291.20 1353336.92
C244	-	R=125.00 D=045.84 L=141.74 T=064.97	109+36.20 110+77.94	562694.32 562827.06	1353336.92 1353316.77
C245	-	R=80.00 D=071.62 L=50.20 T=035.95	110+77.94 111+28.14	562827.06 562872.47	1353316.77 1353297.37
L196	25.342	-	111+28.14 111+53.48	562872.47 562897.89	1353297.37 1353294.84
C246	-	R=100.00 D=057.30 L=20.68 T=011.84	111+53.48 111+74.14	562897.89 562917.89	1353294.84 1353290.87
L197	57.360	-	111+74.14 112+31.50	562917.89 562972.57	1353290.87 1353273.34
C247	-	R=250.00 D=022.92 L=16.14 T=003.70	112+31.50 112+47.65	562972.57 562988.10	1353273.34 1353268.96
L198	60.262	-	112+47.65 113+07.91	562988.10 563046.60	1353268.96 1353254.50
C248	-	R=64.00 D=089.52 L=61.55 T=055.10	113+07.91 113+69.46	563046.60 563104.27	1353254.50 1353267.88
L199	40.139	-	113+69.46 114+09.60	563104.27 563134.74	1353267.88 1353294.01
C249	-	R=48.00 D=124.56 L=21.86 T=027.23	114+09.60 114+31.46	563134.74 563154.04	1353294.01 1353303.85
L200	61.754	-	114+31.46 114+93.22	563154.04 563214.12	1353303.85 1353318.14
C250	-	R=64.00 D=089.52 L=8.94 T=008.00	114+93.22 115+02.15	563214.12 563222.64	1353318.14 1353320.81
L201	46.702	-	115+02.15 115+48.85	563222.64 563266.13	1353320.81 1353337.83
C251	-	R=116.00 D=049.39 L=46.80 T=023.12	115+48.85 115+95.66	563266.13 563311.93	1353337.83 1353345.76
L202	116.277	-	115+95.66 117+11.93	563311.93 563428.15	1353345.76 1353342.24
C252	-	R=104.00 D=055.09 L=26.52 T=014.61	117+11.93 117+38.45	563428.15 563454.47	1353342.24 1353344.81
L203	75.154	-	117+38.45 118+13.60	563454.47 563527.74	1353344.81 1353361.55
C253	-	R=216.81 D=028.43 L=80.77 T=021.35	118+13.60 118+94.37	563527.74 563608.03	1353361.55 1353360.22
C254	-	R=128.48 D=044.59 L=72.88 T=032.50	118+94.37 119+67.26	563608.03 563673.49	1353360.22 1353330.44
C255	-	R=36.81 D=155.66 L=24.34 T=037.90	119+67.26 119+91.60	563673.49 563683.67	1353330.44 1353308.82

PHASE 3

SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
L154	41.964	-	125+00.00 125+41.96	562872.47 562830.72	1353297.37 1353301.55
C206	-	R=25.00 D=229.18 L=12.29 T=028.17	125+41.96 125+54.26	562830.72 562818.68	1353301.55 1353299.78
L155	244.423	-	125+54.26 127+98.68	562818.68 562592.77	1353299.78 1353206.45
C207	-	R=50.00 D=114.59 L=70.51 T=080.79	127+98.68 128+69.18	562592.77 562531.12	1353206.45 1353226.42
L156	4.229	-	128+69.18 128+73.41	562531.12 562528.90	1353226.42 1353230.02
L157	688.905	-	128+73.41 135+62.32	562528.90 562220.10	1353230.02 1353845.84
L158	74.139	-	135+62.32 136+36.46	562220.10 562186.68	1353845.84 1353912.02
C208	-	R=95.00 D=060.31 L=20.46 T=012.34	136+36.46 136+56.92	562186.68 562179.58	1353912.02 1353931.17
L159	59.119	-	136+56.92 137+16.04	562179.58 562165.13	1353931.17 1353988.49
C209	-	R=125.00 D=045.84 L=145.42 T=066.66	137+16.04 138+61.46	562165.13 562210.24	1353988.49 1354118.23
L160	76.778	-	138+61.46 139+38.24	562210.24 562271.16	1354118.23 1354164.97
C210	-	R=185.00 D=030.97 L=93.22 T=028.87	139+38.24 140+31.45	562271.16 562328.03	1354164.97 1354237.58
L161	49.339	-	140+31.45 140+80.79	562328.03 562347.80	1354237.58 1354282.79
C211	-	R=85.00 D=067.41 L=60.66 T=040.89	140+80.79 141+41.46	562347.80 562351.11	1354282.79 1354342.08
L162	18.130	-	141+41.46 141+59.59	562351.11 562345.73	1354342.08 1354359.39
C212	-	R=275.00 D=020.83 L=145.94 T=030.41	141+59.59 143+05.52	562345.73 562340.56	1354359.39 1354503.53
L163	15.878	-	143+05.52 143+21.40	562340.56 562344.17	1354503.53 1354518.99
C213	-	R=305.00 D=018.79 L=51.72 T=009.72	143+21.40 143+73.12	562344.17 562351.61	1354518.99 1354570.10
L164	67.603	-	143+73.12 144+40.72	562351.61 562355.66	1354570.10 1354637.59
C214	-	R=295.00 D=019.42 L=15.19 T=002.95	144+40.72 144+55.91	562355.66 562356.96	1354637.59 1354652.71
L165	152.891	-	144+55.91 146+08.80	562356.96 562373.96	1354652.71 1354804.66
C215	-	R=305.00 D=018.79 L=6.55 T=001.23	146+08.80 146+15.35	562373.96 562374.61	1354804.66 1354811.18

PHASE 3

SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
L166	288.085	-	146+15.35 149+03.41	562374.61 562400.48	1354811.18 1355098.08
C217	-	R=125.00 D=045.84 L=75.36 T=034.54	149+03.41 149+78.78	562400.48 562428.79	1355098.08 1355166.69
L167	165.304	-	149+78.78 151+44.08	562428.79 562534.37	1355166.69 1355293.89
C218	-	R=90.00 D=063.66 L=41.74 T=026.57	151+44.08 151+85.82	562534.37 562552.77	1355293.89 1355330.94
L168	103.858	-	151+85.82 152+89.68	562552.77 562576.35	1355330.94 1355432.08

PHASE 4

SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
L185	44.381	-	152+89.68 153+34.06	562576.35 562534.05	1355432.08 1355445.50
L186	22.514	-	153+34.06 153+56.58	562534.05 562512.30	1355445.50 1355451.34
C218	-	R=45.02 D=127.26 L=69.19 T=088.05	153+56.58 154+25.76	562512.30 562478.07	1355451.34 1355503.72
L169	63.431	-	154+25.76 154+89.19	562478.07 562490.03	1355503.72 1355566.01
C219	-	R=187.49 D=030.56 L=85.47 T=026.12	154+89.19 155+74.67	562490.03 562489.89	1355566.01 1355650.75
L170	93.704	-	155+74.67 156+68.37	562489.89 562470.25	1355650.75 1355742.37
C220	-	R=150.00 D=038.20 L=30.39 T=011.61	156+68.37 156+98.76	562470.25 562460.93	1355742.37 1355771.24
L179	30.190	-	156+98.76 157+28.95	562460.93 562448.79	1355771.24 1355798.88
C229	-	R=100.00 D=057.30 L=33.82 T=019.38	157+28.95 157+62.77	562448.79 562440.64	1355798.88 1355831.54
L180	58.284	-	157+62.77 158+21.05	562440.64 562436.24	1355831.54 1355889.66
C230	-	R=400.00 D=014.32 L=141.61 T=020.28	158+21.05 159+62.67	562436.24 562450.52	1355889.66 1356029.81
L181	165.546	-	159+62.67 161+28.21	562450.52 562496.04	1356029.81 1356188.97
C231	-	R=400.00 D=014.32 L=99.26 T=014.22	161+28.21 162+27.47	562496.04 562511.27	1356188.97 1356286.80
L182	30.800	-	162+27.47 162+58.27	562511.27 562512.21	1356286.80 1356317.56

PHASE 4

SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
C232	-	R=300.00 D=019.10 L=219.75 T=041.97	162+58.27 164+78.02	562512.21 562595.22	1356317.58 1356515.77
L183	158.052	-	164+78.02 166+36.08	562595.22 562704.44	1356515.77 1356630.02
C233	-	R=150.00 D=038.20 L=109.23 T=041.72	166+36.08 167+45.30	562704.44 562745.92	1356630.02 1356728.47
L184	30.591	-	167+45.30 167+75.89	562745.92 562746.98	1356728.47 1356759.04
C234	-	R=75.00 D=076.39 L=87.26 T=066.68	167+75.89 168+63.18	562746.98 562754.85	1356759.04 1356826.30
L171	19.991	-	168+63.18 168+83.17	562754.85 562813.27	1356826.30 1356833.57
C221	-	R=11.67 D=491.16 L=19.78 T=097.15	168+83.17 169+02.95	562813.27 562820.86	1356833.57 1356849.33
L172	45.690	-	169+02.95 169+48.64	562820.86 562799.67	1356849.33 1356889.81
C222	-	R=440.93 D=012.99 L=59.49 T=007.73	169+48.64 170+08.13	562799.67 562789.42	1356889.81 1356940.98
L173	186.688	-	170+08.13 171+94.81	562789.42 562669.72	1356940.98 1357098.81
C223	-	R=1076.12 D=005.32 L=21.74 T=001.16	171+94.81 172+16.55	562669.72 562655.70	1357098.81 1357115.43
L174	5.935	-	172+16.55 172+22.48	562655.70 562651.86	1357115.43 1357119.95
L175	54.489	-	172+22.48 172+76.97	562651.86 562622.52	1357119.95 1357165.87
L176	52.967	-	172+76.97 173+29.94	562622.52 562577.18	1357165.87 1357138.47
C235	-	R=70.00 D=081.85 L=101.11 T=082.76	173+29.94 174+31.05	562577.18 562486.11	1357138.47 1357154.93
L177	116.075	-	174+31.05 175+47.13	562486.11 562414.04	1357154.93 1357245.92
C224	-	R=2691.24 D=002.13 L=208.57 T=104.44	175+47.13 177+55.70	562414.04 562279.22	1357245.92 1357404.99
C225	-	R=1225.78 D=004.67 L=205.86 T=009.62	177+55.70 179+61.55	562279.22 562148.12	1357404.99 1357583.39
C236	-	R=400.00 D=014.32 L=173.70 T=024.88	179+61.55 181+35.25	562148.12 562082.56	1357583.39 1357722.76
L178	210.543	-	181+35.25 183+45.79	562082.56 562046.28	1357722.76 1357930.16

PHASE 4

SEGMENT NUMBER	LINE DATA	TANGENT/CURVE DATA	STATIONS	NORTHING	EASTING
C226	-	R=409.44 D=013.99 L=152.12 T=021.29	183+45.79 184+97.92	562046.28 562044.03	1357930.16 1358081.39
C227	-	R=12884.98 D=000.44 L=161.60 T=000.72	184+97.92 186+59.52	562044.03 562072.59	1358081.39 1358240.45
C228	-	R=1072.52 D=005.34 L=40.48 T=002.16	186+59.52 187+00.00	562072.59 562080.65	1358240.45 1358280.12

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/14

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

0' 250' 500'
SCALE: 1" = 250'

GEOMETRIC PLAN C2.1

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15
12/17/14

ELECTION DISTRICT 5

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)
HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 250'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	05 OF 17

SDP-13-020

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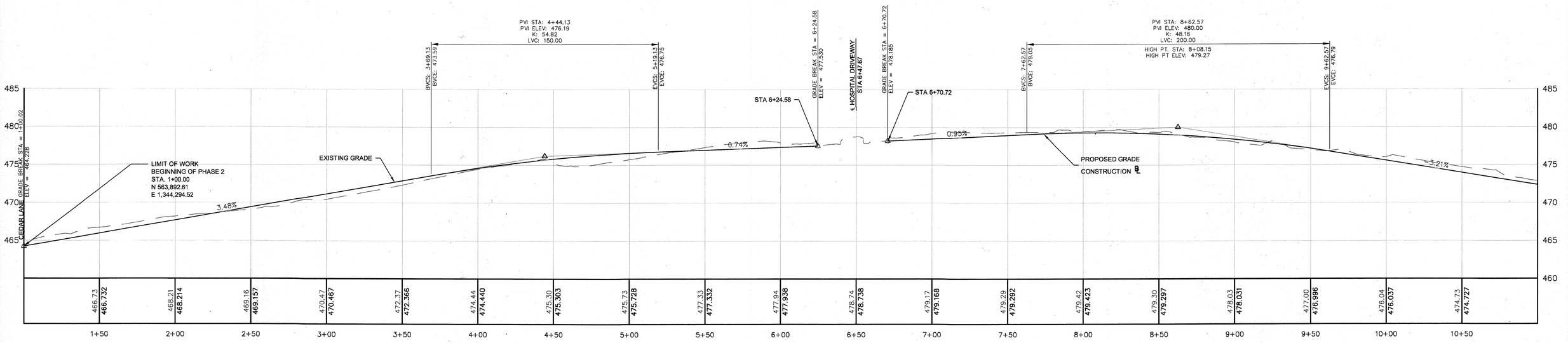
DES. DPB | DRN. AG | CHK. EM



HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0 "

NOTE: GRADES ARE APPROXIMATE

12'
6'
0'
0'
30'
60'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date: 4/2/2016
AS-BUILT DATE: 12/8/16

AS SHOWN

PROFILE C2.2

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G:\ACTIVE PROJECTS\5282 027-Cedar Trail Site Development Plan 2\CAD\Plans\C2-2 - GeometricPlans.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

12/17/14

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 40'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	06 OF 17

SDP-13-020

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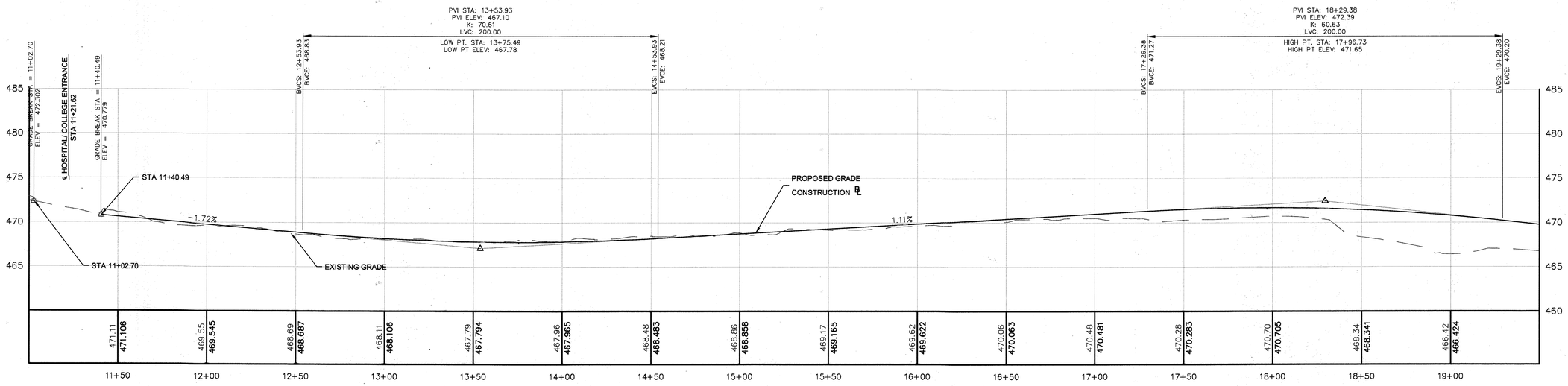
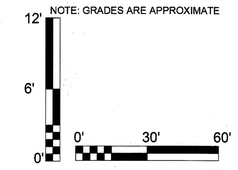


HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0"

NOTE: GRADES ARE APPROXIMATE



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

AS SHOWN

PROFILE C2.3

Toole DesignGroup
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DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB	DRN. AG	CHK. EM

Howard Hughes.
THE HOWARD HUGHES CORPORATION
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Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

12/17/14

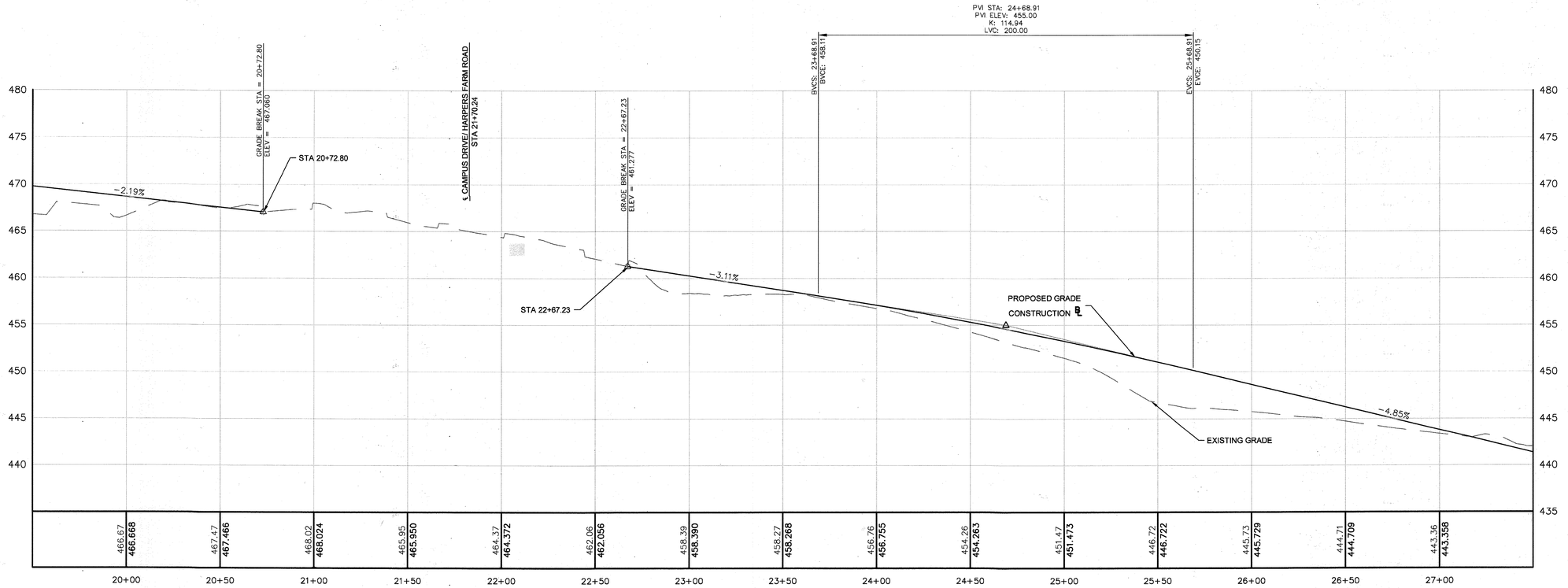
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 40'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	07 OF 171

SDP-13-020



HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0"

NOTE: GRADES ARE APPROXIMATE

12' 6' 0'

0' 30' 60'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

AS SHOWN

PROFILE C2.4

TooleDesignGroup
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DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB	DRN. AG	CHK. EM

Howard Hughes.
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PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

12/17/14

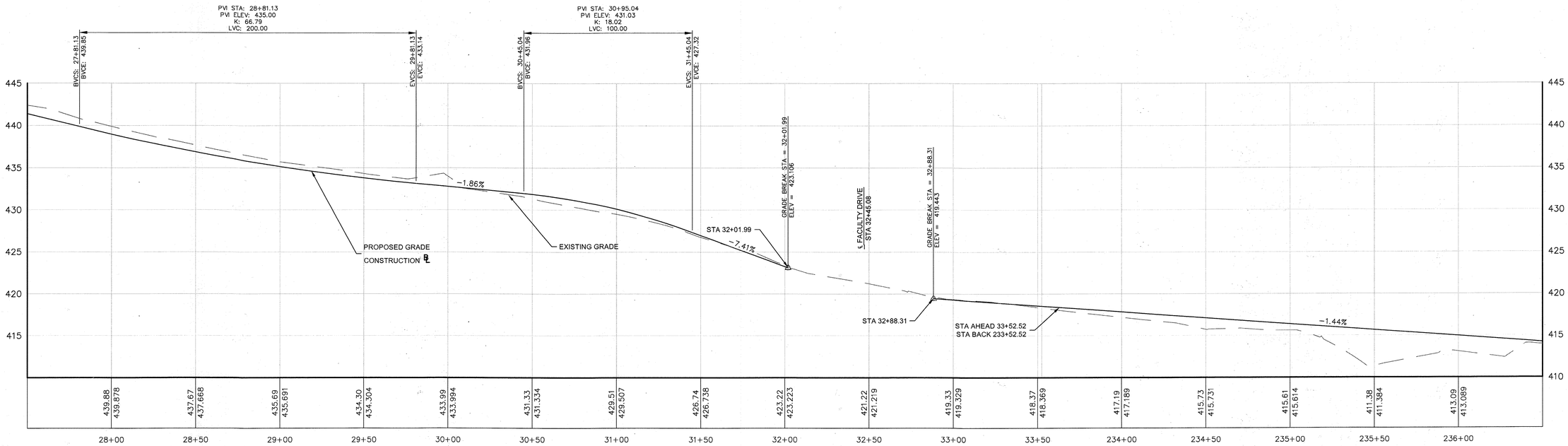
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

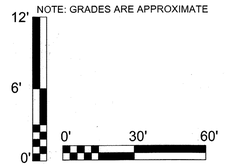
SCALE	ZONING	TDG. FILE No.
1" = 40'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	08 OF 171

SDP-13-020



HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0"

NOTE: GRADES ARE APPROXIMATE



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 7/11/13, 11/20/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 9-15-15
Chief, Division of Land Development — Date 9-15-15
Chief, Development Engineering Division — Date 9-11-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

AS SHOWN

PROFILE C2.5

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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	

DES. DPB | DRN. AG | CHK. EM

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10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MELANIE A. BRICK — No. 35022 — PROFESSIONAL ENGINEER
9/1/15

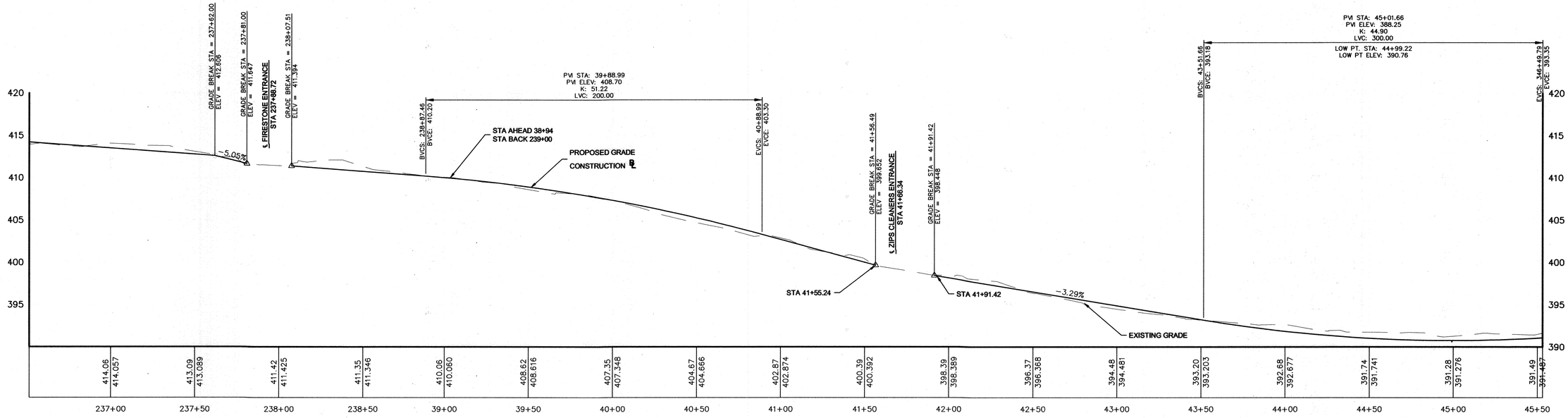
PHASE 2

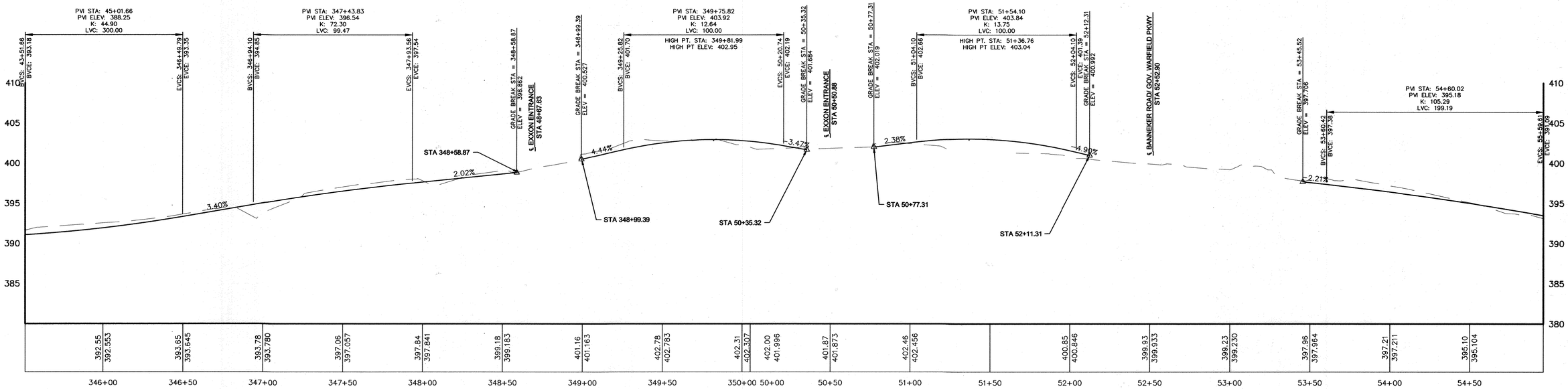
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 40'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/25/15	36	09 OF 171

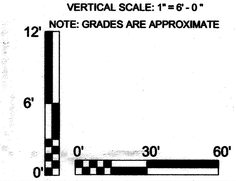
SDP-13-020





HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0"

NOTE: GRADES ARE APPROXIMATE



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16

Chief, Division of Land Development — Date 3-22-16

Chief, Development Engineering Division — Date 3-18-16

NOTE: THERE IS NO AS-BUILT INFORMATION ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date: 4/2/2018
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

AS SHOWN

PROFILE C2.6

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
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DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

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PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — ROBERT WILLIAM DICK — No. 35022 — PROFESSIONAL ENGINEER

5/4/16

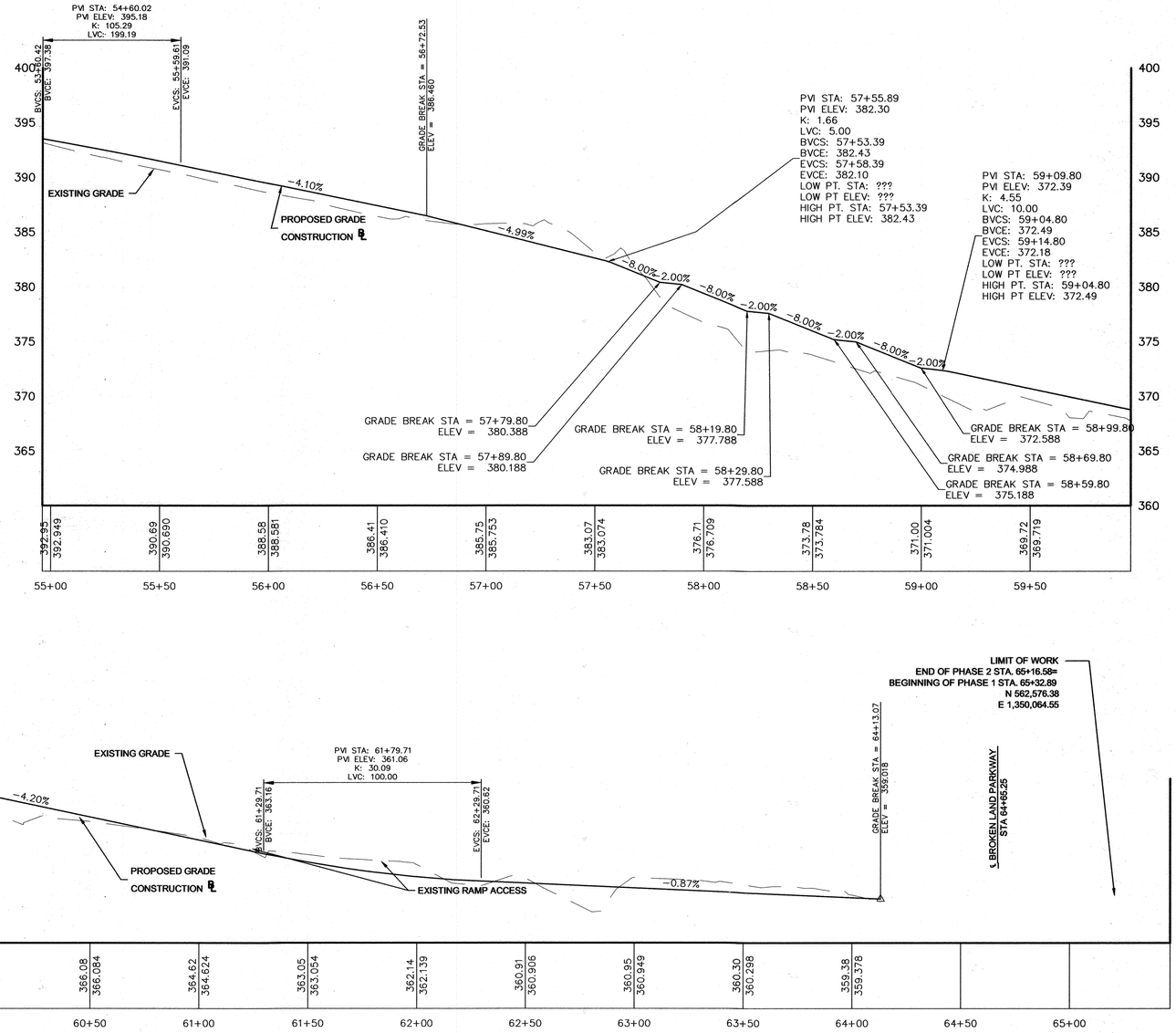
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 40'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
03/07/16	36	10 OF 11

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/13 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3-23-16
Chief, Division of Land Development	Date 3-22-16
Chief, Development Engineering Division	Date 3-18-16

HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0"
NOTE: GRADES ARE APPROXIMATE

12'
6'
0'
0' 30' 60'

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

AS SHOWN

PROFILE ℄2.7

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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

H:\5282\CAD\ 02F-Blandair Trail\Site Development Plan 2\[02FPlans(2)-2 - Consolid'Plans.dwg

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

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PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — NEAL ALAN LIBERMAN — No. 35002 — PROFESSIONAL ENGINEER
3/4/16

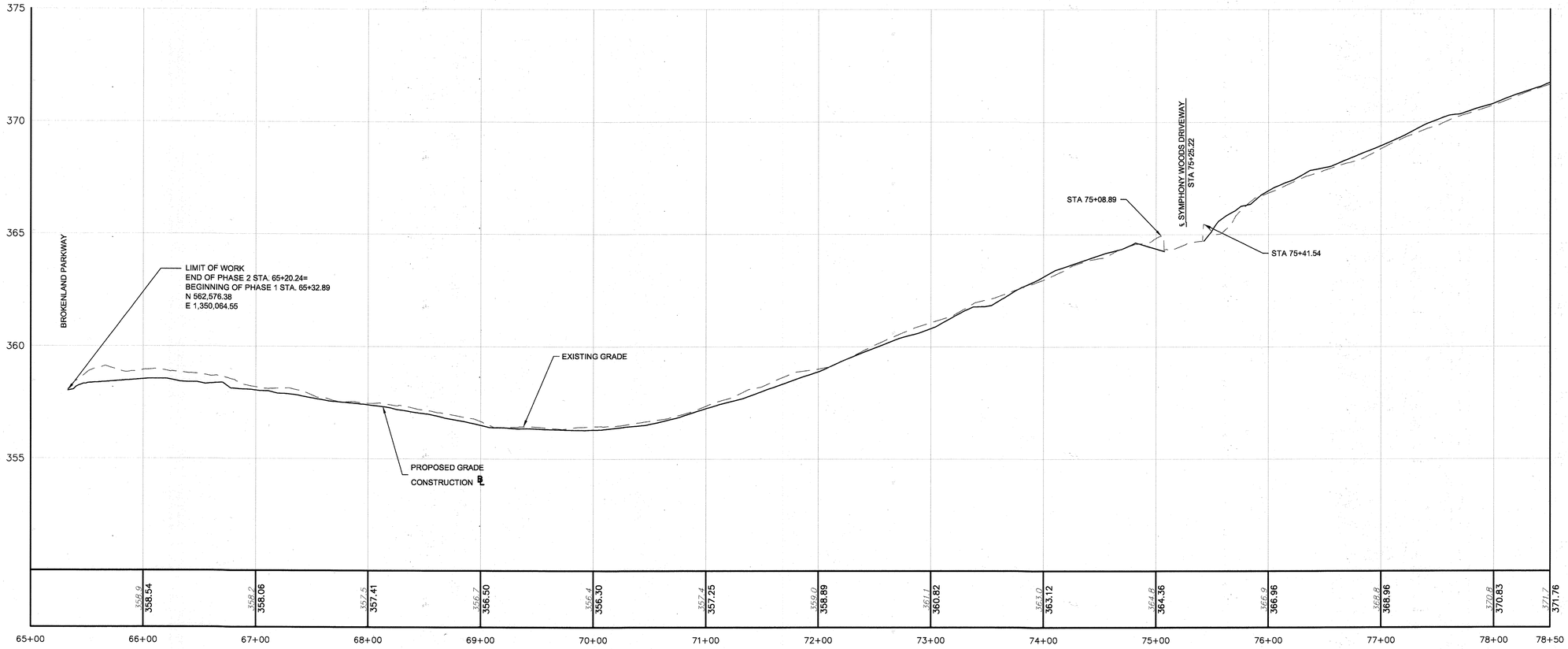
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 40'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
03/07/16	36	11 OF 11

SDP-13-020



HORIZONTAL SCALE: 1" = 50' - 0"
VERTICAL SCALE: 1" = 2.5' - 0"
NOTE: GRADES ARE APPROXIMATE

5'
2.5'
0'
0' 50' 100'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

AS SHOWN	PROFILE		C2.8

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DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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PROFESSIONAL CERTIFICATION
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EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MELANY P. HOLLINGSHEAD — No. 35022 — REGISTERED PROFESSIONAL ENGINEER
12/17/14

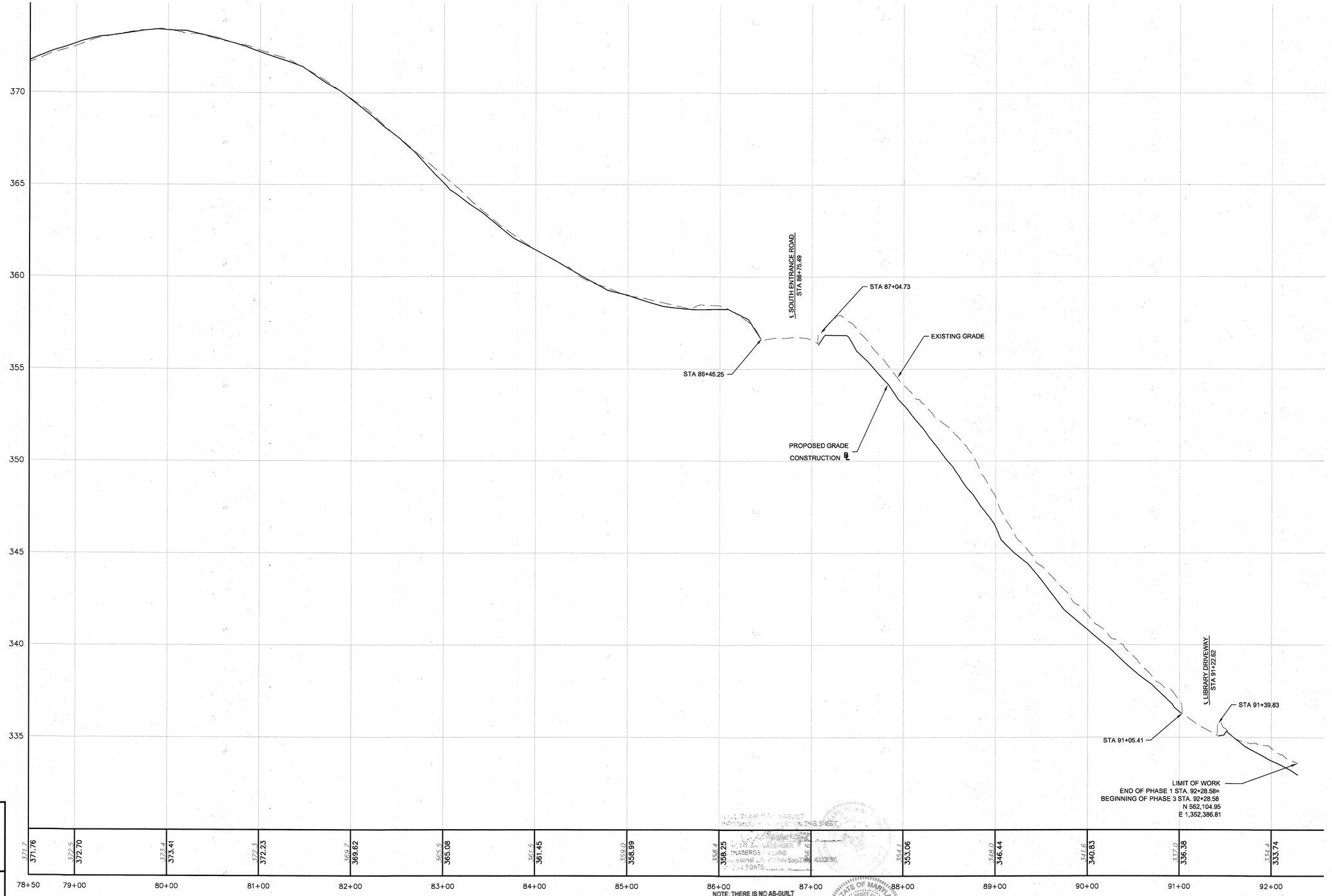
PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
AS SHOWN	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	12 OF 171

SDP-13-020



HORIZONTAL SCALE: 1" = 50' - 0"
VERTICAL SCALE: 1" = 2.5' - 0 "

NOTE: GRADES ARE APPROXIMATE

5'
2.5'
0'
0'
50'
100'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 4/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/16

AS SHOWN

PROFILE C2.9

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DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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EXPIRATION DATE: 12/28/15

12/11/14

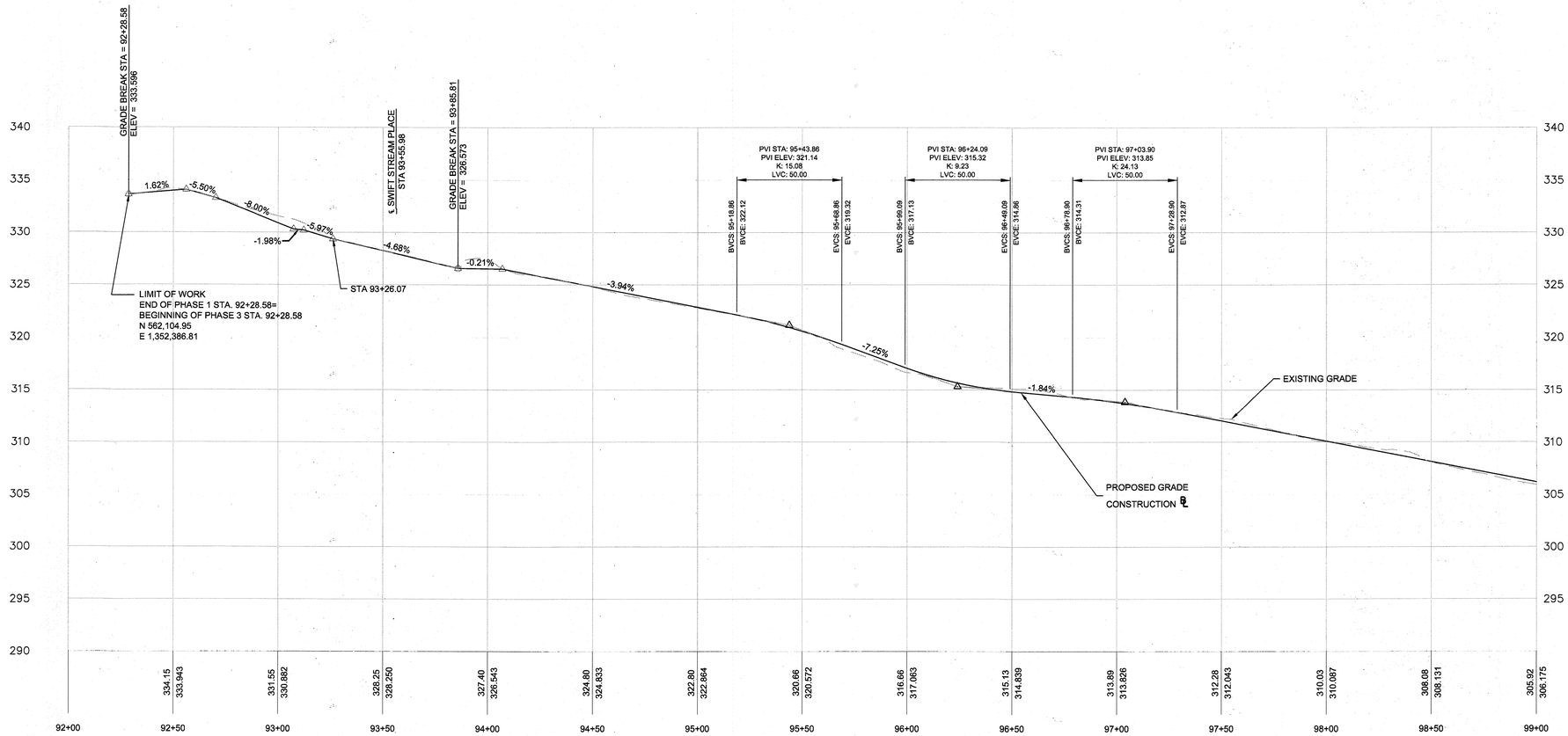
PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
AS SHOWN	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	13 OF 17

SDP-13-020



HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0 "

NOTE: GRADES ARE APPROXIMATE

12'
6'
0'
0'
30'
60'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2018, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-16

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 12/13/16
Professional Engr. Exp.Date 4/30/2016

AS SHOWN

PROFILE C2.10

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DES. DPB	DRN. AG	CHK. EM

G:\ACTIVE PROJECTS\5282 DSP-Blandair Trail\Site Development Plan 3\CAD\Sheets\12-10 - GeometricPlans.dwg

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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PROFESSIONAL CERTIFICATION

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STATE OF MARYLAND — WILLIAM CHARLES BROCK — No. 35022 — PROFESSIONAL ENGINEER — 6/1/15

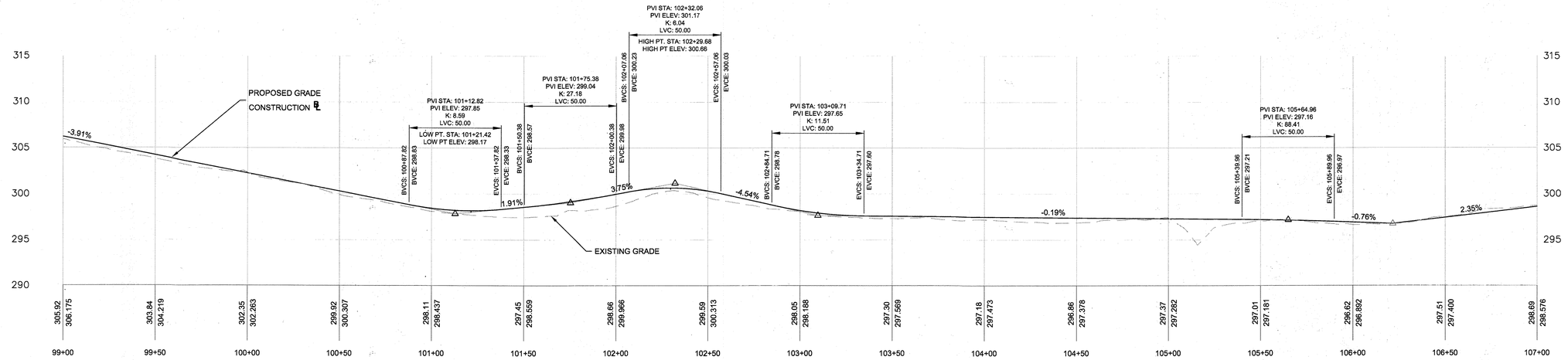
PHASE 3

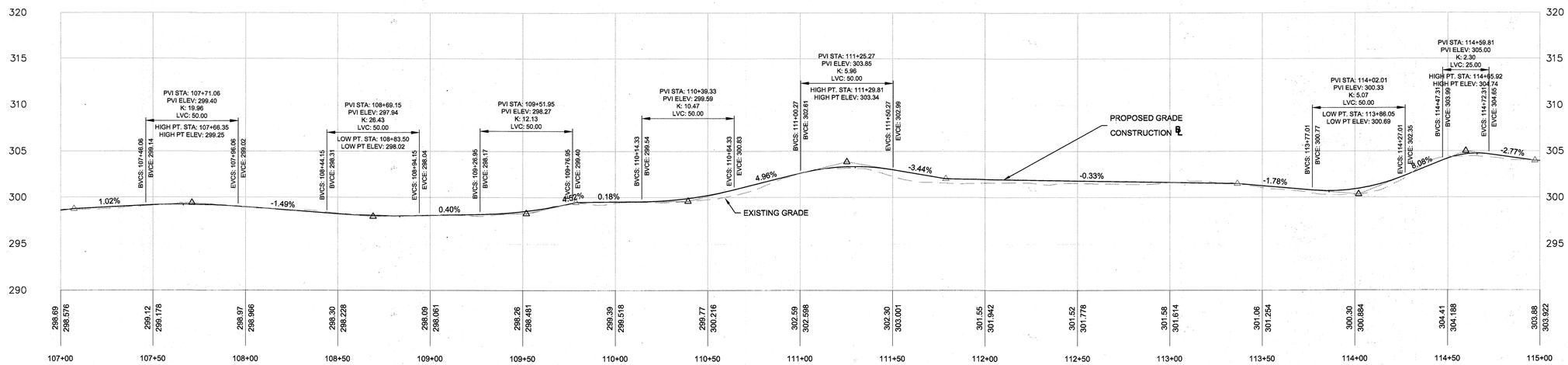
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	14 OF 17

SDP-13-020





APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/14/2015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-14-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/3/16

HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0 "

NOTE: GRADES ARE APPROXIMATE

12' / 6' / 0' — 0' 30' 60'

AS SHOWN

PROFILE C2.11

Toole Design Group
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G:\ACTIVE PROJECTS\2282 CEP-Glendon Ind\Site Development Plan 7\CAD\Plans\C2-10 - CoversheetPlans.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MICHAEL CHRISTOPHER BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

6/1/15

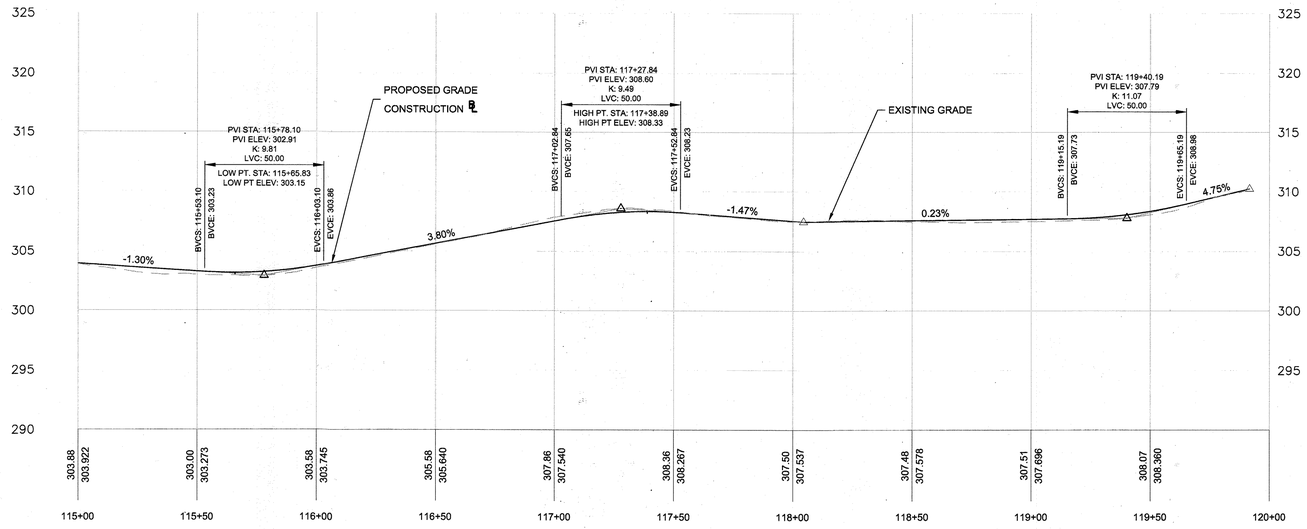
PHASE 3

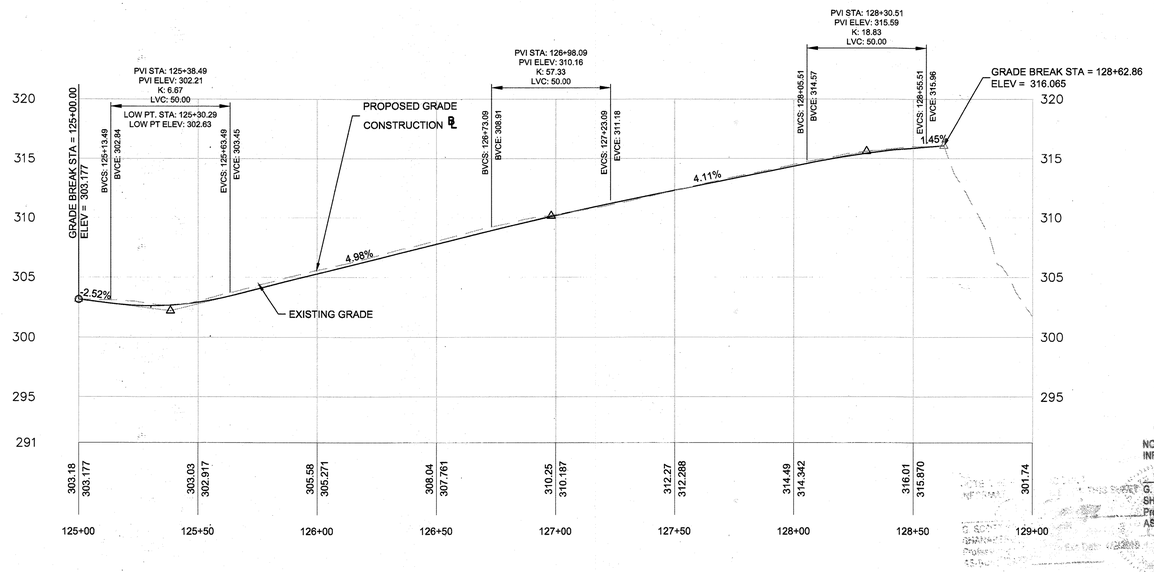
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	15 OF 171

SDP-13-020





HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0 "
NOTE: GRADES ARE APPROXIMATE

12'
6'
0'
0' 30' 60'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 6/11/2015, 11/6/2015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15
Chief, Division of Land Development — Date 7-16-15
Chief, Development Engineering Division — Date 7-10-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 12/5/16

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

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www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
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PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 6/1/15

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

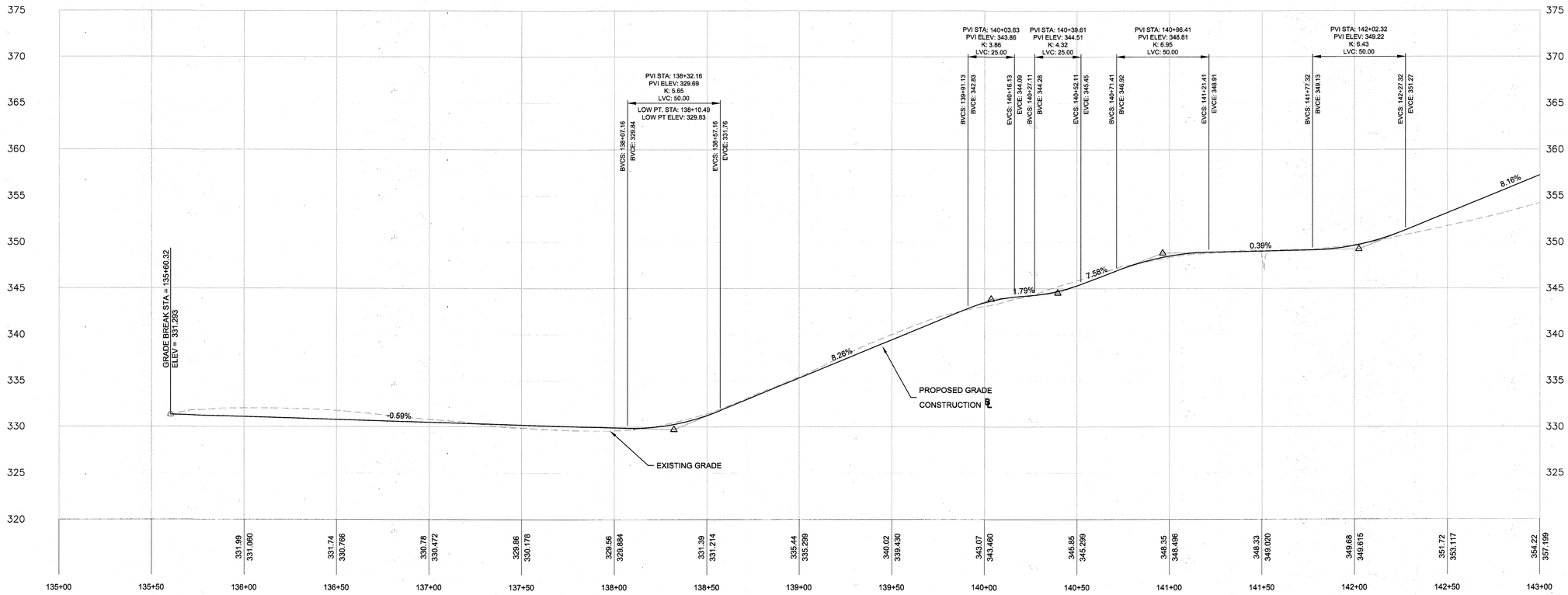
SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	16 OF 17

AS SHOWN

PROFILE C2.12

SDP-13-020

G:\ACTIVE PROJECTS\2012 CEP-Rouse Hall\Site Development Plan 2\Cad\Plan\C2-12 - GeometricPlans.dwg, 4/20/2015 3:16 PM, user.kaufman, 1:1, Arial Narrow, 0.75 mm, 100.00%, By: Kevin Kaufman



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/16

AS SHOWN

PROFILE C2.13

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DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB	DRN. AG	CHK. EM

Howard Hughes.
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PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15
6/1/15

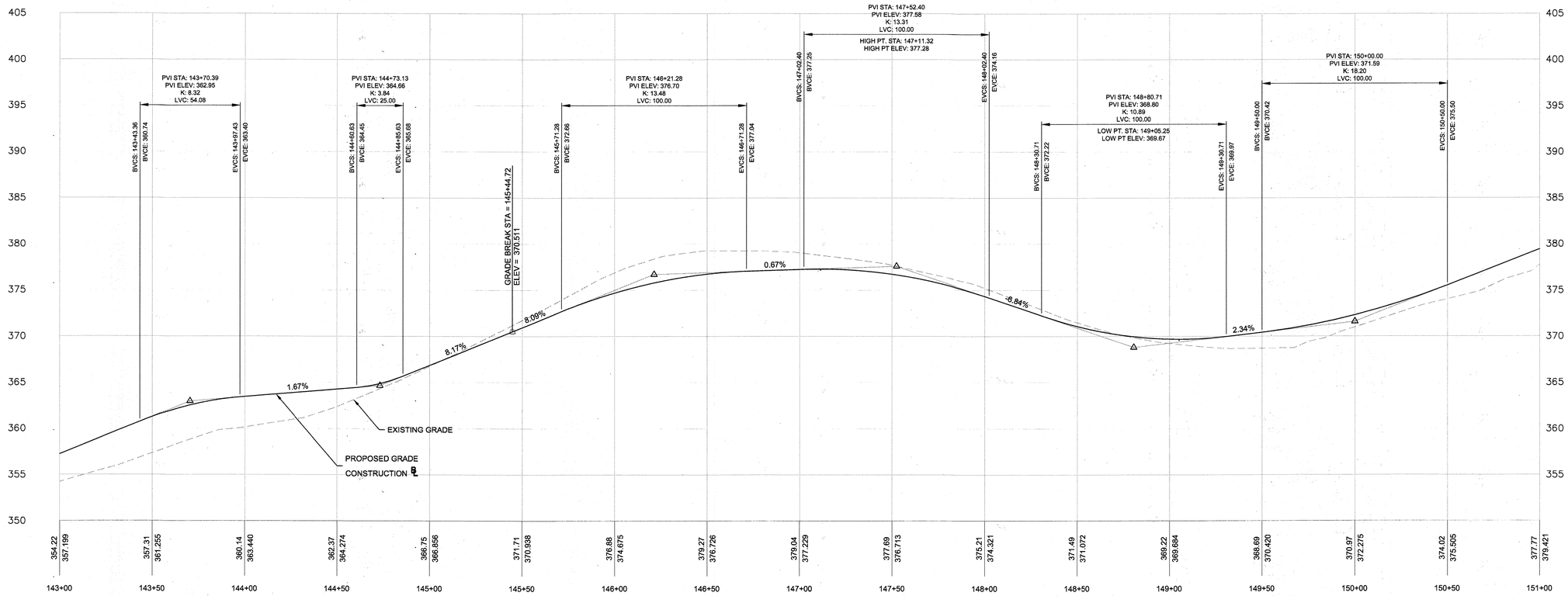
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

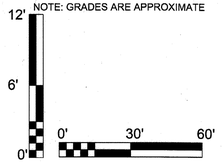
SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	17 OF 171

SDP-13-020



HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0"

NOTE: GRADES ARE APPROXIMATE



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — REGISTERED PROFESSIONAL LAND SURVEYOR — G. SCOTT SHANABERGER — No. 10849

AS SHOWN

PROFILE C2.14

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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB	DRN. AG	CHK. EM

Howard Hughes.
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Robert Jenkins, VP, Engineering & Construction
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PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — REGISTERED PROFESSIONAL ENGINEER — No. 35022 — 6/1/15

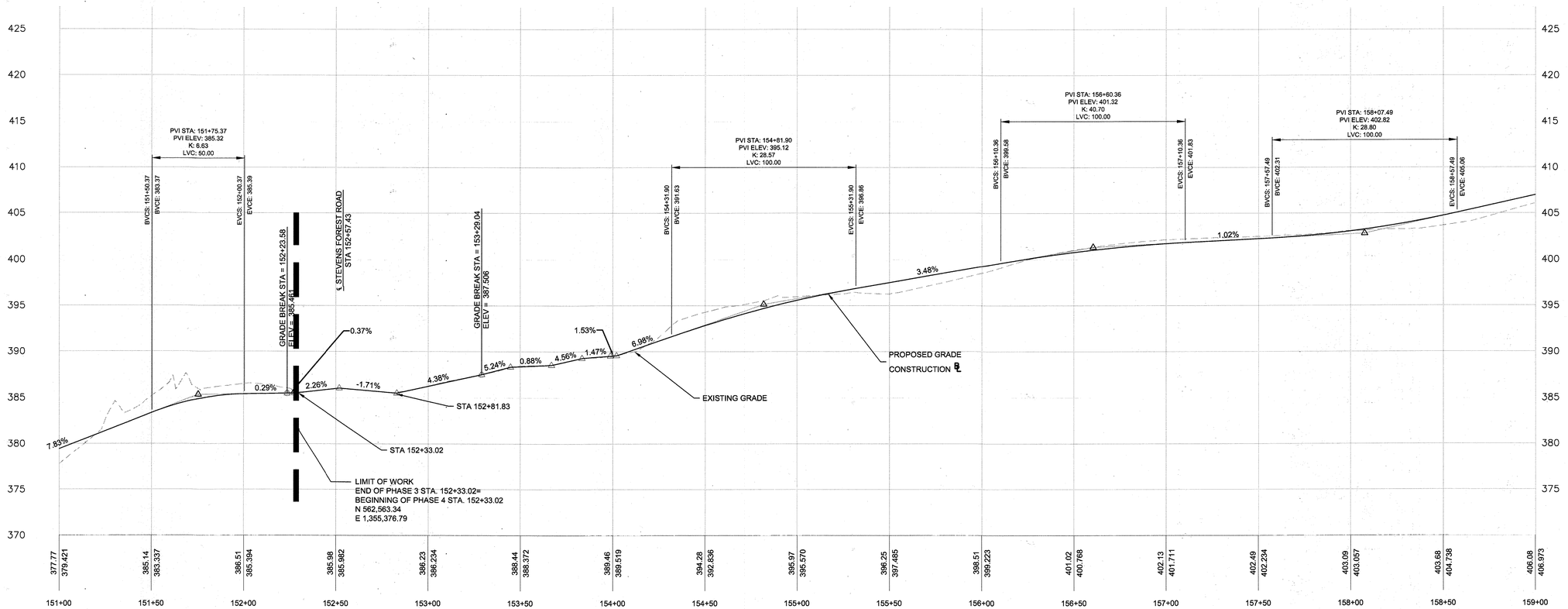
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

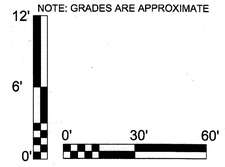
ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	18 OF 171

SDP-13-020



HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0"
NOTE: GRADES ARE APPROXIMATE



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date: 7-21-15
Chief, Division of Land Development — Date: 7-16-15
Chief, Development Engineering Division — Date: 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

AS SHOWN

PROFILE C2.15

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DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
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EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — PROFESSIONAL ENGINEER — No. 35022 — REGISTERED — 6/1/15

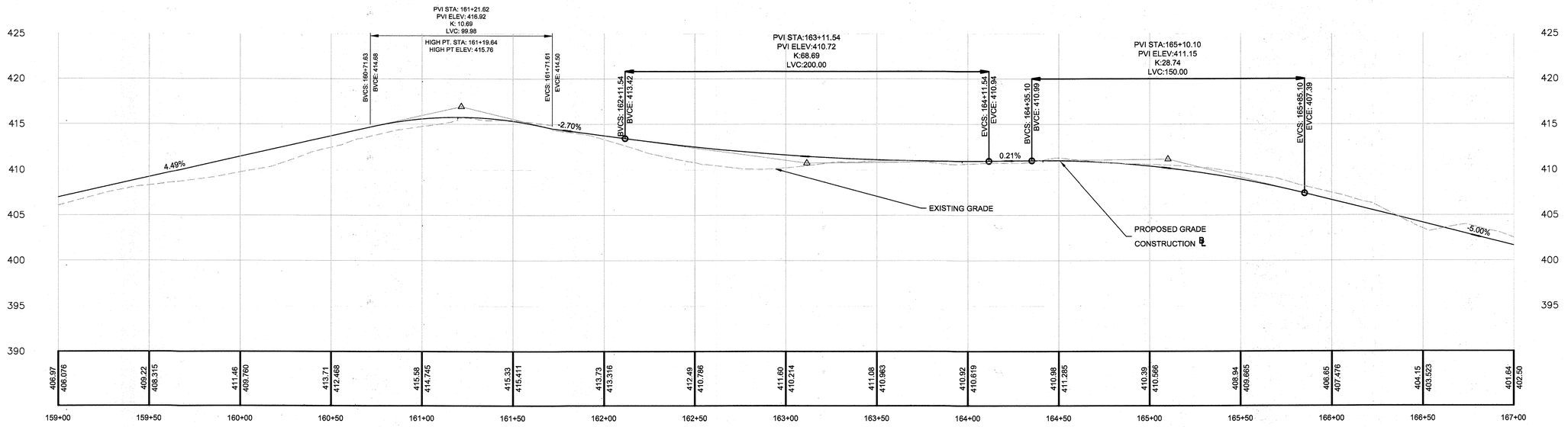
PHASE 3/4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	19 OF 171

SDP-13-020



HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0 "

NOTE: GRADES ARE APPROXIMATE

12'
6'
0'
0'
30'
60'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2015, 11/20/2015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.23.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/16

AS SHOWN

PROFILE C2.16

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EXPIRATION DATE: 12/28/15

6/1/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	20 OF 171

SDP-13-020

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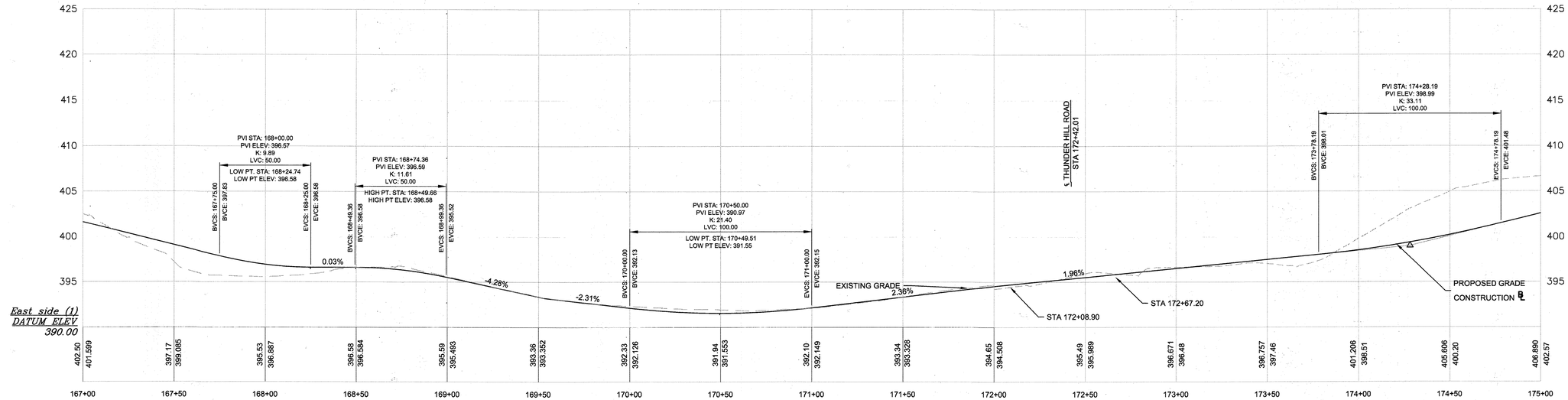

HORIZONTAL SCALE: 1" = 30' - 0"
VERTICAL SCALE: 1" = 6' - 0 "

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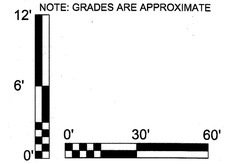

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 01/11/2016, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp. Date 4/2/2016
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — REGISTERED PROFESSIONAL LAND SURVEYOR

G. SCOTT SHANABERGER
SHANABERGER & LANE
AS-BUILT DATE: 10/13/16

AS SHOWN

PROFILE C2.17

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DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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STATE OF MARYLAND — MARY PALLESEN BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 6/11/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	21 OF 171

SDP-13-020

G:\ACTIVE PROJECTS\5200 CEP-Blandair Trail\Site Development Plan 4\Civil\Plans\C2-16 - Construction Plans.dwg
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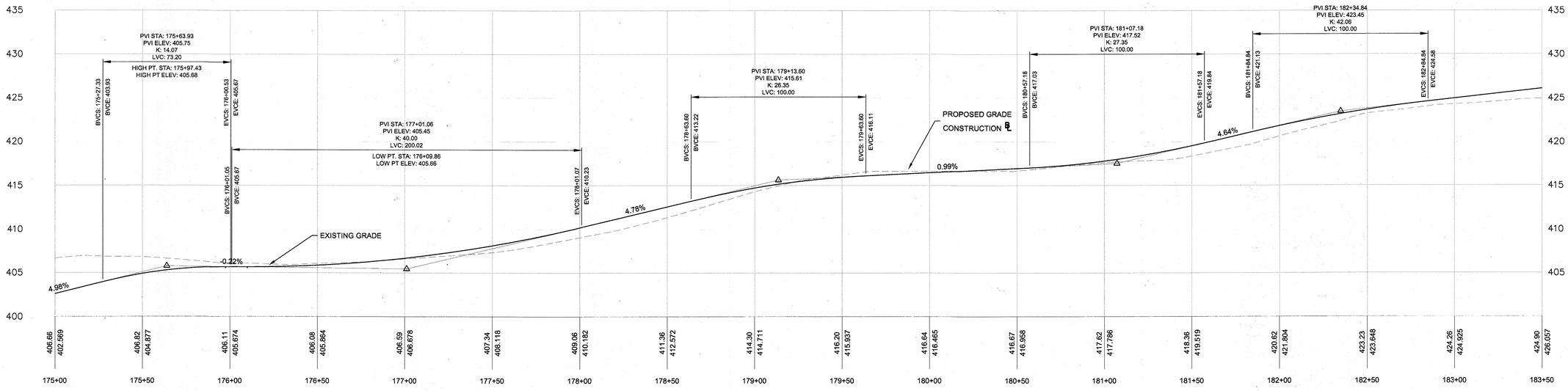

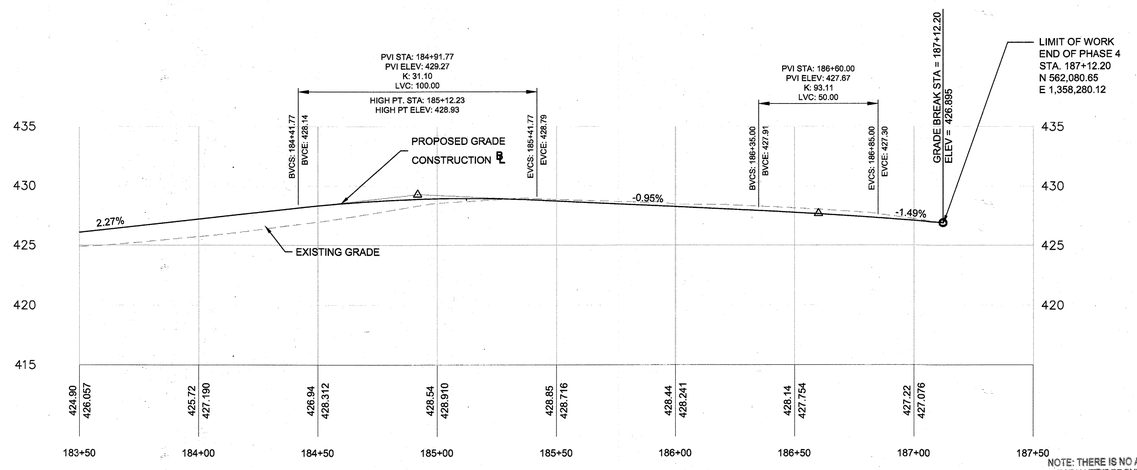

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VERTICAL SCALE: 1" = 6' - 0"

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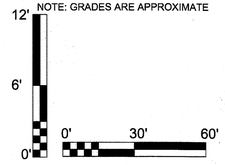

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

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Director — Date 7-21-15

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Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 12/9/16

AS SHOWN

PROFILE C2.18

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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

G:\ACTIVE PROJECTS\5282 CEP-Blandair Trail\Site Development Plan #1\Cad\Plans\C2-18 - GeometricPlans.dwg

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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EXPIRATION DATE: 12/28/15

Mary Phillips Brick 6/1/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	22 OF 71

SDP-13-020

EROSION AND SEDIMENT CONTROL

1. TEMPORARY SILT FENCE SHALL BE CONSTRUCTED FOR SHEET RUN OFF, AND SHALL BE LOCATED AS DIRECTED BY HOWARD COUNTY REPRESENTATIVE OR EROSION AND SEDIMENT INSPECTOR. SUPER SILT FENCE MAY BE INSTALLED AT THE SITE UNDER THE DIRECTION OF THE HOWARD SOIL AND CONSERVATION DISTRICT INSPECTOR.
2. WHEN WIRE SUPPORT IS USED, STANDARD STRENGTH FILTER CLOTH MAY BE USED. POSTS FOR THIS TYPE OF INSTALLATION SHALL BE PLACED A MAXIMUM OF 10 FEET APART. THE WIRE MESH FENCE MUST BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST ONE INCH LONG, TIE WIRES , OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF TWO INCHES AND SHALL NOT EXTEND MORE THAN 34 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
3. WHEN WIRE SUPPORT IS NOT USED, EXTRA STRENGTH FILTER CLOTH MAY BE USED. POSTS FOR THIS TYPE OF FABRIC SHALL BE PLACED A MAXIMUM OF 6 FEET APART. THE FILTER FABRIC SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING ONE INCH LONG (MINIMUM) HEAVY DUTY WIRE STAPLES OR TIE WIRES AND EIGHT INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH.
4. WIRE FENCE REINFORCEMENT FOR SILT FENCES USING STANDARD STRENGTH FILTER CLOTH SHALL BE A MINIMUM OF 14 GUAGE AND SHALL HAVE A MAXIMUM MESH SPACING OF 6 INCHES. POSTS SHALL BE EITHER STEEL POSTS OR WOODEN STAKES AND HAVE A MINIMUM LENGTH OF 5 FEET.
5. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS NOTED IN THE LATEST VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION AND SEDIMENT CONTROL HANDBOOK. THE SYNTHETIC FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF SIX MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0°F TO 120°F.
6. SILT FENCES SHALL BE INSPECTED AND CLEANED ON A WEEKLY BASIS AND ON A DAILY BASIS IMMEDIATELY FOLLOWING EACH RAIN STORM. ALL NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY.
7. REFERENCE THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR MOST RECENT VERSION.
8. THE TEMPORARY EROSION AND SILTATION (E&S) CONTROL ITEMS SHOWN ON THE E&S CONTROL PLAN ARE INTENDED TO PROVIDE A GENERAL PLAN FOR CONTROLLING EROSION AND SILTATION WITHIN THE PROJECT LIMITS. THE E&S CONTROL PLAN IS BASED ON FIELD CONDITIONS AT THE TIME OF PLAN DEVELOPMENT AND AN ASSUMED SEQUENCE OF CONSTRUCTION. THE CONTRACTOR, IN CONJUNCTION WITH THE PROJECT DESIGNER AND/OR ENVIRONEMTNAL MONITOR, SHALL ADJUST THE LOCATION, QUANTITY AND TYPE OF EROSION AND SILTATION CONTROL ITEMS REQUIRED BASED ON THE ACTUAL FIELD CONDITIONS ENCOUNTERED AT THE TIME OF CONSTRUCTION AND THE SELECTED SEQUENCE OF CONSTRUCTION.
9. THE AREAS BEYOND THE PROJECTS CONSTRUCTION AREA ARE TO BE PROTECTED FROM SILTATION. PERIMETER CONTROLS SUCH AS FILTER BARRIER, SILT FENCE, DIVERSION DIKES, TURBIDITY CURTAINS, ETC. SHALL BE INSTALLED PRIOR TO ANY GRUBBING OPERATIONS OR OTHER EARTH MOVING ACTIVITIES.
10. ROCK FOR CHECK DAMS, DROP INLET SILT TRAPS, EROSION CONTROL STONE AND RIPRAP IN CHANNELS SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION AND SEDIMENT CONTROL HANDBOOK..
11. SILT REMOVAL AND SEDIMENT CLEAN-OUT FROM EROSION AND SILTATION CONTROL ITEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING:
    A. TEMPORARY SEDIMENT BASINS AND SEDIMENT TRAPS - WHEN THE "WET" STORAGE VOLUME (PERMANENT POOL) HAS BEEN REDUCED BY 50%.
    B. DEWATERING BASINS - WHEN THE EXCAVATED VOLUME HAS BEEN REDUCED BY 50%.
    C. ALL OTHER EROSION AND SILTATION CONTROL ITEMS - WHEN THE CAPACITY, HEIGHT, OR DEPTH HAS BEEN REDUCED BY 50%.
12. EXCEPT WHERE NOTED HEREON, TO THE BEST OF THE DESIGNER'S KNOWLEDGE, THE PROPOSED DEVELOPMENT OF THE SUBJECT PROPERTY CONFORMS TO ALL CURRENT APPLICABLE LAND DEVELOPMENT ORDINANCES, REGULATIONS, AND ADOPTED STANDARDS.
13. LAND CONSERVATION NOTES - MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT STATE AND LOCAL REGULATIONS. HOWEVER, THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITIES WHICH MAY BE REQUIRED BY THE CODE OF MARYLAND OR ANY ORDINANCE ENACTED BY MARYLAND, SHA, OR HOWARD COUNTY.
14. EROSION AND SILTATION CONTROL SHALL BE PROVIDED WHERE NECESSARY PRIOR TO CLEARING, GRADING AND CONSTRUCTION.
15. ADDITIONAL SILTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS DIRECTED BY HOWARD COUNTY INSPECTOR DURING FIELD REVIEW; COSTS ASSOCIATED WITH ADDITIONAL MEASURES SHALL BE ASSUMED BY THE CONTRACTOR.

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855).
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 SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
   A) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1
   B) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
5. 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.
6. SITE ANALYSIS:

		PHASE 1	PHASE 2	PHASE 3	PHASE 4
TOTAL AREA OF SITE	:	1.59 ACRES	4.09 ACRES	2.97 ACRES	1.64 ACRES
AREA DISTURBED	:	1.59 ACRES	4.09 ACRES	2.97 ACRES	1.64 ACRES
AREA TO BE ROOFED OR PAVED	:	0.54 ACRES	1.30 ACRES	1.11 ACRES	0.78 ACRES
AREA TO BE VEGETATIVELY STABILIZED	:	1.05 ACRES	2.79 ACRES	1.86 ACRES	0.86 ACRES
TOTAL CUT	:	TBD	TBD	TBD	TBD
TOTAL FILL	:	TBD	TBD	TBD	TBD

   SURPLUS CUT TO BE DISPOSED OF ON A SITE WITH AN APPROVED SEDIMENT CONTROL PLAN.
7. ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8. ADDITIONAL SEDIMENT CONTROL PRACTICE MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
9. 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.
10. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY WHICHEVER IS SHORTER.
11. ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
12. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BE STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
PRACTICE APPLIED: WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

A. SOIL PREPARATION
   1. TEMPORARY STABILIZATION
      a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
      b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
      c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
   2. PERMANENT STABILIZATION
      a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
         i. SOIL pH BETWEEN 6.0 AND 7.0.
         ii. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
         iii. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION; IF LOVEGRASS WILL BE PLANTED THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
         iv. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
         v. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
      b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
      c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
      d. APPLY SOIL AMENDMENT AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
      e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SPEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE NECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING
   1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW pH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
   2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE 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-NRCS.
   3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
      a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
      b. THE SUBSOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
      c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
      d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
   4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
   5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
      a. TOPSOIL MUST BE LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY NOT BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER.
      b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
      c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY QUALIFIED AGRONOMIST OR SOIL SCIENTISTS BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
   6. TOPSOIL APPLICATION
      a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
      b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PREFORMED 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 MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
      c. TOPSOIL MUST NOT BE PLACED IF 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.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
   1. SOIL TESTS MUST BE PREFORMED TO DETERMINE THE EXACT RATIONS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTRIBUTED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
   2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
   3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH A FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A # 20 MESH SIEVE.
   4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
   5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,00 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

SEEDING AND MULCHING

DEFINITION: THE APPLICATION OF THE SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE: TO PROTECT DISTURBED SOILS FROM THE EROSION DURING AND AT THE END OF CONSTRUCTION.
PRACTICE APPLES: TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

A. SEEDING
   1. SPECIFICATIONS
      a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SNOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
      b. MULCH ALONE MAY NOT BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
      c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULENT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURE ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULENT LESS EFFECTIVE.
      d. SOD OR SEED MUST NOT 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.
   2. APPLICATION
      a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
         i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE, OR SITE-SPECIFIC SEEDING SUMMARIES.
         ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
      b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY THE COVER SEED WITH SOIL.
         i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST ½ INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
         ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
      c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER)
         i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P2O5 (PHOSPHOROUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.
         ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
         iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING
   1. MULCH MATERIALS (IN ORDER OF PREFERENCE)
      a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
      b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
         i. WCFM IS TO BE DYED GREEN OF CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
         ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
         iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
         iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OF COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
         v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, pH RAND OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.
   2. APPLICATION
      a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
      b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
      c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
   3. ANCHORING
      a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
         i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
         ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY WITH FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
         iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (ARGO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
         iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

TEMPORARY STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.
PURPOSE: TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.
PRACTICE APPLIES: EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN THE TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.b OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

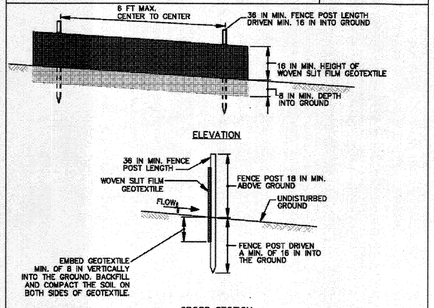
PERMANENT STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
PRACTICE APPLIES: EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

A. SEED MIXTURES
   1. GENERAL USE
      a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN THE TABLE FOR THE APPROPRIATE PLANT HARDINESS ZONE AND BASED ON THE SITE CONDITION OR PURPOSE.
      b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342-CRITICAL AREA PLANTING.
      c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE A SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
      d. FOR AREAS REC

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



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MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.2

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± 1/8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

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MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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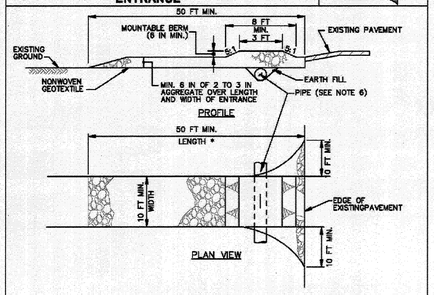
E.3

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE TO FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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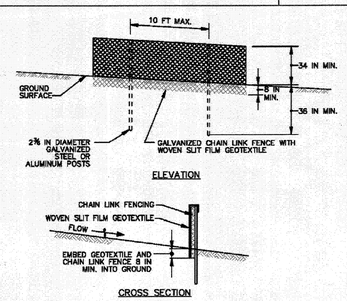
B.2

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HOG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

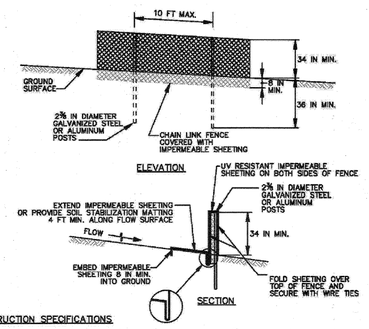
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.7

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL: DF

MAXIMUM DRAINAGE AREA = 2 ACRES



CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

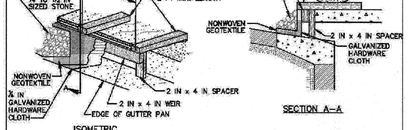
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

C.27

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ½ ACRE



CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 6 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ⅜ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.27

STOCKPILE AREA

DEFINITION: A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.
PURPOSE: TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGED TO DRAINAGE PATTERNS.
PRACTICE APPLIED: STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEPPER THAN 2:1, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGE CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AS APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
8. IF STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE: THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH STANDARD B-4-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR A 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

DIVERSION FENCE

DEFINITION: A TEMPORARY BARRIER OF IMPERMEABLE SHEETING OVER CHAIN LINK FENCE LOCATED IN SUCH A MANNER TO DIRECT WATER TO A DESIRED LOCATION.
PURPOSE: TO DIRECT SEDIMENT-LADEN RUNOFF TO A SEDIMENT TRAPPING PRACTICE, OR TO INTERCEPT AND DIVERT CLEAR WATER AWAY FROM DISTURBED AREAS.
PRACTICE APPLIED: CONSTRUCTED ALONG THE LIMIT OF DISTURBANCE (LOD) OR ACROSS DISTURBED AREAS, A DIVERSION FENCE IS USED WHEN THERE IS INSUFFICIENT SPACE TO CONSTRUCT AN EARTH DIKE, TEMPORARY SWALE, OR PERIMETER DIKE SWALE.

1. TO DIVERT SEDIMENT-LADEN RUNOFF FROM A DISTURBED AREA TO A SEDIMENT TRAPPING PRACTICE.
2. TO SEGMENT DRAINAGE AREAS FOR REDUCING ACREAGE TO SEDIMENT CONTROL PRACTICES.
3. TO DIVERT CLEAR WATER FROM AN UNDISTURBED AREA TO A STABLE OUTLET AT NON-EROSIVE VELOCITIES.

DESIGN CRITERIA:

1. THE MAXIMUM SLOPE ALONG FENCE IS 10 PERCENT.
2. THE MAXIMUM DRAINAGE AREA IS 2 ACRES.
3. FOR DRAINAGE AREAS LARGER THAN 2 ACRES, AN ENGINEERING DESIGN MAY BE USED BASED ON THE 2-YEAR FREQUENCY STORM WITH NRCS METHODOLOGIES (I.E., TR-55, TR-20), ASSUMING THE WORST SOIL COVER CONDITIONS TO PREVAIL IN THE CONTRIBUTING DRAINAGE AREA OVER THE LIFE OF THE DIVERSION FENCE.
4. MAINTAIN POSITIVE DRAINAGE ALONG THE ENTIRE LENGTH OF THE DIVERSION FENCE. SPOT ELEVATIONS MUST BE PROVIDED FOR DIVERSION FENCE HAVING LONGITUDINAL SLOPES FLATTER THAN 1%.
5. DISCHARGE VELOCITIES FROM DIVERSION FENCE MUST BE NON-EROSIVE.
6. WHERE DIVERSION FENCE IS USED TO CONVEY RUNOFF FROM DISTURBED AREAS, THE DISCHARGE MUST BE TO A SEDIMENT CONTROL PRACTICE SUITABLE FOR CONCENTRATED FLOW. SILT FENCE AND SUPER SILT FENCE ARE UNACCEPTABLE FOR RECEIVING DISCHARGES FROM DIVERSION FENCE.
7. WHERE DIVERSION FENCE IS USED TON CONVEY CLEAR WATER RUNOFF, THE DISCHARGE MUST BE TO AN UNDISTURBED, STABLE AREA AT A NON-EROSIVE VELOCITY (4 FPS); OTHERWISE, PROVIDE OUTLET PROTECTION.
8. WHEN DIVERSION FENCE IS USED IN CONJUNCTION WITH A SEDIMENT TRAPPING DEVICE, SEQUENCE CONSTRUCTION SO THAT THE DIVERSION FENCE INSTALLATIONS FOLLOWS COMPLETION OF THE SEDIMENT TRAPPING DEVICE(S).

MAINTENANCE: THE FLOW SURFACE ALONG THE DIVERSION FROM DISTURBED AREAS AND AT THE POINT OF DISCHARGE MUST BE KEPT FREE OF EROSION. ACCUMULATED SEDIMENT AND DEBRIS MUST BE REMOVED AND POSITIVE DRAINAGE MAINTAINED. IMPERMEABLE SHEETING MUST BE REPLACED IF TORN. IF UNDERMINING OCURS, REINSTALL FENCE.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): _____
Seed Mixture (from Table B.3): _____

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20) N	P_2O_5	K_20	Lime Rate
6	Tall Fescue (Lolium arundinaceum)	40	Mar 1 to May 15 Aug 1 to Oct 15	¼- ½ in	45 pounds per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
	Perennial Ryegrass (Lolium perenne)	25	Mar 1 to May 15 Aug 1 to Oct 15	¼- ½ in				
	White Clover (Trifolium repens)	5	Mar 1 to May 15 Aug 1 to Oct 15	¼- ½ in				

Table B.1: Temporary Seeding for Site Stabilization

Plant Species	Seeding Rate [1] lb/ac	lb/1000 ft²	Seeding Depth [1] (inches)	Recommended Seeding Dates by Plant Hardiness Zone [2] 5b and 6a	6b	7a and 7b
Cool-Season Grasses						
Annual Ryegrass (*Lolium perenne ssp. multiflorum*)	40	1.0	0.5	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Barley (*Hordeum vulgare*)	96	2.2	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Oats (*Avena sativa*)	72	1.7	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Wheat (*Triticum aestivum*)	120	2.8	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Cereal Rye (*Secale cereale*)	112	2.8	1.0	Mar 15 to May 31; Aug 1 to Oct 31	Mar 1 to May 15; Aug 1 to Nov 15	Feb 15 to Apr 30; Aug 15 to Dec 15
Warm-Season Grasses						
Foxtail Millet (*Setaria italica*)	30	0.7	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14
Pearl Millet (*Pennisetum glaucum*)	20	0.5	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14

NOTES:

1/ Seeding rates for the warm-season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses.

Seeding rates listed above are for temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use 1/3 of the seeding rate listed above for barley, oats, and wheat. For weather-needed grasses (annual ryegrass, pearl millet, foxtail millet), do not exceed more than 5% (by weight) of the overall permanent seeding mix. Cereal rye generally should not be used as a nurse crop, unless planting will occur in very late fall beyond the seeding dates for other temporary seedings. Cereal rye has allelopathic properties that inhibit the germination and growth of other plants. If it must be used as a nurse crop, seed at 1/3 of the rate listed above.

Oats are the recommended nurse crop for warm-season grasses.

2/ For sandy soils, plant seeds at twice the depth listed above.

3/ The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone.

B.20

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 12/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

ENGINEER'S CERTIFICATION

"I HEREBY 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'S SIGNATURE — DATE 12/1/14

DEVELOPER'S/BUILDER'S CERTIFICATE

"I / WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

SIGNATURE OF DEVELOPER/BUILDER — DATE 12/1/15

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

HOWARD S.C.D. — DATE 2/11/15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp. Date 4/2/2016
AS-BUILT DATE: 10/5/16

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — REGISTERED PROFESSIONAL LAND SURVEYOR

No.	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 39022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MARK A. ALLSTON-BRICK — No. 39022 — REGISTERED PROFESSIONAL ENGINEER — 12/1/14

ELECTION DISTRICT 5 — HOWARD COUNTY

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

E&S CONTROL DETAILS — C3.B

SCALE	ZONING	TDG. FILE No.
N/A	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	24 OF 171

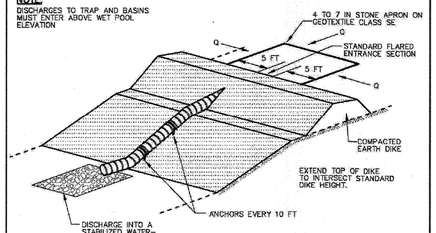
SDP-13-020

O:\ACTIVE PROJECTS\5282 CEP-Blandair Trail\Site Development Plan General\DOI\Plan\D2-1 - EandSDet.dwg
PLOTTED:1:27PM 2/11/2014 2:53 PM, LAST SAVED:9/12/2014 3:17 PM, PLOTTED BY: Andrew Goodwin

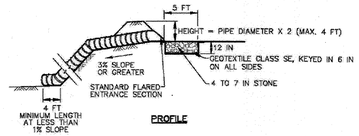
DETAIL D-I PIPE SLOPE DRAIN

STANDARD SYMBOL
PSD – 12
NOTE: DESIGNATION PSD-12 REFERS TO PIPE SLOPE DRAIN WITH 12 IN PIPE

NOTE:
DISCHARGES TO TRAP AND BASINS MUST ENTER ABOVE WET POOL ELEVATION



PERSPECTIVE



PROFILE

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE		MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

D.3 DRAFT October 15, 2009

DETAIL D-I PIPE SLOPE DRAIN

STANDARD SYMBOL
PSD – 12
NOTE: DESIGNATION PSD-12 REFERS TO PIPE SLOPE DRAIN WITH 12 IN PIPE

CONSTRUCTION SPECIFICATIONS

1. SLOPE THE PIPE SLOPE DRAIN (PSD) AT 3 PERCENT OR STEEPER.
2. THE HEIGHT OF THE TOP OF THE EARTH DIKE MUST BE AT LEAST 2 TIMES THE PIPE DIAMETER MEASURED FROM THE INVERT OF THE PIPE. EXTEND THE TOP OF THE DIKE LEVEL UNTIL IT INTERSECTS THE STANDARD DIKE HEIGHT.
3. FLEXIBLE PIPE IS THE PREFERRED. HOWEVER, CORRUGATED METAL PIPE OR EQUIVALENT PVC PIPE CAN BE USED. ALL CONNECTIONS MUST BE WATERTIGHT.
4. ATTACH A FLARED END SECTION TO THE INLET END OF PIPE WITH A WATERTIGHT CONNECTION. PLACE GEOTEXTILE CLASS SE UNDER THE INLET OF THE PIPE SLOPE DRAIN AND EXTEND OUT 5 FEET FROM THE INLET. KEY-IN THE GEOTEXTILE ON ALL SIDES A MINIMUM OF 6 INCHES.
5. SECURELY ANCHOR THE PIPE SLOPE DRAIN TO THE SLOPE, SPACE THE ANCHORS EVERY 10 FEET.
6. HAND TAMP SOIL AROUND AND UNDER THE PIPE AND END SECTION IN 4 INCH LIFTS TO THE TOP OF THE EARTH DIKE.
7. OUTLET WHENEVER POSSIBLE WHERE A PSD DRAINS AN UN-STABILIZED AREA INTO A SEDIMENT TRAP OR BASIN. IF THIS IS NOT POSSIBLE THEN DISCHARGE THE PIPE SLOPE INTO A STABLE CONVEYANCE THAT LEADS TO A SEDIMENT TRAP OR BASIN. DISCHARGE PSD INTO A TRAP OR BASIN AT THE SAME ELEVATION AS THE WET POOL ELEVATION. THE DISCHARGE FROM THE PSD MUST BE AS FAR AWAY FROM THE SEDIMENT CONTROL OUTLET AS POSSIBLE.
8. WHEN THE DRAINAGE AREA IS STABILIZED, DISCHARGE PSD ONTO A STABILIZED AREA AT A NON-EROSIVE VELOCITY. PROVIDE ROCK OUTLET PROTECTION AS NECESSARY.
9. UPON COMPLETING INSTALLATION OF THE PSD, STABILIZE ASSOCIATED DISTURBANCES WITH SEED, MULCH, AND TACK.
10. PERFORM INSPECTION AND ANY REQUIRED MAINTENANCE PERIODICALLY AND AFTER EACH RAIN EVENT.
11. THE INLET MUST BE KEPT OPEN, AT ALL TIMES.

2 OF 2

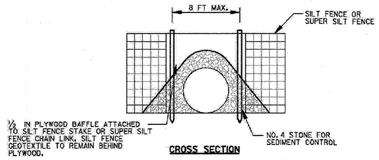
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE		MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

D.4 DRAFT October 15, 2009

DETAIL E-4 CLEAR WATER PIPE THROUGH SILT FENCE OR SUPER SILT FENCE

STANDARD SYMBOL



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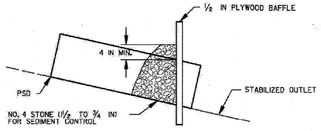

PROFILE

CONSTRUCTION SPECIFICATIONS

1. CUT AND PULL 8 LINEAR FOOT MAXIMUM SECTION OF SILT FENCE.
2. INSTALL PIPE SLOPE DRAIN AND SECURELY ANCHOR TO THE SLOPE.
3. INSTALL ½ INCH PLYWOOD BAFFLE AND ATTACH SILT FENCE (SF) STAKES OR SUPER SILT FENCE (SSF) CHAIN LINK. RESET SILT FENCE GEOTEXTILE BEHIND THE PLYWOOD.
4. PLACE NO. 4 STONE BEHIND THE PLYWOOD BAFFLE TO HEIGHT OF 4 INCHES ABOVE THE TOP OF PIPE SLOPE DRAIN.
5. OUTLET WHENEVER POSSIBLE WHERE A PSD DRAINS AN UN-STABILIZED AREA INTO A SEDIMENT TRAP OR BASIN. IF THIS IS NOT POSSIBLE THEN THE SLOPE DRAIN WILL DISCHARGE INTO A STABLE CONVEYANCE THAT LEADS TO A SEDIMENT TRAP OR BASIN. DISCHARGE PSD INTO A TRAP OR BASIN AT THE SAME ELEVATION AS THE WET POOL ELEVATION. THE DISCHARGE FROM THE PSD MUST BE AS FAR AWAY FROM THE SEDIMENT CONTROL OUTLET AS POSSIBLE.
6. WHEN THE DRAINAGE AREA IS STABLE, DISCHARGE PSD ONTO A STABLE AREA AT A NON-EROSIVE VELOCITY. PLACE 4 TO 7 INCH STONE OVERTOP OF GEOTEXTILE CLASS F AS NECESSARY.
7. PERFORM INSPECTION AND ANY REQUIRED MAINTENANCE PERIODICALLY AND AFTER EACH RAIN EVENT.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE		MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.13 DRAFT October 15, 2009

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014
DTaas

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/20/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

ENGINEER'S CERTIFICATION

"I HEREBY 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'S SIGNATURE — DATE 12/17/14

DEVELOPER'S/BUILDER'S CERTIFICATE

"I / WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION, CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

SIGNATURE OF DEVELOPER/BUILDER — DATE 12/15/14

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

HOWARD S.C.D. — DATE 2/10/15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 7/2/2016
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — NO. 10849 — PROFESSIONAL LAND SURVEYOR

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8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\5282 GDP-Blandair Trail\Site Development Plan General\DAP\Plans\C3-1 - EandSDet.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
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Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 39022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MARY JEAN MISTRETTA BRICK — NO. 39022 — REGISTERED PROFESSIONAL ENGINEER — 12/17/14

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

E&S CONTROL DETAILS		C3.C
SCALE N/A	ZONING NT/POR /R-12	TDG. FILE No. 5282
DATE 08/05/14	TAX MAP – GRID 36	SHEET 24A OF 171

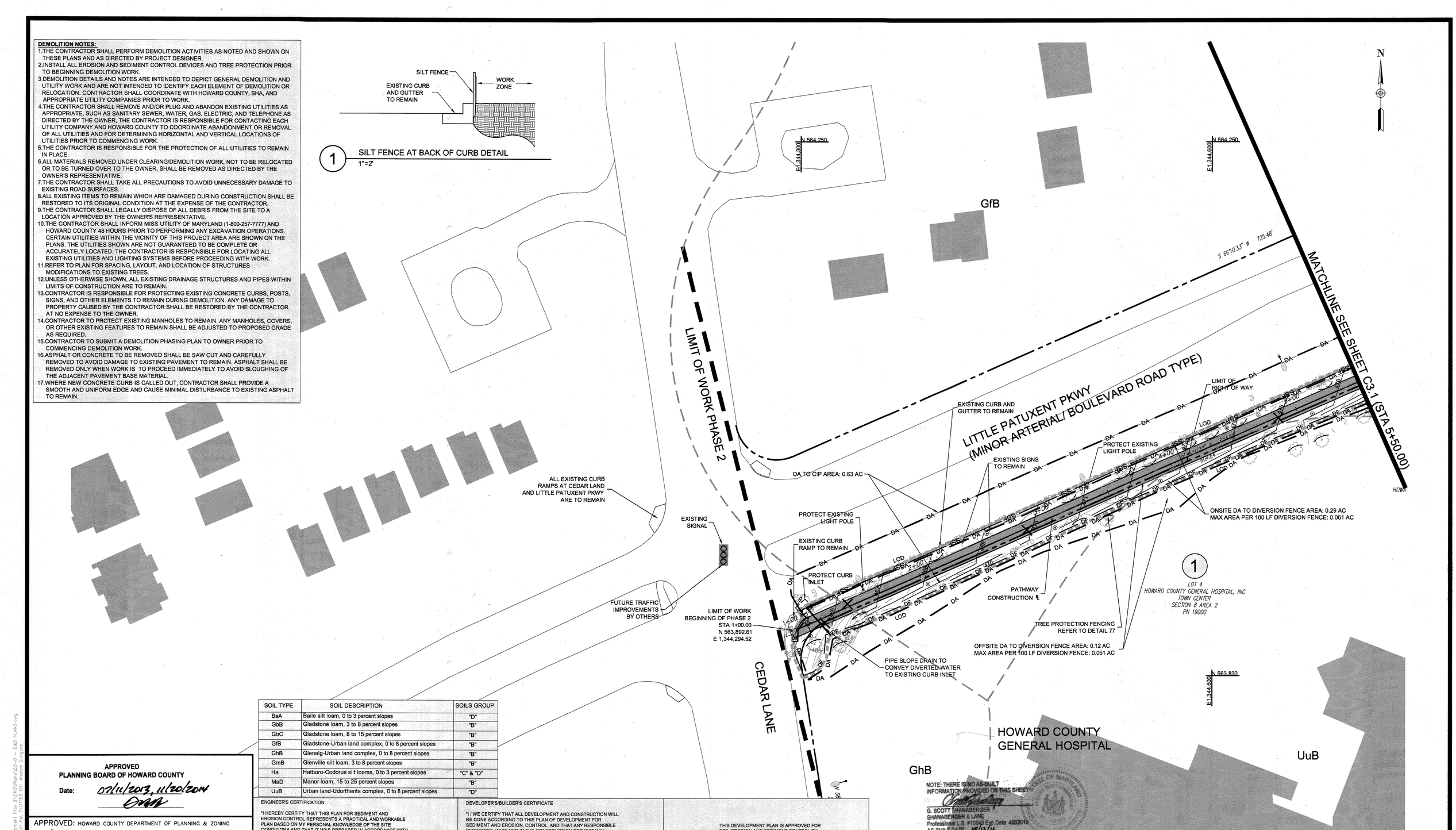
SDP-13-020

G:\ACTIVE PROJECTS\5282 GDP-Blandair Trail\Site Development Plan General\DAP\Plans\C3-1 - EandSDet.dwg, PLOTTED:1/7/2014 2:53 PM, LAST SAVED:9/17/2014 3:17 PM, PLOTTED BY: Andrew Gurgeon

DEMOLITION NOTES:

1. THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS AND AS DIRECTED BY PROJECT DESIGNER.
2. INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION PRIOR TO BEGINNING DEMOLITION WORK.
3. DEMOLITION DETAILS AND NOTES ARE INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK AND ARE NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. CONTRACTOR SHALL COORDINATE WITH HOWARD COUNTY, SHA, AND APPROPRIATE UTILITY COMPANIES PRIOR TO WORK.
4. THE CONTRACTOR SHALL REMOVE AND/OR PLUG AND ABANDON EXISTING UTILITIES AS APPROPRIATE, SUCH AS SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE AS DIRECTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY AND HOWARD COUNTY TO COORDINATE ABANDONMENT OR REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
6. ALL MATERIALS REMOVED UNDER CLEARING/DEMOLITION WORK, NOT TO BE RELOCATED OR TO BE TURNED OVER TO THE OWNER, SHALL BE REMOVED AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
7. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING ROAD SURFACES.
8. ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR.
9. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DEBRIS FROM THE SITE TO A LOCATION APPROVED BY THE OWNER'S REPRESENTATIVE.
10. THE CONTRACTOR SHALL INFORM MISS UTILITY OF MARYLAND (1-800-257-7777) AND HOWARD COUNTY 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION OPERATIONS. CERTAIN UTILITIES WITHIN THE VICINITY OF THIS PROJECT AREA ARE SHOWN ON THE PLANS. THE UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATELY LOCATED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND LIGHTING SYSTEMS BEFORE PROCEEDING WITH WORK.
11. REFER TO PLAN FOR SPACING, LAYOUT, AND LOCATION OF STRUCTURES MODIFICATIONS TO EXISTING TREES.
12. UNLESS OTHERWISE SHOWN, ALL EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN LIMITS OF CONSTRUCTION ARE TO REMAIN.
13. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING CONCRETE CURBS, POSTS, SIGNS, AND OTHER ELEMENTS TO REMAIN DURING DEMOLITION. ANY DAMAGE TO PROPERTY CAUSED BY THE CONTRACTOR SHALL BE RESTORED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
14. CONTRACTOR TO PROTECT EXISTING MANHOLES TO REMAIN. ANY MANHOLES, COVERS, OR OTHER EXISTING FEATURES TO REMAIN SHALL BE ADJUSTED TO PROPOSED GRADE AS REQUIRED.
15. CONTRACTOR TO SUBMIT A DEMOLITION PHASING PLAN TO OWNER PRIOR TO COMMENCING DEMOLITION WORK.
16. ASPHALT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT AND CAREFULLY REMOVED TO AVOID DAMAGE TO EXISTING PAVEMENT TO REMAIN. ASPHALT SHALL BE REMOVED ONLY WHEN WORK IS TO PROCEED IMMEDIATELY TO AVOID SLOUGHING OF THE ADJACENT PAVEMENT BASE MATERIAL.
17. WHERE NEW CONCRETE CURB IS CALLED OUT, CONTRACTOR SHALL PROVIDE A SMOOTH AND UNIFORM EDGE AND CAUSE MINIMAL DISTURBANCE TO EXISTING ASPHALT TO REMAIN.

1 SILT FENCE AT BACK OF CURB DETAIL
1"=2'



SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GbC	Gladstone loam, 8 to 15 percent slopes	"B"
GfB	Gladstone-Urban land complex, 0 to 8 percent slopes	"B"
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	"B"
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Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
MaD	Manor loam, 15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2. 12. 15

ENGINEER'S CERTIFICATION

"I HEREBY 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'S SIGNATURE — DATE 12/17/14

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SIGNATURE OF DEVELOPER/BUILDER — DATE 12/15/15

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

HOWARD S.C.D. — DATE 2/10/15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10949 Exp. Date 4/2/2016
AS-BUILT DATE: 12/13/16

NOTE:
1. THERE IS NO STOCKPILE AREA FOR PHASE 2
2. SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 1 — C3.0

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8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\5282 CDP-Blandair Trail\Site Development Plan 2\CAD\Plans\C3-0 - E&S PLANS.dwg

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes THE HOWARD HUGHES CORPORATION
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COLUMBIA, MD 21044
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PROFESSIONAL CERTIFICATION

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12/17/14

PHASE 2

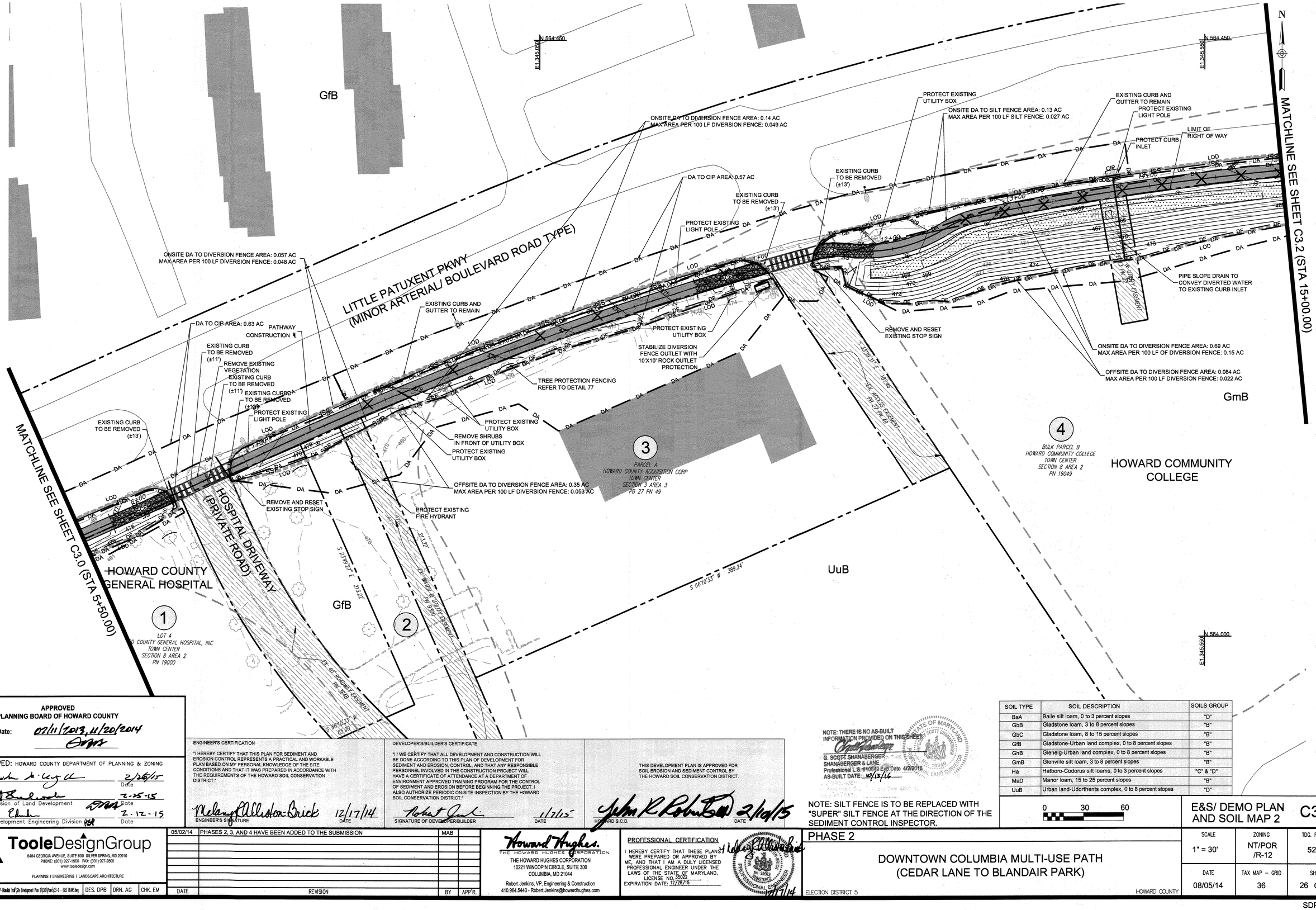
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	25 OF 171

SDP-13-020

PLOTTED: 11/21/2014 1:21 PM, LAST SAVED: 11/21/2014 1:21 PM, PLOTTED BY: Andrew Gudgeon



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Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
MaD	Manor loam, 15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

ENGINEER'S CERTIFICATION

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Melany Alleston-Brick — 12/17/14
ENGINEER'S SIGNATURE — DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

"I / WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION, CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

Robert Jenkins — 1/7/15
SIGNATURE OF DEVELOPER/BUILDER — DATE

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

John R Robertson — 2/6/15
HOWARD S.C.D. — DATE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10840 Exp. Date 4/2/2016
AS-BUILT DATE: 12/13/16

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
DATE	REVISION	BY	APP'R.

TooleDesignGroup
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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\5282 SDP-Blandair Trail\Site Development Plan 2\Cad\Plans\C3-0 - ESD PLAN.dwg | DES. DPB | DRN. AG | CHK. EM

Howard Hughes
THE HOWARD HUGHES CORPORATION
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10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: 12/28/15

Melany Alleston-Brick — 12/17/14

PHASE 2

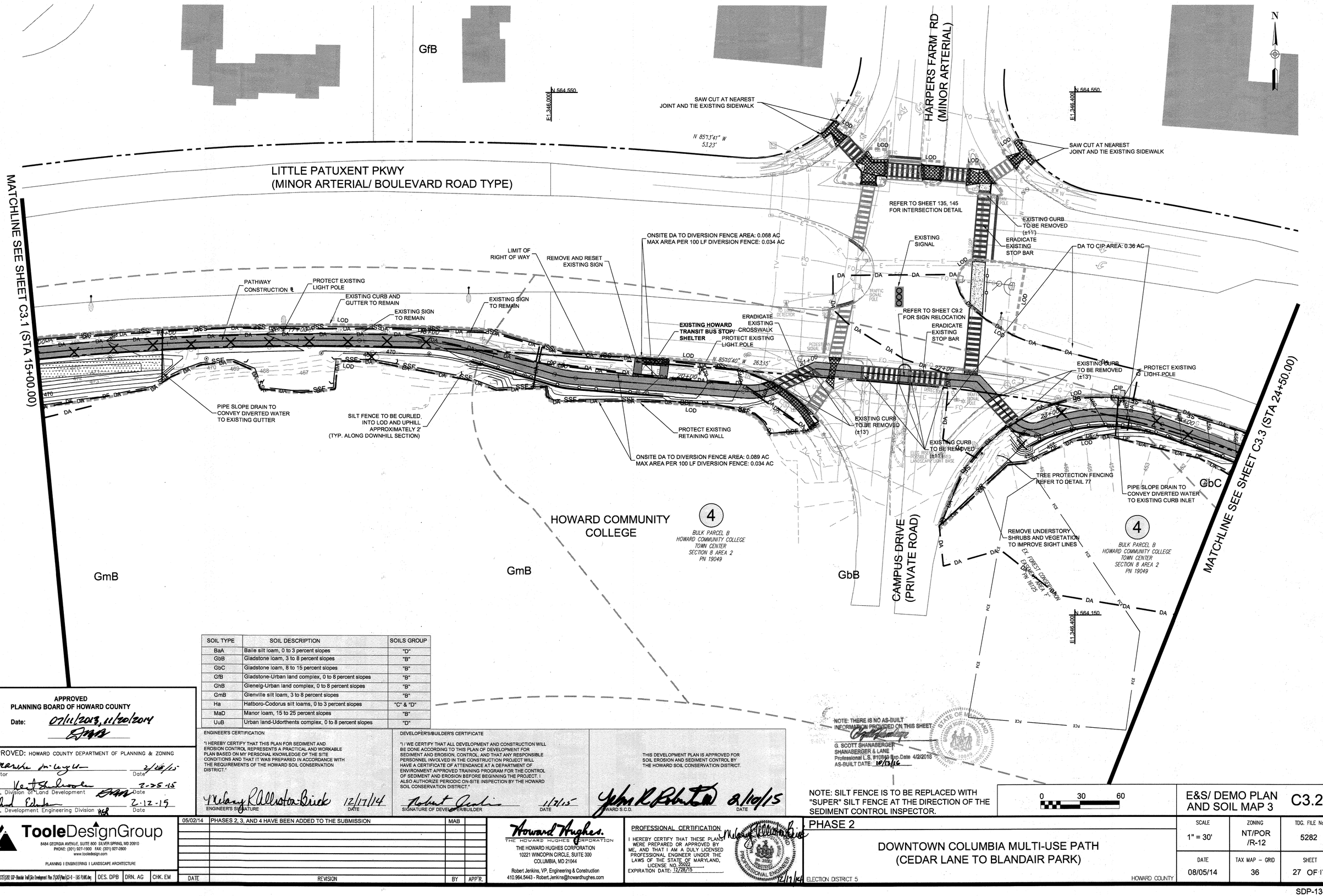
DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

E&S/ DEMO PLAN AND SOIL MAP 2 — C3.1

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	26 OF 171

SDP-13-020



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APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

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SIGNATURE OF DEVELOPER/BUILDER — DATE 12/7/15

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HOWARD S.C.D. — DATE 2/10/15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/16

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 3 — C3.2

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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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EXPIRATION DATE: 12/28/15

12/17/14

PHASE 2

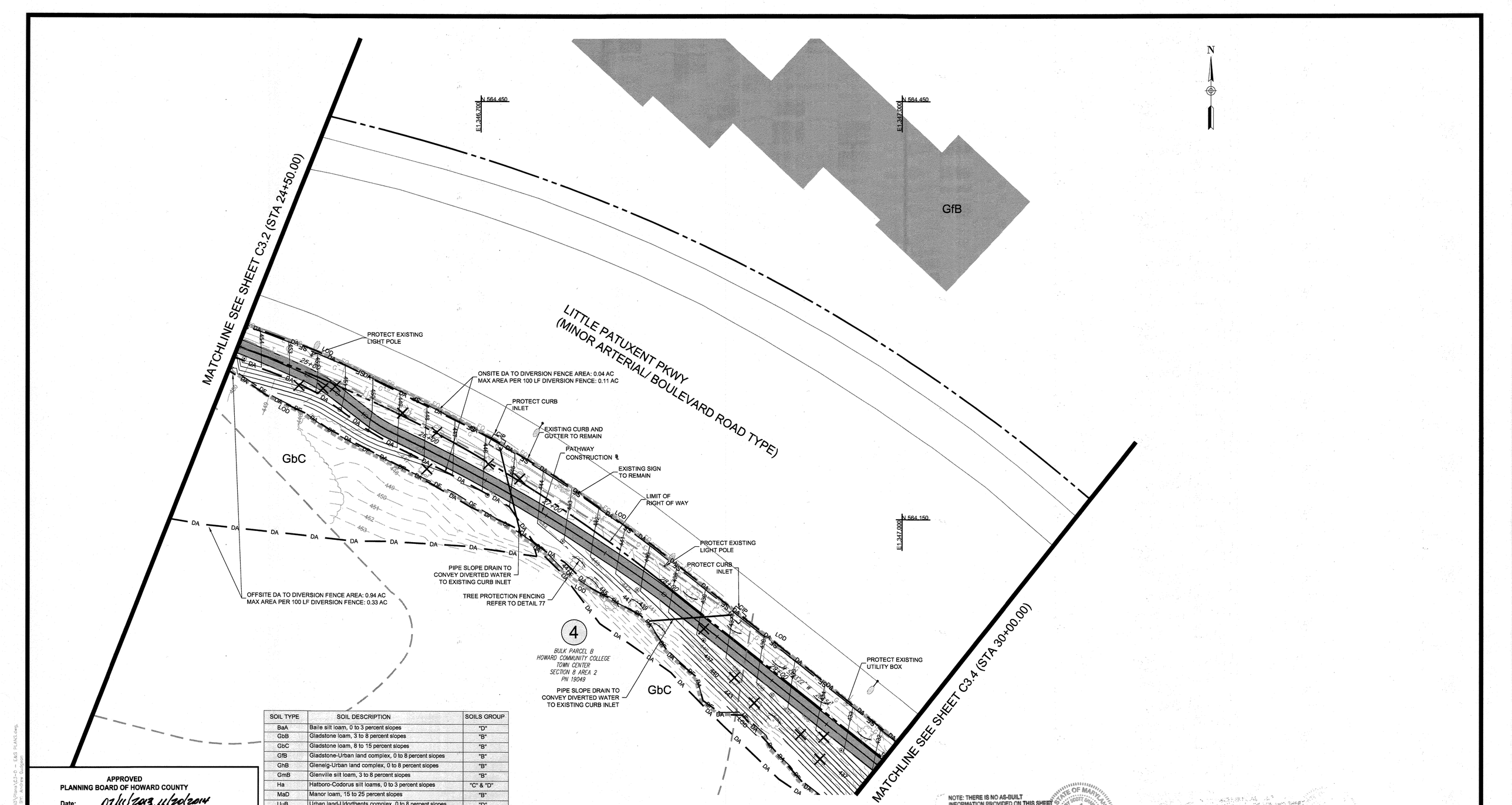
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	27 OF 171

SDP-13-020

O:\MSTR\PE PROJECTS\5282 DCP-Blandair Trail\Site Development Plan 2\CAD\Plans\C3-0 - E&S PLAN.dwg, PLOTTED BY: Andrew Gordon 11/21/2014 - 1:21 PM, LAST SAVED 11/21/2014 1:21 PM, PLOTTED BY: Andrew Gordon



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APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.17.15

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ENGINEER'S SIGNATURE — DATE 12/17/14

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HOWARD S.C.D. — DATE 2/10/15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/16

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 4 C3.3

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12/17/14

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	28 OF 111

SDP-13-020

Q:\ACTIVE PROJECTS\5282 DSP-Historic Trail\Site Development Plan 2\CAD\Plans\C3-0 - E&S PLANS.dwg, 11/21/2014 1:23 PM, LAST SAVED: 11/21/2014 1:21 PM, PLOTTED BY: Andrew Gudgeon

MATCHLINE SEE SHEET C3.3 (STA 30+00.00)

PROTECT EXISTING MANHOLE

EXISTING SIGN TO REMAIN

PROTECT EXISTING LIGHT POLE

EXISTING SIGN TO REMAIN

PIPE SLOPE DRAIN TO CONVEY DIVERTED WATER TO EXISTING GUTTER

PROTECT EXISTING UTILITY BOX

ERADICATE STRIPING REFER TO SHEET C9.4 FOR PROPOSED STRIPING

EXISTING CURB TO BE REMOVED (±13')

LIMIT OF RIGHT OF WAY

PIPE SLOPE DRAIN TO CONVEY DIVERTED WATER TO EXISTING GUTTER

EXISTING CURB AND GUTTER TO REMAIN

PROTECT EXISTING LIGHT POLE

ONSITE DA TO SUPERSILT FENCE AREA: 0.22 AC
MAX AREA PER 100 LF DIVERSION FENCE: 0.046 AC

PATHWAY CONSTRUCTION

REMOVE EXISTING SIDEWALK

PROTECT EXISTING LIGHT POLE

EXISTING CURB TO BE REMOVED (±13')

OFFSITE DA TO DIVERSION FENCE AREA: 0.030 AC
MAX AREA PER 100 LF DIVERSION FENCE: 0.020 AC

SILT FENCE TO BE CURLED INTO LOD AND UPHILL APPROXIMATELY 2' (TYP. ALONG DOWNHILL SECTION)

PROTECT EXISTING UTILITY BOX

SAW CUT AT NEAREST JOINT AND TIE EXISTING SIDEWALK TO NEW TRAIL

OFFSITE DA TO DIVERSION FENCE AREA: 0.027 AC

ONSITE DA TO SUPER SILT FENCE: 0.14 AC
MAX AREA PER 100 LF SUPER SILT FENCE: 0.057 AC

EXISTING CURB TO BE REMOVED (±13')

MATCHLINE SEE SHEET C3.5 (STA 39+50.00)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

FACULTY DR
(PRIVATE ROAD)

GbB

BaA

GfC

GfB

GfB

N 563,900
E1,347,250

N 563,900
E1,347,750

N 563,658
E1,347,750

4
BULK PARCEL B
HOWARD COMMUNITY COLLEGE
TOWN CENTER
SECTION 8 AREA 2
PN 19049

5
OPEN SPACE LOT 1
HOWARD RESEARCH AND DEVELOPMENT
COLUMBIA TOWN CENTER
SECTION 3 AREA 3
PN 13869

6

7
LOT C-2
PEVERLEY GEORGE C III
TOWN CENTER
SECTION 6 AREA 2
PB 28 PN 47

FIRESTONE COMPLETE AUTOCARE STORE

EX. 100 YR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT PN 19049

EX. 20' DRAINAGE & UTILITY EASEMENT PB 13 PN 94

EX. FOREST CONSERVATION EASEMENT AREA 'D' PN 16125

EX. 30' ACCESS, DRAINAGE & UTILITY EASEMENT PB 28 PN 47

STREAM BUFFER

N 37°19'44" W 329.10'

N 81°58'41" W 290.00'

N 08°01'19" E 131.38'

SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GbC	Gladstone loam, 8 to 15 percent slopes	"B"
GfB	Gladstone-Urban land complex, 0 to 8 percent slopes	"B"
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	"B"
GmB	Glenville silt loam, 3 to 8 percent slopes	"B"
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
MaD	Manor loam, 15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 7/11/13, 11/20/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 9-15-15

Chief, Division of Land Development — Date 9-15-15

Chief, Development Engineering Division — Date 9.11.15

ENGINEER'S CERTIFICATION

"I HEREBY 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."

Melanie R. Wellington-Brick — 9/1/15
ENGINEER'S SIGNATURE — DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

"I / WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION, CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

SIGNATURE OF DEVELOPER/BUILDER — 9.2.15 DATE

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

HOWARD S.C.D. — 9/10/15 DATE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp. Date 4/2/2016
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — SURVEYOR

NOTE:
1. THERE IS NO STOCKPILE AREA FOR PHASE 2
2. SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 5 — C3.4

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	

O:\ACTIVE PROJECTS\5282 DCF-Blandair Trail\Site Development Plan 7\CAD\Plans\C3-4 - E&S PLANS.dwg | DES. DPB | DRN. AG | CHK. EM

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MELANIE R. WELLINGTON-BRICK — No. 35022 — PROFESSIONAL ENGINEER — 9/1/15

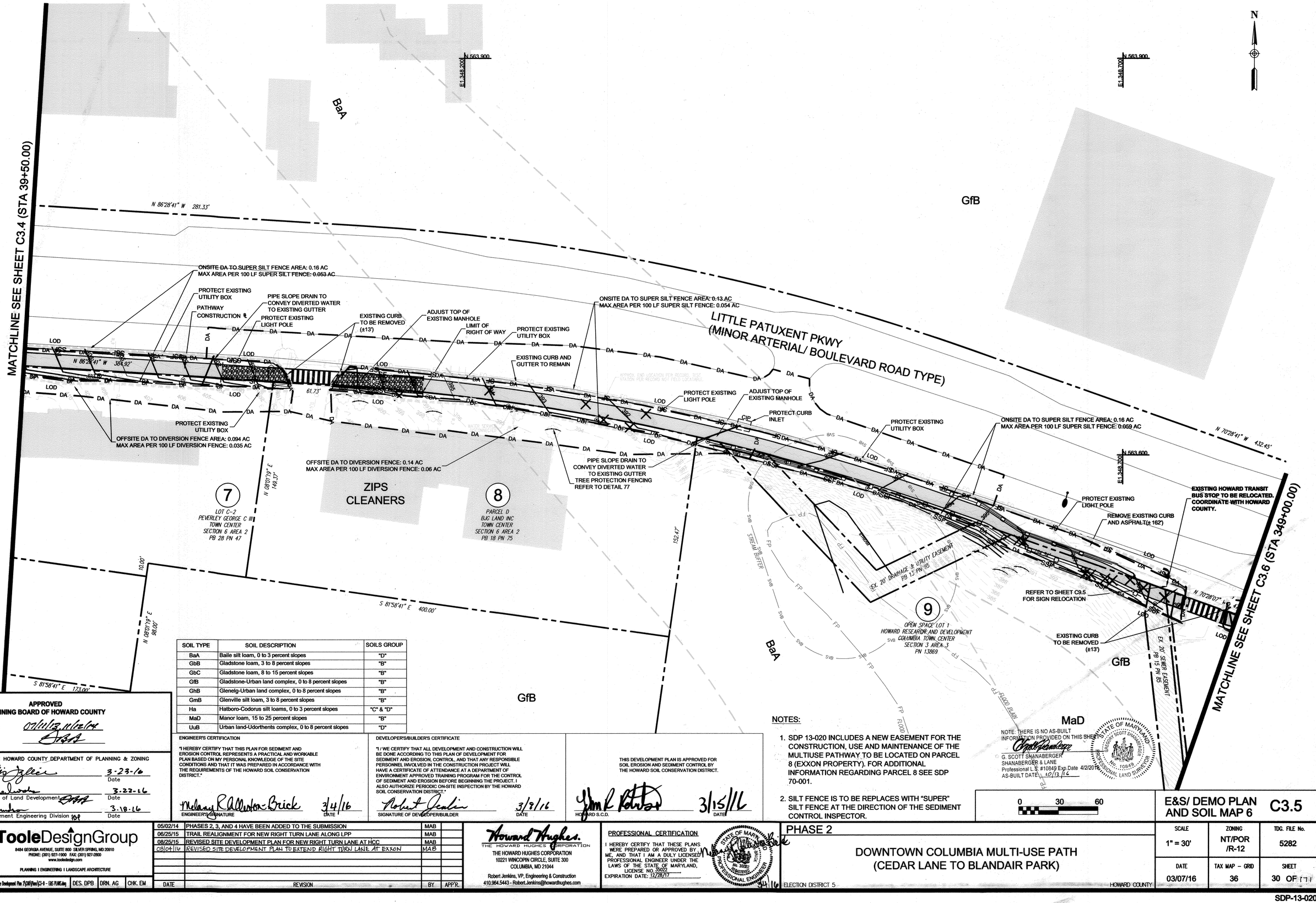
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/25/15	36	29 OF 101

SDP-13-020



SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GbC	Gladstone loam, 8 to 15 percent slopes	"B"
GfB	Gladstone-Urban land complex, 0 to 8 percent slopes	"B"
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	"B"
GmB	Glenville silt loam, 3 to 8 percent slopes	"B"
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
MaD	Manor loam, 15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 03/16/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16
Chief, Division of Land Development — Date 3-22-16
Chief, Development Engineering Division — Date 3-18-16

ENGINEER'S CERTIFICATION

"I HEREBY 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."

Melany R Allerton-Brick — 3/4/16
ENGINEER'S SIGNATURE — DATE

DEVELOPERS/BUILDER'S CERTIFICATE

"I / WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION, CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

Robert Jenkins — 3/8/16
SIGNATURE OF DEVELOPER/BUILDER — DATE

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

3/15/16
HOWARD S.C.D. — DATE

NOTES:

1. SDP 13-020 INCLUDES A NEW EASEMENT FOR THE CONSTRUCTION, USE AND MAINTENANCE OF THE MULTIUSE PATHWAY TO BE LOCATED ON PARCEL 8 (EXXON PROPERTY). FOR ADDITIONAL INFORMATION REGARDING PARCEL 8 SEE SDP 70-001.
2. SILT FENCE IS TO BE REPLACES WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

MaD
NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE 10/13/16

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 6 — C3.5

ToolеDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

I:\2015\15012 CDP-Booster Trail\Site Development Plan 2\DWG\Plans\C3-6 - E&S PLAN6.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — MARK A. BLANDAIR — No. 35022 — REGISTERED PROFESSIONAL ENGINEER
3/4/16

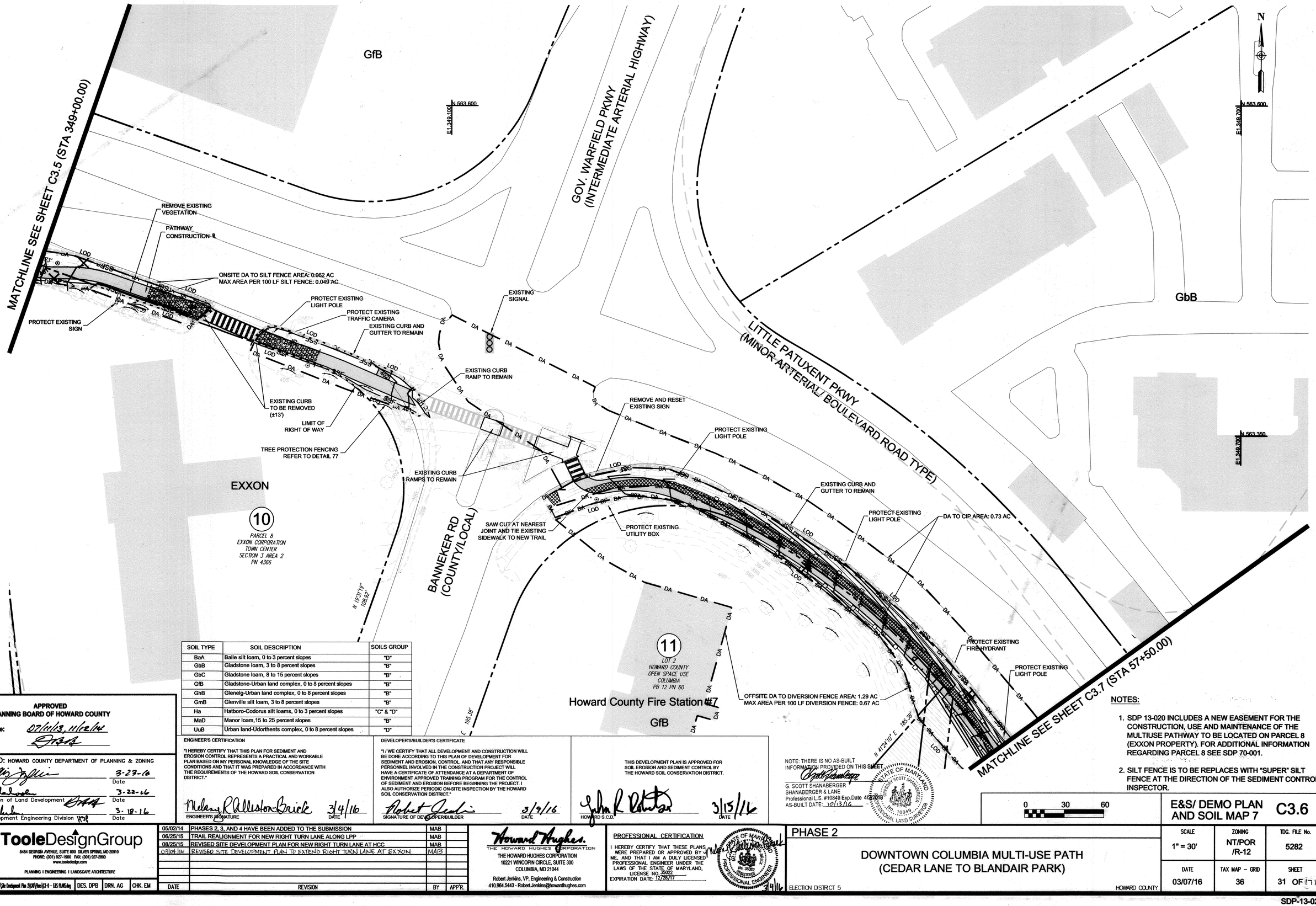
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
03/07/16	36	30 OF 71

SDP-13-020



SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GbC	Gladstone loam, 8 to 15 percent slopes	"B"
GfB	Gladstone-Urban land complex, 0 to 8 percent slopes	"B"
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	"B"
GmB	Glenville silt loam, 3 to 8 percent slopes	"B"
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
MaD	Manor loam,15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16

Chief, Division of Land Development — Date 3-22-16

Chief, Development Engineering Division — Date 3-18-16

ENGINEER'S CERTIFICATION

"I HEREBY 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."

Melany R Alleston-Brickle — 3/4/16
ENGINEER'S SIGNATURE — DATE

DEVELOPERS/BUILDER'S CERTIFICATE

"I / WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION, CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

Robert Jenkins — 3/9/16
SIGNATURE OF DEVELOPER/BUILDER — DATE

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

John R Robertson — 3/15/16
HOWARD S.C.D. — DATE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/30/16
AS-BUILT DATE: 10/13/16

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

NOTES:

1. SDP 13-020 INCLUDES A NEW EASEMENT FOR THE CONSTRUCTION, USE AND MAINTENANCE OF THE MULTIUSE PATHWAY TO BE LOCATED ON PARCEL 8 (EXXON PROPERTY). FOR ADDITIONAL INFORMATION REGARDING PARCEL 8 SEE SDP 70-001.
2. SILT FENCE IS TO BE REPLACES WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 7 — **C3.6**

ToolDesignGroup
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PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

H:\2014\21202 CDP-Revision Final\Site Development Plan\PDP\Phase2\C3-6 - E&S PLANS.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

Howard Hughes.
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COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — ROBERT JENKINS — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 3/9/16

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
03/07/16	36	31 OF 71

SDP-13-020

MATCHLINE SEE SHEET C3.6 (STA 57+50.00)

ONSITE DA TO SUPER SILT FENCE AREA: 0.32 AC
MAX AREA PER 100 LF SUPER SILT FENCE: 0.048 AC

PROTECT EXISTING FIRE HYDRANT

PIPE SLOPE DRAIN TO CONVEY DIVERTED WATER TO EXISTING CURB INLET

PROTECT CURB INLET

EXISTING CURB AND GUTTER TO REMAIN

PROTECT EXISTING LIGHT POLE

ONSITE DA TO SILT FENCE AREA: 0.40 AC
MAX AREA PER 100 LF SILT FENCE: 0.11 AC

LIMIT OF RIGHT OF WAY

PATHWAY CONSTRUCTION ℄

PROTECT EXISTING LIGHT POLE

SAW CUT AT NEAREST JOINT AND TIE EXISTING SIDEWALK TO NEW TRAIL

SAW CUT AT NEAREST JOINT AND TIE EXISTING SIDEWALK TO NEW TRAIL

PROTECT EXISTING DECKING TO UTILITY BOX

SAW CUT AT NEAREST JOINT AND TIE EXISTING SIDEWALK TO NEW TRAIL

SAW CUT AT NEAREST JOINT AND TIE EXISTING SIDEWALK TO NEW TRAIL
TREE PROTECTION FENCING
REFER TO DETAIL 77

ONSITE DA TO DIVERSION FENCE AREA: 0.18 AC
MAX AREA PER 100 LF DIVERSION FENCE: 0.10 AC

REMOVE EXISTING GUARDRAIL

PROTECT EXISTING LIGHT POLE

ERADICATE EXISTING CROSSWALK

ERADICATE EXISTING CROSSWALK

EXISTING CURB TO BE REMOVED (±13')

ERADICATE EXISTING CROSSWALK

ERADICATE EXISTING CROSSWALK

EXISTING CURB TO BE REMOVED (±13')

REFER TO SHEET 137, 146 FOR INTERSECTION DETAIL

EXISTING SIGNAL

EXISTING CURB TO BE REMOVED (±20')

PROTECT EXISTING LIGHT POLE

LIMIT OF WORK PHASE 2

LIMIT OF WORK PHASE 1

LIMIT OF WORK
END OF PHASE 2 STA. 65+16.58=
BEGINNING OF PHASE 1 STA. 65+32.89
N 562,576.38
E 1,350,064.55

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

BROKEN LAND PKWY
(INTERMEDIATE ARTERIAL HIGHWAY)

GbC
GbB
UuB
MaD
GfB

N 563,050
E 1,349,700

N 563,050
E 1,350,200

N 562,852
E 1,350,200

PARCEL B
COLUMBIA TOWN CENTER
SECTION 3 AREA 2
PN 10724

PARCEL 7-A
TOWN CENTER
SECTION 3 AREA 2
PB 30 PN 17

EX. PUBLIC DRAINAGE & UTILITY EASEMENT PB 1724

EX. 20' STORM DRAINAGE & UTILITY EASEMENT PB 15 PN 85

EX. WATER MAIN EASEMENT PB 30 PN 17

EX. DITCH EASEMENT PB 12 PN 60

EX. 10' STORM DRAIN EASEMENT PB 12 PN 60

OPEN SPACE LOT 12
COLUMBIA ASSOCIATION
COLUMBIA TOWN CENTER
SECTION 3 AREA 2
PN 10724

S 83°21'07" E 127.68'

S 06°38'53" W 24.50'

S 83°21'07" E 30.00'

S 55°13'29" E 180.00'

S 03°20'21" E 220.75'

S 22°37'39" E 43.69'

S 45°17'29" E 145.73'

SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GbC	Gladstone loam, 8 to 15 percent slopes	"B"
GfB	Gladstone-Urban land complex, 0 to 8 percent slopes	"B"
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	"B"
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Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
MaD	Manor loam, 15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/12, 11/02/04

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16
Chief, Division of Land Development — Date 3-22-16
Chief, Development Engineering Division — Date 3.18.16

ENGINEER'S CERTIFICATION

"I HEREBY 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'S SIGNATURE — DATE 3/4/16

DEVELOPER'S/BUILDER'S CERTIFICATE

"I / WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION, CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

SIGNATURE OF DEVELOPER/BUILDER — DATE 3/9/16

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

HOWARD S.C.D. — DATE 3/15/16

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER, SHANABERGER & LANE
Professional L.S. #10849 Exp. Date 4/2/2016
AS-BUILT DATE 10/13/2016

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 8 C3.7

ToolеDesignGroup
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PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 32602, EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — ROBERT SCOTT JENKINS — No. 32602 — REGISTERED PROFESSIONAL ENGINEER

3/4/16

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
03/07/16	36	32 OF 71

SDP-13-020

N

DOWNTOWN COLUMBIA

MATCHLINE SEE SHEET C3.9 (STA. 71+50.00)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

UuB

LIMIT OF WORK PHASE 2

LIMIT OF WORK PHASE 1

EXISTING TRAFFIC SIGNAL
LIMIT OF WORK
END OF PHASE 2 STA. 65+20.24=
BEGINNING OF PHASE 1 STA. 65+32.89
N 562,576.38
E 1,350,064.55

OPEN SPACE LOT 2
COLUMBIA TOWN CENTER
SECTION 3 AREA 2
PN 10724

12

BROKEN LAND PKWY
(INTERMEDIATE ARTERIAL HIGHWAY)

PED SIGNAL POLE

EXISTING CURB AND GUTTER TO REMAIN

SILT FENCE TO BE CURLED INTO LOD AND UPHILL APPROXIMATELY 2 FT (TYP. ALONG DOWNHILL SECTION)

TREE PROTECTION FENCING REFER TO DETAIL 77

EXISTING CURB TO BE REMOVED (± 2 LF)

13

HOWARD RESEARCH AND DEVELOPMENT
65.2808/ N/A
PARCEL 0527 LOT N/A

GbB

LIMIT OF RIGHT OF WAY

EXISTING CURB AND GUTTER TO REMAIN

PATHWAY CONSTRUCTION ℄

LOD

Ha

INTERMITTENT STREAM BUFFER (50')

WETLAND BUFFER

FLOOD PLAIN

WETLAND

EX. 20" WATER MAIN (PT 1) L.5894 F.0

EX. 20" SEWER R/W L.1705 F.93

EX. 10" S.D. SEWER PB.12 PG.160

N 562,852
E 1,350,550

N 562,422
E 1,350,550

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — NO. 10849 — PROFESSIONAL LAND SURVEYOR

SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GbC	Gladstone loam, 8 to 15 percent slopes	"B"
GmB	Glenville silt loam, 3 to 8 percent slopes	"B"
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
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NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 01/14/15, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

ENGINEER'S CERTIFICATION

"I HEREBY 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."

Melanie Allston-Brick — 12/17/14
ENGINEER'S SIGNATURE — DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

"I / WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION, CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

Robert Jenkins — 1/6/15
SIGNATURE OF DEVELOPER/BUILDER — DATE

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

John R. Robinson — 2/10/15
HOWARD S.C.D. — DATE

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

Melanie Allston-Brick — 12/17/14

STATE OF MARYLAND — MELANIE ALLSTON-BRICK — NO. 35022 — REGISTERED PROFESSIONAL ENGINEER

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	33 OF 47

E&S/ DEMO PLAN AND SOIL MAP 1 — C3.8

SDP-13-020

C:\ACTIVE PROJECTS\3282 CDP-Blandair Park\Site Development Plan\DESIGN\CAD\Shifted Trail\Shifted Plans\C3-8 - Shifted\EandSPlans.dwg, 1/21/2014 12:43 PM, LAST SAVED: 11/4/2014, & LAST PM, PLOTTED BY: Andrew Gudgeon

MATCHLINE SEE SHEET C3.8 (STA. 71+50.00)

MATCHLINE SEE SHEET C3.10 (STA. 80+50.00)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

MALL ACCESS RD
(PRIVATE ROAD)

N 562,852
E1,350,778

N 562,852
E1,351,488

EXISTING TRAFFIC SIGNAL

EXISTING SIDEWALK TO BE REMOVED BY OTHERS

EXISTING CURB AND GUTTER TO REMAIN

LIMIT OF RIGHT OF WAY

PATHWAY CONSTRUCTION ℄

EXISTING CURB AND GUTTER TO REMAIN

LIMIT OF RIGHT OF WAY

EXISTING SIDEWALK TO BE RECONSTRUCTED BY OTHERS

EXISTING CURB TO BE REMOVED (± 6 LF)

EXISTING UTILITY TO BE REMOVED/RELOCATED BY OTHERS

SILT FENCE TO BE CURLED INTO LOD AND UPHILL APPROXIMATELY 2 FT (TYP. ALONG DOWNHILL SECTION)

STOCK PILE AREA

EXISTING CURB TO BE REMOVED (±5.5 LF)

EX. 20" WATER R/W (PART I) L 0001 F. 244

EX. 8" WATER R/W (PARCEL A-PT 1) L 7417 F. 303

COLUMBIA ASSOCIATION, INC
PARCEL 0293 LOT 9B S 1 1,134A

(14)

(13)

HOWARD RESEARCH AND DEVELOPMENT
65,2808/ N/A
PARCEL 0527 LOT N/A

(15)

SYMPHONY WOODS PARK
(BY OTHERS)
FDC-DC-MSW-1

COLUMBIA ASSOCIATION, INC.
PARCEL 0452 LOT 23 36,2326 AR
PLAT NO. 13535 & 13536
COLUMBIA TOWN CENTER
SECTION 1

UuB

GbC

GbB

Ha

BaA

N 562,422
E1,351,488

SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GbC	Gladstone loam, 8 to 15 percent slopes	"B"
GmB	Glenville silt loam, 3 to 8 percent slopes	"B"
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

ENGINEER'S CERTIFICATION

"I HEREBY 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."

Melany C Allston-Brick — ENGINEER'S SIGNATURE — 12/17/14 DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

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Robert Jenkins — SIGNATURE OF DEVELOPER/BUILDER — 1/7/15 DATE

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

John N Robertson — HOWARD S.C.D. — 2/10/15 DATE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 2 — C3.9

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www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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PROFESSIONAL CERTIFICATION

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Melany C Allston-Brick — 12/17/14

STATE OF MARYLAND — MELANY CHRISTINE ALLSTON-BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	34 OF 111

SDP-13-020

G:\ACTIVE PROJECTS\5282 CDP-Blandair Trail\Site Development Plan\USCAD\DA01\Settled Trail\Settled Trail-A1-3=8 - Shift+RedpenSDP-x-x.dwg, PLOTTED: 11/21/2014 12:43 PM, LAST SAVED: 11/21/2014 12:43 PM, PLOTTED BY: Andrew Quitjesen

MATCHLINE SEE SHEET C3.9 (STA. 80+50.00)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

PATHWAY CONSTRUCTION ℄

LIMIT OF RIGHT OF WAY

EXISTING CURB AND GUTTER TO REMAIN

LOD

COLUMBIA ASSOCIATION, INC.
PARCEL 0293 LOT 9B S 1 1,134A

14

EXISTING SIGN TO BE RELOCATED, REFER TO SHEET C9.10

EX. 10' S.D. ESMT. PB 12 PN 64

EXISTING SIGN TO BE RELOCATED, REFER TO SHEET C9.10

16

HOWARD COUNTY MARYLAND
LOT 4 128 A PARCEL 0389

S ENTRANCE RD
(COUNTY/ LOCAL ROAD)

UuB

REFER TO SHEET 139, 148 FOR INTERSECTION DETAIL

EXISTING CURB TO BE REMOVED (± 6 LF)

EXISTING TRAFFIC SIGNAL

EXISTING CURB TO BE REMOVED (± 11 LF)

EXISTING HOWARD TRANSIT BUS STOP/ SHELTER

87+00

17

EXISTING SIGN POST TO BE REMOVED

20

STOCK PILE AREA

RELOCATE EXISTING CHERRY TREE

TOWN CENTER S1 A3 ROUTE 29
PARCEL 0389 LOT 3

SHA PO LOT 3 1728

LIMIT OF RIGHT OF WAY

TREE PROTECTION FENCING
REFER TO DETAIL 77

COUNTY LIBRARY

HOWARD COUNTY MARYLAND
IMPS LOT 5 32166
10375 LITTLE PATUXENT PKWY
PARCEL 0389 LOT 5

GbC

SYMPHONY WOODS PARK
(BY OTHERS)
FDC-DC-MSW-1

15

COLUMBIA ASSOCIATION, INC.
PARCEL 0452 LOT 23 36 2926 AR
PLAT NO. 13535 & 13536
COLUMBIA TOWN CENTER
SECTION 1

BaA

SILT FENCE TO BE CURLED INTO LOD AND UPHILL APPROXIMATELY 2 FT (TYP. ALONG DOWNHILL SECTION)

PATHWAY CONSTRUCTION ℄

MATCHLINE SEE SHEET C3.11 (STA. 89+50.00)

N 562,852
E 1,351,756

N 562,852
E 1,352,460

N 562,472
E 1,352,252

SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GbC	Gladstone loam, 8 to 15 percent slopes	"B"
GmB	Glenville silt loam, 3 to 8 percent slopes	"B"
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

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Melanie P. Allerton-Brick — 12/17/14
ENGINEER'S SIGNATURE — DATE

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Robert Jenkins — 1/7/15
SIGNATURE OF DEVELOPER/BUILDER — DATE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10949 Exp. Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10949 — PROFESSIONAL LAND SURVEYOR

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

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

HOWARD S.C.D. — 2/10/15 DATE

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 3 C3.10

ToolеDesignGroup
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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
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PROFESSIONAL CERTIFICATION

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Melanie P. Allerton-Brick — 12/17/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

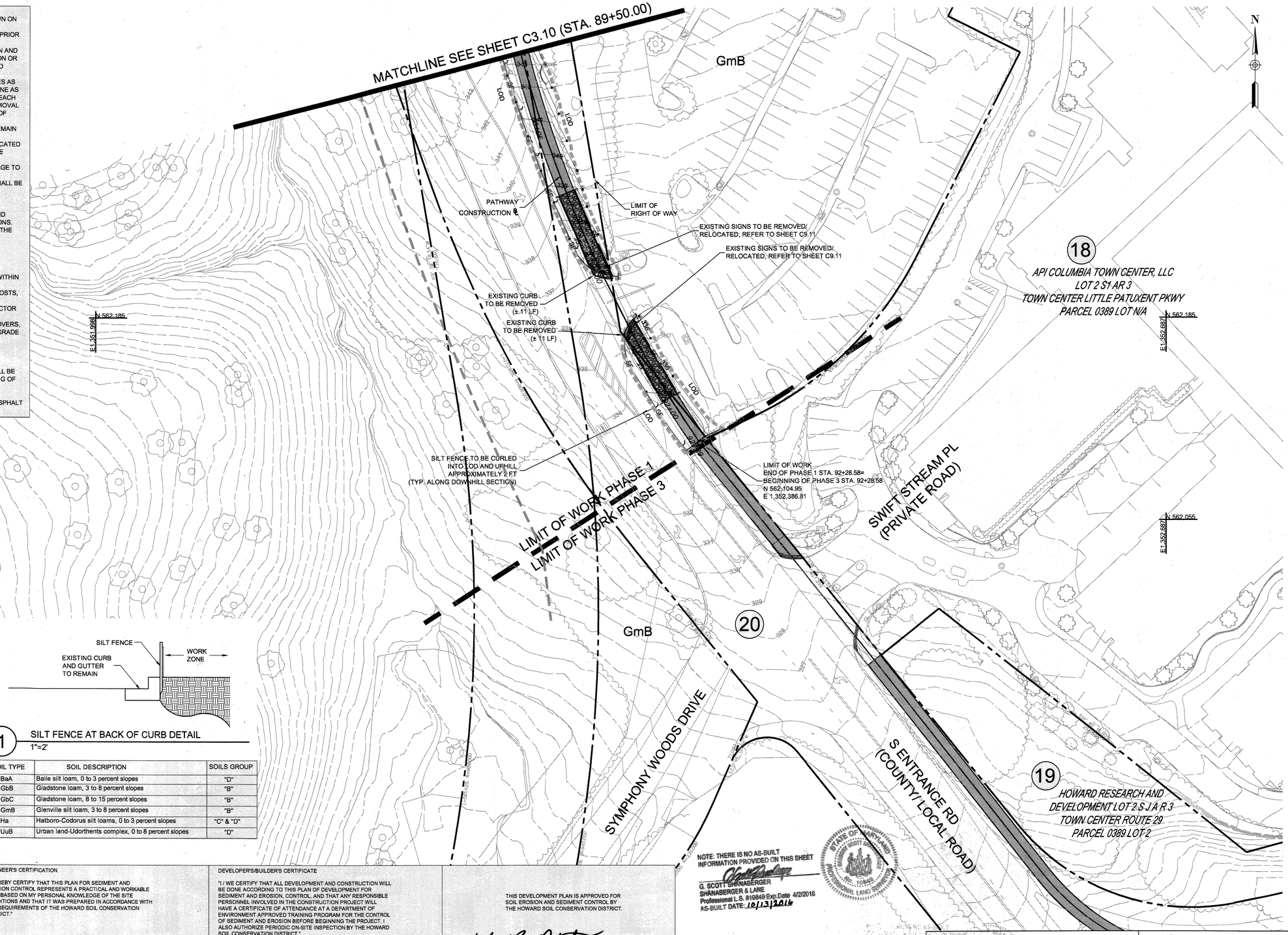
SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	35 OF 171

SDP-13-020

G:\ACTIVE PROJECTS\5282 JDP-Blandair Park\Site Development Plan\SDP\Cad Data\Sheet Files\Sheet Files\C3-4 - SoilsMapEandSPhase.dwg
PLOTTED: 1/7/2014 12:44 PM, LAST SAVED: 1/4/2014 5:04 PM, PLOTTED BY: Andrew Gudgeon

DEMOLITION NOTES:

1. THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS AND AS DIRECTED BY PROJECT DESIGNER.
2. INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION PRIOR TO BEGINNING DEMOLITION WORK.
3. DEMOLITION DETAILS AND NOTES ARE INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK AND ARE NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. CONTRACTOR SHALL COORDINATE WITH HOWARD COUNTY, SHA, AND APPROPRIATE UTILITY COMPANIES PRIOR TO WORK.
4. THE CONTRACTOR SHALL REMOVE AND/OR PLUG AND ABANDON EXISTING UTILITIES AS APPROPRIATE, SUCH AS SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE AS DIRECTED BY THE OWNER, THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY AND HOWARD COUNTY TO COORDINATE ABANDONMENT OR REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
6. ALL MATERIALS REMOVED UNDER CLEARING/DEMOLITION WORK, NOT TO BE RELOCATED OR TO BE TURNED OVER TO THE OWNER, SHALL BE REMOVED AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
7. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING ROAD SURFACES.
8. ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR.
9. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DEBRIS FROM THE SITE TO A LOCATION APPROVED BY THE OWNER'S REPRESENTATIVE.
10. THE CONTRACTOR SHALL INFORM MISS UTILITY OF MARYLAND (1-800-257-7777) AND HOWARD COUNTY 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION OPERATIONS. CERTAIN UTILITIES WITHIN THE VICINITY OF THIS PROJECT AREA ARE SHOWN ON THE PLANS. THE UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATELY LOCATED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND LIGHTING SYSTEMS BEFORE PROCEEDING WITH WORK.
11. REFER TO PLAN FOR SPACING, LAYOUT, AND LOCATION OF STRUCTURES MODIFICATIONS TO EXISTING TREES.
12. UNLESS OTHERWISE SHOWN, ALL EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN LIMITS OF CONSTRUCTION ARE TO REMAIN.
13. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING CONCRETE CURBS, POSTS, SIGNS, AND OTHER ELEMENTS TO REMAIN DURING DEMOLITION. ANY DAMAGE TO PROPERTY CAUSED BY THE CONTRACTOR SHALL BE RESTORED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
14. CONTRACTOR TO PROTECT EXISTING MANHOLES TO REMAIN. ANY MANHOLES, COVERS, OR OTHER EXISTING FEATURES TO REMAIN SHALL BE ADJUSTED TO PROPOSED GRADE AS REQUIRED.
15. CONTRACTOR TO SUBMIT A DEMOLITION PHASING PLAN TO OWNER PRIOR TO COMMENCING DEMOLITION WORK.
16. ASPHALT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT AND CAREFULLY REMOVED TO AVOID DAMAGE TO EXISTING PAVEMENT TO REMAIN. ASPHALT SHALL BE REMOVED ONLY WHEN WORK IS TO PROCEED IMMEDIATELY TO AVOID SLOUGHING OF THE ADJACENT PAVEMENT BASE MATERIAL.
17. WHERE NEW CONCRETE CURB IS CALLED OUT, CONTRACTOR SHALL PROVIDE A SMOOTH AND UNIFORM EDGE AND CAUSE MINIMAL DISTURBANCE TO EXISTING ASPHALT TO REMAIN.



1 SILT FENCE AT BACK OF CURB DETAIL
1"=2'

SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GbC	Gladstone loam, 8 to 15 percent slopes	"B"
GmB	Glenville silt loam, 3 to 8 percent slopes	"B"
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/20/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

ENGINEER'S CERTIFICATION

"I HEREBY 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."

Melany P. Allston-Brick — ENGINEER'S SIGNATURE — 12/17/14 DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

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Robert Jenkins — SIGNATURE OF DEVELOPER/BUILDER — 12/15/15 DATE

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

John R. Robertson — HOWARD S.C.D. — 2/10/15 DATE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp. Date 4/2/2016
AS-BUILT DATE: 10/13/2016

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NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 4 — C3.11

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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DESIGN PROJECTS\5282 CDP-Revised Trail\Site Development Plan\DESIGN\C4D\Shifted Trail\Shifted Plans\C3-8 - ShiftedEandSPlan.dwg, PLOTTED: 1/21/2014 12:41 PM, LAST SAVED: 11/4/2014 5:04 PM, PLOTTED BY: Andrew Gudgeon

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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Melany P. Allston-Brick — STATE OF MARYLAND — MELANY PATRICIA ALLSTON-BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 12/17/14

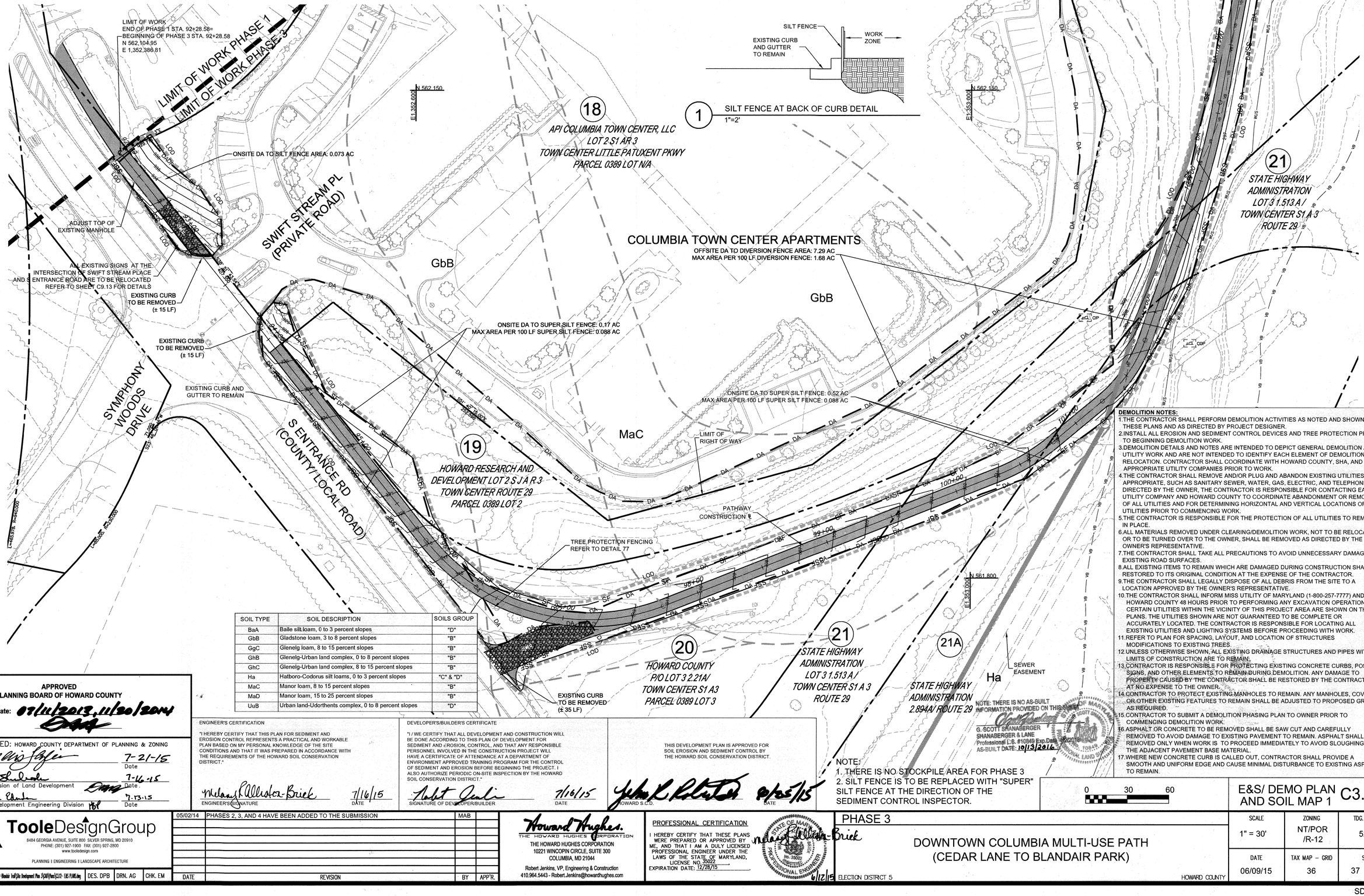
PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	36 OF [illegible]

SDP-13-020



SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GgC	Glenelg loam, 8 to 15 percent slopes	"B"
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	"B"
GhC	Glenelg-Urban land complex, 8 to 15 percent slopes	"B"
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
MaC	Manor loam, 8 to 15 percent slopes	"B"
MaD	Manor loam, 15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

DEMOLITION NOTES:

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8. ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR.
9. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DEBRIS FROM THE SITE TO A LOCATION APPROVED BY THE OWNER'S REPRESENTATIVE.
10. THE CONTRACTOR SHALL INFORM MISS UTILITY OF MARYLAND (1-800-257-7777) AND HOWARD COUNTY 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION OPERATIONS. CERTAIN UTILITIES WITHIN THE VICINITY OF THIS PROJECT AREA ARE SHOWN ON THE PLANS. THE UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATELY LOCATED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND LIGHTING SYSTEMS BEFORE PROCEEDING WITH WORK.
11. REFER TO PLAN FOR SPACING, LAYOUT, AND LOCATION OF STRUCTURES MODIFICATIONS TO EXISTING TREES.
12. UNLESS OTHERWISE SHOWN, ALL EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN LIMITS OF CONSTRUCTION ARE TO REMAIN.
13. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING CONCRETE CURBS, POSTS, SIGNS, AND OTHER ELEMENTS TO REMAIN DURING DEMOLITION. ANY DAMAGE TO PROPERTY CAUSED BY THE CONTRACTOR SHALL BE RESTORED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
14. CONTRACTOR TO PROTECT EXISTING MANHOLES TO REMAIN. ANY MANHOLES, COVERS, OR OTHER EXISTING FEATURES TO REMAIN SHALL BE ADJUSTED TO PROPOSED GRADE AS REQUIRED.
15. CONTRACTOR TO SUBMIT A DEMOLITION PHASING PLAN TO OWNER PRIOR TO COMMENCING DEMOLITION WORK.
16. ASPHALT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT AND CAREFULLY REMOVED TO AVOID DAMAGE TO EXISTING PAVEMENT TO REMAIN. ASPHALT SHALL BE REMOVED ONLY WHEN WORK IS TO PROCEED IMMEDIATELY TO AVOID SLOUGHING OF THE ADJACENT PAVEMENT BASE MATERIAL.
17. WHERE NEW CONCRETE CURB IS CALLED OUT, CONTRACTOR SHALL PROVIDE A SMOOTH AND UNIFORM EDGE AND CAUSE MINIMAL DISTURBANCE TO EXISTING ASPHALT TO REMAIN.

NOTE:
1. THERE IS NO STOCKPILE AREA FOR PHASE 3
2. SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/16/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15
Chief, Division of Land Development — Date 7-16-15
Chief, Development Engineering Division — Date 7-13-15

ENGINEER'S CERTIFICATION

"I HEREBY 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'S SIGNATURE — DATE 7/16/15

DEVELOPER'S/BUILDER'S CERTIFICATE

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SIGNATURE OF DEVELOPER/BUILDER — DATE 7/16/15

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

HOWARD S.C.D. — DATE 9/25/15

ToolеDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MELANIE L. BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

6/12/15

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

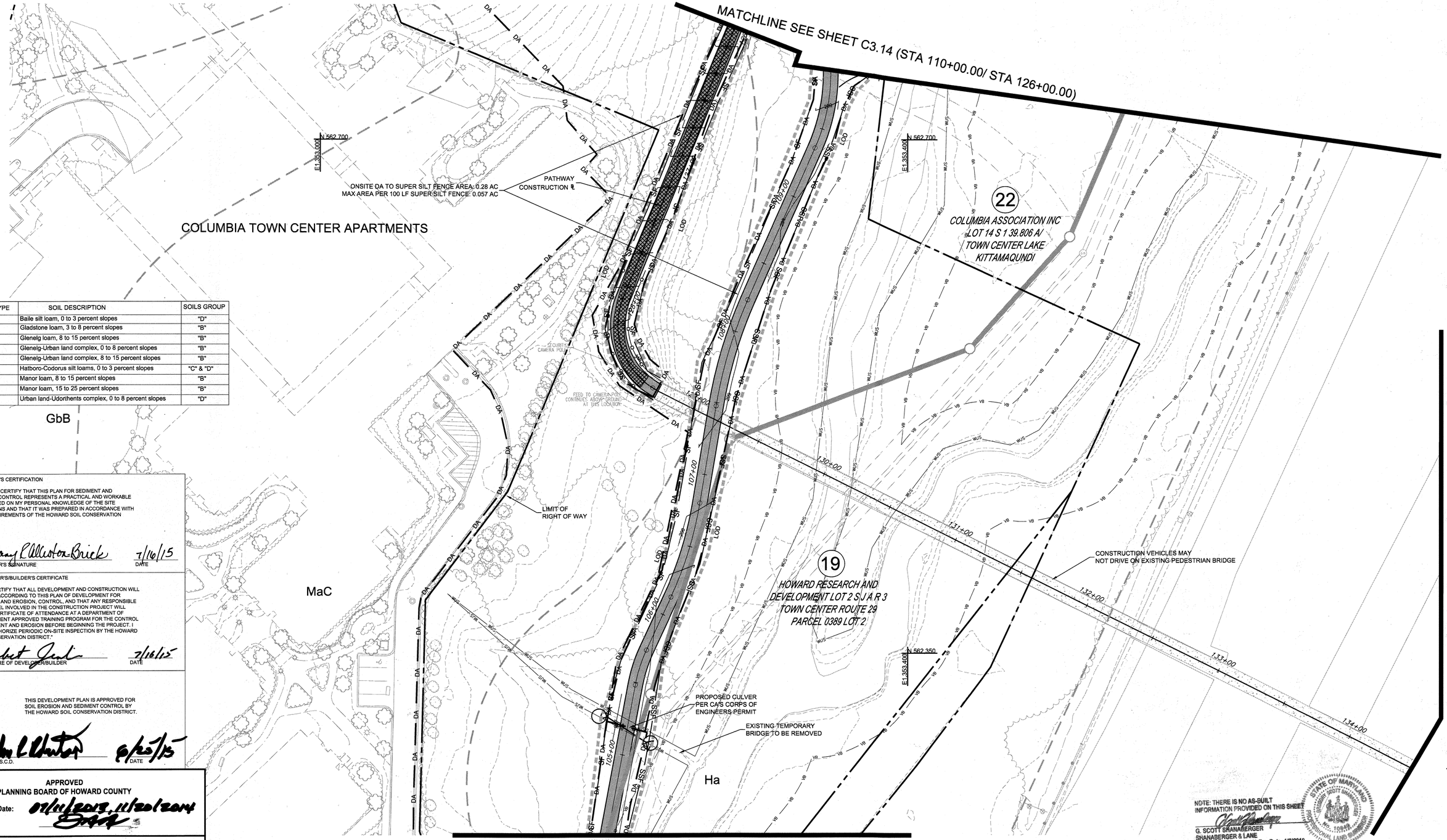
ELECTION DISTRICT 5 — HOWARD COUNTY

E&S/ DEMO PLAN AND SOIL MAP 1 C3.12

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
06/09/15	36	37 OF 171

SDP-13-020

Q:\ACTIVE PROJECTS\5282 CSP-Blandair Trail\Site Development Plan 3\CAD\Plans\C3.13 - E&S PLANS.dwg
PLOTTED: 6/11/2015 3:14 PM - LAST SAVED BY: JZorn - 3:14 PM - PLOTTED BY: Derek Brown - E&S PLANS.dwg



SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GgC	Glenelg loam, 8 to 15 percent slopes	"B"
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	"B"
GhC	Glenelg-Urban land complex, 8 to 15 percent slopes	"B"
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	"C" & "D"
MaC	Manor loam, 8 to 15 percent slopes	"B"
MaD	Manor loam, 15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

ENGINEER'S CERTIFICATION

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Melany Ellington-Brick — 7/16/15
ENGINEER'S SIGNATURE — DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

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Robert Jenkins — 7/16/15
SIGNATURE OF DEVELOPER/BUILDER — DATE

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

HOWARD S.C.D. — 6/25/15 DATE

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/06/2015, 07/02/2015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — 7-24-15 Date
Chief, Division of Land Development — 7-16-15 Date
Chief, Development Engineering Division — 7.13.15 Date

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

E&S/ DEMO PLAN AND SOIL MAP 2 — C3.13

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	38 OF 171

ToolDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
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www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MELANY ELLINGTON-BRICK — No. 35022 — PROFESSIONAL ENGINEER

Melany Ellington-Brick 6/1/15

SDP-13-020

MATCHLINE SEE SHEET C3.15 (STA 115+50.00)

N

23

ABC PARKING BUSINESS TRUST
C/O HOWARD HUGHES CORP.
IMPSP/O LOT 17 LOT 18/ RSB LOTS
15 16

19

HOWARD RESEARCH AND
DEVELOPMENT LOT 2 S J A R 3
TOWN CENTER ROUTE 29
PARCEL 0389 LOT 2

N 563,250
E1,352,800

N 563,250
E1,353,150

N 562,950
E1,353,150

UuB

MaC

Ha

LAKE KITTAMAQUNDI

TRAIL CONNECTION
TO WHOLE FOODS
PARKING LOT

ONSITE DA TO SUPER SILT FENCE AREA: 0.057 AC
MAX AREA PER 100 LF SUPER SILT FENCE: 0.048 AC

PROTECT EXISTING
CULVERT

SAW CUT EXISTING TRAIL
AND TIE TO NEW TRAIL

PATHWAY
CONSTRUCTION

SAW CUT EXISTING TRAIL
AND TIE TO NEW TRAIL

LIMIT OF
RIGHT OF WAY

STA. 111+37.22=
STA. 125+00.00

MATCHLINE SEE SHEET C3.13 (STA 110+00.00/ STA 126+00.00)

SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GgC	Glenelg loam, 8 to 15 percent slopes	"B"
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	"B"
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MaC	Manor loam, 8 to 15 percent slopes	"B"
MaD	Manor loam, 15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

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Melany R Allodor-Brick — 7/16/15
ENGINEER'S SIGNATURE — DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

"I / WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION, CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

Robert Jenkins — 7/16/15
SIGNATURE OF DEVELOPER/BUILDER — DATE

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

HOWARD S.C.D. — 6/25/15
DATE

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2015, as shown

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — 7-21-15 Date

Chief, Division of Land Development — 7-16-15 Date

Chief, Development Engineering Division — 7-13-15 Date

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 3 C3.14

Toole Design Group
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

D:\ACTIVE PROJECTS\5282 ADP-Blandair Trail\Site Development Plan 3\Civil\Plans\C3.13- E&S PLANS.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

Melany R Allodor-Brick — 7/16/15

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	39 OF 47

SDP-13-020

N

25

ABC PARKING BUSINESS TRUST
C/O HOWARD HUGHES CORP.
IMPSP/O LOT 17 LOT 18/ RSB LOTS
15 16

24

COLUMBIA ASSOCIATION INC
LOT 7 S 1 4.427 ACRE/ TOWN
CENTER SUBDV

23

ABC PARKING BUSINESS TRUST
C/O HOWARD HUGHES CORP.
IMPSP/O LOT 17 LOT 18/ RSB LOTS
15 16

THE HOWARD HUGHES CORPORATION

N 563,700
E1,352,900

N 563,700
E1,353,450

N 563,500
E1,353,150

SAW CUT EXISTING TRAIL AND TIE TO NEW TRAIL

REMOVE EXISTING WAYSIDE

PATHWAY CONSTRUCTION ℄

REMOVE EXISTING WAYSIDE

LIMIT OF RIGHT OF WAY

PIPE SLOPE DRAIN TO CONVEY DIVERTED WATER ACROSS DISTURBED AREA. PROVIDE 10'X10' ROCK OUTLET PROTECTION AT DOWNSTREAM END.

UuB

MATCHLINE SEE SHEET C3.14 (STA 115+50.00)

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

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Melany Pallerton-Brick — 7/16/15
ENGINEER'S SIGNATURE — DATE

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Robert Jenkins — 7/16/15
SIGNATURE OF DEVELOPER/BUILDER — DATE

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

HOWARD S.C.D. — 07/25/15
DATE

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2015, 11:00 AM

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — 7-21-15 Date

Chief, Division of Land Development — 7-16-15 Date

Chief, Development Engineering Division — 7.13.15 Date

SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
GgC	Glenelg loam, 8 to 15 percent slopes	"B"
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MaC	Manor loam, 8 to 15 percent slopes	"B"
MaD	Manor loam, 15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2017
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

D:\ACTIVE PROJECTS\5282 SDP-Blandair Trail\Site Development Plan 3\CAD\Panel\C3.15 - E&S PLANS.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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PROFESSIONAL CERTIFICATION

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Melany Pallerton-Brick — 7/16/15

STATE OF MARYLAND — MELANY PALLERTON-BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

PHASE 3

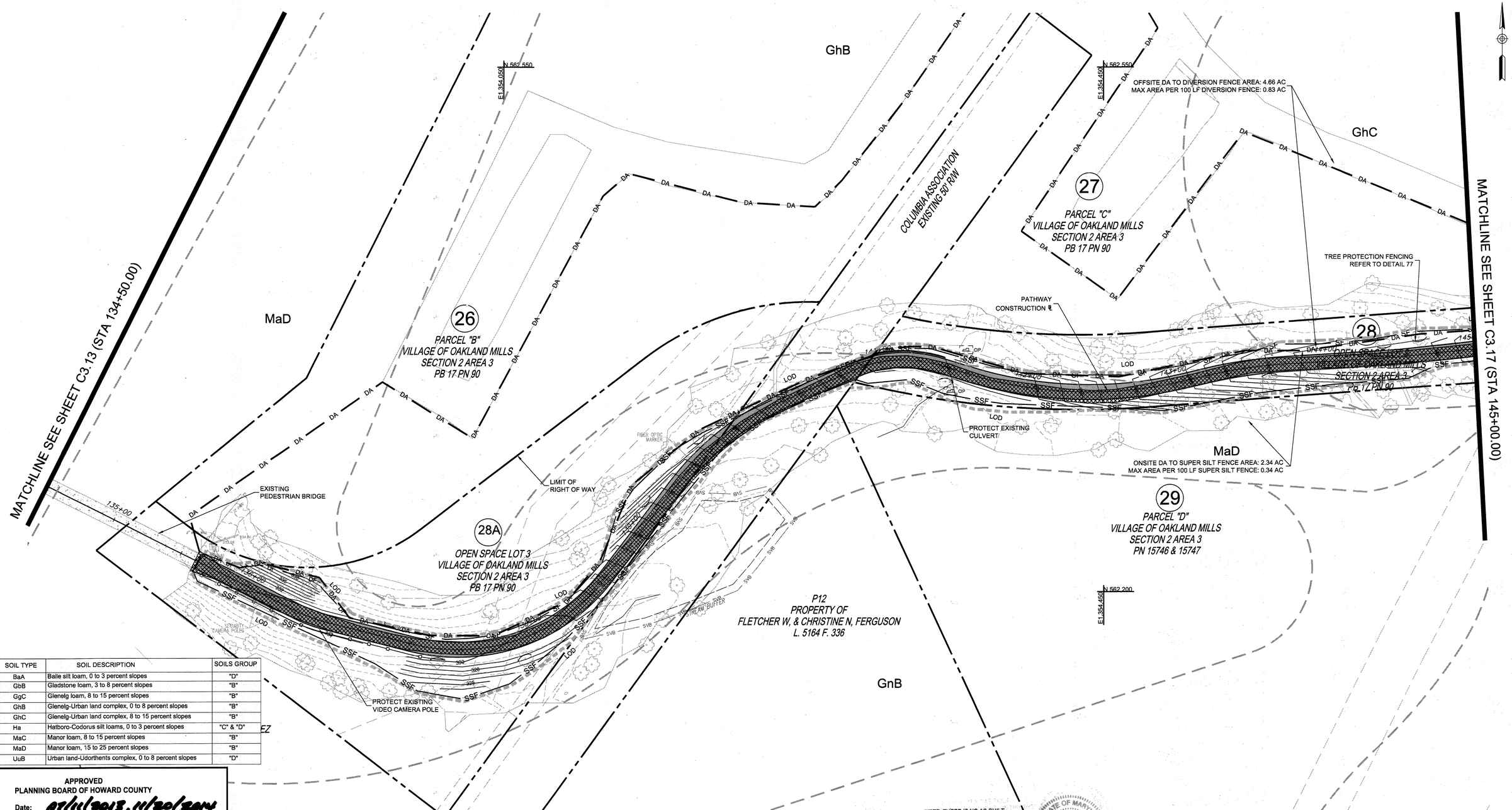
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

E&S/ DEMO PLAN AND SOIL MAP 4 — C3.15

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	40 OF 71

SDP-13-020



SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
GbB	Gladstone loam, 3 to 8 percent slopes	"B"
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MaD	Manor loam, 15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/01/2015, 11/20/2015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15
Chief, Division of Land Development — Date 7-16-15
Chief, Development Engineering Division — Date 7.13.15

ENGINEER'S CERTIFICATION

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ENGINEER'S SIGNATURE — DATE 7/16/15

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SIGNATURE OF DEVELOPER/BUILDER — DATE 7/16/15

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

HOWARD S.C.D. — DATE 6/25/15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 5 C3.16

Toole Design Group
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PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\5282 DSP-Blandair Trail\Site Development Plan 3\SAP\Plans\C3.12- E&S PLANS.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
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PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

11/1/15

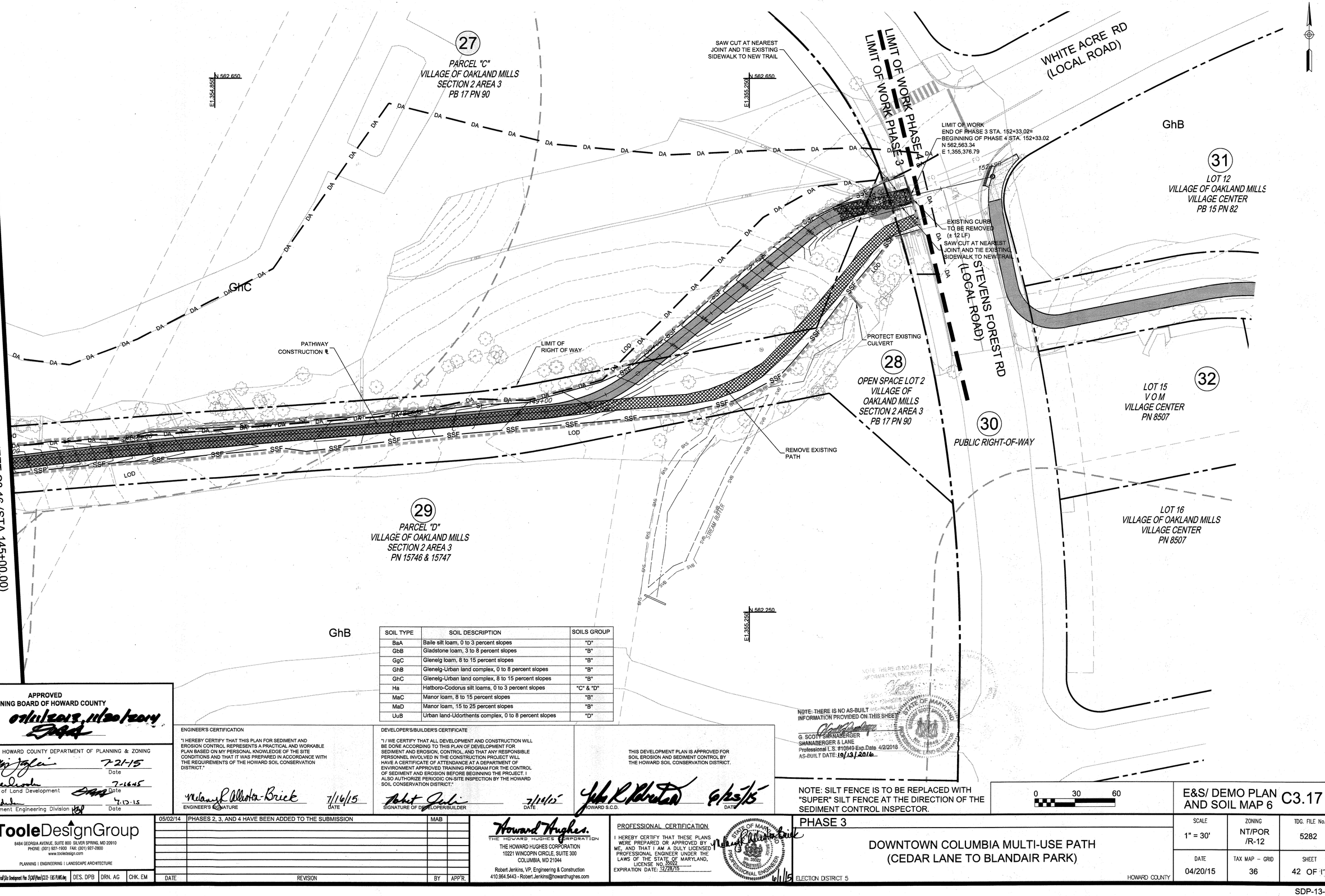
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	41 OF 47

SDP-13-020



SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
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MaD	Manor loam, 15 to 25 percent slopes	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/21/2015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.15.15

ENGINEER'S CERTIFICATION

"I HEREBY 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."

Melanie P. Allerton-Brick — 7/16/15
ENGINEER'S SIGNATURE — DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

"I / WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION, CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

Robert Jenkins — 7/16/15
SIGNATURE OF DEVELOPER/BUILDER — DATE

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

John R. Robertson — 6/23/15
HOWARD S.C.D. — DATE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

E&S/ DEMO PLAN AND SOIL MAP 6 C3.17

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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
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Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

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Melanie P. Allerton-Brick — 6/1/15

PHASE 3

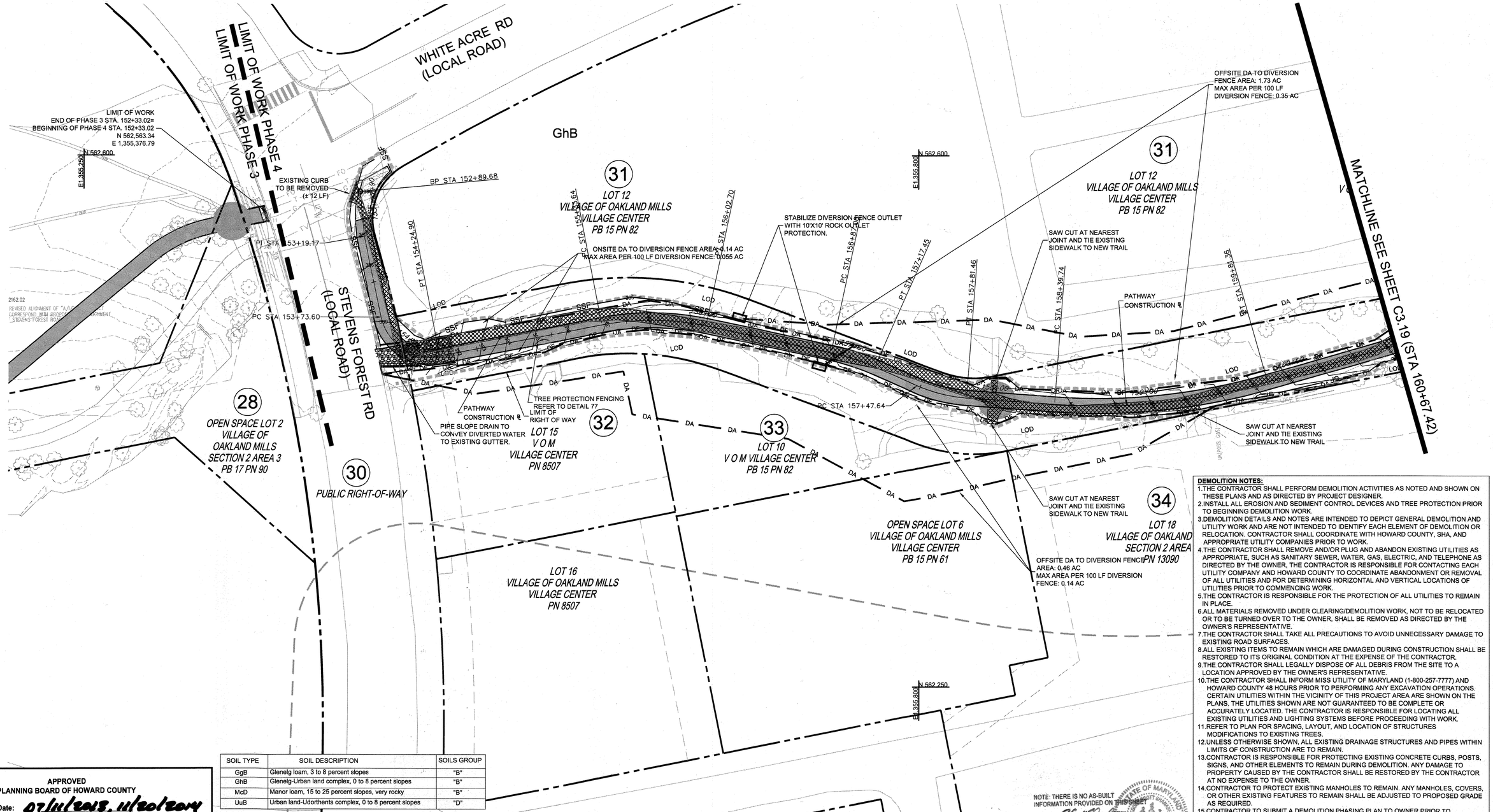
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	42 OF 171

SDP-13-020

Q:\ACTIVE PROJECTS\5282 DCP-Blandair Trail\Site Development Plan 3\C4D\Plans\C3.17- E&S PLAN.dwg
PLOTTED: 6/1/2015 3:27 PM, LAST SAVED: 4/29/2015 1:16 PM, PLOTTED BY: Lena Sieck



SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
GgB	Glenelg loam, 3 to 8 percent slopes	"B"
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	"B"
McD	Manor loam, 15 to 25 percent slopes, very rocky	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

DEMOLITION NOTES:

1. THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS AND AS DIRECTED BY PROJECT DESIGNER.
2. INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION PRIOR TO BEGINNING DEMOLITION WORK.
3. DEMOLITION DETAILS AND NOTES ARE INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK AND ARE NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. CONTRACTOR SHALL COORDINATE WITH HOWARD COUNTY, SHA, AND APPROPRIATE UTILITY COMPANIES PRIOR TO WORK.
4. THE CONTRACTOR SHALL REMOVE AND/OR PLUG AND ABANDON EXISTING UTILITIES AS APPROPRIATE, SUCH AS SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE AS DIRECTED BY THE OWNER, THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY AND HOWARD COUNTY TO COORDINATE ABANDONMENT OR REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
6. ALL MATERIALS REMOVED UNDER CLEARING/DEMOLITION WORK, NOT TO BE RELOCATED OR TO BE TURNED OVER TO THE OWNER, SHALL BE REMOVED AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
7. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING ROAD SURFACES.
8. ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR.
9. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DEBRIS FROM THE SITE TO A LOCATION APPROVED BY THE OWNER'S REPRESENTATIVE.
10. THE CONTRACTOR SHALL INFORM MISS UTILITY OF MARYLAND (1-800-257-7777) AND HOWARD COUNTY 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION OPERATIONS. CERTAIN UTILITIES WITHIN THE VICINITY OF THIS PROJECT AREA ARE SHOWN ON THE PLANS. THE UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATELY LOCATED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND LIGHTING SYSTEMS BEFORE PROCEEDING WITH WORK.
11. REFER TO PLAN FOR SPACING, LAYOUT, AND LOCATION OF STRUCTURES MODIFICATIONS TO EXISTING TREES.
12. UNLESS OTHERWISE SHOWN, ALL EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN LIMITS OF CONSTRUCTION ARE TO REMAIN.
13. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING CONCRETE CURBS, POSTS, SIGNS, AND OTHER ELEMENTS TO REMAIN DURING DEMOLITION. ANY DAMAGE TO PROPERTY CAUSED BY THE CONTRACTOR SHALL BE RESTORED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
14. CONTRACTOR TO PROTECT EXISTING MANHOLES TO REMAIN. ANY MANHOLES, COVERS, OR OTHER EXISTING FEATURES TO REMAIN SHALL BE ADJUSTED TO PROPOSED GRADE AS REQUIRED.
15. CONTRACTOR TO SUBMIT A DEMOLITION PHASING PLAN TO OWNER PRIOR TO COMMENCING DEMOLITION WORK.
16. ASPHALT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT AND CAREFULLY REMOVED TO AVOID DAMAGE TO EXISTING PAVEMENT TO REMAIN. ASPHALT SHALL BE REMOVED ONLY WHEN WORK IS TO PROCEED IMMEDIATELY TO AVOID SLOUGHING OF THE ADJACENT PAVEMENT BASE MATERIAL.
17. WHERE NEW CONCRETE CURB IS CALLED OUT, CONTRACTOR SHALL PROVIDE A SMOOTH AND UNIFORM EDGE AND CAUSE MINIMAL DISTURBANCE TO EXISTING ASPHALT TO REMAIN.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date: 4/22/2018
AS-BUILT DATE: 10/13/2016

NOTE:
1. THERE IS NO STOCKPILE AREA FOR PHASE 4
2. SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/16/2015, 11/20/2014
SDP-13-020

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

ENGINEER'S CERTIFICATION

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Melanie R. Allerton-Brick — 7/16/15
ENGINEER'S SIGNATURE — DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

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7/16/15
SIGNATURE OF DEVELOPER/BUILDER — DATE

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

6/25/15
HOWARD S.C.D. — DATE

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 39022, EXPIRATION DATE: 12/28/15

Melanie R. Allerton-Brick
6/1/15

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 1 C3.18

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	43 OF 71

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DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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Robert Jenkins, VP, Engineering & Construction
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SDP-13-020

N

N 562 850
E 1,356,650

PC STA 168+57.69
PT STA 169+06.00
PC STA 169+20.10
PT STA 169+68.43
PC STA 170+11.79
PT STA 171+35.64
PC STA 171+51.65
PT STA 170+72.52
PRC STA 167+97.49
PT STA 167+44.96
PC STA 166+75.51

31
LOT 12
VILLAGE OF
OAKLAND MILLS
VILLAGE CENTER
PB 15 PN 82

SAW CUT AND TIE EXISTING
TRAIL TO NEW TRAIL

PATHWAY
CONSTRUCTION

EXISTING CURB AND
GUTTER TO REMAIN

ELECTRIC LINE CONDUITS
BELOW GRADE TO FEED
PEDESTRIAN LIGHT UNITS

28
OPEN SPACE LOT 3
VILLAGE OF
OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

MATCHLINE SEE SHEET C3.20 (STA 171+11.21)

GhB

SAW CUT AT NEAREST
JOINT AND TIE EXISTING
SIDEWALK TO NEW TRAIL

PT STA 164+36.84

37
LOT 14
VILLAGE CENTER
PB 15 PN 82

LIMIT OF
RIGHT OF WAY

36
LOT 14
VILLAGE OF OAKLAND MILLS
SECTION 2

LOT 12
M VILLAGE CENTER
PB 15 PN 82

MATCHLINE SEE SHEET C3.18 (STA 160+67.42)

PC STA 161+46.91
PT STA 162+46.16
PC STA 162+73.71

LIMIT OF
RIGHT OF WAY

OPEN SPACE LOT A
VILLAGE OF
OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

28

PIPE SLOPE DRAIN TO
CONVEY DIVERTED WATER
ACROSS DISTURBED AREA.
STABILIZE OUTLET WITH 10'X10'
ROCK OUTLET PROTECTION.

2"G IN COMMON
TRENCH WITH ELEC.

35
OPEN SPACE LOT 13
V O M
VILLAGE CENTER
PB 15 PN 82

36
LOT 14
VILLAGE OF OAKLAND MILLS
SECTION 2

McD

N 562 450
E 1,356,350

TREE PROTECTION FENCING
REFER TO DETAIL 77

ONSITE DA TO DIVERSION FENCE AREA: 0.74 AC
MAX AREA PER 100 LF DIVERSION FENCE: 0.085 AC

SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
GgB	Glenelg loam, 3 to 8 percent slopes	"B"
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	"B"
McD	Manor loam, 15 to 25 percent slopes, very rocky	"B"
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

AGE OF OAKLAND MILLS

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-28-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

ENGINEER'S CERTIFICATION

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Melany Pallister-Brick — 7/16/15
ENGINEER'S SIGNATURE — DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

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7/16/15 — SIGNATURE OF DEVELOPER/BUILDER — DATE

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

9/25/15 — HOWARD S.C.D. — DATE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 2 C3.19

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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\5282 SDP-Blandair Trail\Site Development Plan 4\CAD\Plans\C3.19- E&S PLAN.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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STATE OF MARYLAND — MELANY PALLISTER-BRICK — No. 35022 — PROFESSIONAL ENGINEER

Melany Pallister-Brick — 6/1/15

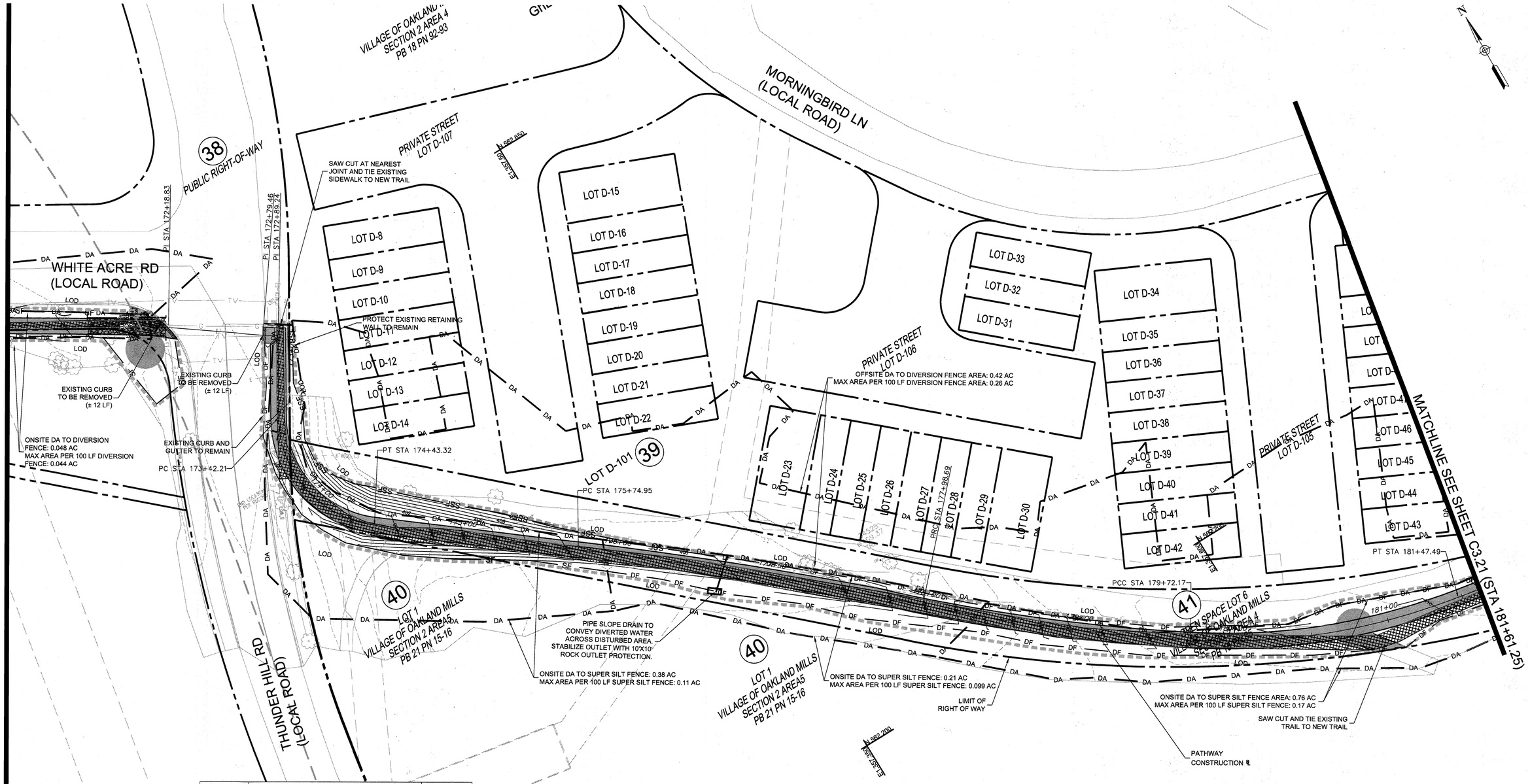
PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	44 OF [illegible]

SDP-13-020



SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
GgB	Glenelg loam, 3 to 8 percent slopes	"B"
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	"B"
McD	Manor loam, 15 to 25 percent slopes, very rocky	"B"
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APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

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Melany R Allerton-Brick — 7/16/15
ENGINEER'S SIGNATURE — DATE

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SIGNATURE OF DEVELOPER/BUILDER — 7/16/15 DATE

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

HOWARD S.C.D. — 6/25/15 DATE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 3 C3.20

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DES. DPB	DRN. AG	CHK. EM

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Melany R Allerton-Brick — STATE OF MARYLAND — MELANY RENEE ALLERTON-BRICK — No. 35522 — REGISTERED PROFESSIONAL ENGINEER — 6/11/15

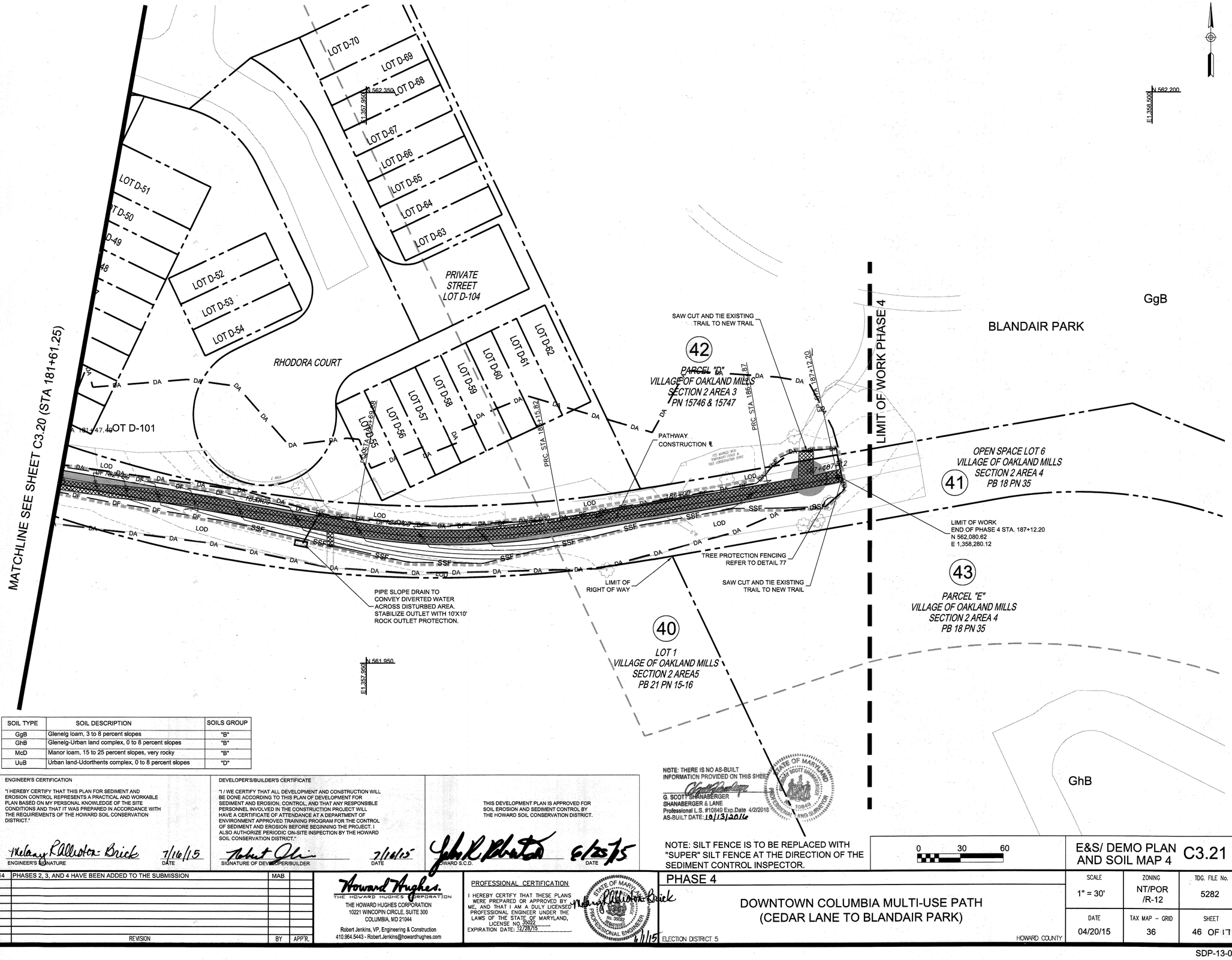
PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	45 OF 71

SDP-13-020



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APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/01/2015, 11/20/2014

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Melany Ralleston-Brick — 7/16/15
ENGINEER'S SIGNATURE — DATE

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Robert Ohrin — 7/16/15
SIGNATURE OF DEVELOPER/BUILDER — DATE

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

John R. Robertson — 6/25/15
HOWARD S.C.D. — DATE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

NOTE: SILT FENCE IS TO BE REPLACED WITH "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

0 30 60

E&S/ DEMO PLAN AND SOIL MAP 4 — C3.21

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Melany Ralleston-Brick — 6/11/15

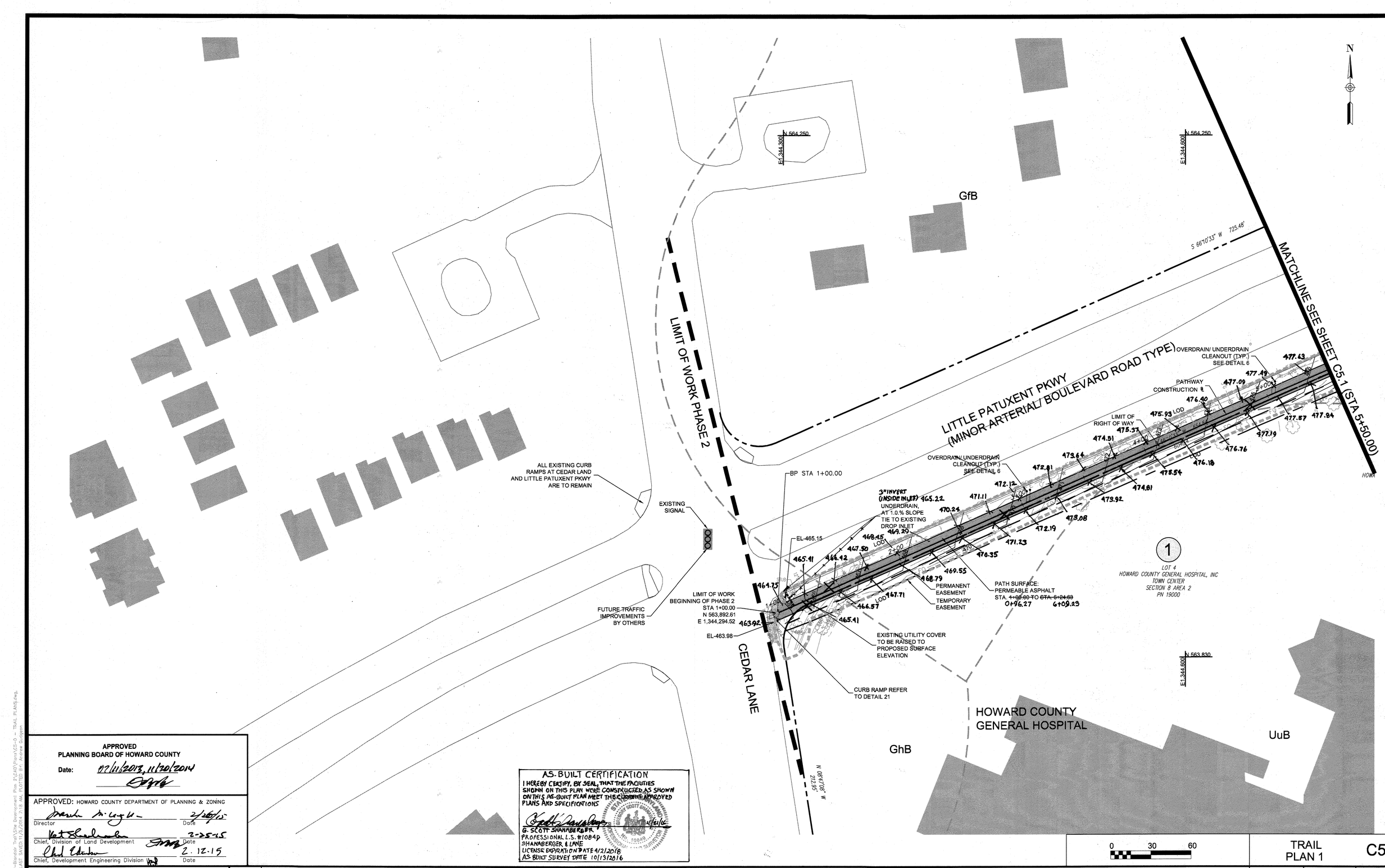
PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	46 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS

G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10849
SHANABERGER & LANE
LICENSE EXPIRATION DATE 4/21/2018
AS-BUILT SURVEY DATE 10/13/2016

0 30 60

TRAIL PLAN 1 — C5.0

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\5282 GDP-Boundary Trail\Site Development Plan 2\CAD\Plans\C5-0 - TRAIL PLANS.dwg

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

12/17/14

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	47 OF 171

SDP-13-020

G:\ACTIVE PROJECTS\5282 GDP-Boundary Trail\Site Development Plan 2\CAD\Plans\C5-0 - TRAIL PLANS.dwg, 11/21/2014 1:28 PM, LAST SAVED:11/5/2014 7:18 AM, PLOTTED BY: Andrew Gudgeon

N

MATCHLINE SEE SHEET C5.2 (STA 15+00.00)

MATCHLINE SEE SHEET C5.0 (STA 5+50.00)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

HOSPITAL DRIVEWAY
(PRIVATE ROAD)

HOWARD COUNTY
GENERAL HOSPITAL

HOWARD COMMUNITY
COLLEGE

GfB

GmB

UuB

N 564,450
E 1,345,000

N 564,000
E 1,345,550

PRC STA 5+59.72

PRC STA 6+83.94

PCC STA 10+80.72

PCC STA 11+42.38

PRC STA 11+63.82

PRC STA 12+15.85

PT STA 12+70.59

PC STA 13+27.08

CURB RAMP REFER TO DETAIL 22

CURB RAMP REFER TO DETAIL 23

CURB RAMP REFER TO DETAIL 23

3" C.O TOP: 476.07

3" C.O TOP: 475.59

OVERDRAIN/ UNDERDRAIN CLEANOUT (TYP.) SEE DETAIL 6

3" INVERT 474.52

PERMANENT EASEMENT

TEMPORARY EASEMENT

EXISTING UTILITY COVER TO BE RAISED TO PROPOSED SURFACE ELEVATION

PATH SURFACE: PERMEABLE ASPHALT
STA. ~~6+70.69~~ TO STA. ~~11+02.79~~
6+85.30 10+85.97

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0% SLOPE

CENTERLINE 4' GRASS SWALE
~~BEGIN PROPOSED GRASS SWALE~~(REFER TO DETAIL 14)
STA 11+79.27 ~~OFF 8.00'~~
12.14'

PATH SURFACE: PERMEABLE ASPHALT
STA. ~~11+40.35~~ TO STA. ~~20+72.14~~
11+56.32 15+00

3" UNDERDRAIN OUTLET TO GRASS SWALE (TYP.), AT 1.0% SLOPE

SWALE UNDERDRAIN TIE IN TO EXISTING MANHOLE/ INLET
3" UD INV 463.00(E)
3" UD INV 463.20(W)

LIMIT OF RIGHT OF WAY

PATHWAY CONSTRUCTION

EX. 40' ROADWAY EASEMENT PB 27 PN 49

EX. ACCESS EASEMENT PB 27 PN 49

EX. WATER & UTILITY EASEMENT PN 9300

EX. 40' ROADWAY EASEMENT PN 3618

S 23°49'27" E 213.22'

213.22'

S 66°10'33" W 65.00'

S 66°10'33" W 389.24'

S 33°39'31" E 187.46'

1 LOT 4
HOWARD COUNTY GENERAL HOSPITAL, INC
TOWN CENTER
SECTION 8 AREA 2
PN 19000

2 PARCEL A
HOWARD COUNTY ACQUISITION CORP
TOWN CENTER
SECTION 3 AREA 3
PB 27 PN 49

3 PARCEL A
HOWARD COUNTY ACQUISITION CORP
TOWN CENTER
SECTION 3 AREA 3
PB 27 PN 49

4 BULK PARCEL B
HOWARD COMMUNITY COLLEGE
TOWN CENTER
SECTION 8 AREA 2
PN 19049

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/14/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE COMPLETE APPROVED PLANS AND SPECIFICATIONS
G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10849
SHANABERGER & LANE
LICENSE EXPIRATION DATE 4/2/2018
AS-BUILT SURVEY DATE: 10/13/2016

0 30 60

TRAIL PLAN 2 C5.1

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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

| DES. DPB | DRN. AG | CHK. EM |

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
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COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 39025
EXPIRATION DATE: 12/28/15
1/29/15

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	48 OF 171

SDP-13-020

GfB

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

HARPERS FARM RD
(MINOR ARTERIAL)

N 564,550
E1,348,000

N 564,550
E1,348,400

N 85°13'41" W
53.23'

MATCHLINE SEE SHEET C5.1 (STA 15+00.00)

MATCHLINE SEE SHEET C5.3 (STA 24+50.00)

3" UNDERDRAIN OUTLET TO GRASS SWALE (TYP.), AT 1.0% SLOPE

PATHWAY CONSTRUCTION ℄

PERMANENT EASEMENT

TEMPORARY EASEMENT

CENTERLINE A GRASS SWALE

END PROPOSED GRASS SWALE (REFER TO DETAIL 14) STA 15+98.45 OFF 8.00' 16+11.25 11.98'

EXISTING UTILITY COVER TO BE RAISED TO PROPOSED SURFACE ELEVATION

PATH SURFACE: PERMEABLE ASPHALT STA. 11+46.35 TO STA. 20+72.14

BEGIN PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 12) STA 18+35.41 OFF 8.00' AND FENCING(REFER TO DETAIL 85)

PT STA 17+46.72

PC STA 17+92.67

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0% SLOPE

PT STA 18+35.41

PC STA 18+98.61

HIGH POINT STA 19+00.00 ELEV. 471.70

PT STA 19+15.19

LIMIT OF RIGHT OF WAY

COORDINATE WITH HOWARD COUNTY FOR BUS STOP RELOCATION DURING CONSTRUCTION

ENHANCED BUS STOP/ SHELTER REFER TO DETAIL THIS SHEET

EXISTING HOWARD TRANSIT BUS STOP/ SHELTER

PT STA 21+02.67

PC STA 20+43.69

END PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 12) STA 19+82.90 OFF 8.00' AND FENCING(REFER TO DETAIL 85)

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0% SLOPE PT STA 20+72.79

4" INV: 465.68

PROPOSED SIDEWALK REFER TO DETAIL 29

REFER TO SHEET 135, 145 FOR INTERSECTION DETAIL

EXISTING SIGNAL

PROPOSED NEW CURB INLET CONNECT TO EXISTING PIPE

EXISTING FIBER OPTIC LINE TO BE RE-ROUTED AROUND PROPOSED CURB INLET

EXTEND EXISTING CULVERT REFER TO SHEET 141 FOR SHA STANDARD DETAILS

PROPOSED MANHOLE REFER TO SHEET 141 FOR SHA STANDARD DETAILS

PROPOSED CONCRETE HEAD WALL REFER TO SHEET 141 FOR SHA STANDARD DETAILS

PROPOSED FENCE REFER TO DETAIL 85 FOR STANDARD DETAILS

PATH SURFACE: PERMEABLE ASPHALT STA. 22+07.29 TO STA. 32+02.26

PC STA 22+68.53

PCC STA 23+84.56

PRC STA 22+91.71

BEGIN PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 12) STA 22+83.44 OFF 8.00' AND FENCING(REFER TO DETAIL 85)

HOWARD COMMUNITY COLLEGE

4 BULK PARCEL B HOWARD COMMUNITY COLLEGE TOWN CENTER SECTION 8 AREA 2 PN 19049

CAMPUS DRIVE (PRIVATE ROAD)

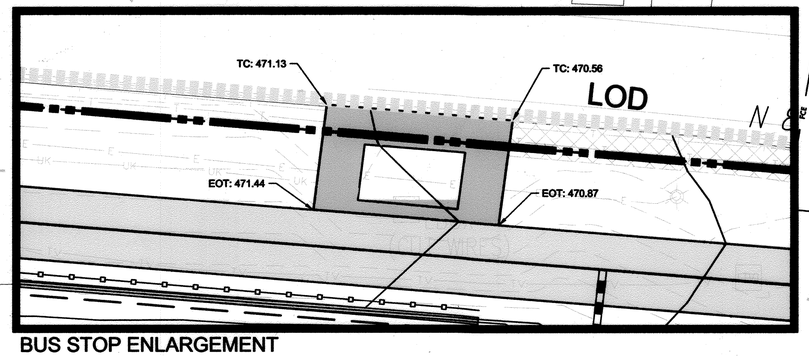
EX. FOREST CONSERVATION EASEMENT AREA "F" PN 6725

GmB

GbC

GbD

BUS STOP ENLARGEMENT



0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS
G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10849
SHANABERGER & LANE
LICENSE EXPIRATION DATE 4/2/2018
AS-BUILT SURVEY DATE: 10/13/2016

TooleDesignGroup
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PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15
STATE OF MARYLAND — No. 35022 — PROFESSIONAL ENGINEER
1/24/15

PHASE 2

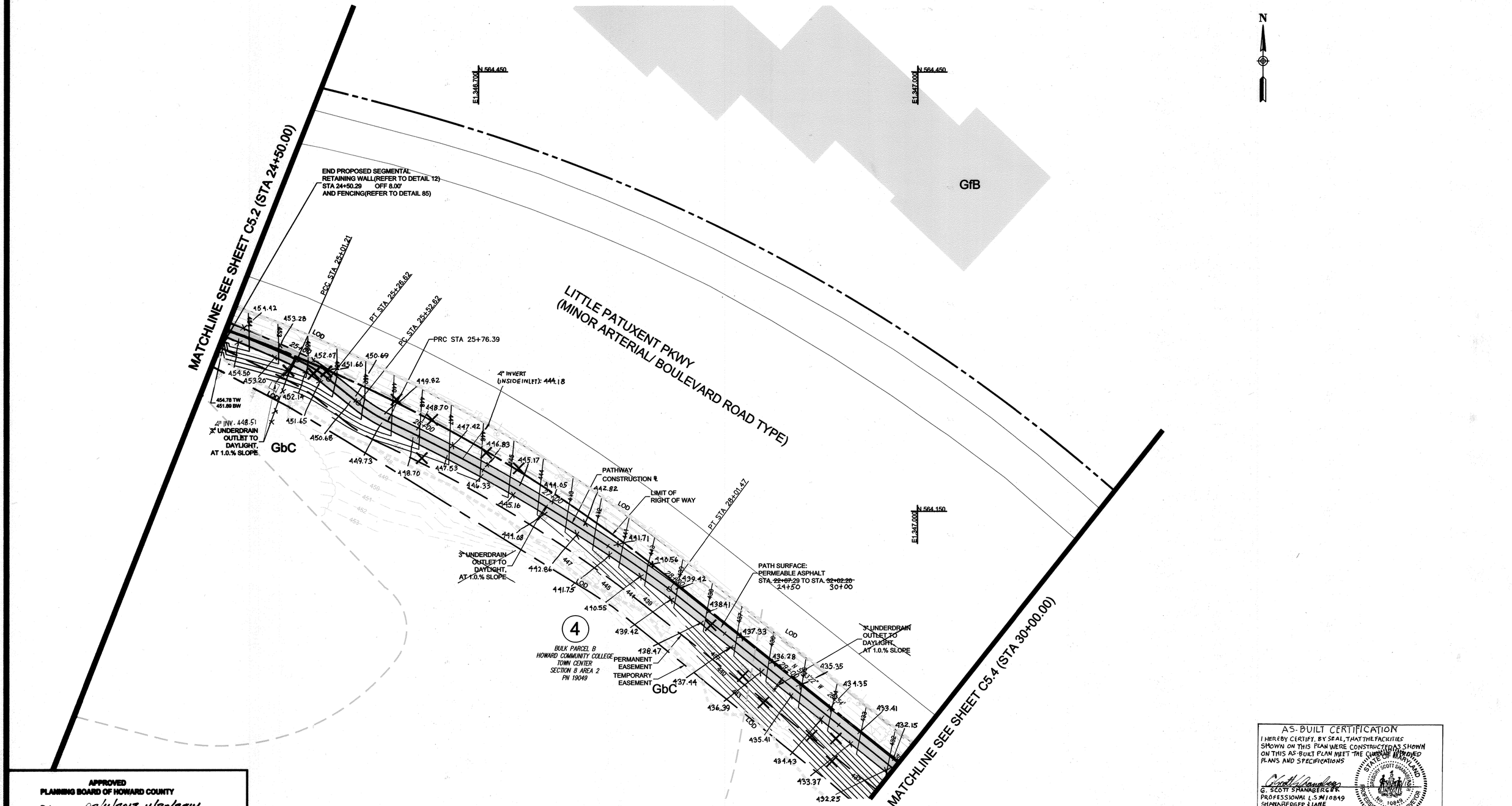
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	49 OF 171

TRAIL PLAN 3 — C5.2

SDP-13-020



AS-BUILT CERTIFICATION

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G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10849
SHANABERGER & LANE
LICENSE EXPIRATION DATE 4/21/2016
AS-BUILT SURVEY DATE: 10/13/2014

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 7.25.15
Chief, Development Engineering Division — Date 2.12.15

0 30 60

TRAIL PLAN 4 — C5.3

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PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB | DRN. AG | CHK. EM

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — ROBERT P. JENKINS — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

11/24/14

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	50 OF 171

SDP-13-020

MATCHLINE SEE SHEET C5.3 (STA 30+00.00)

29+98.48
L5.66

PC STA 30+99.04

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

FACULTY DR
(PRIVATE ROAD)

GbB

GfB

BaA

GfC

N 563,900
E1,347,250

N 563,900
E1,347,750

3' UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0% SLOPE

PATH SURFACE:
PERMEABLE ASPHALT
STA. ~~82+67.29~~ TO STA. ~~32+02.20~~
30+00 31+84.88

3' INVERT (@FACE CURB): 422.24

CURB RAMP REFER TO DETAIL 24

CURB RAMP REFER TO DETAIL 24

APPROX. LOCATION 4" x 2" REDUCER

418.65 TW
415.65 BW

STA AHEAD = 233+52.52
STA BACK = 33+52.52

BEGIN PROPOSED SEGMENTAL RETAINING WALL
(REFER TO DETRAIL 12)
STA AHEAD 33+52.52
STA BACK 233+52.52 OFF 8.00'
STA WALL 0+00
AND FENCING (REFER TO DETAIL 85)

3' UNDERDRAIN OUTLET TO DAYLIGHT AT 1.0.% SLOPE

33+18.17 TO 34+31.15
234+31.15 TO 237+52.35

PATH SURFACE:
PERMEABLE ASPHALT
STA. ~~82+88.35~~ TO ~~83+52.22~~
STA. ~~232+52.52~~ TO ~~411+18.05~~

PT STA 234+29.05
PT STA 234+66.31
PC STA 234+85.58
PT STA 234+92.74
PT STA 235+09.03
PC STA 235+17.95
PT STA 235+21.95
PC STA 235+44.18
PT STA 235+54.60

END PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 12)
STA 35+90.41 OFF 8.00'
AND FENCING(REFER TO DETAIL 85)

STA AHEAD = 38+94.00
STA BACK = 239+00.00

PC STA 236+39.98
PT STA 236+52.78
PC STA 236+44.98
PC STA 238+05.82
PC STA 237+69.87
PT STA 237+71.91
PT STA 235+67.35
PT STA 238+09.66
PC STA 238+19.56
PT STA 238+62.15
PC STA 238+63.75

OVERDRAIN/ UNDERDRAIN CLEANOUT (TYP.) SEE DETAIL 6

OVERDRAIN/ UNDERDRAIN CLEANOUT (TYP.) SEE DETAIL 6

EXISTING UTILITY COVER TO BE RAISED TO PROPOSED SURFACE ELEVATION

4
BULK PARCEL B
HOWARD COMMUNITY COLLEGE
TOWN CENTER
SECTION 8 AREA 2
PN 19049

PARTIAL FOREST STAND DELINEATION IS REQUIRED AND HAS BEEN SUBMITTED SEPARATELY. REQUIRED MITIGATION IS SHOWN ON SHEET 73.

BEGIN PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 11)
STA 33+93.55 OFF 14.00'

BEGIN SEGMENTAL RETAINING WALL (REFER TO DETAIL 11)
STA 233+93.55 OFF 14.00'

EXISTING TEMPORARY EASEMENT

EXISTING PERMANENT EASEMENT

EX. PUBLIC ROAD DRAINAGE & UTILITY EASEMENT PN 19049

EX. 20' DRAINAGE & UTILITY EASEMENT PB 13 PN 94

END PROPOSED SEGMENTAL RETAINING WALL (REFER TO DETAIL 12)
BEGIN PROPOSED CONCRETE RETAINING WALL (SEE SHEET C11.26)
STAT 234+60.75 OFF 8.00'
STAT WALL 1+08.23

LIMIT OF RIGHT OF WAY

END PROPOSED RETAINING WALL (REFER TO DETAIL 11)
STA 235+22 OFF 8.00'
STA WALL 169.48

5
OPEN SPACE LOT 1
HOWARD RESEARCH AND DEVELOPMENT
COLUMBIA TOWN CENTER
SECTION 3 AREA 3
PN 13869

END PROPOSED CONCRETE RETAINING WALL (SEE SHEET C11.26)
STA 236+29.43 OFF 8.00'
STA WALL 2+76.91

3' UNDERDRAIN INVERT: 413.01
TO UNDERDRAIN OUTLET TO DAYLIGHT AT 1.0.% SLOPE

PROPOSED TEMPORARY EASEMENT

PROPOSED TEMPORARY EASEMENT

PATHWAY CONSTRUCTION IS

PATH SURFACE:
PERMEABLE ASPHALT
STA. ~~238+05.82~~ TO ~~239+00~~
STA. ~~38+00~~ TO ~~41+18.65~~

FIRESTONE COMPLETE AUTOCARE STORE

238+30.35 TO 238+63.75
38+63.75 TO 39+46

7
LOT C-2
PEVERLEY GEORGE C III
TOWN CENTER
SECTION 6 AREA 2
PB 28 PN 47

FUTURE SIGNALIZED INTERSECTION IMPROVEMENTS BY OTHERS

6
CURB RAMP REFER TO DETAIL 25

EX. 30' INGRESS-EGRESS EASEMENT PB 28 PN 47

EX. FOREST CONSERVATION EASEMENT AREA 'D' PN 16125

N 03°01'16" E 131.36'

N 37°19'14" W 529.10'

N 81°58'41" W 290.00'

MATCHLINE SEE SHEET C5.5 (STA 39+50.00)

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 7/11/13, 11 Pages

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 9-15-15

Chief, Division of Land Development — Date 9-15-15

Chief, Development Engineering Division — Date 9/11/15

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS

G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10849
SHANABERGER LAME
LICENSE EXPIRATION DATE 4/2/2018
AS-BUILT SURVEY DATE: 10/13/2016

0 30 60

TRAIL PLAN 5 — C5.4

TooleDesignGroup
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PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

O:\ACTIVE PROJECTS\5282 SCP-Blandair Trail\Site Development Plan 2\CAD\Plans\C5-5 - TRAIL PLANS.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
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9/11/15

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/25/15	36	51 OF 171

SDP-13-020

O:\ACTIVE PROJECTS\5282 SCP-Blandair Trail\Site Development Plan 2\CAD\Plans\C5-5 - TRAIL PLANS.dwg, 9/11/2015 8:53:14 AM, EST, BARRY MOYER

MATCHLINE SEE SHEET C5.4 (STA 39+50.00)

N 563,900
E1,348,200

BaA

N 86°28'41" W 281.33'

PC STA 39+88.50

OVERDRAIN/ UNDERDRAIN CLEANOUT (TYP.) SEE DETAIL 6

CURB RAMP REFER TO DETAIL 26

407.94 406.90 405.93 404.79 403.67 402.59 401.48 406.21

408.14 407.15 406.18 405.03 403.96 402.73 401.50 406.26

PATH SURFACE: PERMEABLE ASPHALT STA. ~~50+01.48~~ TO ~~41+48.65~~ 39+46 41+35.10

61.73'

397.83 396.75 395.60 394.76 393.82 392.97 392.55 392.19 391.91 391.68 391.46 391.34

397.90 396.80 395.70 394.78 394.00 393.14 392.51 392.18 392.00 391.75 391.61 391.51

EXISTING UTILITY COVER TO BE RAISED TO PROPOSED SURFACE ELEVATION

LIMIT OF RIGHT OF WAY

OVERDRAIN/ UNDERDRAIN CLEANOUT (TYP.) SEE DETAIL 6

PATH SURFACE: PERMEABLE ASPHALT STA. ~~41+04.28~~ TO ~~48+47.55~~ 41+02.61 TO 45+94 346+00 TO 348+46.39

42+00 43+00 44+00 45+00 346+00

PERMANENT EASEMENT

TEMPORARY EASEMENT

391.66 TW 389.60 BW

BEGIN PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 12) STA 44+78.32 OFF 8.00' AND FENCING(REFER TO DETAIL 85)

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0% SLOPE

3" INVERT (INSIDE INLET) 389.25

LITTLE PATUXENT PKWY (MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

EXISTING UTILITY COVER TO BE RAISED TO PROPOSED SURFACE ELEVATION

391.56 391.79 392.11 392.52

PATHWAY CONSTRUCTION ¶

393.13 393.76 394.53 394.93 395.65

392.40 TW 391.93 BW 392.80 392.24 393.36 393.95

394.74 395.07 395.68 396.23 396.89 397.59 398.18 398.63 398.90 399.22

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0% SLOPE

STREAM BUFFER

EX. 20' DRAINAGE & UTILITY EASEMENT PB 13 PN 95

END PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 12) STA 45+75.47 OFF 8.00' AND FENCING(REFER TO DETAIL 85)

STA AHEAD = 346+00.00
STA BACK = 45+94.00

PT STA 346+58.28

PROPOSED FENCE SEE DETAIL 85

MATCH EXISTING CURB AT STA 346+78.69

PC STA 346+93.78

PT STA 347+05.83

PC STA 347+21.97

PT STA 347+36.18

75FT EXTENSION OF EXISTING TURN LANE STARTING AT STA 348+02.41

N 563,600 E1,348,700

PC STA 347+88.89

PT STA 347+98.12

PC STA 348+18.84

PT STA 348+38.75

PC STA 348+58.66

EXISTING HOWARD TRANSIT BUS STOP TO BE RELOCATED. COORDINATE WITH HOWARD COUNTY.

NEW CURB AND GUTTER REFER TO DETAIL 27

3" INVERT (@ FACE CURB) 399.97

R=5'

END TRAIL TRANSITION FROM 10FT TO 8FT 397.48 AT STA 347+28

BEGIN TRAIL TRANSITION FROM 8FT to 10FT STATING AT STA 347+90

END TRAIL TRANSITION FROM 8FT TO 10FT AT STA 348+33

BEGIN TRAIL TRANSITION FROM 10FT to 8FT STARTING AT STA 346+87

CURB RAMP REFER TO DETAIL 27

N 70°28'41" W 432.45'

N 70°28'07" W

EX. 20' SEWER EASEMENT PB 15 PN 65

MATCHLINE SEE SHEET C5.6 (STA 349+00.00)

N 86°28'41" W 281.33'

ZIPS CLEANERS

7 LOT C-2 PEVERLEY GEORGE C III TOWN CENTER SECTION 6 AREA 2 PB 28 PN 47

8 PARCEL D BJG LAND INC TOWN CENTER SECTION 6 AREA 2 PB 18 PN 75

9 OPEN SPACE LOT 1 HOWARD RESEARCH AND DEVELOPMENT COLUMBIA TOWN CENTER SECTION 3 AREA 3 PN 13869

N 08°01'19" E 149.37'

10.00'

N 08°01'19" E 98.00'

S 81°58'41" E 400.00'

S 81°58'41" E 173.00'

152.47'

S 38°41' W 534.21'

GfB

BaA

MaD

FLOOD PLAIN

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16

Chief, Division of Land Development — Date 3-22-16

Chief, Development Engineering Division — Date 3-18-16

NOTES:

1. SDP 13-020 INCLUDES A NEW EASEMENT FOR THE CONSTRUCTION, USE AND MAINTENANCE OF THE MULTIUSE PATHWAY TO BE LOCATED ON PARCEL 8 (EXXON PROPERTY). FOR ADDITIONAL INFORMATION REGARDING PARCEL 8 SEE SDP 70-001.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE OVERALL APPROVED PLANS AND SPECIFICATIONS

STATE OF MARYLAND — GEORGE SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10849
SHANABERGER & LANE
LICENSE EXPIRATION DATE 4/2/2018
AS-BUILT SURVEY DATE: 10/13/2016

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 600 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

K:\2013\13020 SDP-Elevated Trail\Site Development Plan 2\DGN\Plans\13-4 - TRAIL PLAN.dwg | DES. DPB | DRN. AG | CHK. EM

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 3/4/16

PHASE 2

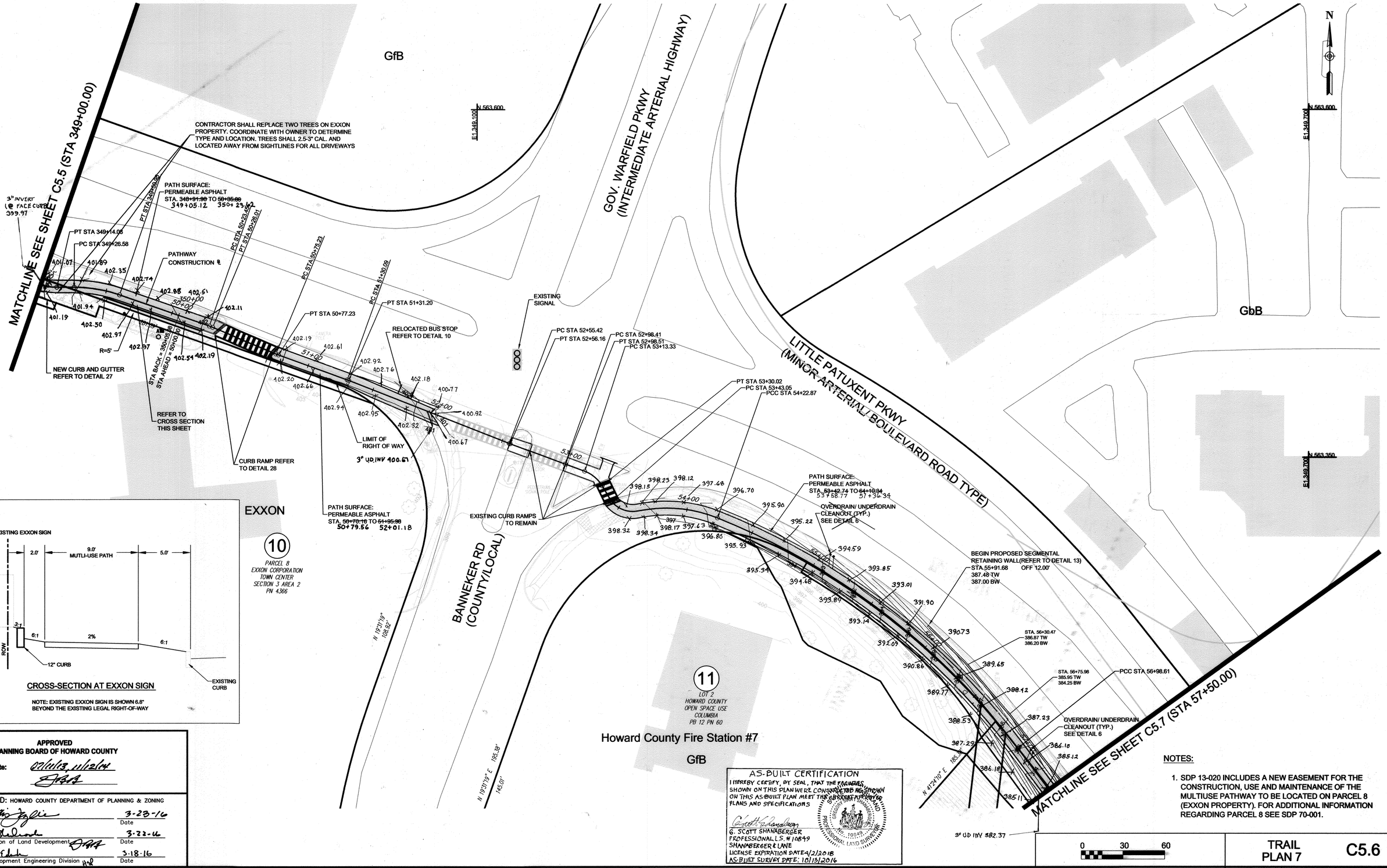
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

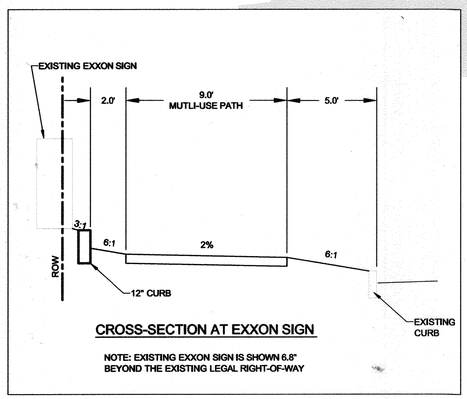
ELECTION DISTRICT 5 — HOWARD COUNTY

TRAIL PLAN 6 — C5.5

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
03/07/16	36	52 OF 171

SDP-13-020





CROSS-SECTION AT EXXON SIGN

NOTE: EXISTING EXXON SIGN IS SHOWN 6.8' BEYOND THE EXISTING LEGAL RIGHT-OF-WAY

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	3-23-16 Date
Chief, Division of Land Development	3-22-16 Date
Chief, Development Engineering Division	3-18-16 Date

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE GREATEST EXTENT OF THE PLANS AND SPECIFICATIONS

G. SCOTT SHANABERGER
PROFESSIONAL L.S. # 10849
SHANABERGER & LANE
LICENSE EXPIRATION DATE: 4/2/2018
AS-BUILT SURVEY DATE: 10/13/2016

NOTES:

1. SDP 13-020 INCLUDES A NEW EASEMENT FOR THE CONSTRUCTION, USE AND MAINTENANCE OF THE MULTIUSE PATHWAY TO BE LOCATED ON PARCEL 8 (EXXON PROPERTY). FOR ADDITIONAL INFORMATION REGARDING PARCEL 8 SEE SDP 70-001.

0 30 60

TRAIL PLAN 7 — C5.6

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
02/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — ROBERT MARK BLANDAIR — No. 35022 — REGISTERED PROFESSIONAL ENGINEER
3/4/16

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
03/07/16	36	53 OF 171

SDP-13-020

MATCHLINE SEE SHEET C5.6 (STA 57+50.00)

STA. 57+47.50
381.98 TW
380.00 BW

END PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 13)
STA 58+11.04 OFF 12.00
377.37 TW
377.00 BW

PCC STA 58+84.44

PROPOSED NEW DRAINAGE PIPE
INLET INVERT 368.64
OUTLET INVERT 368.00
PIPE LENGTH 123'

PT STA 59+58.60

3" UNDERDRAIN
OUTLET TO DAYLIGHT (TYP.),
AT 1.0% SLOPE

PATH SURFACE:
PERMEABLE ASPHALT
STA. ~~53+42.74~~ TO ~~64+10.34~~
60+26.09 63+79.19

LIMIT OF RIGHT OF WAY

PATHWAY CONSTRUCTION ℄

PC STA 61+16.27

PT STA 62+46.59

3" UNDERDRAIN
OUTLET TO DAYLIGHT (TYP.),
AT 1.0% SLOPE

PERMANENT EASEMENT

TEMPORARY EASEMENT

BEGIN PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 13)
STA 62+47.43 OFF 14.00'
357.00 TW
356.73 BW

BEGIN PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 13)
STA 62+52.34 OFF 19.00'
355.00 TW
354.67 BW

END PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 13)
STA 63+22.56 OFF 17.00'
355.00 TW
354.53 BW

END PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL 13)
STA 63+24.02 OFF 17.00'
357.00 TW
356.64 BW

3" UD INV 359.04

REFER TO SHEET 137, 146
FOR INTERSECTION DETAIL

EXISTING SIGNAL

PT STA 64+06.68

LIMIT OF WORK
END OF PHASE 2 STA. 65+16.58=
BEGINNING OF PHASE 1 STA. 65+32.89
N 562,576.38
E 1,350,064.55

LIMIT OF WORK PHASE 2

LIMIT OF WORK PHASE 1

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

BROKEN LAND PKWY
(INTERMEDIATE ARTERIAL HIGHWAY)

N 563,050
E 1,350,200

N 562,852
E 1,350,200

PARCEL 7-A
TOWN CENTER
SECTION 3 AREA 2
PB 30 PN 17

PARCEL B
COLUMBIA TOWN CENTER
SECTION 3 AREA 2
PN 10724

EX. PUBLIC DRAINAGE & UTILITY EASEMENT PN 10724

20' STORM DRAINAGE & UTILITY EASEMENT PB 15 PN 85

EX. WATER MAIN EASEMENT PB 17 PN 17

EX. STORM DRAIN EASEMENT PB 12 PN 60

OPEN SPACE LOT 12
COLUMBIA ASSOCIATION
COLUMBIA TOWN CENTER
SECTION 3 AREA 2
PN 19724

GbC
GbB
UuB
MaD
GfB

S 83°21'07" E 127.68'
S 06°38'53" W 23.50'
S 83°21'07" E 30.00'
S 55°13'39" E 66.28'
S 22°37'39" E 43.69'
S 55°13'39" E 180.00'
S 02°02'21" E 220.00'
S 55°13'39" E 137.13'
S 09°57'43" W 103.02'

0 30 60

05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB
DATE	REVISION	BY / APP'R.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16
Chief, Division of Land Development — Date 3-22-16
Chief, Development Engineering Division — Date 3.18.16

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEETING APPROVED PLANS AND SPECIFICATIONS.
B. SCOTT SHANABERGER
PROFESSIONAL L.S. NO. 10849
SHANABERGER BLANE
LICENSE EXPIRATION DATE 4/1/2018
AS-BUILT SURVEY DATE 10/13/2016

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 39022
EXPIRATION DATE: 12/28/17

ToolDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

I:\2014\11202 027-Blandair Trail\Site Development Plan 2\[C5-8 - TRAIL PLAN8.dwg] DES. DPB DRN. AG CHK. EM

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PHASE 2

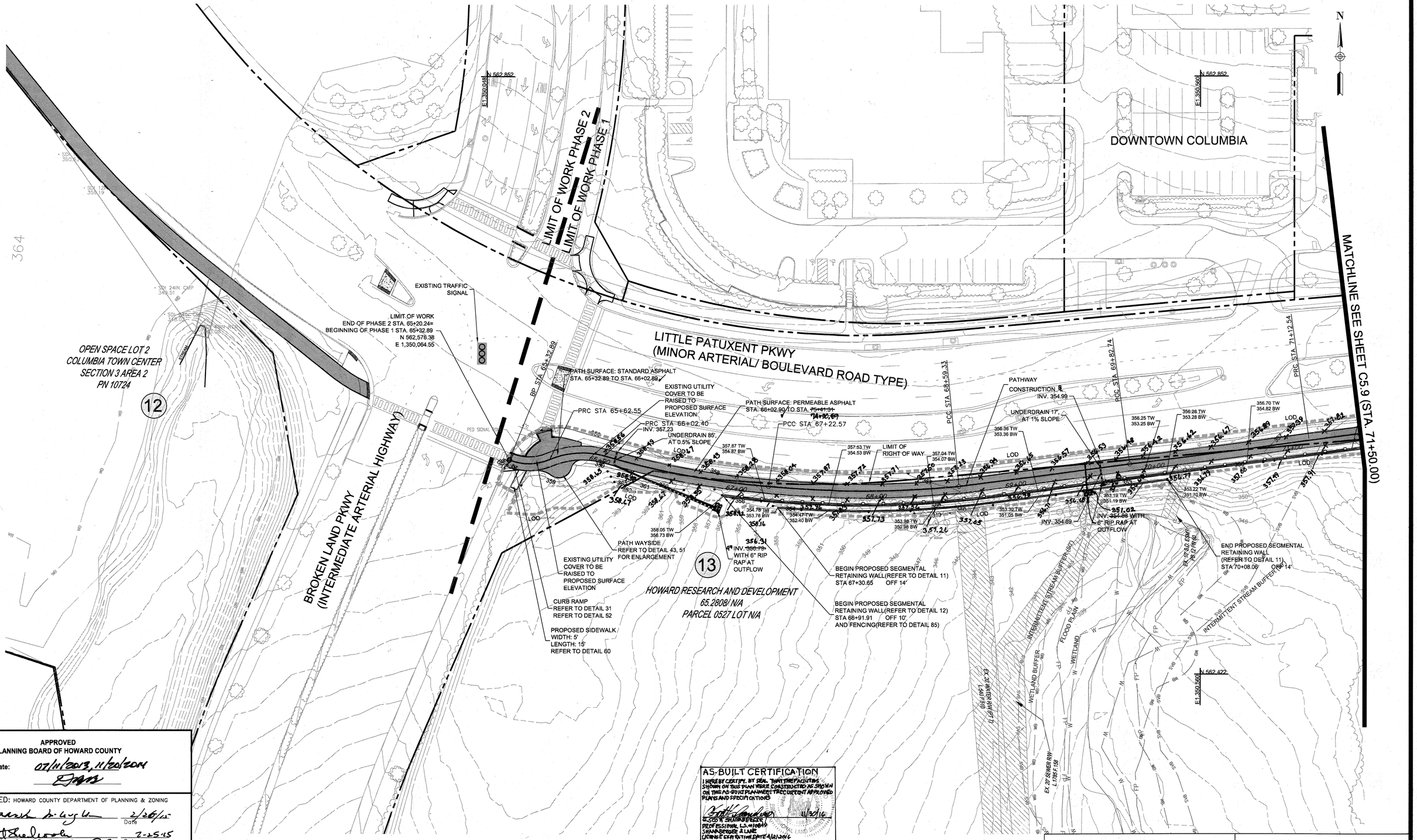
DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

TRAIL PLAN 8 — C5.7

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
03/07/16	36	54 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS
G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10849
SHANABERGER & LANE
LICENSE EXPIRATION DATE 4/21/2016
AS-BUILT SURVEY DATES: 10/20/14
11/30/16

0 30 60

TRAIL PLAN 1 — C5.8

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB | DRN. AG | CHK. EM

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15
12/17/14

PHASE 1
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)
ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	55 OF 71

SDP-13-020

MATCHLINE SEE SHEET C5.8 (STA. 71+50.00)

MATCHLINE SEE SHEET C5.10 (STA. 80+50.00)

N 562 852
E 1,350,776

N 562 852
E 1,351,248

MALL ACCESS RD
(PRIVATE ROAD)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

EXISTING TRAFFIC SIGNAL

CURB RAMPS REFER TO DETAIL 32 (R4.05 MODIFIED)

POC STA 72+35.18

PT STA 74+82.83

POC STA 75+67.11

PRC STA 77+30.56

PATHWAY CONSTRUCTION

LIMIT OF RIGHT OF WAY

UNDERDRAIN 12" AT 1% SLOPE

PATH SURFACE: STANDARD ASPHALT
STA. ~~76+41.32~~ 74+98.89 TO STA. ~~78+11.06~~ 75+66.89

PATH SURFACE: PERMEABLE ASPHALT
STA. ~~78+11.37~~ 75+66.89 TO STA. ~~85+04.05~~ 85+97.89

LOD

357.84 TW
355.52 BW

358.58 TW
357.08 BW

INV. 362.84
4" INV. 362.78 WITH 6" RIP RAP AT OUTFLOW

RIPRAP

END PROPOSED SEGMENTAL RETAINING WALL(REFER TO DETAIL)
STA 71+83.32 OFF 10'
AND FENCING(REFER TO DETAIL 85)

EX. 8" WATER (PART 1)
L 686' +/-

EX. 8" WATER R/W (PARCEL & PT 1)
L 477' +/- 803

COLUMBIA ASSOCIATION, INC.
PARCEL 0293 LOT 9B S 1 1.134A

(14)

(13)

HOWARD RESEARCH AND DEVELOPMENT
65/2808/ N/A
PARCEL 0527 LOT N/A

REFER TO ENLARGEMENT A SHEET C5.9

TRAFFIC SIGNAL CABINET TO BE RELOCATED BY OTHERS

UTILITIES TO BE RELOCATED BY OTHERS
PATH TO BE WIDENED TO 10' WIDTH WHEN THE TRAFFIC SIGNAL CABINET IS RELOCATED

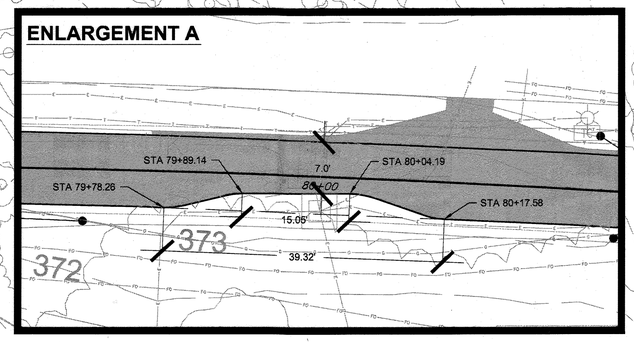
SYMPHONY WOODS PARK
(BY OTHERS)
FDC-DC-MSW-1

(15)

COLUMBIA ASSOCIATION, INC.
PARCEL 0452 LOT 23 36,2326 AR
PLAT NO. 13535 & 13536
COLUMBIA TOWN CENTER
SECTION 1

N 562 422
E 1,351,488

ENLARGEMENT A



AS-BUILT CERTIFICATION

I HEREBY CERTIFY BY SEAL THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS

11/30/16

S. SCOTT SHANKBERGER II
PROFESSIONAL L.S. #10849
SHANKBERGER & LANE
LICENSE EXPIRATION DATE: 4/1/2016
AS-BUILT SURVEY DATE: 11/15/2014

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: ~~07/11/2013~~, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date: ~~2/25/15~~

Chief, Division of Land Development — Date: 2-25-15

Chief, Development Engineering Division — Date: 2.12.15

0 30 60

TRAIL PLAN 2 — C5.9

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

N:\CIVIL PROJECTS\282 CIP - Bender Ind\Site Development Plan\282DP\CAD\Sheet Ind\Sheet Plan\C5-1 - SiteSheetPlan.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION

THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP. Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

2/17/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	56 OF 111

SDP-13-020

D:\ACTIVE PROJECTS\282 CIP - Bender Ind\Site Development Plan\282DP\CAD\Sheet Ind\Sheet Plan\C5-1 - SiteSheetPlan.dwg

MATCHLINE SEE SHEET C5.9 (STA. 80+50.00)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

PATH SURFACE: PERMEABLE ASPHALT
STA. ~~76+11.97~~ TO STA. ~~86+94.68~~
PATHWAY ~~75+00.00 TO 85+97.07~~
CONSTRUCTION ℄

PCC STA. 81+89.42

LOD

LIMIT OF RIGHT OF WAY

COLUMBIA ASSOCIATION, INC.
PARCEL 0293 LOT 9B S 1 1,134A

14

PATH SURFACE: STANDARD ASPHALT
STA. 85+94.69 TO STA. 86+44.92

UNDERDRAIN 25'
AT 1% SLOPE
EX. 10' S.D. ESMT
PB 12 PN 64
4" INV. 356.52±
INV. 356.09 WITH
6" RIP RAP AT
OUTFLOW

INV. 356.90

PT STA 85+90.97

PCC STA 85+85.71

PC STA 85+91.75

PT STA 86+20.87

PI STA 86+44.66

EXISTING TRAFFIC SIGNAL

REFER TO SHEET 139, 148
FOR INTERSECTION DETAIL

PCC STA 87+12.90

EXISTING HOWARD TRANSIT BUS STOP/ SHELTER

CURB RAMP REFER
TO SHEET DETAIL 35

EXISTING UTILITY COVER TO BE ADJUSTED TO PROPOSED SURFACE ELEVATION

PRC STA 87+38.04

PATH WAYSIDE
REFER TO DETAIL 44, 52
FOR ENLARGEMENT

17

20

PATH SURFACE: STANDARD ASPHALT
STA. 87+06.84 TO STA. 92+28.58

16

HOWARD COUNTY MARYLAND
LOT 6 128 A PARCEL 0389

S ENTRANCE RD
(COUNTY LOCAL ROAD)

TOWN CENTER ST A3 ROUTE 29
PARCEL 0389 LOT 3

SHA PID LOT 3 1128

LIMIT OF
RIGHT OF WAY

PROPOSED SIDEWALK
WIDTH: 6'
LENGTH: 60'
REFER TO DETAIL 33

PATHWAY
CONSTRUCTION ℄

15

SYMPHONY WOODS PARK
(BY OTHERS)
FDC-DC-MSW-1

15 COLUMBIA ASSOCIATION, INC.
PARCEL 0452 LOT 23 36.2326 AR
PLAT NO. 13535 & 13536
COLUMBIA TOWN CENTER
SECTION 1

COUNTY
LIBRARY

HOWARD COUNTY MARYLAND
IMPS LOT 5.32166
10375 LITTLE PATUXENT PKWY
PARCEL 0389 LOT 5

N 562,852
E 351,758

N 562,852
E 352,488

N 562,422
E 352,258

MATCHLINE SEE SHEET C5.11 (STA. 89+50.00)

N

0 30 60

TRAIL PLAN 3 — C5.10

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-17-15

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN AND MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS

E. SCOTT SHANDEROFF
PROFESSIONAL L.S. # 10849
SHANDEROFF & LOWE
LICENSE EXPIRATION DATE: 6/1/2016
AS-BUILT SURVEY DATE: 11/25/2014

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

| DES. DPB | DRN. AG | CHK. EM |

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 10/28/15

11/7/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	57 OF 171

SDP-13-020

O:\ACTIVE PROJECTS\5282 CP - Blandair Trail\Site Development Plan\DESIGN\CAD\Shifted Trail\Shifted Plans\C5-8 - ShiftedTrailPlns.dwg, PLOTTED: 11/7/2014 12:48 PM by Robert Jenkins, Civil 3D Version: 2014.0 (Build 9.0.0.1706) for Letter (8.50in...

MATCHLINE SEE SHEET C5.10 (STA. 89+50.00)

N

PATH SURFACE: STANDARD ASPHALT
STA. 87+06.84 TO STA. 92+28.58

PATHWAY CONSTRUCTION

PT STA 90+97.04

PCI STA 91+46.13

LIMIT OF RIGHT OF WAY

CURB RAMPS REFER TO DETAIL 34

EP STA 92+28.58

EXISTING UTILITY COVER TO BE ADJUSTED TO PROPOSED SURFACE ELEVATION

EXISTING UTILITY COVER TO BE ADJUSTED TO PROPOSED SURFACE ELEVATION

LIMIT OF WORK PHASE 1

LIMIT OF WORK PHASE 3

LIMIT OF WORK
END OF PHASE 1 STA. 92+28.58=
BEGINNING OF PHASE 3 STA. 92+28.58
N 562,104.95
E 1,352,386.81

N 562,185
E 1,351,998

N 562,185
E 1,352,687

N 562,055
E 1,352,687

18

API COLUMBIA TOWN CENTER, LLC
LOT 2 S1 AR 3
TOWN CENTER LITTLE PATUXENT PKWY
PARCEL 0389 LOT N/A

SWIFT STREAM PL
(PRIVATE ROAD)

20

SYMPHONY WOODS DRIVE

S ENTRANCE RD
(COUNTY / LOCAL ROAD)

19

HOWARD RESEARCH AND
DEVELOPMENT LOT 2 S J A R 3
TOWN CENTER ROUTE 29
PARCEL 0389 LOT 2

0 30 60

TRAIL PLAN 4

C5.11

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/20/15

Chief, Division of Land Development — Date 2/20/15

Chief, Development Engineering Division — Date 2.25.15

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
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COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
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PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

12/7/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	58 OF 71

SDP-13-020

Q:\ACTIVE PROJECTS\5282 GDP-Blandair Trail\Site Development Plan\SDP13-020\Sht\Sht Trail\Sht\Trail Plans\C5.11-Sht 4 - ShtTrailPlan4Pltrs.dwg, 12/7/2014 10:48:46 AM, USER: SAMSUNG, PLOTTED BY: Andrea Gregoire

MATCHLINE SEE SHEET C5.13 (STA 104+50.00)

N

LIMIT OF WORK
END OF PHASE 1 STA. 92+28.58=
BEGINNING OF PHASE 3 STA. 92+28.58
N 562,104.95
E 1,352,386.81

LIMIT OF WORK PHASE 1
LIMIT OF WORK PHASE 3

PATH SURFACE: STANDARD ASPHALT
STA. 92+28.58 TO STA. 93+08.18

SWIFT STREAM PL
(PRIVATE ROAD)

CURB RAMPS REFER
TO DETAIL 37

SYMPHONY
WOODS
DRIVE

PATH SURFACE: STANDARD ASPHALT
STA. 94+08.07 TO STA. 96+00.00

S ENTRANCE RD
(COUNTY/LOCAL ROAD)

EX. 25' WATER R/W
PB 15 PN 32

N 562200
N 562150
E 1,352,600
N 562000
N 561800

18
API COLUMBIA TOWN CENTER, LLC
LOT 2 S1 AR 3
TOWN CENTER LITTLE PATUXENT PKWY
PARCEL 0389 LOT N/A

COLUMBIA TOWN CENTER APARTMENTS

19
HOWARD RESEARCH AND
DEVELOPMENT LOT 2 S J A R 3
TOWN CENTER ROUTE 29
PARCEL 0389 LOT 2

LIMIT OF
RIGHT OF WAY

PATHWAY
CONSTRUCTION

BOLLARD AND CHAIN
TO BE PROVIDED BY
COLUMBIA ASSOCIATION

PATH SURFACE: MEDIUM DUTY ASPHALT
STA. 96+00.00 TO STA. 110+56.00
SEE DETAIL 68

SEE INSET D
SHEET C5.12

20
HOWARD COUNTY
P/O LOT 3 2.21A/
TOWN CENTER S1 A3
PARCEL 0389 LOT 3

21
STATE HIGHWAY
ADMINISTRATION
LOT 3 1.513 A /
TOWN CENTER S1 A 3
ROUTE 29

21A
STATE HIGHWAY
ADMINISTRATION
2.894A/ ROUTE 29

PERMANENT
EASEMENT
TEMPORARY
EASEMENT

SEWER
EASEMENT

N 562,150
E 1,352,600
N 562,150
E 1,353,000
N 561,800
E 1,353,000

21
STATE HIGHWAY
ADMINISTRATION
LOT 3 1.513 A /
TOWN CENTER S1 A 3
ROUTE 29

HIGH POINT
102+28.68

LOW POINT
101+21.42

SEWER LINE

RIM=297.90

INSET D

STA. 96+94.48
OFF 5.00' R
ELEV. 313.88

STA. 96+65.63
OFF 28.07' R
ELEV. 314.36

STA. 96+51.10
OFF 30.57' R
ELEV. 313.96

STA. 96+65.63
OFF 28.07' R
ELEV. 314.12

STA. 97+58.90
OFF 5.00' R
ELEV. 311.58

STA. 96+83.23
OFF 31.95' R
ELEV. 314.04

STA. 96+82.46
OFF 55.89' R
ELEV. 310.76

R=15'
16'
LOD

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10840 Exp.Date: 4/9/2016
AS-BUILT DATE: 10/3/14

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Toole Design Group
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

6/12/15

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

TRAIL PLAN 1 — C5.12

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
06/09/15	36	59 OF 171

SDP-13-020

G:\ACTIVE PROJECTS\5282 CCP-Blandair Trail\Site Development Plan 3\CAD\Plans\C5.12 - TRAIL PLANS.dwg
PLOTTED: 6/11/2015 9:11 AM by CAST GAMES.
01 XAT TIVE PROJECTS 5282 CCP—Blandair Trail\Site Development Plan 3\CAD\Plans\C5.12— TRAIL PLANS.dwg, 6/11/2015 3:34 PM, PLOTTED BY: Chris Dixon

MATCHLINE SEE SHEET C5.14 (STA 110+00.00/ STA 126+00.00)

COLUMBIA TOWN CENTER APARTMENTS

3" UNDERDRAIN OUTLET TO DAYLIGHT. AT 1.0 % SLOPE

PATHWAY CONSTRUCTION II

PATH SURFACE: STANDARD ASPHALT STA. 126+25.00 TO STA. 128+75.10

LIMIT OF RIGHT OF WAY

FENCE DETAIL REFER TO DETAIL 85

SECURITY CAMERA POLE

FEED TO CAMERA POLE CONTINUES ABOVE GROUND AT THIS LOCATION

PERMANENT EASEMENT

TEMPORARY EASEMENT

LOW POINT 108+83.50

HIGH POINT 107+66.35

CONNECT TO EXISTING PED BRIDGE OVER RTE 29

22

COLUMBIA ASSOCIATION INC. LOT 14 S 1 39,806 A/ TOWN CENTER LAKE KITTAMAQUNDI

MH 1418 RIM=298.31

19

HOWARD RESEARCH AND DEVELOPMENT LOT 2 S/ A R 3 TOWN CENTER ROUTE 29 PARCEL 0389 LOT 2

RIM=301.40 INV=291.45

RIM=297.68 INV=287.46

SEWER LINE

PROPOSED CULVERT PER CA'S CORPS OF ENGINEERS PERMIT

EXISTING TEMPORARY BRIDGE TO BE REMOVED

CORPS OF ENGINEERS PERMITS FOR THIS AREA WERE PREPARED AND SUBMITTED BY COLUMBIA ASSOCIATION IN CONJUNCTION WITH THE LAKE KITTAMAQUNDI MULTIUSE PROJECT FROM STA. 101+50.00 TO STA. 106+00.00

PATH SURFACE: MEDIUM DUTY ASPHALT STA. 96+00.00 TO STA. 110+00.00 SEE DETAIL 68

N 562 700 E 1 353 400

N 562 350 E 1 353 400

MATCHLINE SEE SHEET C5.12 (STA 104+50.00)

MATCHLINE SEE SHEET C5.16 (STA 134+50.00)

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 12/13/16

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/01/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-14-15

Chief, Development Engineering Division — Date 7-13-15

0 30 60

TRAIL PLAN 2 C5.13

Toole Design Group
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\5282 HRP- Blandair Trail\Site Development Plan 3\CAD\Plans\C5.13- TRAIL PLAN1.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 6/1/15

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	60 OF 171

SDP-13-020

MATCHLINE SEE SHEET C5.15 (STA 115+50.00)

MATCHLINE SEE SHEET C5.13 (STA 110+00.00/ STA 126+00.00)

N

0 30 60

23
ABC PARKING BUSINESS TRUST
C/O HOWARD HUGHES CORP.
IMPSP/O LOT 17 LOT 18/ RSB LOTS
15 16

19
HOWARD RESEARCH AND
DEVELOPMENT LOT 2 S J A R 3
TOWN CENTER ROUTE 29
PARCEL 0389 LOT 2

LAKE KITTAMAQUNDI

TRAIL CONNECTION TO WHOLE FOODS PARKING LOT

HIGH POINT 114+65.92

PATH SURFACE: STANDARD ASPHALT STA. 114+00.00 TO STA. 117+50.00

LOW POINT 113+86.05

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0.% SLOPE 3" INVERT: 300.01

PERMANENT EASEMENT

TEMPORARY EASEMENT

LIMIT OF RIGHT OF WAY

PATHWAY CONSTRUCTION II

PATH SURFACE: PERMEABLE ASPHALT STA. 110+00.00 TO 114+00.00 111+40.74 120+17.99

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0.% SLOPE 3" INVERT: 300.13

HIGH POINT 111+29.81

STA. 111+37.22= STA. 125+00.00

PATH SURFACE: ~~STANDARD~~ PERMEABLE ASPHALT STA. 125+00.00 TO STA. 126+25.00

LOW POINT 125+30.29

TRAIL WAYSIDE
REFER TO DETAIL 45
REFER TO DETAIL 53

EX. 20' SEWER & UTILITY EASEMENT L 630 F 30

EX. 20' SEWER & UTILITY EASEMENT L 4470 F 503

100 YR FLOOD PLAIN EASEMENT PB 23

EX. 60' TO 51' PUBLIC ACCESS EASEMENT

EX. 20' SEWER & UTILITY EASEMENT L 4470 F 503

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/Mar/2015, 11:56:12 2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7-13-15

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS.
G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10848
SHANABERGER & LANE
LICENSE EXPIRATION DATE 4/2/2018
AS-BUILT SURVEY DATE: 10/6/2014

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — ROBERT ALLISTER BIRD — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

6/1/15

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

TRAIL PLAN 3 — C5.14

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	61 OF 171

SDP-13-020

G:\ACTIVE PROJECTS\5282 DDP--Blandair Trail\Site Development Plan 2\CAD\Plans\C5.12 - TRAIL PLANS.dwg
PLOTTED: 6/1/2015 9:47 PM, LAST SAVED: 5/30/2015 16:51 PM, PLOTTED BY: Gerrit Dilen

N

25

ABC PARKING BUSINESS TRUST
C/O HOWARD HUGHES CORP.
IMPSP/O LOT 17 LOT 18/ RSB LOTS
15 16

24

COLUMBIA ASSOCIATION INC
LOT 7 S 1 4.427 ACRE/ TOWN
CENTER SUBDV

23

ABC PARKING BUSINESS TRUST
C/O HOWARD HUGHES CORP.
IMPSP/O LOT 17 LOT 18/ RSB LOTS
15 16

THE HOWARD HUGHES CORPORATION

23

ABC PARKING BUSINESS TRUST
C/O HOWARD HUGHES CORP.
IMPSP/O LOT 17 LOT 18/ RSB LOTS
15.16

N 563800
N 563700
N 563600
N 563500
E1 353 900
E1 353 450
E1 353 150

310.49 310.82 310.30 310.40 310.39 310.01 309.06 311.10 310.38 310.00 309.30 308.40 308.37 307.75 307.77 307.55 307.61 307.65 307.45 307.58 307.41 307.52 307.42 307.32 307.40 307.56 307.65 307.95 307.93 308.02 308.02 307.29 307.29 306.26 306.29 305.35 305.24 304.24 304.13 303.33 303.31 303.05 303.03 302.98 303.06

PERMANENT EASEMENT
TEMPORARY EASEMENT
3" INVERT: 306.25
PATH SURFACE: PERMEABLE ASPHALT STA. ~~117+50.00 TO 120+00.00~~ 111+40.74 TO 120+17.94
LIMIT OF RIGHT OF WAY
PATHWAY CONSTRUCTION
3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0% SLOPE
HIGH POINT 117+38.89
PATH SURFACE: STANDARD ASPHALT STA. 114+00.00 TO STA. 117+50.00
LOW POINT 115+65.83
3" INVERT: 301.50

EX. SEWER & UTILITY EASEMENT PB 12 FN
EX. 20' SEWER & UTILITY EASEMENT L. 1417 F. 533
EASEMENT PB 86

MATCHLINE SEE SHEET C5.14 (STA 115+50.00)

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: ~~07/11/2013~~, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15
Chief, Division of Land Development — Date 7-16-15
Chief, Development Engineering Division — Date 7-13-15

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS
E. SCOTT SHANABERGER
PROFESSIONAL L.S. #10849
SHANABERGER & LANE
LICENSE EXPIRATION DATE 4/2/18
AS-BUILT SURVEY DATE: 10/13/2016
11/11/16

0 30 60

TRAIL PLAN 4 C5.15

ToolDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
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DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15
Michael Christopher Bruce
6/1/15

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	62 OF 71

SDP-13-020

G:\ACTIVE PROJECTS\5200 DGP-Blandair Trail\Site Development Plan 3\EAD\Sheets\SDP-13-020 - TRAIL PLANS.dwg

MATCHLINE SEE SHEET C5.13 (STA 134+50.00)

N 562400

E 1,354,050

N 562,550

16.5' A.T. & T. R/W

COLUMBIA ASSOCIATION EXISTING 50' R/W

E 1,354,450

N 562,550

MATCHLINE SEE SHEET C5.17 (STA 145+00.00)

26

PARCEL "B"
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

EASEMENT FOR DRAINAGE & UTILITIES P.B. 17 P.N. 90

LIMIT OF RIGHT OF WAY

PERMANENT EASEMENT

TEMPORARY EASEMENT

27

PARCEL "C"
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

PATHWAY CONSTRUCTION ℄

28

OPEN SPACE LOT 2
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

LOD

144+00

143+00

142+00

141+00

PATH SURFACE: STANDARD ASPHALT
STA. 138+50.00 TO STA. 146+00.00

CORPS OF ENGINEERS PERMITS FOR THIS AREA WERE PREPARED ANDSUBMITTED BY COLUMBIA ASSOCIATION IN CONJUNCTION WITH THE LAKE KITTAMAQUNDI MULTIUSE PROJECT FROM STA. 141+00.00 TO STA. 142+00.00

EXISTING CULVERT TO REMAIN

29

PARCEL "D"
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PN 15746 & 15747

135+00

CONNECT TO EXISTING PED BRIDGE OVER RTE 29

331.99
331.91
331.25
331.14
331.44
331.37
331.19
331.05
330.91
330.84
330.68
330.35
330.77
330.67
330.48
330.33
330.12
329.95
329.81

28A

OPEN SPACE LOT 3
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

PATH SURFACE: PERMEABLE ASPHALT
STA. ~~136+50.00 TO 138+50.00~~
136+50.34 138+37.17

330.73
330.17
329.89
329.83
329.98
330.39
330.20
329.90

FENCE DETAIL
REFER TO DETAIL 85

TRAIL SECTION
REFER TO DETAIL 8

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0% SLOPE

3" INVERT: 327.73

LOW POINT
138+10.49

CORPS OF ENGINEERS PERMITS FOR THIS AREA WERE PREPARED ANDSUBMITTED BY COLUMBIA ASSOCIATION IN CONJUNCTION WITH THE LAKE KITTAMAQUNDI MULTIUSE PROJECT FROM STA. 138+00.00 TO STA. 140+00.00

P10
PROPERTY OF
NICOLAS HERNANDEZ
L. 9251 F. 250

P12
PROPERTY OF
FLETCHER W, & CHRISTINE N, FERGUSON
L. 5164 F. 336

N 562,200

E 1,354,450

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 01/06/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7-13-15

AS-BUILT CERTIFICATION

I HEREBY CERTIFY BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS

11/11/15

G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10873
SHANABERGER & LANE.
LICENSE EXPIRATION DATE 4/2/2018
AS-BUILT SURVEY DATE 10/13/2014

0 30 60

TRAIL PLAN 5 C5.16

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MICHAEL D. PALLOZZI — No. 35022 — PROFESSIONAL ENGINEER

6/1/15

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	63 OF 171

SDP-13-020

O:\ACTIVE PROJECTS\5282 GGP-Blandair Trail\Site Development Plan 3\CAD\Plans\C5.12- TRAIL PLANS.dwg, PLOTTED:5/11/2015 3:23 PM, LAST SAVED:4/20/2015 6:57 PM, PLOTTED BY: Chris Dalen

MATCHLINE SEE SHEET C5.16 (STA 145+00.00)

27
PARCEL "C"
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

33' SINCLAIR REFINING CO. R/W
L. 174 F. 153

N 562,650
E 1,354,850

LIMIT OF WORK
END OF PHASE 3 STA. 152+33.02=
BEGINNING OF PHASE 4 STA. 152+33.02
N 562,563.34
E 1,355,376.79

N 562,650
E 1,355,250

LIMIT OF WORK PHASE 3
LIMIT OF WORK PHASE 4

WHITE ACRE RD
(LOCAL ROAD)

PATH SURFACE: STANDARD ASPHALT
STA. 150+50.00 TO STA. 151+90.83

CURB RAMP REFER TO DETAIL 38

31
LOT 12
VILLAGE OF OAKLAND MILLS
VILLAGE CENTER
PB 15 PN 82

CONTACT HOWARD COUNTY TO COORDINATE WORK IN THIS INTERSECTION WITH THE OAKLAND MILLS STREETSCAPE PROJECT LATEST REVISIONS

TRAIL WAYSIDE
REFER TO DETAIL 48
REFER TO DETAIL 54

STEVENS FOREST RD
(LOCAL ROAD)

PERMANENT EASEMENT
TEMPORARY EASEMENT

LIMIT OF RIGHT OF WAY

HIGH POINT 147+11.32

PATHWAY CONSTRUCTION ℄

PATH SURFACE: STANDARD ASPHALT
STA. 147+50.00 TO STA. 149+00.00

LOW POINT 149+05.23

28
OPEN SPACE LOT 2
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

30
PUBLIC RIGHT-OF-WAY

32
LOT 15
V O M
VILLAGE CENTER
PN 8507

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0.% SLOPE

PATH SURFACE: PERMEABLE ASPHALT
STA. ~~146+00.00 TO 150+20.00~~
149+07.80 150+64.99

CORPS OF ENGINEERS PERMITS FOR THIS AREA WERE PREPARED ANDSUBMITTED BY COLUMBIA ASSOCIATION IN CONJUNCTION WITH THE LAKE KITTAMAQUNDI MULTIUSE PROJECT FROM STA. 149+50.00 TO STA. 151+75.00

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0.% SLOPE

PATH SURFACE: PERMEABLE ASPHALT
STA. ~~146+00.00 TO 150+20.00~~
145+96.57 147+42.96

PATH SURFACE: STANDARD ASPHALT
STA. 138+50.00 TO STA. 146+00.00

29
PARCEL "D"
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PN 15746 & 15747

LOT 16
VILLAGE OF OAKLAND MILLS
VILLAGE CENTER
PN 8507

S/B STREAM BUFFER

EASEMENT FOR
DRAINAGE & UTILITIES
P.B. 17 P.N. 91

N 562,250
E 1,355,250

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15
Chief, Division of Land Development — Date 7-16-15
Chief, Development Engineering Division — Date 7-13-15

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS
6/14/16
G. SCOTT SHAMBERGER PE
PROFESSIONAL L.E.# 10849
SHAMBERGER & LANE
LICENSE EXPIRATION DATE: 4/2/2018
AS-BUILT SURVEY DATE: 10/3/16

TRAIL PLAN 6 — C5.17

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
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DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

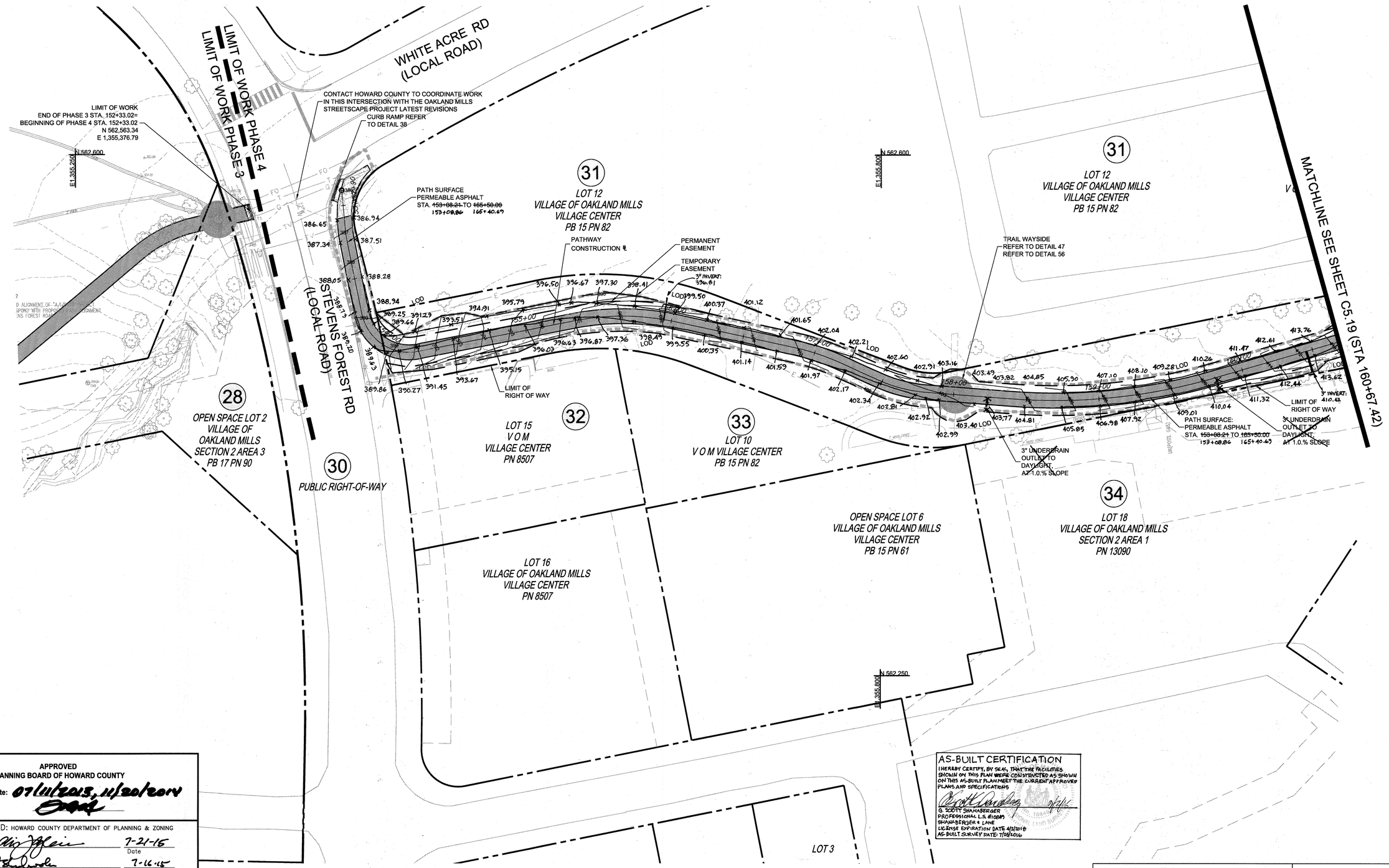
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 35022
EXPIRATION DATE: 12/28/15
6/1/15

PHASE 3
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)
ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	64 OF 71

SDP-13-020

C:\ACTIVE PROJECTS\5282 CEP-Blandair Trail\Site Development Plan 3\CAD\Plans\C5.13 - TRAIL PLANS.dwg
Plotted by: Dave Sharp 3:33 PM, Last Saved by: AG/DPB on 6/1/2015 8:57 AM, PLOTTED BY: Dave Sharp



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 7-21-15
Chief, Division of Land Development	Date 7-16-15
Chief, Development Engineering Division	Date 7.13.15

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS

G. SCOTT SHAMBERGER
PROFESSIONAL L.S. #10847
SHAMBERGER & LANE
LICENSE EXPIRATION DATE 4/2/2018
AS-BUILT SURVEY DATE: 7/15/2016

0 30 60

TRAIL PLAN 1 C5.18

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DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
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PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MARIA J. WHITCOMB-PRICH — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

6/1/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	65 OF 171

SDP-13-020

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N

N 562,850
E 1,356,950

PATH WIDTH 8 FEET WIDE:
STA. 169+29.57 TO 170+21.05

TRANSITION PATH WIDTH FROM 10 FEET WIDE TO 8 FEET WIDE:
STA. 169+05.62 TO 167+29.57

PERMANENT EASEMENT

TEMPORARY EASEMENT

TRANSITION PATH WIDTH FROM 8 FEET WIDE TO 10 FEET WIDE:
STA. 170+21.05 TO 170+51.65

PATHWAY CONSTRUCT

PATH SURFACE:
PERMEABLE ASPHALT
STA. ~~169+00.00~~ TO ~~171+80.00~~
169+91.46 171+35.68

EX WOODEN GUARDRAIL

TIE IN TO EXISTING TRAILS

LIMIT OF RIGHT OF WAY

PATH SURFACE: STANDARD ASPHALT
STA. 165+50.00 TO STA. 169+00.00

PATH SURFACE
PERMEABLE ASPHALT
STA. ~~153+08.21~~ TO ~~165+50.00~~
153+08.86 165+40.69

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0% SLOPE

PATHWAY CONSTRUCTION ₹

3" UNDERDRAIN OUTLET TO DAYLIGHT, AT 1.0% SLOPE

3" INVERT: 409.41

3" INVERT: 407.76

3" INVERT: 389.26

2"Ø IN COMMON TRENCH WITH ELEC.

ELECTRIC LINE CONDUITS BELOW GRADE TO FEED PEDESTRIAN TUNNEL LIGHTS

31
LOT 12
VILLAGE OF OAKLAND MILLS VILLAGE CENTER
PB 15 PN 82

28
OPEN SPACE LOT 3
VILLAGE OF OAKLAND MILLS SECTION 2 AREA 3
PB 17 PN 90

28
OPEN SPACE LOT B
VILLAGE OF OAKLAND MILLS SECTION 2 AREA 3
PB 17 PN 90

37
LOT 14
VILLAGE CENTER
PB 15 PN 82

36
LOT 14
VILLAGE OF OAKLAND MILLS SECTION 2

35
OPEN SPACE LOT 13
V O M
VILLAGE CENTER
PB 15 PN 82

36
LOT 14
VILLAGE OF OAKLAND MILLS SECTION 2

LOT 12
M VILLAGE CENTER
PB 15 PN 82

LOT 17
AGE OF OAKLAND MILLS
SECTION 2 AREA 1
PN 13090

MATCHLINE SEE SHEET C5.18 (STA 160+67.42)

MATCHLINE SEE SHEET 5.20 (STA 171+11.21)

N 562,450
E 1,356,350

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014
DAA

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 9-23-15

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS
G. SCOTT SHAMBERGER 9/2/16
G. SCOTT SHAMBERGER
PROFESSIONAL L.S. #10847
SHAMBERGER LANE
LICENSE EXPIRATION DATE: 4/2/2018
AS-BUILT SURVEY DATE: 7/26/2016

0 30 60

TRAIL PLAN 2 C5.19

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www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
05/11/16	REVISE PATH TO ELIMINATE FENCE & LANES GUARDRAIL	TMT	MAB

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

9/1/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	66 OF 71

SDP-13-020

C:\ACTIVE PROJECTS\5282 CEP-Howdan Inst\Site Development Plan 4\CAD\Plans\C5.19- TRAIL PLANS.dwg, 9/1/2016 8:29:01 PM, LAST SAVED by TTHOMPSON, PLOTTED BY: Chris Dyer

MATCHLINE SEE SHEET C5.19 (STA 171+11.21)

VILLAGE OF OAKLAND MILLS SECTION 2 AREA 4 PB 18 PN 92-93

PUBLIC RIGHT-OF-WAY

38

WHITE ACRE RD (LOCAL ROAD)

MORNINGBIRD LN (LOCAL ROAD)

PRIVATE STREET LOT D-107

PRIVATE STREET LOT D-106

PRIVATE STREET LOT D-105

LOT D-8
LOT D-9
LOT D-10
LOT D-11
LOT D-12
LOT D-13
LOT D-14

LOT D-15
LOT D-16
LOT D-17
LOT D-18
LOT D-19
LOT D-20
LOT D-21
LOT D-22

LOT D-101

39

LOT D-23
LOT D-24
LOT D-25
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LOT D-29
LOT D-30

LOT D-31
LOT D-32
LOT D-33

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LOT D-35
LOT D-36
LOT D-37
LOT D-38
LOT D-39
LOT D-40
LOT D-41
LOT D-42

LOT D-43
LOT D-44
LOT D-45
LOT D-46

MATCHLINE SEE SHEET C5.21 (STA 181+13.25)

3" UNDERDRAIN OUTLET TO DAYLIGHT @ 1.0% SLOPE

391.96 392.35 LOD 393.36 394.10

392.07 392.47 LOD 393.54 394.32

TRAIL WAYSIDE
REFER TO DETAIL 48
REFER TO DETAIL 57

CURB RAMP REFER TO DETAIL 39

PATH SURFACE: STANDARD ASPHALT
STA. 172+68.00 TO STA. 175+50.00

3" INVERT INTO SD MH: 405.80

LOD

406.42 406.63 406.42 406.70 407.10 407.91 408.36

406.42 406.45 406.60 406.87 407.36 408.05 408.46

PATH SURFACE:
~~PERMEABLE ASPHALT~~
STA. ~~175+50.00~~ TO ~~177+50.00~~
176+21.14 177+47.52

PERMANENT EASEMENT

TEMPORARY EASEMENT

414.76 415.37 416.05 416.53 416.67 416.88 417.16 417.31 417.60 417.99 418.34

415.49 416.08 416.44 416.77 416.84 416.92 417.15 417.82 417.85 418.20 418.56

3" INVERT: 412.74

OVERDRAIN/ UNDERDRAIN CLEANOUT (TYP.) SEE DETAIL 6

PATH SURFACE: STANDARD ASPHALT
STA. 177+50.00 TO STA. 179+00.00

PATH SURFACE:
PERMEABLE ASPHALT
STA. ~~178+00.00~~ TO ~~187+12.00~~
178+95.33 187+12.21

TRAIL WAYSIDE
REFER TO DETAIL 49
REFER TO DETAIL 58

SAWCUT AND CONNECT EXISTING TRAIL TO NEW WAYSIDE

LOT 1
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 5
PB 21 PN 15-16

40

OPEN SPACE LOT 6
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 4
PB 18 PN 35

41

THUNDER HILL RD (LOCAL ROAD)

N 562,660 E 1,357,800

N 562,200 E 1,357,950

N

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/24/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7-13-15

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS

6/1/16

G. SCOTT CHANNBERGER,
PROFESSIONAL L.S. #10880
SHANBERGER & LANE
LICENSE EXPIRATION DATE: 4/2/2018
AS-BUILT SURVEY DATE: 7/23/2015

TrailPlan 3 C5.20

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
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DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

6/1/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	67 OF 131

SDP-13-020

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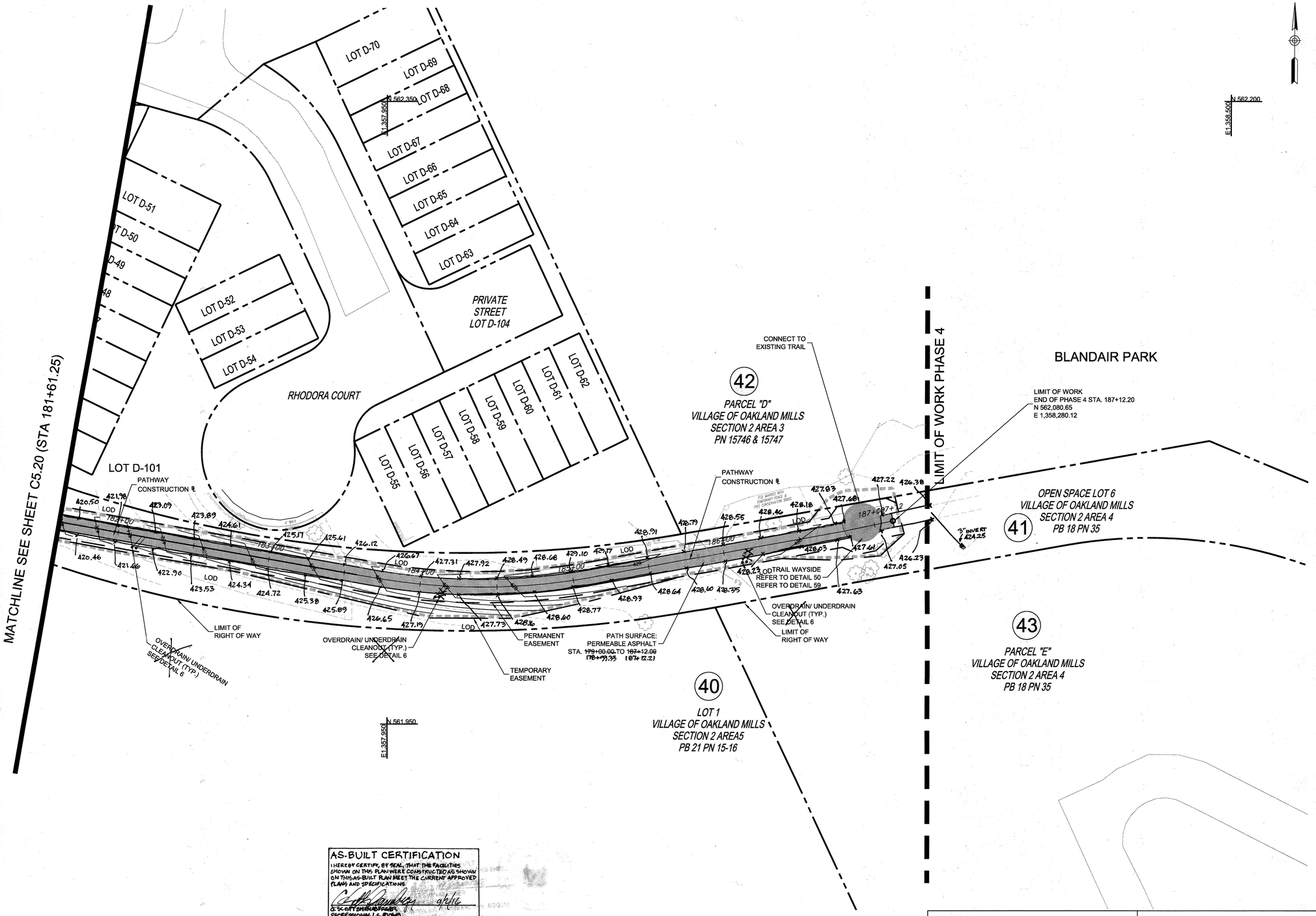

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS.

& SCOTT SHANKBERGER, P.L.S.
PROFESSIONAL L.S. #10849
SHANKBERGER & LANE
LICENSE EXPIRATION DATE 4/2/2018
AS-BUILT SURVEY DATE: 7/25/2016

TooleDesignGroup
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Q:\ACTIVE PROJECTS\5282 CEP-Blandair Trail\Site Development Plan 4\CAD\Plans\C5.18 - TRAIL PLANS.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
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PROFESSIONAL CERTIFICATION

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STATE OF MARYLAND — MICHAEL PALLISTON BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

Michael Palliston Brick 7/1/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

TRAIL PLAN 4 — C5.21

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	68 OF 171

SDP-13-020

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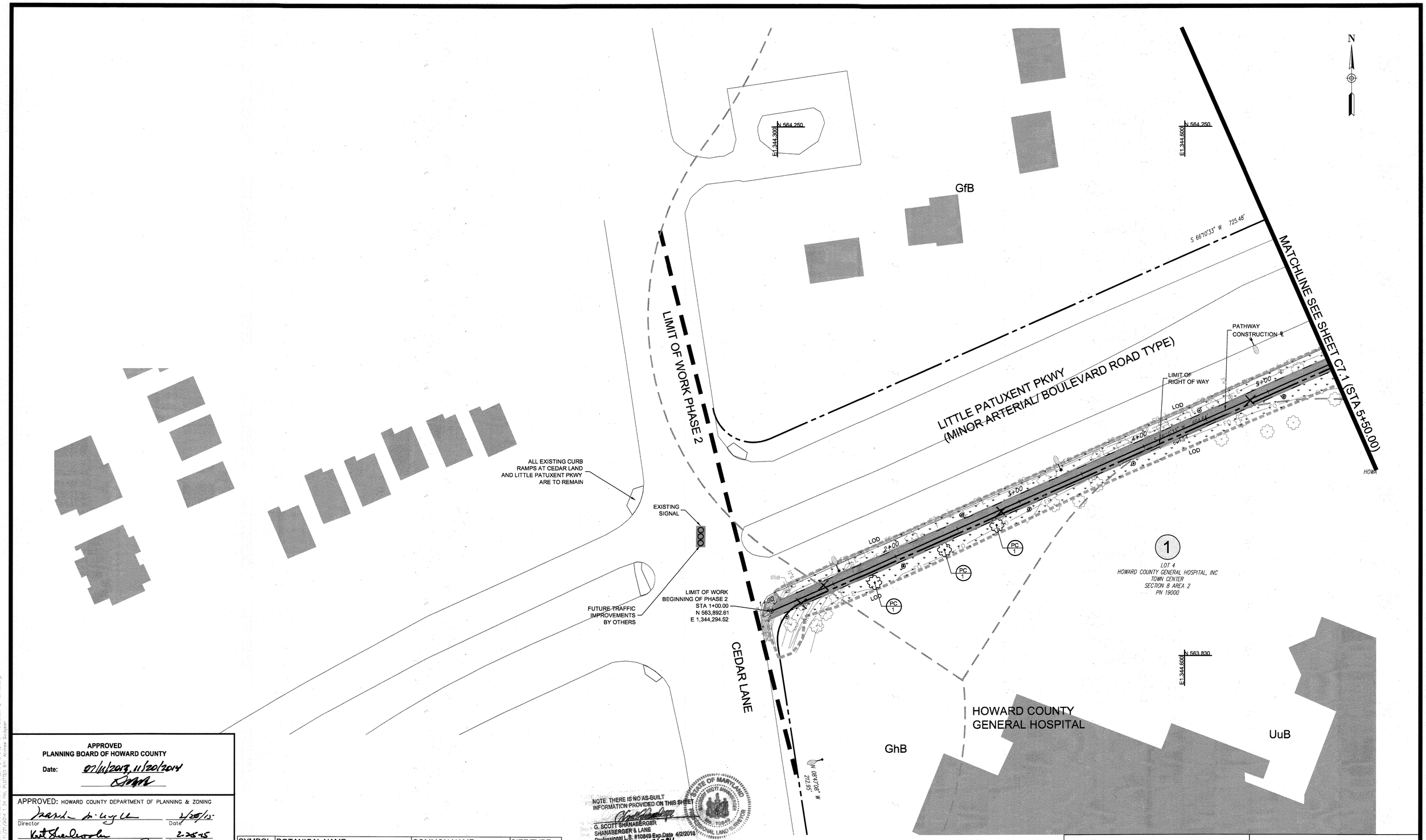

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/25/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2-12-15

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Deciduous Trees		
PC	Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane Tree	2.5 - 3" CAL./ B&B

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

LANDSCAPE PLAN 1 — C7.0

TooleDesignGroup
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DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB | DRN. AG | CHK. EM

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15
12/17/14

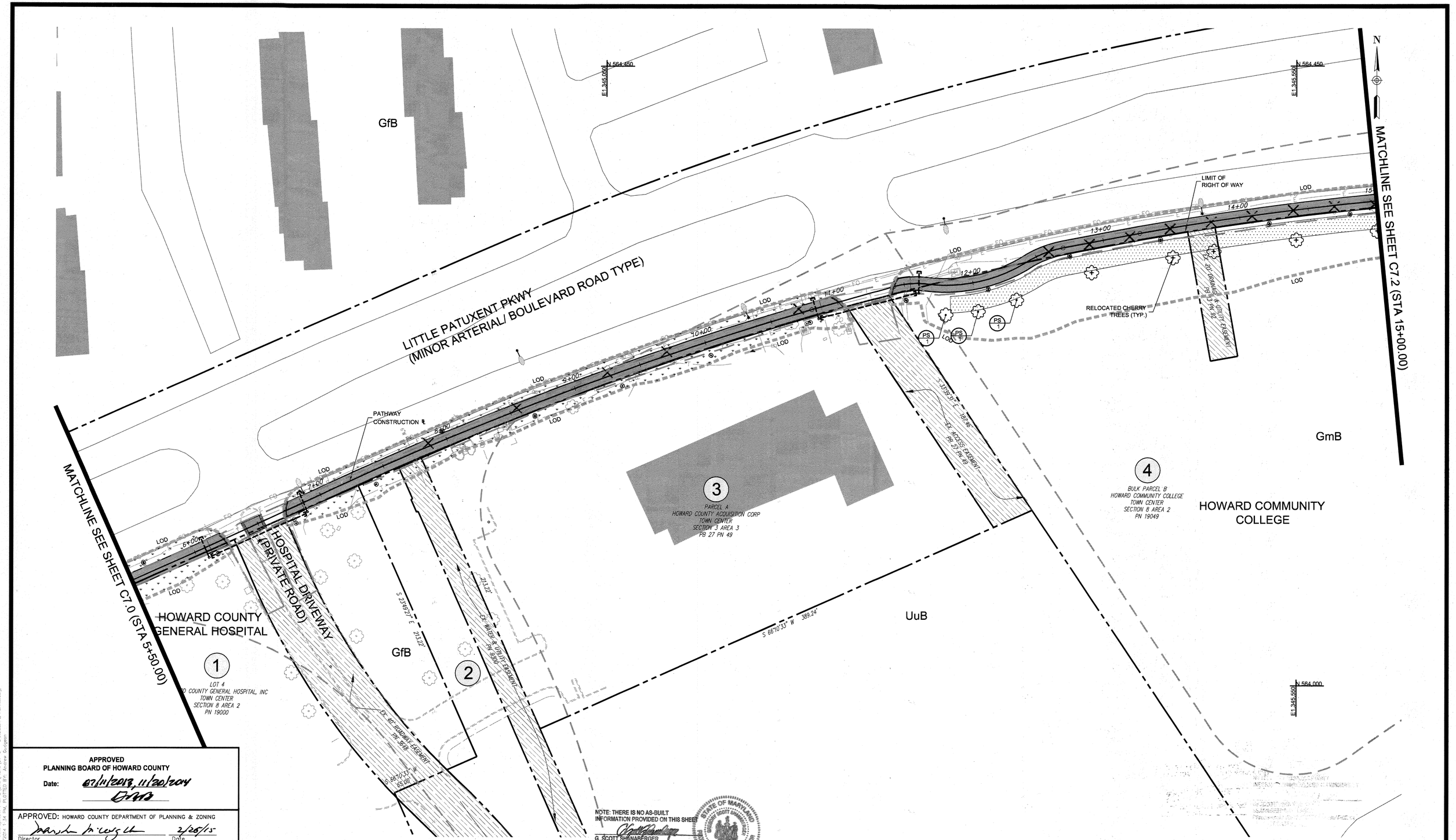
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	69 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2-12-15

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Deciduous Trees		
PS	Prunus serrulata 'Kwanzan'	Kwanzan Cherry	1.5" - 2" CAL./ B&B

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

LANDSCAPE PLAN 2 — C7.1

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB	DRN. AG	CHK. EM

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EXPIRATION DATE: 12/28/15
12/17/14

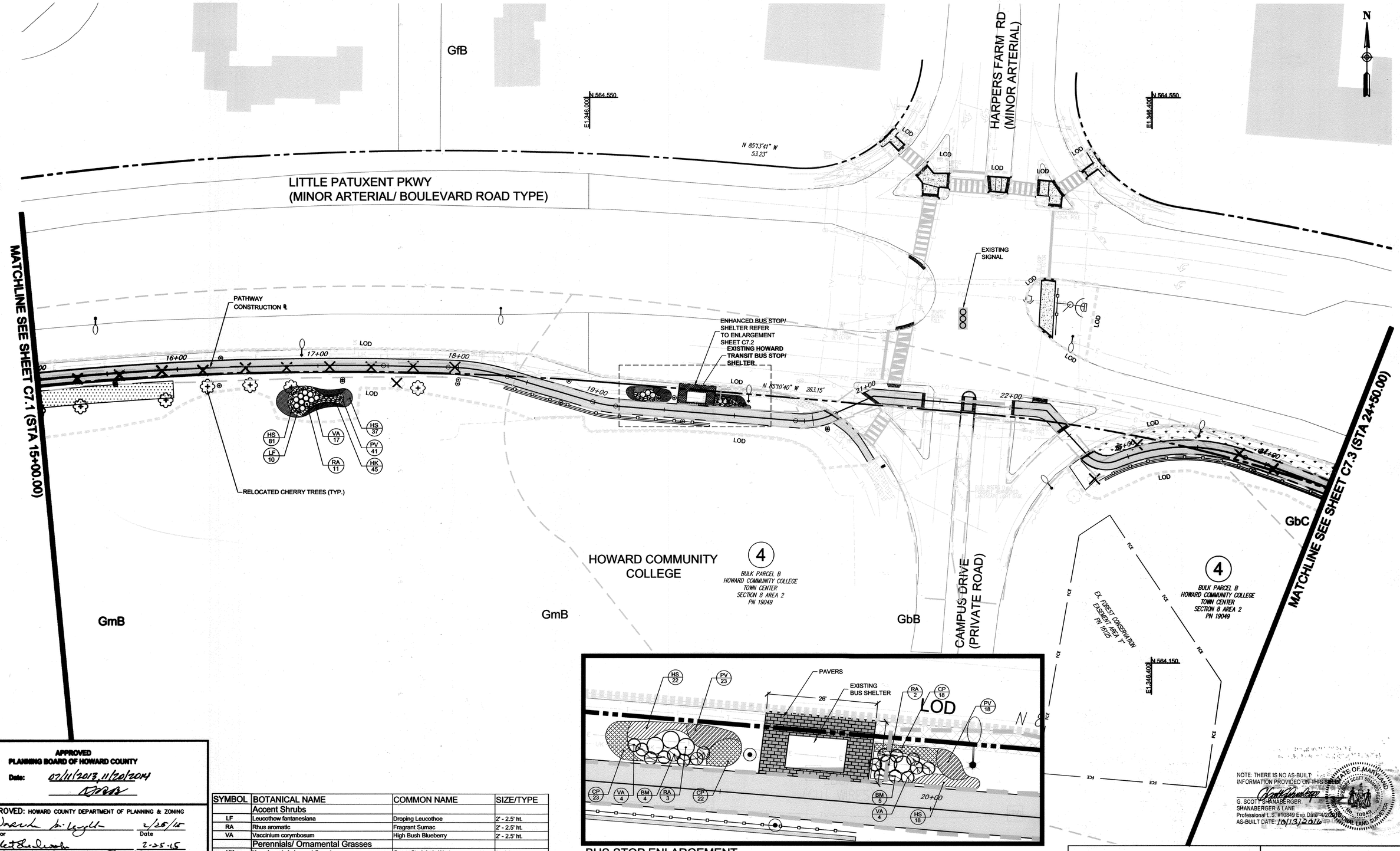
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	70 OF 171

SDP-13-020



BUS STOP ENLARGEMENT

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND
G. SCOTT SHANABERGER
No. 10849
PROFESSIONAL LAND SURVEYOR

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/25/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Accent Shrubs		
LF	Leucothow fantanesiana	Droping Leucothoe	2' - 2.5' ht.
RA	Rhus aromatic	Fragrant Sumac	2' - 2.5' ht.
VA	Vaccinium corymbosum	High Bush Blueberry	2' - 2.5' ht.
	Perennials/ Ornamental Grasses		
HK	Hypericum kalmianum ' Gemo'	Gemo St. John's Wort	1gal./cont.
HS	Hemercocallis ' Stella de Oro'	Daylily	1gal./cont.
PV	Panicum virgatum	Red Switch Grass	1gal./cont.

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DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB | DRN. AG | CHK. EM

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PROFESSIONAL CERTIFICATION
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EXPIRATION DATE: 12/28/15

STATE OF MARYLAND
No. 35022
REGISTERED
PROFESSIONAL ENGINEER
1/29/15

PHASE 2

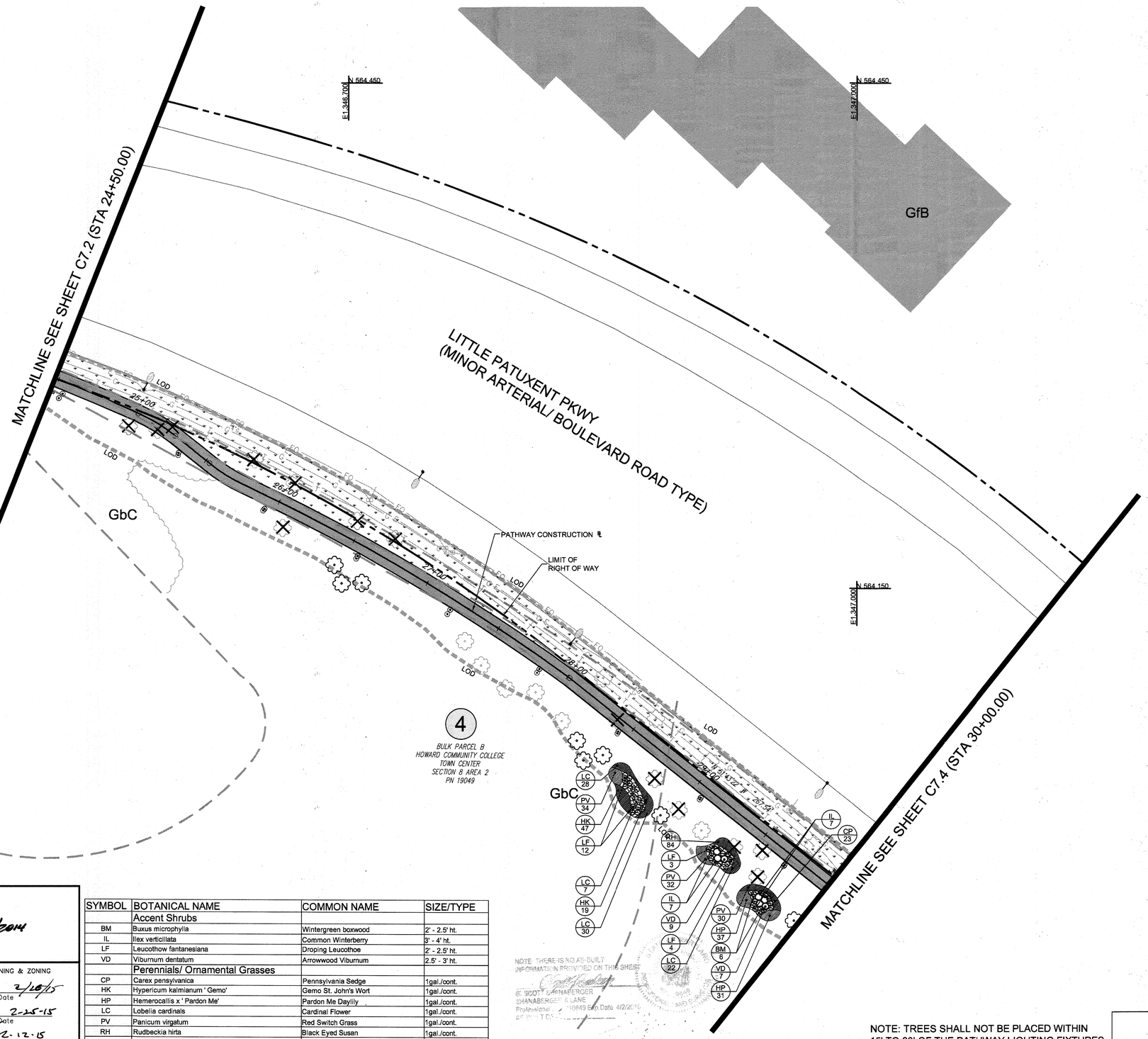
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

LANDSCAPE PLAN 3 — C7.2

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	71 OF 171

SDP-13-020



SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Accent Shrubs		
BM	Buxus microphylla	Wintergreen boxwood	2' - 2.5' ht.
IL	Ilex verticillata	Common Winterberry	3' - 4' ht.
LF	Leucothow fantanesiana	Droping Leucothoe	2' - 2.5' ht.
VD	Viburnum dentatum	Arrowwood Viburnum	2.5' - 3' ht.
	Perennials/ Ornamental Grasses		
CP	Carex pensylvanica	Pennsylvania Sedge	1gal./cont.
HK	Hypericum kalmianum ' Gemo'	Gemo St. John's Wort	1gal./cont.
HP	Hemerocallis x ' Pardon Me'	Pardon Me Daylily	1gal./cont.
LC	Lobelia cardinals	Cardinal Flower	1gal./cont.
PV	Panicum virgatum	Red Switch Grass	1gal./cont.
RH	Rudbeckia hirta	Black Eyed Susan	1gal./cont.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/20/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

LANDSCAPE PLAN 4 — C7.3

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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\5282 CEP-Blandair Trail\Site Development Plan 2\CAD\Plans\C7-4 - LANDSCAPE PLAN.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
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THE HOWARD HUGHES CORPORATION
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COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

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12/17/14

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	72 OF 171

SDP-13-020

MATCHLINE SEE SHEET C7.3 (STA 30+00.00)

MATCHLINE SEE SHEET C7.5 (STA 39+50.00)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

FACULTY DR
(PRIVATE ROAD)

GfB

GbB

BaA

GfC

GfB

N 563,900
E1,347,250

N 563,900
E1,347,750

N 563,658
E1,347,750

DESIGNATED REPLACEMENT PLANTING FOR
17 3/8" CALIPER TULIP TREE REMOVED IN THE FCE AREA,
REFER TO SHEET C3.4

LIMIT OF
RIGHT OF WAY

DESIGNATED REPLACEMENT PLANTING FOR
17 3/8" CALIPER TULIP TREE REMOVED IN THE FCE AREA,
REFER TO SHEET C3.4

APPROX. LOCATION
4" x 2" REDUCER

PATHWAY
CONSTRUCTION ℄

FUTURE SIGNALIZED INTERSECTION
IMPROVEMENTS BY OTHERS

RH 31
IL 1
VA 10
HS 23
BM 4
IL 3
EV 26
BM 4
HS 22
HS 13
BM 3
LF 3
LF 4
BM 7
VD 4
CP 5
RH 35
LT 2

4
BULK PARCEL B
HOWARD COMMUNITY COLLEGE
TOWN CENTER
SECTION 8 AREA 2
PN 19049

5
OPEN SPACE LOT 1
HOWARD RESEARCH AND DEVELOPMENT
COLUMBIA TOWN CENTER
SECTION 3 AREA 3
PN 13869

6

7
LOT C-2
PEVERLEY GEORGE C III
TOWN CENTER
SECTION 6 AREA 2
PB 28 PN 47

FIRESTONE COMPLETE
AUTOCARE STORE

EX. PUBLIC 100 YR FLOODPLAIN
DRAINAGE & UTILITY EASEMENT
PN 19049

EX. 20' DRAINAGE & UTILITY EASEMENT
PB 13 PN 94

EX. FOREST CONSERVATION
EASEMENT AREA 'D'
PN 16125

EX. 30' INGRESS-EGRESS EASEMENT
PB 28 PN 47

N 08°01'19" E
101.38'

N 37°19'

STREAM

STREAM BUFFER

LOD

FCE

SVB

BAS

FO

N

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 7/11/13, 11/20/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 9-15-15
Chief, Division of Land Development — Date 9-15-15
Chief, Development Engineering Division — Date 9/11/15

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Deciduous Trees		
LT	Liriodendron tulipifera	Tuliptree	2.5 - 3" CAL / B&B
	Accent Shrubs		
BM	Buxus microphylla	Wintergreen boxwood	2' - 2.5' ht.
IL	Ilex verticillata	Common Winterberry	3' - 4' ht.
LF	Leucothow fantanesiana	Droping Leucothoe	2' - 2.5' ht.
VA	Vaccinium corymbosum	High bush Blueberry	2' - 2.5' ht.
VD	Viburnum dentatum	Arrowwood Viburnum	2.5' - 3' ht.
	Perennials/ Ornamental Grasses		
CP	Carex pensylvanica	Pennsylvania Sedge	1gal./cont.
EV	Elymus virginicus	Virginia Wild Rye	1gal./cont.
HS	Hemerocallis ' Stella d' Oro'	Daylily	1gal./cont.
RH	Rudbeckia hirta	Black Eyed Susan	1gal./cont.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — NO. 10849 — PROFESSIONAL LAND SURVEYOR

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/31/2016

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

LANDSCAPE PLAN 5 — C7.4

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Q:\ACTIVE PROJECTS\5282 cdp--Blandair Trail\Site Development Plan 2\CAD\Plans\C7-5 - LANDSCAPE PLANS.dwg

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	

Howard Hughes
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COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 36022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MICHAEL A. BRICK — 36022 — PROFESSIONAL ENGINEER

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/25/15	36	73 OF 71

SDP-13-020

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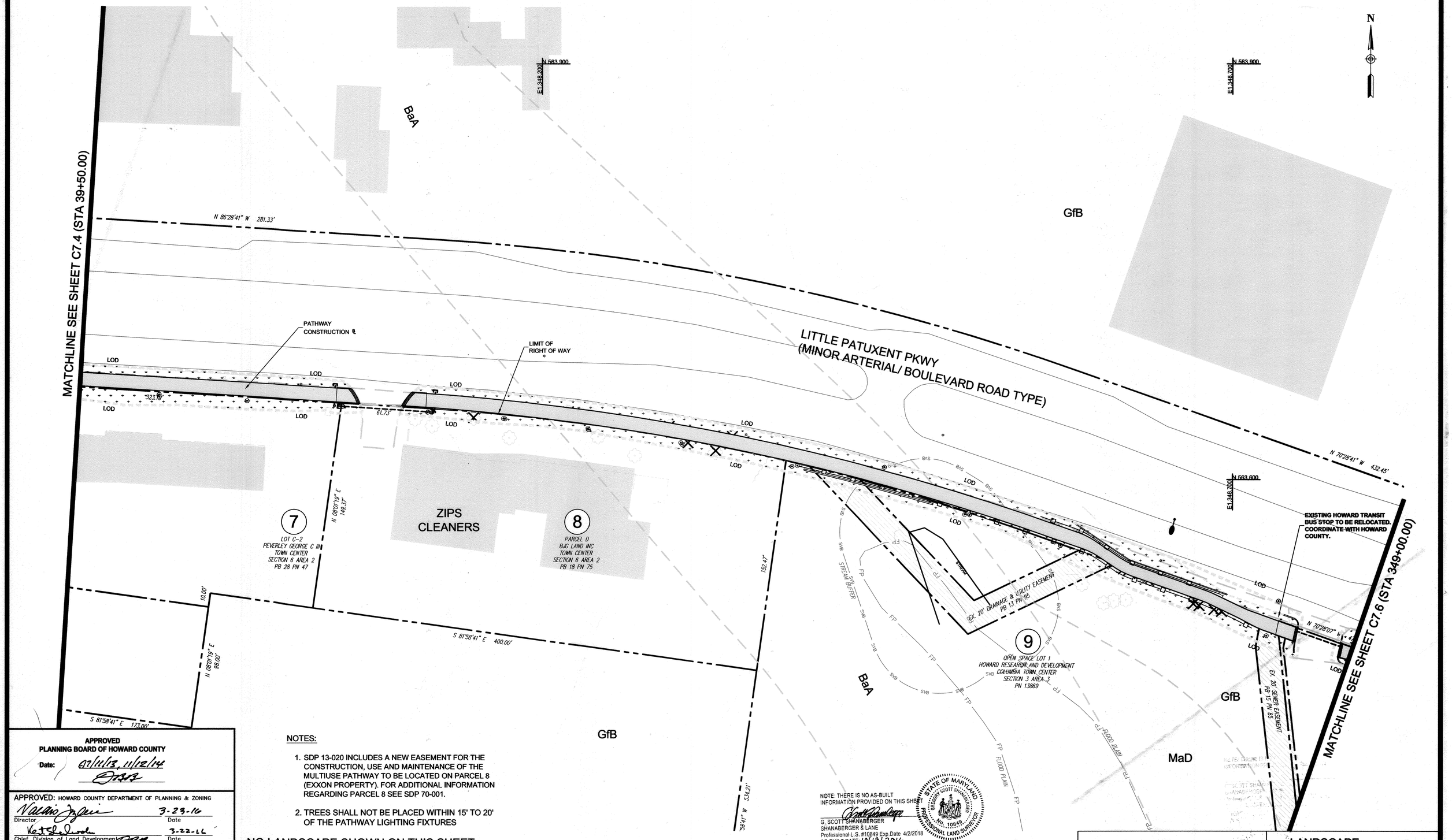

NOTES:

1. SDP 13-020 INCLUDES A NEW EASEMENT FOR THE CONSTRUCTION, USE AND MAINTENANCE OF THE MULTIUSE PATHWAY TO BE LOCATED ON PARCEL 8 (EXXON PROPERTY). FOR ADDITIONAL INFORMATION REGARDING PARCEL 8 SEE SDP 70-001.
2. TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

NO LANDSCAPE SHOWN ON THIS SHEET

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16
Chief, Division of Land Development — Date 3-22-16
Chief, Development Engineering Division — Date 3.18.16

LANDSCAPE PLAN 6 — C7.5

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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

DES. DPB | DRN. AG | CHK. EM

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PROFESSIONAL CERTIFICATION
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EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — MARY LISTER — No. 35022 — REGISTERED PROFESSIONAL ENGINEER
3/4/16

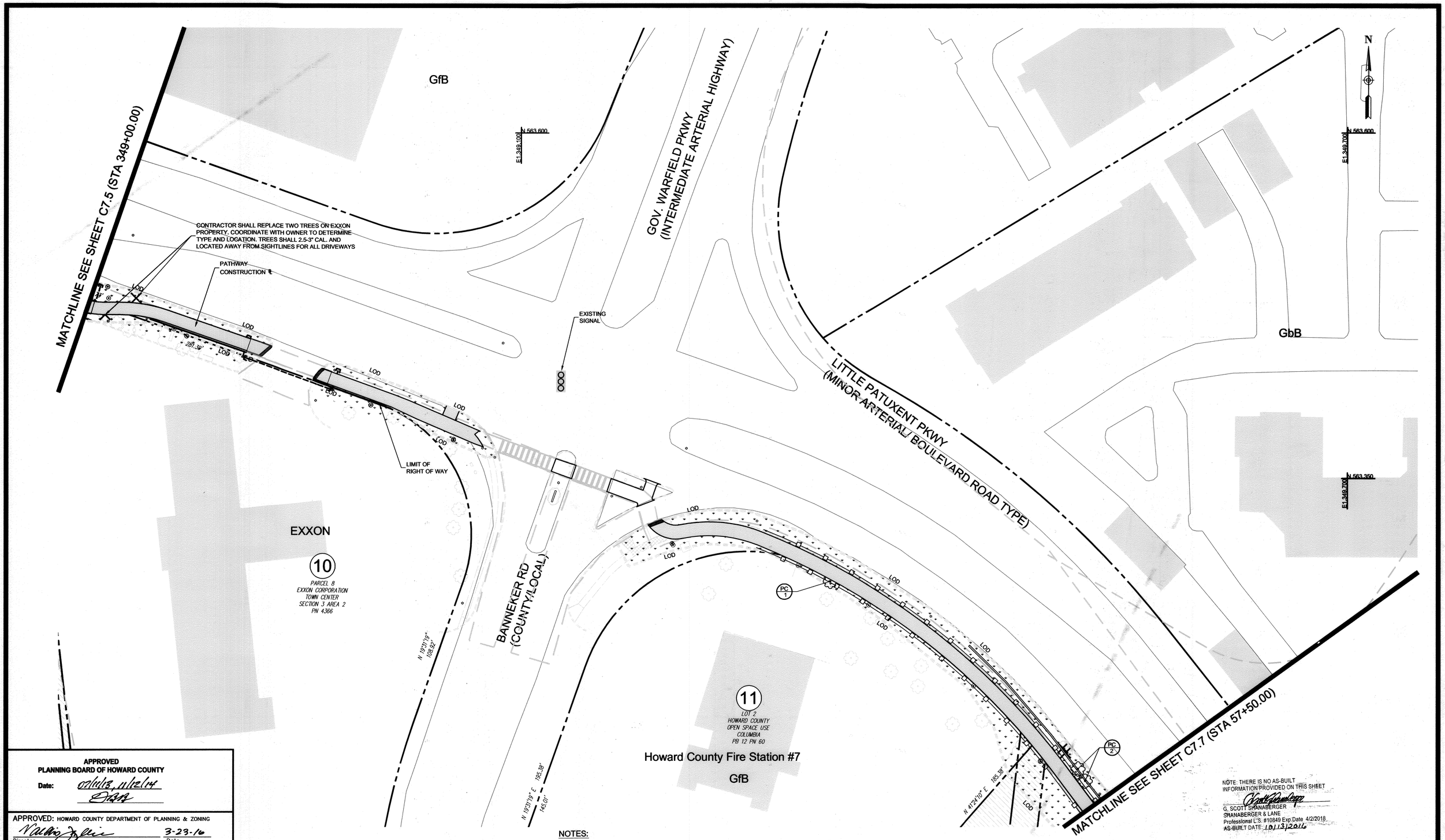
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
03/07/16	36	74 OF 171

SDP-13-020



NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

APPROVED
PLANNING BOARD OF HOWARD COUNTY

Date: 07/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date: 3-23-16

Chief, Division of Land Development — Date: 3-22-16

Chief, Development Engineering Division — Date: 3-18-16

NOTES:

1. SDP 13-020 INCLUDES A NEW EASEMENT FOR THE CONSTRUCTION, USE AND MAINTENANCE OF THE MULTIUSE PATHWAY TO BE LOCATED ON PARCEL 8 (EXXON PROPERTY). FOR ADDITIONAL INFORMATION REGARDING PARCEL 8 SEE SDP 70-001.
2. TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Deciduous Trees		
PC	Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane Tree	2.5 - 3" CAL./ B&B

0 30 60

LANDSCAPE PLAN 7 — C7.6

TooleDesignGroup
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DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

DES. DPB	DRN. AG	CHK. EM

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PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

3/4/16

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
03/07/16	36	75 OF 171

SDP-13-020

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND
GREGORY SCOTT SHANABERGER
No. 10849
PROFESSIONAL LAND SURVEYOR

APPROVED
PLANNING BOARD OF HOWARD COUNTY

Date: 07/01/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16

Chief, Division of Land Development — Date 3-22-16

Chief, Development Engineering Division — Date 3-18-16

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Deciduous Trees		
PC	Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane Tree	2.5 - 3" CAL./ B&B

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

LANDSCAPE PLAN 8 — **C7.7**

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DES. DPB | DRN. AG | CHK. EM

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EXPIRATION DATE: 12/28/17

STATE OF MARYLAND
No. 35022
REGISTERED PROFESSIONAL ENGINEER
3/4/16

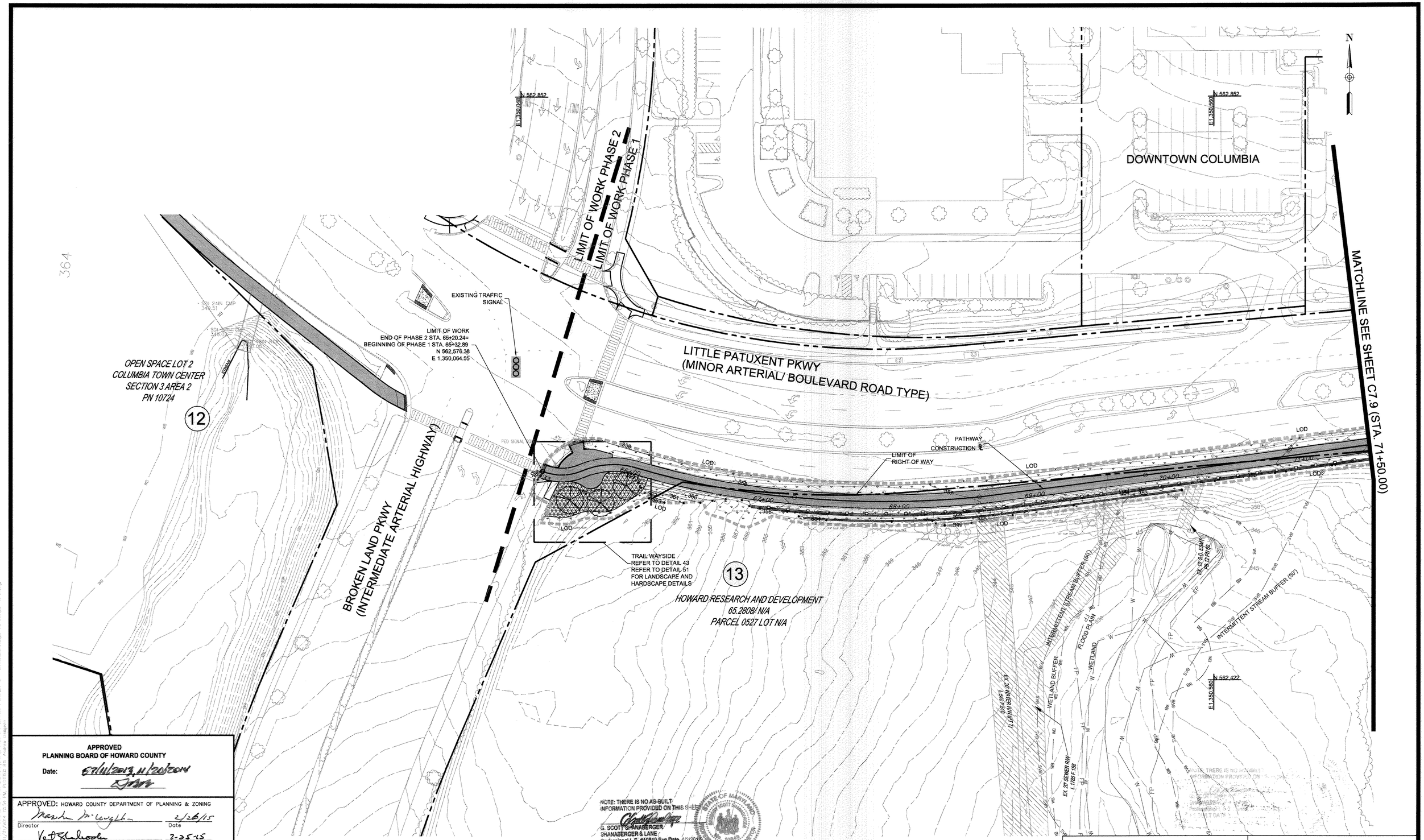
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
03/07/16	36	76 OF 171

SDP-13-020



NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

NO LANDSCAPE SHOWN ON THIS SHEET

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

LANDSCAPE PLAN 1 C7.8

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

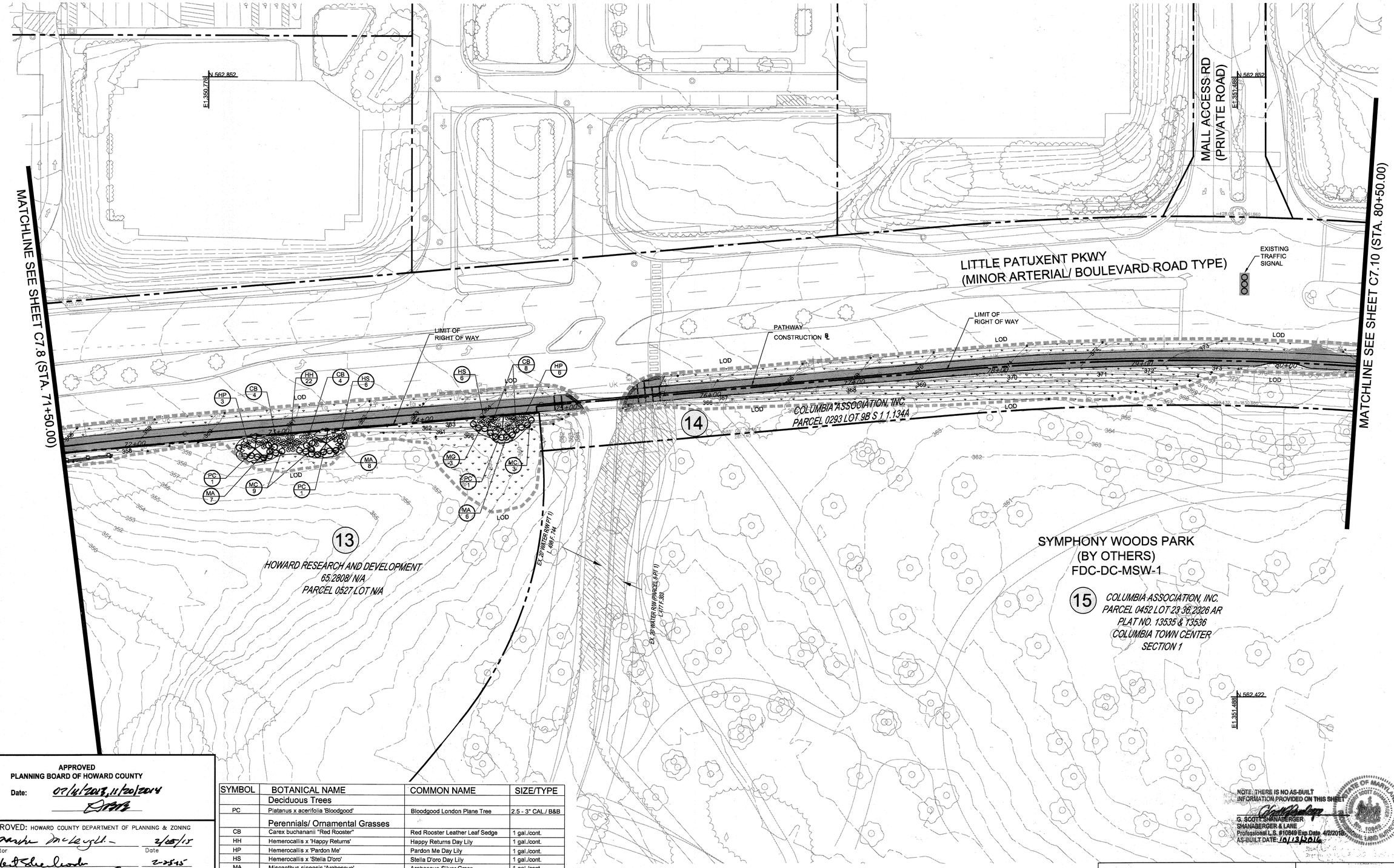
PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	77 OF 167

SDP-13-020



SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Deciduous Trees		
PC	Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane Tree	2.5 - 3" CAL./ B&B
	Perennials/ Ornamental Grasses		
CB	Carex buchananii "Red Rooster"	Red Rooster Leather Leaf Sedge	1 gal./cont.
HH	Hemerocallis x 'Happy Returns'	Happy Returns Day Lily	1 gal./cont.
HP	Hemerocallis x 'Pardon Me'	Pardon Me Day Lily	1 gal./cont.
HS	Hemerocallis x 'Stella D'oro'	Stella D'oro Day Lily	1 gal./cont.
MA	Miscanthus sinensis 'Arabesque'	Arabesque Silver Grass	1 gal./cont.
MC	Muhlenbergia capillaris	Pink Muhly Grass	1 gal./cont.

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/6/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/05/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

LANDSCAPE PLAN 2 — C7.9

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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
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STATE OF MARYLAND — MICHAEL AUSTIN BROOKS — No. 35022 — PROFESSIONAL ENGINEER

2/17/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	78 OF 171

SDP-13-020

O:\ACTIVE PROJECTS\5282 CP~Blandair\Civil\Site Development Plan\DESIGN\DATA\Shifted Trail\Shifted Plans\C7-8 - Shifted Landscape-Hardscape Plans.dwg, 8/5/2014 1:09:47 PM, AutoCAD Civil 3D (Education Version) 2014, Plotted by: ADAM GREGORY

MATCHLINE SEE SHEET C7.9 (STA. 80+50.00)

N 562,852
E 1,351,756

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

PATHWAY CONSTRUCTION ℄

LOD

LIMIT OF RIGHT OF WAY

COLUMBIA ASSOCIATION, INC.
PARCEL 0293 LOT 9B S 11,134A

14

EX. 10' S.D. ESMT PB 12 PN 84

EXISTING TRAFFIC SIGNAL

EXISTING HOWARD TRANSIT BUS STOP/ SHELTER

TRAFFIC POLE

TRAIL WAYSIDE
REFER TO DETAIL 44
REFER TO DETAIL 52
FOR LANDSCAPE AND HARDSCAPE DETAILS

17

COUNTY LIBRARY

HOWARD COUNTY MARYLAND
IMPS LOT 5.32166
10375 LITTLE PATUXENT PKWY
PARCEL 0389 LOT 5

20

16

HOWARD COUNTY MARYLAND
LOT 4,128 A PARCEL 0389

S ENTRANCE RD
(COUNTY/ LOCAL ROAD)

RELOCATED EXISTING CHERRY TREE

SHA P/O LOT 3,1728
TOWN CENTER S1,A3 ROUTE 29
PARCEL 0389 LOT 3

N 562,422
E 1,352,469

SYMPHONY WOODS PARK
(BY OTHERS)
FDC-DC-MSW-1

15

COLUMBIA ASSOCIATION, INC.
PARCEL 0452 LOT 23 36,2326 AR
PLAT NO. 13535 & 13536
COLUMBIA TOWN CENTER
SECTION 1

15

MATCHLINE SEE SHEET C7.11 (STA. 89+50.00)

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2014

NO LANDSCAPE SHOWN ON THIS SHEET

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
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12/17/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

LANDSCAPE PLAN 3 — C7.10

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	79 OF 171

SDP-13-020

G:\ACTIVE PROJECTS\5282 CDP-Blandair Trail\Site Development Plan\SUBMISSION\SDP\Submitted Tmp\Sheet Prints\C7-10 - Splitheds.crosspoppin-Hardscape Plans.dwg, 8/7/2014 11:29:29 AM, LAST SAVED BY AG29, PLOTTED BY Andrew Gorgen

MATCHLINE SEE SHEET C7.10 (STA. 89+50.00)

PATHWAY CONSTRUCTION ℄

LOD

N 562,185
E 1,351,998

LIMIT OF WORK PHASE 1
LIMIT OF WORK PHASE 3

LIMIT OF RIGHT OF WAY

LIMIT OF WORK
END OF PHASE 1 STA. 92+28.58=
BEGINNING OF PHASE 3 STA. 92+28.58
N 562,104.95
E 1,352,386.81

18
API COLUMBIA TOWN CENTER, LLC
LOT 2 S1 AR 3
TOWN CENTER LITTLE PATUXENT PKWY
PARCEL 0389 LOT N/A

N 562,185
E 1,352,687

N 562,055
E 1,352,687

SWIFT STREAM PL
(PRIVATE ROAD)

20

SYMPHONY WOODS DRIVE

S ENTRANCE RD
(COUNTY / LOCAL ROAD)

19
HOWARD RESEARCH AND DEVELOPMENT LOT 2 S J A R 3
TOWN CENTER ROUTE 29
PARCEL 0389 LOT 2

N

0 30 60

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

NO LANDSCAPE SHOWN ON THIS SHEET

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2015
AS-BUILT DATE: 10/13/2014

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/6/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

LANDSCAPE PLAN 4 C7.11

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

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2/17/15

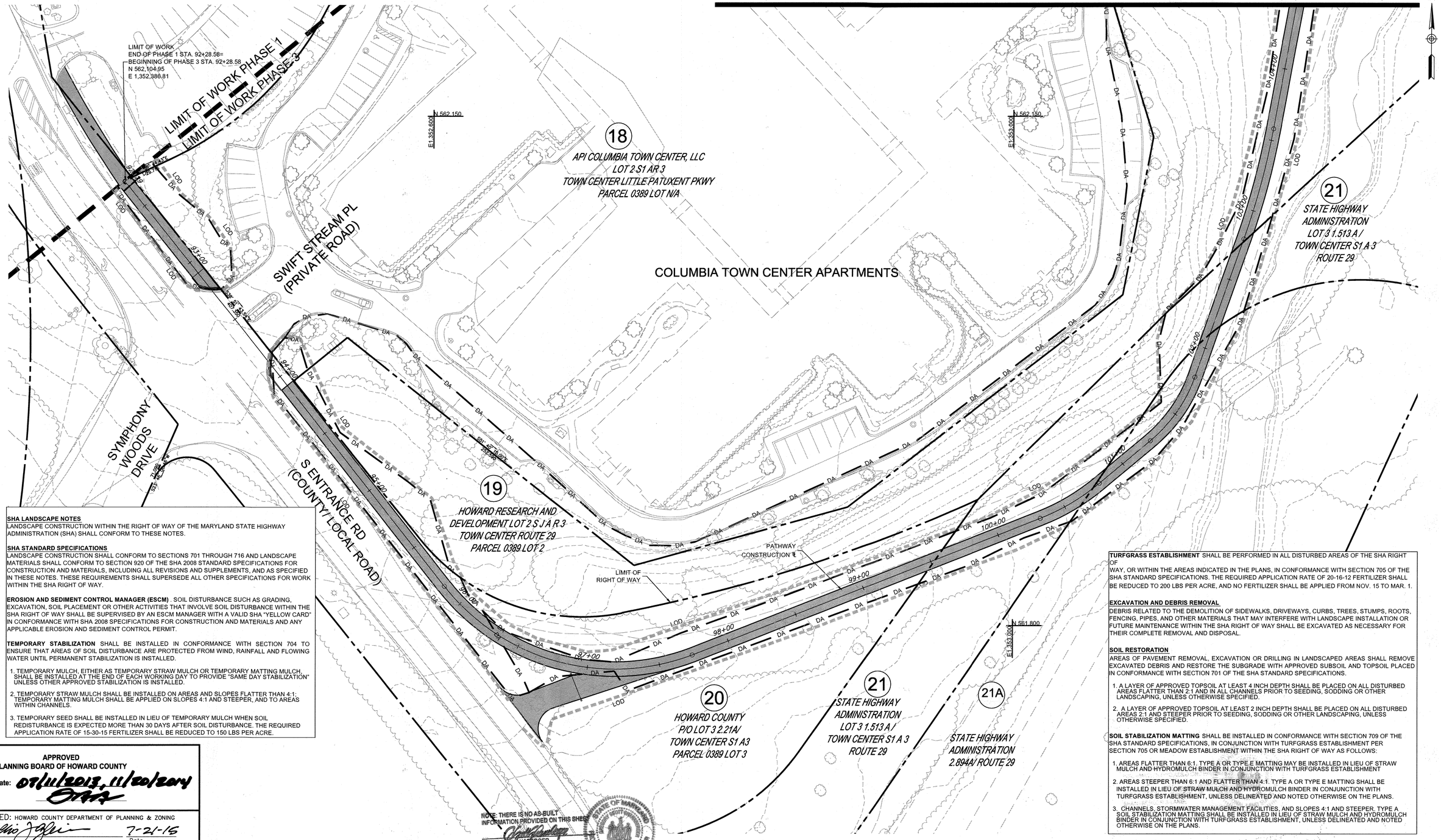
PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	80 OF 171

SDP-13-020



SHA LANDSCAPE NOTES
LANDSCAPE CONSTRUCTION WITHIN THE RIGHT OF WAY OF THE MARYLAND STATE HIGHWAY ADMINISTRATION (SHA) SHALL CONFORM TO THESE NOTES.

SHA STANDARD SPECIFICATIONS
LANDSCAPE CONSTRUCTION SHALL CONFORM TO SECTIONS 701 THROUGH 716 AND LANDSCAPE MATERIALS SHALL CONFORM TO SECTION 920 OF THE SHA 2008 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, INCLUDING ALL REVISIONS AND SUPPLEMENTS, AND AS SPECIFIED IN THESE NOTES. THESE REQUIREMENTS SHALL SUPERSEDE ALL OTHER SPECIFICATIONS FOR WORK WITHIN THE SHA RIGHT OF WAY.

EROSION AND SEDIMENT CONTROL MANAGER (ESCM) . SOIL DISTURBANCE SUCH AS GRADING, EXCAVATION, SOIL PLACEMENT OR OTHER ACTIVITIES THAT INVOLVE SOIL DISTURBANCE WITHIN THE SHA RIGHT OF WAY SHALL BE SUPERVISED BY AN ESCM MANAGER WITH A VALID SHA "YELLOW CARD" IN CONFORMANCE WITH SHA 2008 SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS AND ANY APPLICABLE EROSION AND SEDIMENT CONTROL PERMIT.

TEMPORARY STABILIZATION SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 704 TO ENSURE THAT AREAS OF SOIL DISTURBANCE ARE PROTECTED FROM WIND, RAINFALL AND FLOWING WATER UNTIL PERMANENT STABILIZATION IS INSTALLED.

1. TEMPORARY MULCH, EITHER AS TEMPORARY STRAW MULCH OR TEMPORARY MATTING MULCH, SHALL BE INSTALLED AT THE END OF EACH WORKING DAY TO PROVIDE "SAME DAY STABILIZATION" UNLESS OTHER APPROVED STABILIZATION IS INSTALLED.
2. TEMPORARY STRAW MULCH SHALL BE INSTALLED ON AREAS AND SLOPES FLATTER THAN 4:1; TEMPORARY MATTING MULCH SHALL BE APPLIED ON SLOPES 4:1 AND STEEPER, AND TO AREAS WITHIN CHANNELS.
3. TEMPORARY SEED SHALL BE INSTALLED IN LIEU OF TEMPORARY MULCH WHEN SOIL REDISTURBANCE IS EXPECTED MORE THAN 30 DAYS AFTER SOIL DISTURBANCE. THE REQUIRED APPLICATION RATE OF 15-30-15 FERTILIZER SHALL BE REDUCED TO 150 LBS PER ACRE.

TURFGRASS ESTABLISHMENT SHALL BE PERFORMED IN ALL DISTURBED AREAS OF THE SHA RIGHT OF WAY, OR WITHIN THE AREAS INDICATED IN THE PLANS, IN CONFORMANCE WITH SECTION 705 OF THE SHA STANDARD SPECIFICATIONS. THE REQUIRED APPLICATION RATE OF 20-16-12 FERTILIZER SHALL BE REDUCED TO 200 LBS PER ACRE, AND NO FERTILIZER SHALL BE APPLIED FROM NOV. 15 TO MAR. 1.

EXCAVATION AND DEBRIS REMOVAL
DEBRIS RELATED TO THE DEMOLITION OF SIDEWALKS, DRIVEWAYS, CURBS, TREES, STUMPS, ROOTS, FENCING, PIPES, AND OTHER MATERIALS THAT MAY INTERFERE WITH LANDSCAPE INSTALLATION OR FUTURE MAINTENANCE WITHIN THE SHA RIGHT OF WAY SHALL BE EXCAVATED AS NECESSARY FOR THEIR COMPLETE REMOVAL AND DISPOSAL.

SOIL RESTORATION
AREAS OF PAVEMENT REMOVAL, EXCAVATION OR DRILLING IN LANDSCAPED AREAS SHALL REMOVE EXCAVATED DEBRIS AND RESTORE THE SUBGRADE WITH APPROVED SUBSOIL AND TOPSOIL PLACED IN CONFORMANCE WITH SECTION 701 OF THE SHA STANDARD SPECIFICATIONS.

1. A LAYER OF APPROVED TOPSOIL AT LEAST 4 INCH DEPTH SHALL BE PLACED ON ALL DISTURBED AREAS FLATTER THAN 2:1 AND IN ALL CHANNELS PRIOR TO SEEDING, SODDING OR OTHER LANDSCAPING, UNLESS OTHERWISE SPECIFIED.
2. A LAYER OF APPROVED TOPSOIL AT LEAST 2 INCH DEPTH SHALL BE PLACED ON ALL DISTURBED AREAS 2:1 AND STEEPER PRIOR TO SEEDING, SODDING OR OTHER LANDSCAPING, UNLESS OTHERWISE SPECIFIED.

SOIL STABILIZATION MATTING SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 709 OF THE SHA STANDARD SPECIFICATIONS, IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT PER SECTION 705 OR MEADOW ESTABLISHMENT WITHIN THE SHA RIGHT OF WAY AS FOLLOWS:

1. AREAS FLATTER THAN 6:1, TYPE A OR TYPE E MATTING MAY BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT
2. AREAS STEEPER THAN 6:1 AND FLATTER THAN 4:1, TYPE A OR TYPE E MATTING SHALL BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT, UNLESS DELINEATED AND NOTED OTHERWISE ON THE PLANS.
3. CHANNELS, STORMWATER MANAGEMENT FACILITIES, AND SLOPES 4:1 AND STEEPER, TYPE A SOIL STABILIZATION MATTING SHALL BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT, UNLESS DELINEATED AND NOTED OTHERWISE ON THE PLANS.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.15.15

NO LANDSCAPE SHOWN ON THIS SHEET

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

LANDSCAPE PLAN 1 C7.12

TooleDesignGroup
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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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PROFESSIONAL CERTIFICATION
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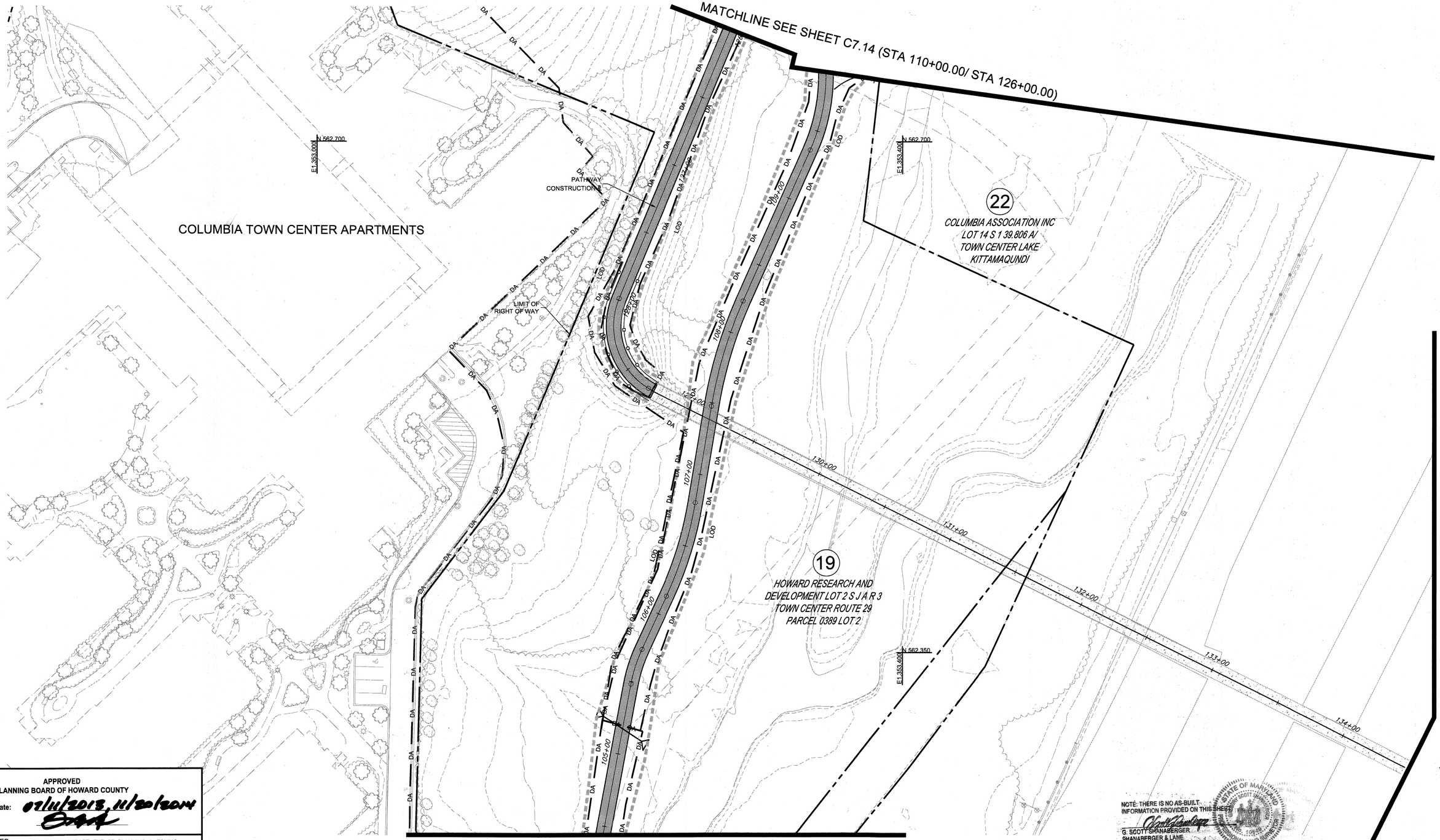
EXPIRATION DATE: 12/28/15
6/12/15

PHASE 3
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)
ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
06/09/15	36	81 OF 171

SDP-13-020

O:\ACTIVE PROJECTS\5282 CEP-Meadow Trail\Site Development Plan 3\CAD\Plans\C7.12- LANDSCAPE PLANS.dwg, 6/9/2015 2:19 PM, LAST SAVED BY AGIES, 1:1 PLOT, PLOTTED BY Gene Tibbetts



NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NO LANDSCAPE SHOWN ON THIS SHEET

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

LANDSCAPE PLAN 2 C7.13

DATE	REVISION	BY	APP'R.
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

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EXPIRATION DATE: 12/28/15

Melissa Pallozzi Brick
6/1/15

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	82 OF 171

SDP-13-020

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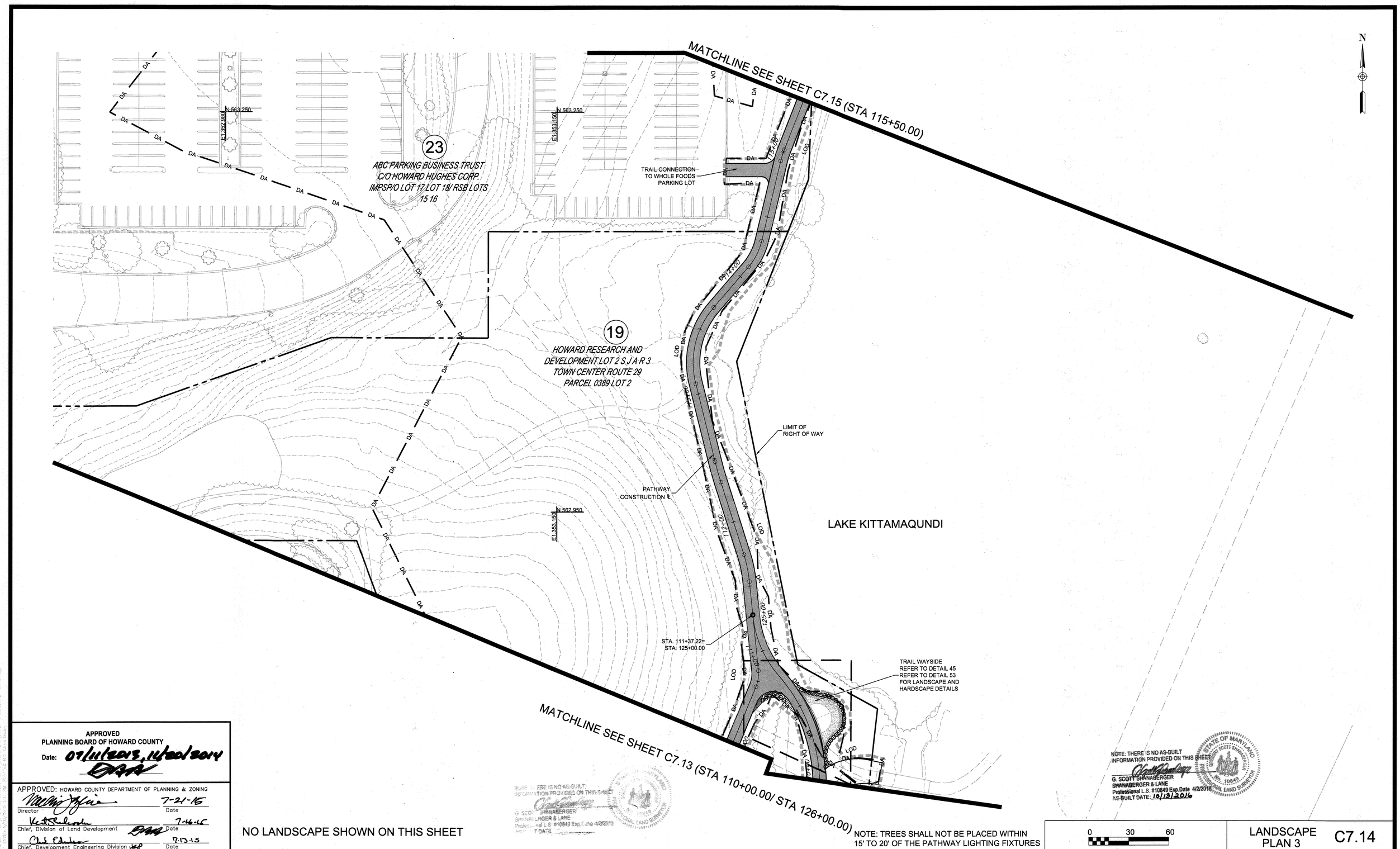

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE

NO LANDSCAPE SHOWN ON THIS SHEET

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

LANDSCAPE PLAN 3 C7.14

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	7-21-15 Date
Chief, Division of Land Development	7-16-15 Date
Chief, Development Engineering Division	7-13-15 Date

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Q:\ACTIVE PROJECTS\5282 GDP-Blandair Trail\Site Development Plan 3\CAD\Plans\C7.12 - LANDSCAPE PLANS.dwg | DES. DPB | DRN. AG | CHK. EM

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EXPIRATION DATE: 12/28/15

Nancy Allister Brick
6/1/15

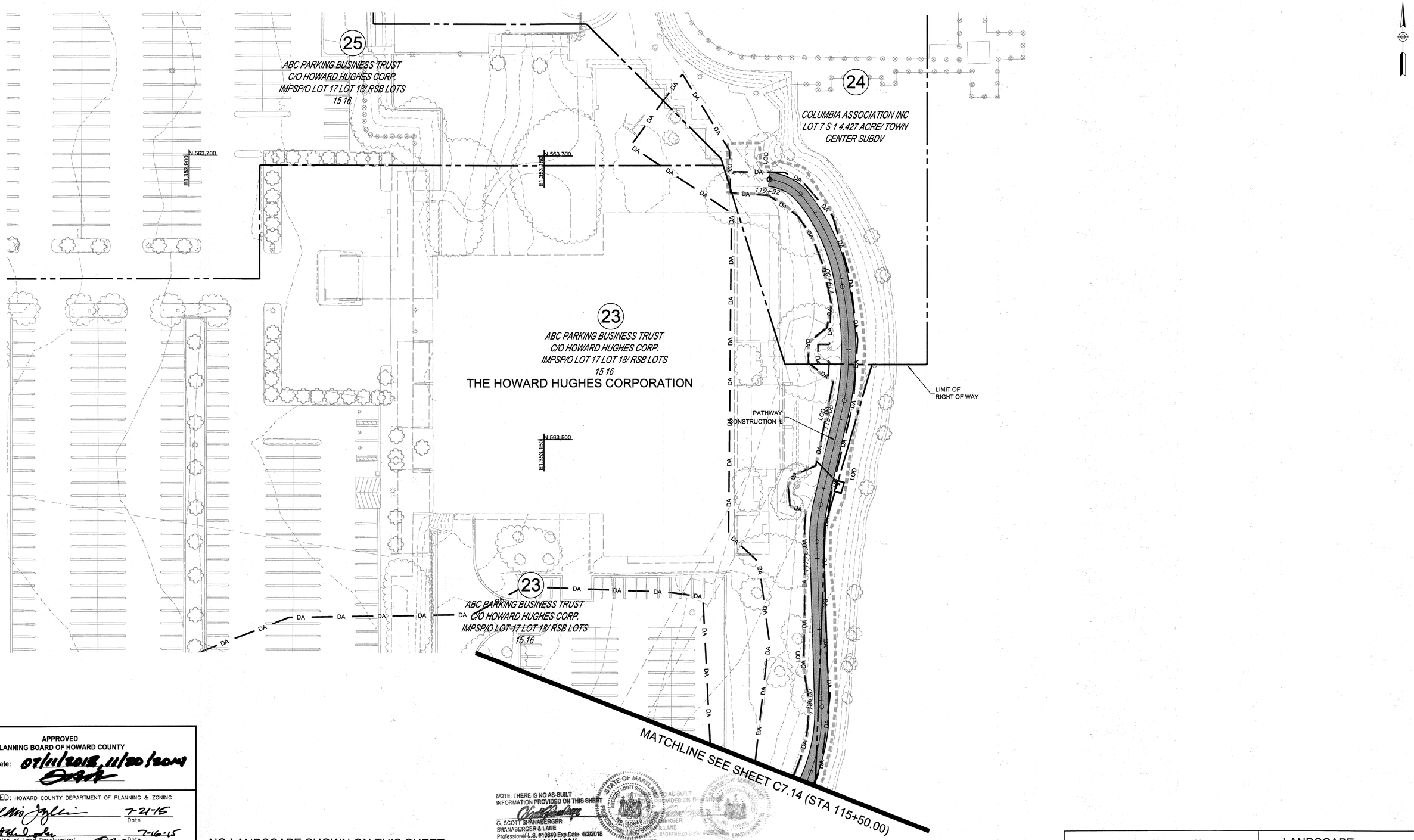
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	83 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
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Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NO LANDSCAPE SHOWN ON THIS SHEET

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

LANDSCAPE PLAN 4 — C7.15

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB | DRN. AG | CHK. EM

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

Melanie Allison Brick
6/1/15

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	84 OF 171

SDP-13-020

N

MATCHLINE SEE SHEET C7.13 (STA 134+50.00)

MATCHLINE SEE SHEET C7.17 (STA 145+00.00)

N 562,550
E 1,354,050

N 562,550
E 1,354,450

N 562,200
E 1,354,450

COLUMBIA ASSOCIATION
EXISTING 50' R/W

LIMIT OF
RIGHT OF WAY

PATHWAY
CONSTRUCTION ℄

LOD

DA

135+00

136+00

137+00

138+00

139+00

140+00

141+00

142+00

143+00

144+00

145+00

26
PARCEL "B"
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

27
PARCEL "C"
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

28
OPEN SPACE LOT 2
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

28A
OPEN SPACE LOT 3
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

29
PARCEL "D"
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PN 15746 & 15747

P10
PROPERTY OF
NICOLAS HERNANDEZ
L. 9251 F. 250

P12
PROPERTY OF
FLETCHER W, & CHRISTINE N, FERGUSON
L. 5164 F. 336

NO LANDSCAPE SHOWN ON THIS SHEET

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/14/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE:

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PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\5282 - Howard Hughes Development Plan - Columbia\Plans\C7.16 - LANDSCAPE PLAN5.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
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COLUMBIA, MD 21044
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PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

6/1/15

LANDSCAPE PLAN 5 — C7.16

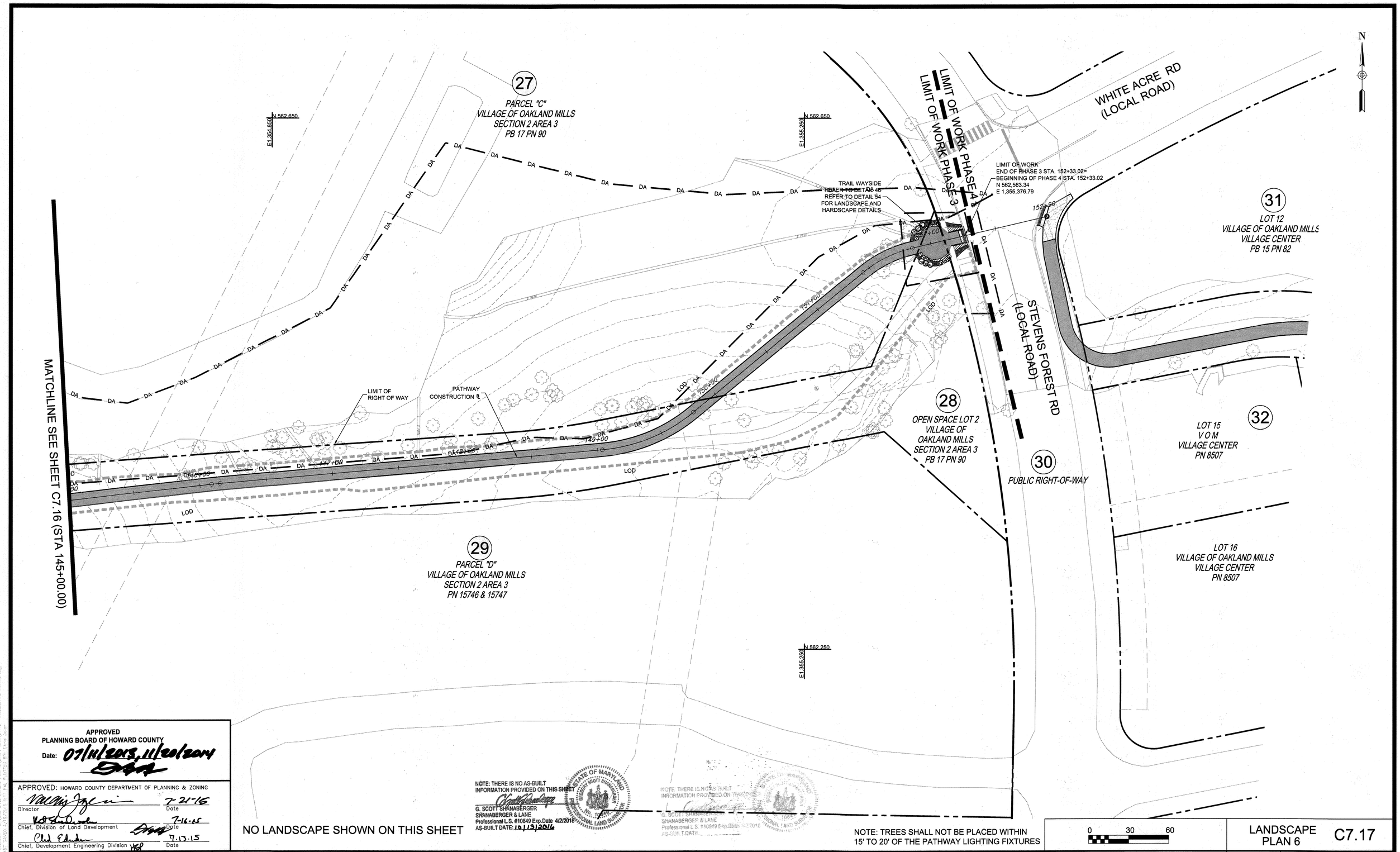
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	85 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE

NO LANDSCAPE SHOWN ON THIS SHEET

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

LANDSCAPE PLAN 6 — C7.17

TooleDesignGroup
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PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB	DRN. AG	CHK. EM

Howard Hughes.
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THE HOWARD HUGHES CORPORATION
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410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
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EXPIRATION DATE: 12/28/15

Melanie Rollins-Brick
6/1/15

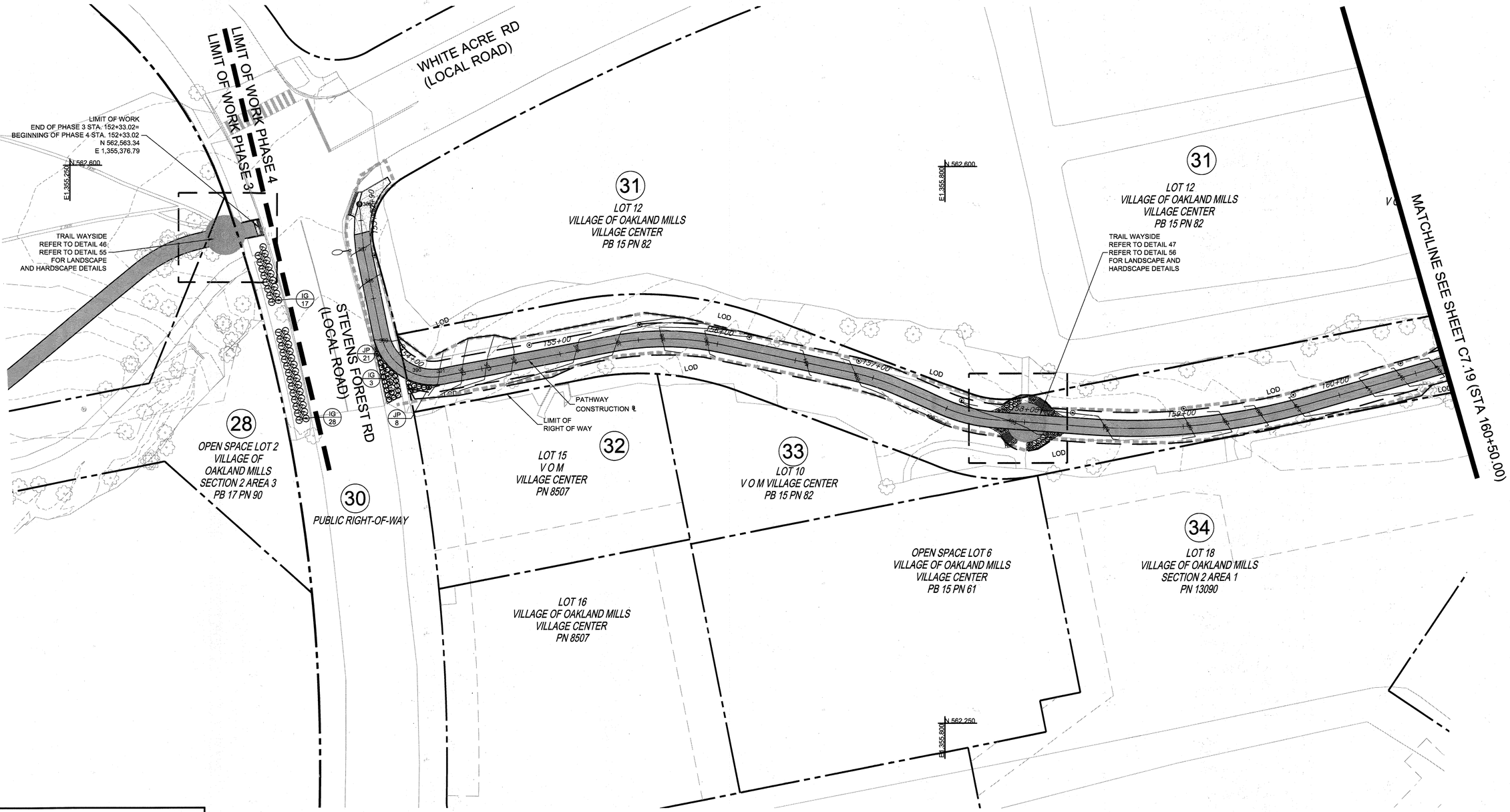
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	86 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/ul/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Accent Shrubs		
IG	Ilex glabra 'Compacta'	Compact Inkberry Holly	2.5' - 3' ht.
	Groundcover		
JP	Juniperus chinensis 'Parsonii'	Juniper Parsoni	1gal./cont.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE:

LANDSCAPE PLAN 1 — C7.18

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING ! ENGINEERING ! LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\2282 CEP-Oakland Trail\Site Development Plan 4\2282Plan4C7.18 - LANDSCAPE PLAN1.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

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Mary Kathleen Brick — 6/1/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	87 OF 171

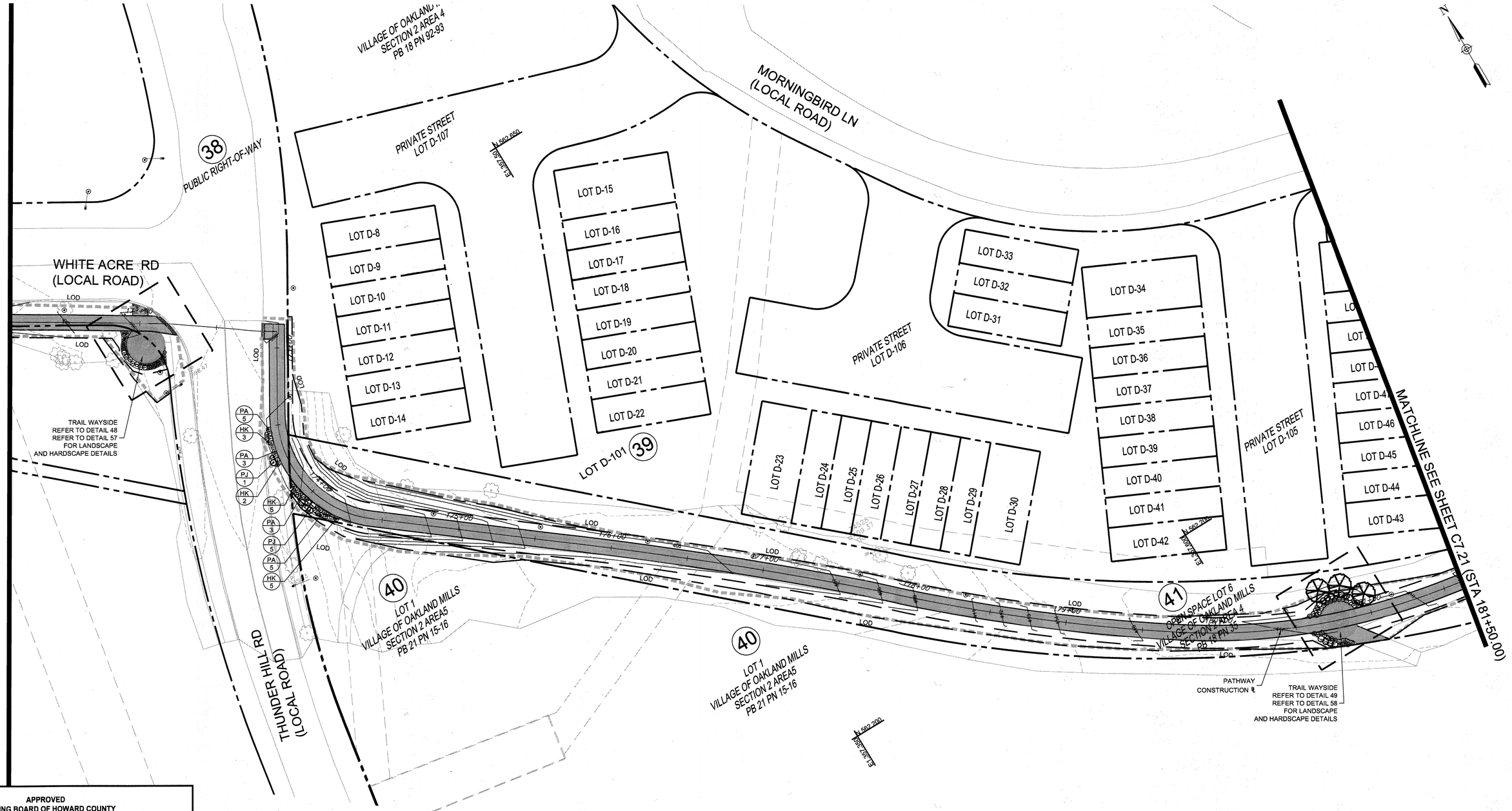
SDP-13-020

N

N 562,850
E 1,356,950

31
LOT 12
VILLAGE OF
OAKLAND MILLS
VILLAGE CENTER
PB 15 PN 82

LOD
765+00
LOD
765+00
LOD
765+00



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2015, 4/30/2015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Perennials/ Ornamental Grasses		
HK	Hypericum kalmianum ' Gemo'	Gemo St. John's Wort	1gal./cont.
PA	Pennisetum alopecuroides ' Hameln"	Dwarf Fountain Grass	1gal./cont.
PJ	Pieris japonica 'Compacta'	Compact Japanese Andromeda	1gal./cont.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

LANDSCAPE PLAN 3 — C7.20

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

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Nancy Christie Buck — 6/1/15

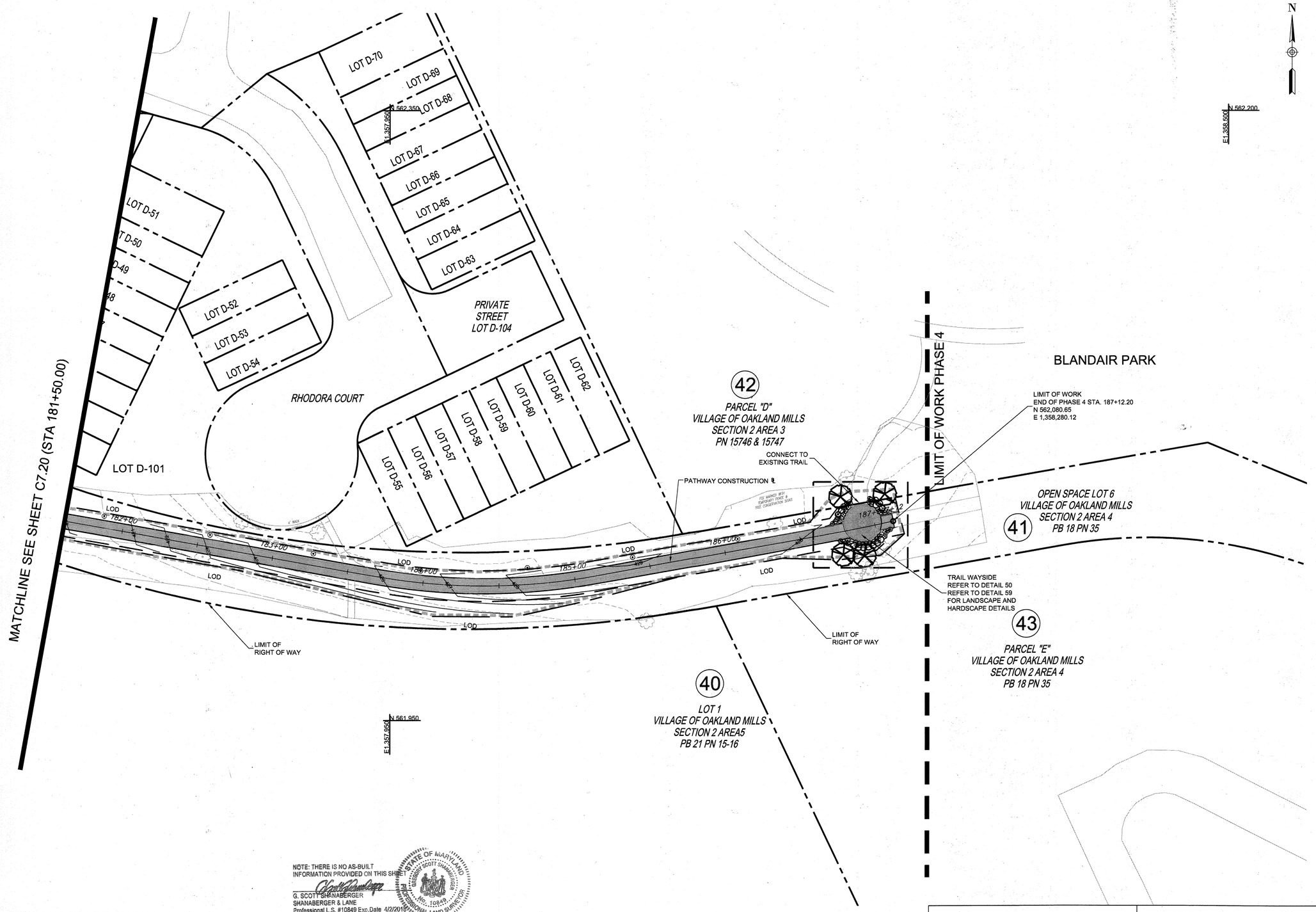
PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	89 OF [illegible]

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NO LANDSCAPE SHOWN ON THIS SHEET

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

NOTE: TREES SHALL NOT BE PLACED WITHIN 15' TO 20' OF THE PATHWAY LIGHTING FIXTURES

0 30 60

LANDSCAPE PLAN 4 — C7.21

TooleDesignGroup
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
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COLUMBIA, MD 21044
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PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: 12/28/15

6/1/15

PHASE 4

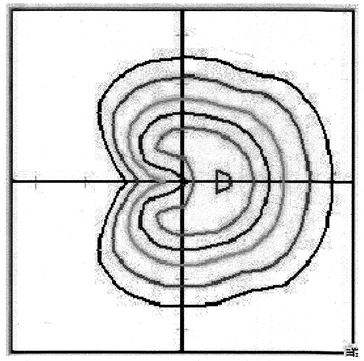
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	90 OF 171

SDP-13-020

© TOOLE DESIGN GROUP, LLC 2015 (SDP-Blandair Trail)Site Development Plan 4\DGN\Plan\C7.21- LANDSCAPE PLAN4.dwg
DES. DPB | DRN. AG | CHK. EM



Hadco Maple Lawn Acorn
Type 3 Horizontal Footcandle Diagram
Scale: 1:30

ALL EXISTING CURB RAMPS AT CEDAR LAND AND LITTLE PATUXENT PKWY ARE TO REMAIN

EXISTING SIGNAL

FUTURE TRAFFIC IMPROVEMENTS BY OTHERS

LIMIT OF WORK PHASE 2

LIMIT OF WORK BEGINNING OF PHASE 2
STA 1+00.00
N 563,892.61
E 1,344,294.52

CEDAR LANE

N 564,250
E1,344,300

N 564,250
E1,344,600

S 66°10'33" W 725.48'

MATCHLINE SEE SHEET C8.1 (STA 5+50.00)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

TRAIL - CEDAR TO HOSPITAL ENT
AVG - 1.13FC
MAX - 2.50FC
MIN - 0.3FC
AVG/MIN - 3.77

POST TOP 201
STA. 1+09
OFF 8.00

POST TOP 202
STA. 2+03
OFF 8.00

POST TOP 203
STA. 2+57
OFF 8.00

EXISTING COBRA 27

EXISTING COBRA 28

EXISTING COBRA 29

POST TOP 204
STA. 3+04
OFF 8.00

POST TOP 205
STA. 3+88
OFF 8.00

POST TOP 206
STA. 4+48
OFF 8.00

POST TOP 207
STA. 5+09
OFF 8.00

LIMIT OF RIGHT OF WAY

PATHWAY CONSTRUCTION

PERMANENT EASEMENT

TEMPORARY EASEMENT

1
LOT 4
HOWARD COUNTY GENERAL HOSPITAL, INC
TOWN CENTER
SECTION 8 AREA 2
PN 19000

N 563,830
E1,344,600

N 68°17'08" W
212.35'

HOWARD COUNTY
GENERAL HOSPITAL

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/20/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

FIXTURES:
POST TOP - 71 WATT HADCO-MAPLELAWN, 71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/15/2014

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
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Robert Jenkins, VP, Engineering & Construction
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PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — NELSON HILLARD BRIT — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

10/17/14

/PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

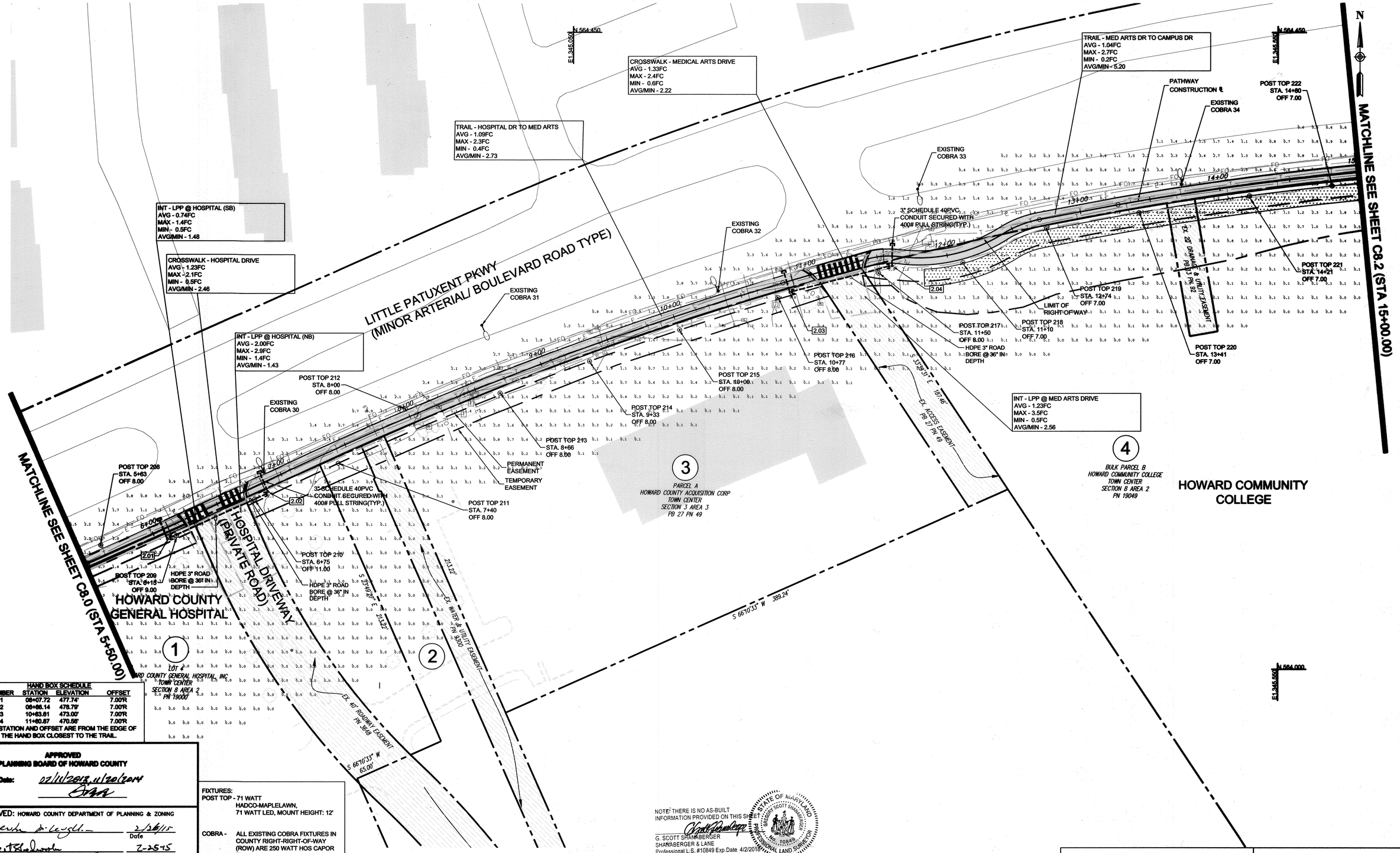
ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	91 OF 171

LIGHTING PLAN 1 — C8.0

SDP-13-020

© \\ACTIVE PROJECTS\2082 GBP-Howard Hughes\Site Development Plan 2\CAD\Plans\C8-0 – LIGHTING PLANS 2014-09-12.dwg, 10/17/2014 1:49 PM, JOSTEN BIRCH, 1/2/2014 1:49 PM, PC6770 by Antonio Delgado



HAND BOX SCHEDULE			
NUMBER	STATION	ELEVATION	OFFSET
2.01	06+07.72	477.74'	7.00'R
2.02	06+86.14	478.79'	7.00'R
2.03	10+63.61	473.00'	7.00'R
2.04	11+60.87	470.56'	7.00'R

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

FIXTURES:
POST TOP - 71 WATT HADCO-MAPLELAWN, 71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2015
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 2 — **C8.1**

TooleDesignGroup
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EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MARK STEVEN WILLIAMS — No. 35022 — REGISTERED PROFESSIONAL ENGINEER
1/28/15

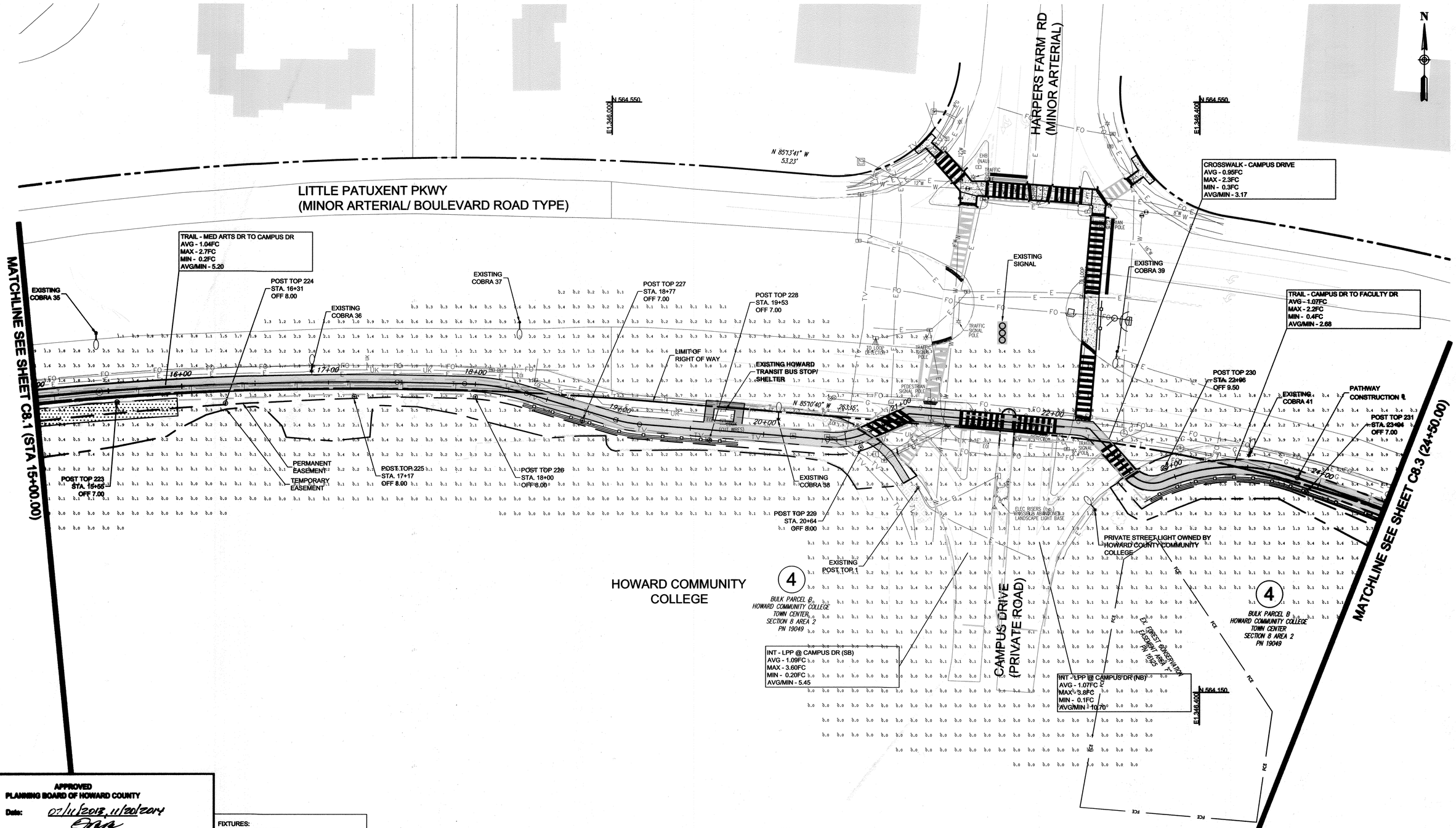
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	92 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date: 4/2...
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

LIGHTING PLAN 3 — C8.2

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.toodesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

Melissa D. Brinck

STATE OF MARYLAND — MELISSA DAWN BRINCK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

12/4/15

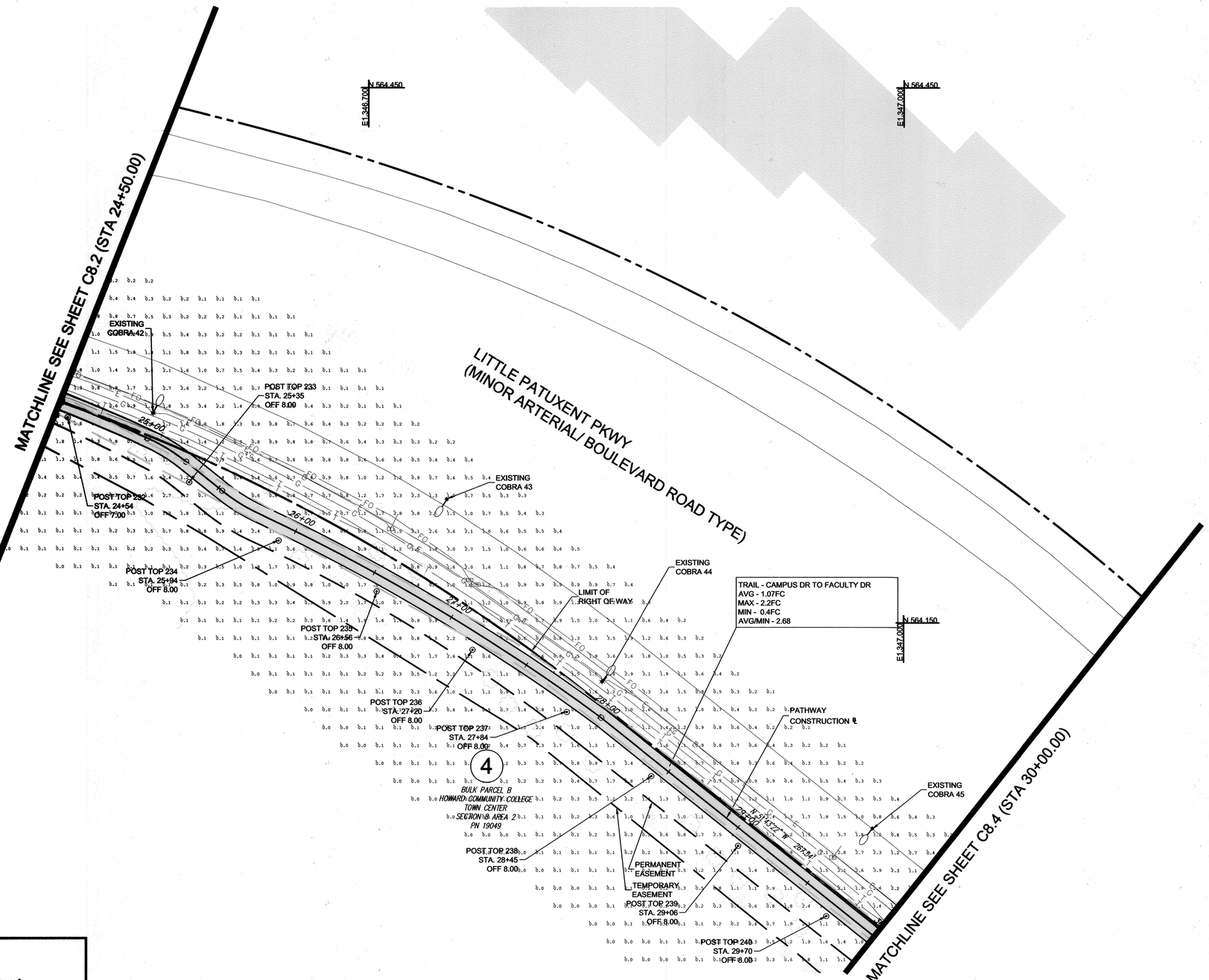
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	93 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS BUILT DATE 12/31/2014

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 4 — **C8.3**

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE
DES. DPB | DRN. AG | CHK. EM

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

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12/4/15

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	94 OF 171

SDP-13-020

MATCHLINE SEE SHEET C8.3 (STA 30+00.00)

POST TOP 241
STA. 30+31
OFF 8.00

POST TOP 242
STA. 30+90
OFF 8.00

EXISTING
COBRA 46

3" SCHEDULE 40PVC
CONDUIT SECURED WITH
400# PULL STRING(TYP.)

EXISTING
COBRA 47

N 563,900
E1,347,250

CROSSWALK - FACULTY DRIVE
AVG - 0.99FC
MAX - 2.3FC
MIN - 0.5FC
AVG/MIN - 1.98

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

APPROX. LOCATION
4" x 2" REDUCER

POST TOP 245
STA. 32+87
OFF 8.00

POST TOP 246
STA. 33+57
OFF 7.00

POST TOP 247
STA. 34+07
OFF 7.00

PATHWAY
CONSTRUCTION E

POST TOP 248
STA. 234+82
OFF 7.00

EXISTING
COBRA 48

POST TOP 243
STA. 31+47
OFF 8.00

HDPE 3" ROAD
BORE @ 36" IN
DEPTH

POST TOP 244
STA. 31+95
OFF 8.00

TRAIL - CAMPUS DR TO FACULTY DR
AVG - 1.07FC
MAX - 2.2FC
MIN - 0.4FC
AVG/MIN - 2.68

FACULTY DR
(PRIVATE ROAD)

4
BULK PARCEL B
HOWARD COMMUNITY COLLEGE
TOWN CENTER
SECTION 6 AREA 2
PN 19049

STREAM

EX. PUBLIC 100-YR. FLOODPLAIN, DRAINAGE & UTILITY EASEMENT PN 19049

INT - LPP @ FACULTY DRIVE
AVG - 0.63FC
MAX - 2.3FC
MIN - 0.0FC
AVG/MIN - 0.00

STREAM BUFFER

PERMANENT
EASEMENT

TEMPORARY
EASEMENT

5
OPEN SPACE LOT 7
HOWARD RESEARCH AND DEVELOPMENT
COLUMBIA TOWN CENTER
SECTION 3 AREA 3
PN 13869

EX. 20' DRAINAGE & UTILITY EASEMENT
JOB 13 PM 94

EX. FOREST CONSERVATION
EASEMENT AREA 'D'
PN 19125

POST TOP 249
STA. 235+36
OFF 7.00

POST TOP 250
STA. 235+99
OFF 7.00

INT - LPP @ LONG FOSTER
AVG - 1.27FC
MAX - 2.6FC
MIN - 0.3FC
AVG/MIN - 4.23

6

N 37°19'44" W

TRAIL - FACULTY DR TO LONG DR
AVG - 1.28FC
MAX - 2.5FC
MIN - 0.6FC
AVG/MIN - 2.13

POST TOP 252
STA. 237+18
OFF 8.00

EXISTING
COBRA 49

LIMIT OF
RIGHT OF WAY

POST TOP 251
STA. 236+60
OFF 8.00

3" SCHEDULE 40PVC
CONDUIT SECURED WITH
400# PULL STRING(TYP.)

POST TOP 253
STA. 238+13
OFF 7.00

N 563,658
E1,347,750

HDPE 3" ROAD
BORE @ 36" IN
DEPTH

EX. 30' INGRESS-EGRESS EASEMENT
LIBER 1138
FOLIO 38
PB 28 PM 47

7
LOT C-2
PEVERLEY GEORGE C III
TOWN CENTER
SECTION 6 AREA 2
PB 28 PM 47

FIRESTONE COMPLETE
AUTOCARE STORE

N 563,900
E1,347,750

CROSSWALK - LONG FOSTER
AVG - 1.39FC
MAX - 2.1FC
MIN - 0.9FC
AVG/MIN - 1.54

TRAIL - LONG DR TO ZIPS
AVG - 1.25FC
MAX - 2.7FC
MIN - 0.5FC
AVG/MIN - 2.50

FUTURE SIGNALIZED INTERSECTION
IMPROVEMENTS BY OTHERS

EXISTING
COBRA 50

POST TOP 255
STA. 39+35
OFF 8.00

POST TOP 254
STA. 238+72
OFF 8.00

MATCHLINE SEE SHEET C8.5 (STA 39+50.00)

N

HAND BOX SCHEDULE			
NUMBER	STATION	ELEVATION	OFFSET
2.05	31+81.89	423.70'	7.00'R
2.06	33+07.16	419.57'	7.00'R
2.07	37+55.70	412.48'	7.00'R
2.08	38+17.55	411.64'	7.00'R

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 7/11/13, 11/20/14
2nd

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 9-15-15

Chief, Division of Land Development — Date 9-15-15

Chief, Development Engineering Division — Date 9.11.15

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/23/2015

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 5 — C8.4

ToolDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

9/1/15

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/25/15	36	95 OF 171

SDP-13-020

© LATITUDE PRODUCTS/SDC ESP-Blandair Trail/Site Development Plan 2/CAD/Xsheet/C8-4 - LIGHTING PLANS 2015-4-Sht-2.dwg, 8/27/2015 7:29:25 AM, LaserMaster Corporation, Xerox 6204 Color Laser Printer

MATCHLINE SEE SHEET C8.4 (STA 39+50.00)

N 563,900
E 1,348,200

N 563,900
E 1,348,700

N

TRAIL - LONG DR TO ZIPS
AVG - 1.25FC
MAX - 2.7FC
MIN - 0.5FC
AVG/MIN - 2.50

CROSSWALK - ZIPS DR
AVG - 0.96FC
MAX - 1.9FC
MIN - 0.6FC
AVG/MIN - 1.6

TRAIL - ZIPS TO GAS DR
AVG - 1.12FC
MAX - 2.5FC
MIN - 0.4FC
AVG/MIN - 2.80

N 86°28'41" W 281.33'

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

POST TOP 256
STA. 40+05
OFF 8.00

POST TOP 257
STA. 40+69
OFF 8.00

EXISTING
COBRA 51

POST TOP 258
STA. 41+39
OFF 8.00

EXISTING
COBRA 52

LIMIT OF
RIGHT OF WAY

EXISTING
COBRA 53

NUMEROUS PRIMARY ELECTRIC LINES TO SUB-STATION

UNKNOWN WATER FEATURE UNABLE TO ACCESS

3" SCHEDULE 40PVC
CONDUIT SECURED WITH
400# PULL STRING(TYP.)

2.09

2.10

61.73'

WATER SERVICES DISCONNECTED

POST TOP 259
STA. 42+01
OFF 8.00

POST TOP 260
STA. 42+57
OFF 8.00

PERMANENT
EASEMENT

TEMPORARY
EASEMENT

POST TOP 261
STA. 43+18
OFF 8.00

POST TOP 262
STA. 43+87
OFF 8.00

POST TOP 263
STA. 44+75
OFF 7.00

POST TOP 264
STA. 45+34
OFF 7.00

EXISTING
COBRA 54

POST TOP 265
STA. 346+03
OFF 9.00

STA AHEAD = 346+00.00
STA BACK = 45+94.00

POST TOP 266
STA. 346+77
OFF 8.00

RELOCATED
EXISTING COBRA 55

N 563,600
E 1,348,700

PATHWAY
CONSTRUCTION ℄

EXISTING COBRA 55
TO BE RELOCATED
TO THE MEDIAN

CROSSWALK - GAS STATION - W
AVG - 1.20FC
MAX - 2.0FC
MIN - 0.6FC
AVG/MIN - 2.00

EXISTING HOWARD TRANSIT
BUS STOP TO BE RELOCATED.
COORDINATE WITH HOWARD
COUNTY.

N 70°28'41" W 432.45'

INT - LPP @ ZIPS
AVG - 0.99FC
MAX - 1.9FC
MIN - 0.4FC
AVG/MIN - 2.48

ZIPS
CLEANERS

7
LOT C-2
PEVERLEY GEORGE C III
TOWN CENTER
SECTION 6 AREA 2
PB 28 PN 47

8
PARCEL D
BJG LAND INC.
TOWN CENTER
SECTION 6 AREA 2
PB 18 PN 75

9
OPEN SPACE LOT 1
HOWARD RESEARCH AND DEVELOPMENT
COLUMBIA TOWN CENTER
SECTION 3 AREA 3
PN 13869

N 08°01'19" E 1,450.57'

10.00'

S 81°58'41" E 400.00'

N 08°01'19" E 98.00'

152.47'

STREAM BUFFER

FP

FLOOD PLAIN

EX. 20' DRAINAGE & UTILITY EASEMENT
PB 43 PN 95

20' SEWER EASEMENT
PB 18 PN 95

2.11

POST TOP 267
STA. 347+82
OFF 8.00

POST TOP 268
STA. 348+40
OFF 8.00

INT - LPP @ GAS STATION - WEST
AVG - 1.12FC
MAX - 3.9FC
MIN - 0.2FC
AVG/MIN - 5.60

MATCHLINE SEE SHEET C8.6 (STA 349+00.00)

HAND BOX SCHEDULE			
NUMBER	STATION	ELEVATION	OFFSET
2.09	41+32.60	400.23'	7.00'R
2.10	42+05.57	397.91'	7.00'R
2.11	48+31.43	399.05'	7.00'R

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16

Chief, Division of Land Development — Date 3-22-16

Chief, Development Engineering Division — Date 3-18-16

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTES:

1. SDP 13-020 INCLUDES A NEW EASEMENT FOR THE CONSTRUCTION, USE AND MAINTENANCE OF THE MULTIUSE PATHWAY TO BE LOCATED ON PARCEL 8 (EXXON PROPERTY). FOR ADDITIONAL INFORMATION REGARDING PARCEL 8 SEE SDP 70-001.

2. REFER TO SHEET 161 FOR ALL GENERAL LIGHTING NOTES

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

0 30 60

LIGHTING PLAN 6 — **C8.5**

ToolDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
09/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

DES. DPB | DRN. AG | CHK. EM

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
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PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 39022, EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — MARK A. BLANDFORD — No. 39022 — PROFESSIONAL ENGINEER

SHH 11/16

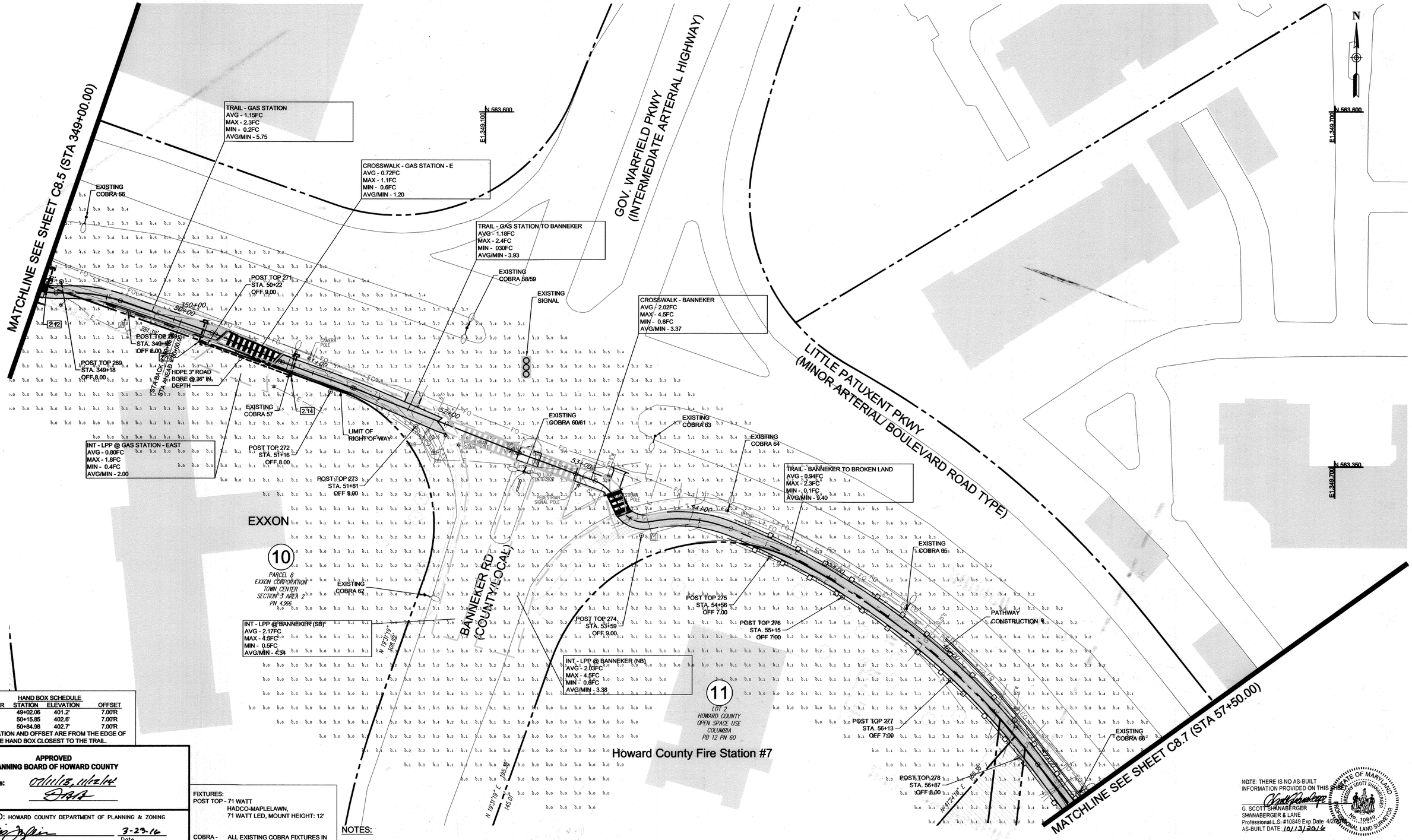
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
03/07/16	36	96 OF 171

SDP-13-020



HAND BOX SCHEDULE			
NUMBER	STATION	ELEVATION	OFFSET
2.12	49+02.06	401.2'	7.00'R
2.13	50+15.85	402.6'	7.00'R
2.14	50+84.98	402.7'	7.00'R

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 04/11/13, 11/26/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16

Chief, Division of Land Development — Date 3-22-16

Chief, Development Engineering Division — Date 3-18-16

FIXTURES:
POST TOP - 71 WATT HADCO-MAPLELAWN, 71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTES:

1. SDP 13-020 INCLUDES A NEW EASEMENT FOR THE CONSTRUCTION, USE AND MAINTENANCE OF THE MULTIUSE PATHWAY TO BE LOCATED ON PARCEL 8 (EXXON PROPERTY). FOR ADDITIONAL INFORMATION REGARDING PARCEL 8 SEE SDP 70-001.
2. REFER TO SHEET 161 FOR ALL GENERAL LIGHTING NOTES

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

0 30 60

LIGHTING PLAN 7 — **C8.6**

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
05/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — MARK A. BLANDFORD — NO. 35022 — PROFESSIONAL ENGINEER

5/4/16

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
03/07/16	36	97 OF 171

SDP-13-020

MATCHLINE SEE SHEET C8.6 (STA 57+50.00)

PARCEL 7-A
TOWN CENTER
SECTION 3 AREA 2
PB 30 PN 17

EX. PUBLIC DRAINAGE & UTILITY EASEMENT PN 10724

EX. 20' STORM DRAINAGE & UTILITY EASEMENT PB 15 PN 85

EX. WATER MAIN EASEMENT PB 30 PN 47

S 83°21'07" E
127.68'

S 06°53'53" W
23.50'

S 83°21'07" E
30.00'

S 55°12'14" E
60.00'

PERMANENT EASEMENT

TEMPORARY EASEMENT

EX. DITCH EASEMENT PB 15 PN 60

PARCEL B
COLUMBIA TOWN CENTER
SECTION 3 AREA 2
PN 10724

POST TOP 279
STA. 57+97
OFF 9.00

POST TOP 280
STA. 58+60
OFF 9.00

EXISTING COBRA 67

POST TOP 281
STA. 59+68
OFF 7.00

LIMIT OF RIGHT OF WAY

POST TOP 282
STA. 60+25
OFF 7.00

EXISTING COBRA 68

PATHWAY CONSTRUCTION

POST TOP 283
STA. 61+28
OFF 7.00

POST TOP 284
STA. 61+86
OFF 8.00

POST TOP 285
STA. 62+50
OFF 8.00

EXISTING COBRA 69

EX. 10' STORM DRAINAGE EASEMENT PB 72 PN 60

POST TOP 286
STA. 63+43
OFF 8.00

POST TOP 287
STA. 63+94
OFF 5.00

EXISTING COBRA 70

12

OPEN SPACE LOT 12
COLUMBIA ASSOCIATION
COLUMBIA TOWN CENTER
SECTION 3 AREA 2
PN 10724

N 563,050
E 1,349,700

N 563,050
E 1,350,200

N 562,852
E 1,350,200

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

BROKEN LAND PKWY
(INTERMEDIATE ARTERIAL HIGHWAY)

LIMIT OF WORK PHASE 2

LIMIT OF WORK PHASE 1

TRAIL - BANNEKER TO BROKEN LAND
AVG - 0.94FC
MAX - 2.3FC
MIN - 0.1FC
AVG/MIN - 9.40

CROSSWALK - BROKEN LAND PKWY
AVG - 1.69FC
MAX - 3.8FC
MIN - 0.5FC
AVG/MIN - 3.38

INT - LPP @ BLP (NB)
AVG - 1.12FC
MAX - 9.7FC
MIN - 0.3FC
AVG/MIN - 3.73

INT - LPP @ BLP (SB)
AVG - 1.52FC
MAX - 4.0FC
MIN - 0.5FC
AVG/MIN - 3.04

EXISTING SIGNAL

TRAFFIC SIGNAL POLE

PEDESTRIAN SIGNAL POLE

TRAFFIC CONTROL CABINET

LIMIT OF WORK
END OF PHASE 2 STA. 65+16.58=
BEGINNING OF PHASE 1 STA. 65+32.89
N 562,576.38
E 1,350,064.55

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

HAND BOX SCHEDULE

NUMBER	STATION	ELEVATION	OFFSET
2.15	63+71.78	360.02'	7.00'R

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16

Chief, Division of Land Development — Date 3-22-16

Chief, Development Engineering Division — Date 3.18.16

NOTE: THERE IS NO-AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SMANABERGER
SMANABERGER & LANE
Professional L.S. #10849 Exp Date: 4/30/2017
AS-BUILT DATE: 10/13/2016

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 8 — C8.7

ToolеDesignGroup
8484 GEORGIA AVENUE, SUITE 600 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
09/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/17

9/4/16

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
03/07/16	36	98 OF 171

SDP-13-020

N

N 562,852
E1,350,048

N 562,852
E1,350,560

DOWNTOWN COLUMBIA

MATCHLINE SEE SHEET C8.9 (STA. 71+50.00)

364

- SDI 48IN CMP 350.15
- SDI 12IN CMP 350.19
- SDI 24IN CMP 349.51
- SDI 24IN CMP 348.02
- SDI 48IN RCP 348.00

OPEN SPACE LOT 2
COLUMBIA TOWN CENTER
SECTION 3 AREA 2
PN 10724

12

BROKEN LAND PKWY
(INTERMEDIATE ARTERIAL HIGHWAY)

LIMIT OF WORK PHASE 2

LIMIT OF WORK PHASE 1

CROSSWALK - LPP @ BLP EAST
AVG - 1.00FC
MAX - 1.50FC
MIN - 0.50FC
AVG/MIN - 2.00
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

EXISTING TRAFFIC SIGNAL

LIMIT OF WORK
END OF PHASE 2 STA. 65+20.24=
BEGINNING OF PHASE 1 STA. 65+32.89
N 562,576.38
E 1,350,064.55

INTERSECTION - LPP @ BLP WB APPROACH
AVG - 1.41FC
MAX - 3.90FC
MIN - 0.50FC
AVG/MIN - 2.82
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

INTERSECTION - LPP @ BLP EB DEPART
AVG - 2.00FC
MAX - 3.90FC
MIN - 0.90FC
AVG/MIN - 2.22
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

EXISTING COBRA 25

EXISTING COBRA 24

EXISTING COBRA 23

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

EXISTING COBRA 02

POST TOP 03
STA. 66+94.58
OFF 7.07

EXISTING COBRA 03

POST TOP 06
STA. 69+00.40
OFF 7.58

POST TOP 08
STA. 70+01.21
OFF 6.87

EXISTING COBRA 04

MCI WORLD COM VAULT

POST TOP 01
STA. 65+79.68
OFF 8.70

POST TOP 02
STA. 66+37.46
OFF 7.56

POST TOP 04
STA. 67+44.33
OFF 7.63

POST TOP 05
STA. 68+45.82
OFF 7.72

POST TOP 07
STA. 69+48.69
OFF 7.64

POST TOP 09
STA. 70+71.58
OFF 7.56

POST TOP 10
STA. 71+22.28
OFF 7.38

EXISTING COBRA 01

TEMPORARY EASEMENTS (TYP.)

PERMANENT EASEMENTS (TYP.)

WAYSIDE @ BLP
AVG - 0.56FC
MAX - 0.70FC
MIN - 0.50FC
AVG/MIN - 1.12
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

TRAIL - BROKEN LAND PKWY TO S. ENTRANCE RD
AVG - 0.89FC
MAX - 4.00FC
MIN - 0.50FC
AVG/MIN - 1.78
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

13

HOWARD RESEARCH AND DEVELOPMENT
65.2808/ N/A
PARCEL 0527 LOT N/A

LIMIT OF RIGHT OF WAY

EX. 20' WATER R/W (FT 7) L 1467 F 510

EX. 20' SEWER R/W L 1785 F. 158

INTERMITTENT STREAM BUFFER (50')

FLOOD PLAIN

W - WETLAND

WETLAND BUFFER

EX. 15' S.D. ESMT PB 12 PG 92

N 562,422
E1,350,660

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/01/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/25/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

FIXTURES:
POST TOP - 71 WATT HADCO-MAPLELAWN, 71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10949 — PROFESSIONAL LAND SURVEYOR

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10949 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2015

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 1 — C8.8

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.3531, EXPIRATION DATE: 06/16/15.

STATE OF MARYLAND — NICHOLAS A. WILDASIN — No. 3531 — PROFESSIONAL ENGINEER

10/7/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	99 OF 171

SDP-13-020

© CIVIL PROJECTS\13052 LDP-Blandair Trail\Site Development Plan\DESIGN\DAD\Shifted Trail\Shifted Plans\09-08 - Splitfield.sgn\Plans.dwg
8/28/2014 7:27:27 AM by Dan Bell (LDP-Blandair Trail\Site Development Plan\DESIGN\DAD\Shifted Trail\Shifted Plans\09-08 - Splitfield.sgn\Plans.dwg)

MATCHLINE SEE SHEET C8.8 (STA. 71+50.00)

MATCHLINE SEE SHEET C8.10 (STA. 80+50.00)

MALL ACCESS RD
(PRIVATE ROAD)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

N 562 852
E1,350,778

N 562 852
E1,351,288

EXISTING COBRA 22
EXISTING COBRA 23
EXISTING COBRA 21
EXISTING COBRA 20
EXISTING COBRA 27
EXISTING COBRA 19
EXISTING TRAFFIC SIGNAL
POST TOP 21
STA. 80+04.33
OFF 7.86
3" SCHEDULE 40PVC CONDUIT SECURED WITH 400# PULL STRING
EXISTING COBRA 10
POST TOP 20
STA. 79+44.28
OFF 7.24
UNKNOWN PEDESTAL
EXISTING COBRA 11
EXISTING COBRA 09
POST TOP 18
STA. 78+05.38
OFF 6.83
EXISTING COBRA 08
POST TOP 16
STA. 76+63.96
OFF 8.21
EXISTING COBRA 07
EXISTING COBRA 06
EXISTING COBRA 05
LIMIT OF RIGHT OF WAY
FIBERLIGHT
ATT
POST TOP 13
STA. 73+05.29
OFF 7.80
POST TOP 14
STA. 74+22.51
OFF 7.62
VERIZON PEDESTAL
MCI VAULT
POST TOP 15
STA. 76+12.57
OFF 7.64
POST TOP 17
STA. 77+858.70
OFF 7.72
POST TOP 19
STA. 78+58.10
OFF 7.08
BGE TRANSFORMER #40-010-A
BGE 1.03
POST TOP 11
STA. 71+73.05
OFF 7.53
POST TOP 12
STA. 72+51.82
OFF 7.82
BGE TRANSFORMER #30614402519
BGE SWITCHGEAR #3014402501
TEMPORARY EASEMENTS (TYP.)
LIMIT OF RIGHT OF WAY

COLUMBIA ASSOCIATION INC.
PARCEL 0293 LOT 9B S 1 1.134A

TRAIL - BROKEN LAND PKWY TO S. ENTRANCE RD
AVG - 0.89FC
MAX - 4.00FC
MIN - 0.50FC
AVG/MIN - 1.78
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

TRAIL - BROKEN LAND PKWY TO S. ENTRANCE RD
AVG - 0.89FC
MAX - 4.00FC
MIN - 0.50FC
AVG/MIN - 1.78
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

EX. 24" WATER RW (PART I)
L 488 F. 744

EX. 20" WATER RW (PARCEL 3-PT 1)
L 417 F. 303

13
HOWARD RESEARCH AND DEVELOPMENT
65.2808/ N/A
PARCEL 0527 LOT N/A

14

SYMPHONY WOODS PARK
(BY OTHERS)
FDC-DC-MSW-1

15
COLUMBIA ASSOCIATION, INC.
PARCEL 0452 LOT 23 36,2326 AR
PLAT NO. 13535 & 13536
COLUMBIA TOWN CENTER
SECTION 1

N 562 422
E1,351,488

HAND BOX SCHEDULE			
NUMBER	STATION	ELEVATION	OFFSET
1.01	74+95.79	363.87'	8.68'R
1.02	75+45.44	365.39'	8.55'R
1.03	80+00.52	372.97'	9.15'R

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/25/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 2 — C8.9

ToolеDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.3531, EXPIRATION DATE: 06/16/15.

STATE OF MARYLAND — MICHAEL GILLESPIE BROOK — No. 3531 — REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT

2/18/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	100 OF 171

SDP-13-020

G:\MTWE PROJECTS\5282 DP - Bonds for Site Development Plan\SDP\DAN\Shifted Trail\Shifted Plans\C8-9 - ShiftedLightPlns.dwg, PLOTTED: 2/18/2014 1:56 PM by LEONARD M ADKINS, PLOTTED BY: Andrew Rogers

MATCHLINE SEE SHEET C8.9 (STA. 80+50.00)

N 562,852
E 351,756

N 562,852
E 352,468

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

EXISTING COBRA 28
EXISTING COBRA 14
EXISTING COBRA 16
EXISTING COBRA 15
EXISTING COBRA 13
EXISTING COBRA 12
EXISTING COBRA 17
EXISTING COBRA 18
EXISTING COBRA 19
EXISTING COBRA 20
EXISTING COBRA 22

EXISTING TRAFFIC SIGNAL

EXISTING HOWARD TRANSIT BUS STOP/ SHELTER

POST TOP 23
STA. 81+34.34
OFF 7.10

POST TOP 22
STA. 80+81.31
OFF 7.64

POST TOP 25
STA. 82+95.52
OFF 8.34

POST TOP 24
STA. 82+16.39
OFF 7.65

POST TOP 28
STA. 84+86.40
OFF 8.38

POST TOP 26
STA. 83+48.95
OFF 7.61

POST TOP 27
STA. 84+37.06
OFF 7.62

POST TOP 29
STA. 85+32.12
OFF 7.57

POST TOP 30
STA. 86+27.18
OFF 7.60

POST TOP 31
STA. 87+38.02
OFF 8.47

POST TOP 32
STA. 87+77.14
OFF 9.82

POST TOP 33
STA. 88+80.10
OFF 7.00

POST TOP 34
STA. 88+70.17
OFF 9.22

POST TOP 35
STA. 89+22.98
OFF 9.54

ZAYO
ACSI
ATT
FIBERLIGHT

PERMANENT EASEMENTS (TYP.)
TEMPORARY EASEMENTS (TYP.)

COLUMBIA ASSOCIATION, INC.
PARCEL 0293 LOT 9B S 1 1.134A

EMPTY CONDUIT UNABLE TO TRACE

EX. 10' S.D. ESMT. PB 12 PN 64

LIMIT OF RIGHT OF WAY

BGE TRANSFORMER # 40-004-C

TRAFFIC POLE

Curve 230 R=468.670

INT - LPP @ S ENTRANCE RD
AVG - 1.89FC
MAX - 5.60FC
MIN - 0.30FC
AVG/MIN - 6.30
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

INTERSECTION - LPP @ S ENT WB DEPART
AVG - 1.75FC
MAX - 3.80FC
MIN - 0.40FC
AVG/MIN - 4.38
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

INTERSECTION - LPP @ S ENT EB APPROACH
AVG - 2.19FC
MAX - 4.30FC
MIN - 1.00FC
AVG/MIN - 2.19
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

CROSSWALK - LPP @ S ENT EAST
AVG - 2.59FC
MAX - 6.80FC
MIN - 0.60FC
AVG/MIN - 4.32
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

INTERSECTION - LPP @ S ENTRANCE WB ARRIVAL
AVG - 2.13FC
MAX - 6.60FC
MIN - 0.40FC
AVG/MIN - 5.33
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

INTERSECTION - LPP @ S ENTRANCE EB DEPART
AVG - 2.47FC
MAX - 5.80FC
MIN - 0.90FC
AVG/MIN - 2.74
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

TRAIL - BROKEN LAND PKWY TO S. ENTRANCE RD
AVG - 0.89FC
MAX - 4.00FC
MIN - 0.50FC
AVG/MIN - 1.78
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

CROSSWALK - LPP @ S ENT SOUTH
AVG - 1.71FC
MAX - 3.90FC
MIN - 1.00FC
AVG/MIN - 1.71
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

SOUTH ENTRANCE RD SB DEPART
AVG - 1.91FC
MAX - 3.40FC
MIN - 0.90FC
AVG/MIN - 2.12
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

SOUTH ENTRANCE RD SB APPROACH
AVG - 1.15FC
MAX - 1.80FC
MIN - 0.70FC
AVG/MIN - 1.61
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

WAYSIDE @ S ENTRANCE
AVG - 1.67FC
MAX - 3.70FC
MIN - 1.00FC
AVG/MIN - 1.67
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

TRAIL - S ENTRANCE ROADTO LIBRARY DRIVEWAY
AVG - 0.81FC
MAX - 1.20FC
MIN - 0.60FC
AVG/MIN - 1.35
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

3" SCHEDULE 40PVC CONDUIT SECURED WITH 400# PULL STRING

PERMANENT EASEMENTS (TYP.)

SYMPHONY WOODS PARK
(BY OTHERS)
FDC-DC-MSW-1

15 COLUMBIA ASSOCIATION, INC.
PARCEL 0452 LOT 23 36.2326 AR
PLAT NO. 13535 & 13536
COLUMBIA TOWN CENTER
SECTION 1

16 HOWARD COUNTY MARYLAND
LOT 4-128 A PARCEL 0389

17 COUNTY LIBRARY
HOWARD COUNTY MARYLAND
IMPS LOT 5.32166
10375 LITTLE PATUXENT PKWY
PARCEL 0389 LOT 5

20 SHA PID LOT 3.1758
TOWN CENTER ST A3 ROUTE 29
PARCEL 0389 LOT 3

S ENTRANCE RD
(COUNTY LOCAL ROAD)

1.04
1.05
1.06

N 562,422
E 352,468

LIMIT OF RIGHT OF WAY

MATCHLINE SEE SHEET C8.11 (STA. 89+50.00)

HAND BOX SCHEDULE

NUMBER	STATION	ELEVATION	OFFSET
1.04	86+41.48	353.26'	78.51'R
1.05	88+05.46	352.64'	7.40'R
1.06	88+07.55	353.21'	7.03'L

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

FIXTURES:
POST TOP - 71 WATT HADCO-MAPLELAWN, 71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

STATE OF MARYLAND G. SCOTT SHANABERGER No. 10849 PROFESSIONAL LAND SURVEYOR

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2014

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 3 — C8.10

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

Howard Hughes
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10221 WINCOPIN CIRCLE, SUITE 300
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Robert Jenkins, VP, Engineering & Construction
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PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.3531, EXPIRATION DATE: 06/16/15.

STATE OF MARYLAND ROBERT MATTHEW BROOK No. 3531 REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT

10/17/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	101 OF 171

SDP-13-020

D:\ACTIVE PROJECTS\13282 HGP-Baseball Trail\Site Development Plan\DESIGN\04Drafting\Final Plans\C8-10 - SiteHeadingPlan.dwg

MATCHLINE SEE SHEET C8.10 (STA. 89+50.00)

EXISTING COBRA 23

POST TOP 36 STA. 89+79.45 OFF 8.33

LIMIT OF RIGHT OF WAY

POST TOP 37 STA. 90+36.92 OFF 6.42

POST TOP 38 STA. 90+96.57 OFF 8.03

1.07

3" SCHEDULE 40PVC CONDUIT SECURED WITH 400# PULL STRING

CROSSWALK - LIBRARY DRIVEWAY EAST
AVG - 0.85FC
MAX - 0.90FC
MIN - 0.70FC
AVG/MIN - 1.21
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

EXISTING COBRA 24

1.08

TRAIL - LIBRARY DRIVEWAY TO SWIFT STREAM PL
AVG - 0.89FC
MAX - 1.20FC
MIN - 0.60FC
AVG/MIN - 1.48
** POINT-BY-POINT LIGHT VALUES NOT SHOWN FOR CLARITY

POST TOP 39 STA. 91+55.88 OFF 6.71

POST TOP 40 STA. 91+98.66 OFF 5.38

N 562,185
E 1,351,998

N 562,185
E 1,352,687

LIMIT OF WORK PHASE 1
LIMIT OF WORK PHASE 3

LIMIT OF WORK
END OF PHASE 1 STA. 92+28.58=
BEGINNING OF PHASE 3 STA. 92+28.58
N 562,104.95
E 1,352,386.61

EXISTING COBRA 25

N 562,055
E 1,352,687

SWIFT STREAM PL (PRIVATE ROAD)

18
API COLUMBIA TOWN CENTER, LLC
LOT 2 S1 AR 3
TOWN CENTER LITTLE PATUXENT PKWY
PARCEL 0389 LOT N/A

20

SYMPHONY WOODS DRIVE

S ENTRANCE RD (COUNTY/ LOCAL ROAD)

19
HOWARD RESEARCH AND DEVELOPMENT LOT 2 S J A R 3
TOWN CENTER ROUTE 29
PARCEL 0389 LOT 2

N

HAND BOX SCHEDULE			
NUMBER	STATION	ELEVATION	OFFSET
1.07	91+00.83	337.06'	6.66'L
1.08	91+59.64	335.34'	6.70'L

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

FIXTURES:
POST TOP - 71 WATT HADCO-MAPLELAWN, 71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/15/2014

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 4 — C8.11

Toole Design Group
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.3531, EXPIRATION DATE: 06/16/15.

STATE OF MARYLAND — MICHAEL A. BRADY — No. 21302 — REGISTERED PROFESSIONAL ENGINEER

12/17/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	102 OF 171

SDP-13-020

G:\ACTIVE PROJECTS\13582 (GP-Blandair Park\Site Development\ Plan\DESIGN\CAD\Shifted Trail\Shifted Plans\C8-8 - ShiftedLightPlns.dwg
ATTEN:/ APPROX 1:30.0" IN. LAST SAVED: 12/17/2014 8:19 PM. PLOTTED: 12/17/2014 8:20 PM. Xrefs Bound

MATCHLINE SEE SHEET C8.13 (STA 104+50.00)

N

LIMIT OF WORK
END OF PHASE 1 STA. 92+28.58=
BEGINNING OF PHASE 3 STA. 92+28.58
N 562,104.95
E 1,352,386.81

LIMIT OF WORK PHASE 1

LIMIT OF WORK PHASE 3

POST TOP 300
STA. 92+29
OFF 8.00

POST TOP 301
STA. 92+99
OFF 8.00

3.01

LOD

SWIFT STREAM PL
(PRIVATE ROAD)

N 562,150
E 1,352,600

18
API COLUMBIA TOWN CENTER, LLC
LOT 2 S1 AR 3
TOWN CENTER LITTLE PATUXENT PKWY
PARCEL 0389 LOT N/A

COLUMBIA TOWN CENTER APARTMENTS

GbB

HDPE 3" ROAD
BORE @ 36" IN
DEPTH

3.02

POST TOP 302
STA. 94+05
OFF 8.00

EXISTING
COBRA 26

SYMPHONY
WOODS
DRIVE

POST TOP 303
STA. 94+75
OFF 8.00

S ENTRANCE RD
(COUNTY LOCAL ROAD)

MaC

19
HOWARD RESEARCH AND
DEVELOPMENT LOT 2 S J A R 3
TOWN CENTER ROUTE 29
PARCEL 0389 LOT 2

POST TOP 305
STA. 96+11
OFF 8.00

POST TOP 307
STA. 97+50
OFF 8.00

POST TOP 304
STA. 95+45
OFF 8.00

POST TOP 306
STA. 96+81
OFF 8.00

UuB

20
HOWARD COUNTY
P/O LOT 3 2.21A/
TOWN CENTER S1 A3
PARCEL 0389 LOT 3

GbB

POST TOP 311
STA. 100+24
OFF 8.00

POST TOP 312
STA. 100+91
OFF 8.00

PATHWAY
CONSTRUCTION

POST TOP 309
STA. 98+85
OFF 8.00

POST TOP 310
STA. 99+34
OFF 8.00

POST TOP 308
STA. 98+15
OFF 8.00

21
STATE HIGHWAY
ADMINISTRATION
LOT 3 1.513 A /
TOWN CENTER S1 A 3
ROUTE 29

21A
STATE HIGHWAY
ADMINISTRATION
2.894A/ ROUTE 29

Ha

N 562,150
E 1,353,000

POST TOP 317
STA. 104+40
OFF 8.00

POST TOP 316
STA. 103+67
OFF 8.00

POST TOP 315
STA. 102+98
OFF 8.00

POST TOP 314
STA. 102+28
OFF 8.00

POST TOP 313
STA. 101+55
OFF 8.00

21
STATE HIGHWAY
ADMINISTRATION
LOT 3 1.513 A /
TOWN CENTER S1 A 3
ROUTE 29

TRAIL - S ENTRANCE RD TO BRIDGE
AVG - 1.14FC
MAX - 2.8FC
MIN - 0.2FC
AVG/MIN - 5.70

N 561,800
E 1,353,000

Hadco Maple Lawn Acorn
Type 3 Horizontal Footcandle Diagram
Scale: 1:60

Ua

HAND BOX SCHEDULE			
NUMBER	STATION	ELEVATION	OFFSET
3.01	93+08.33	330.86'	7.00'L
3.02	94+06.64	326.85'	7.00'L

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 1 — C8.12

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15
6/12/15

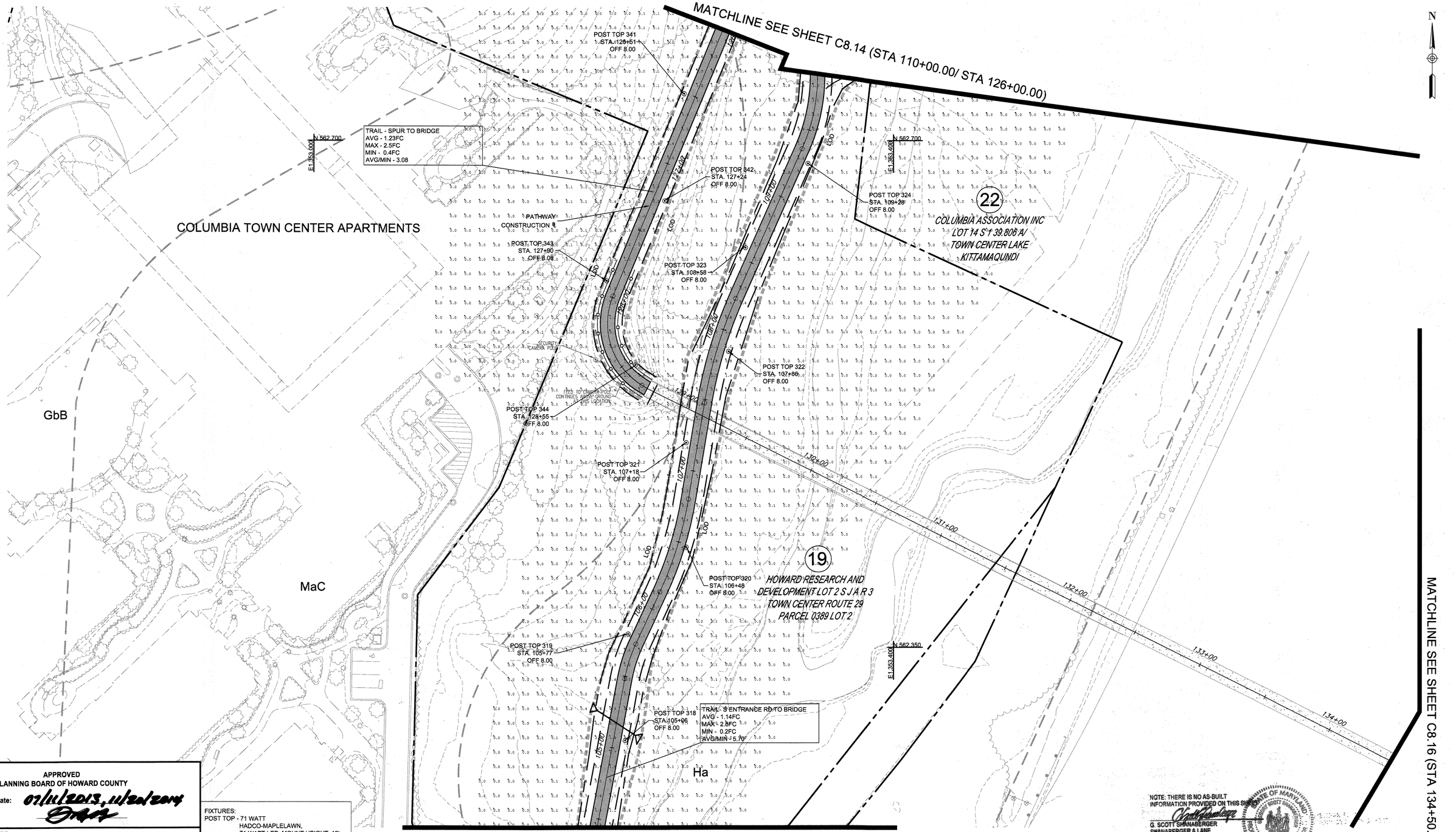
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
06/09/15	36	103 OF 171

SDP-13-020



NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	7-21-15 Date
Chief, Division of Land Development	7-16-15 Date
Chief, Development Engineering Division	7.13.15 Date

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 2 C8.13

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB | DRN. AG | CHK. EM

Howard Hughes.
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EXPIRATION DATE: 12/28/15
6/1/15

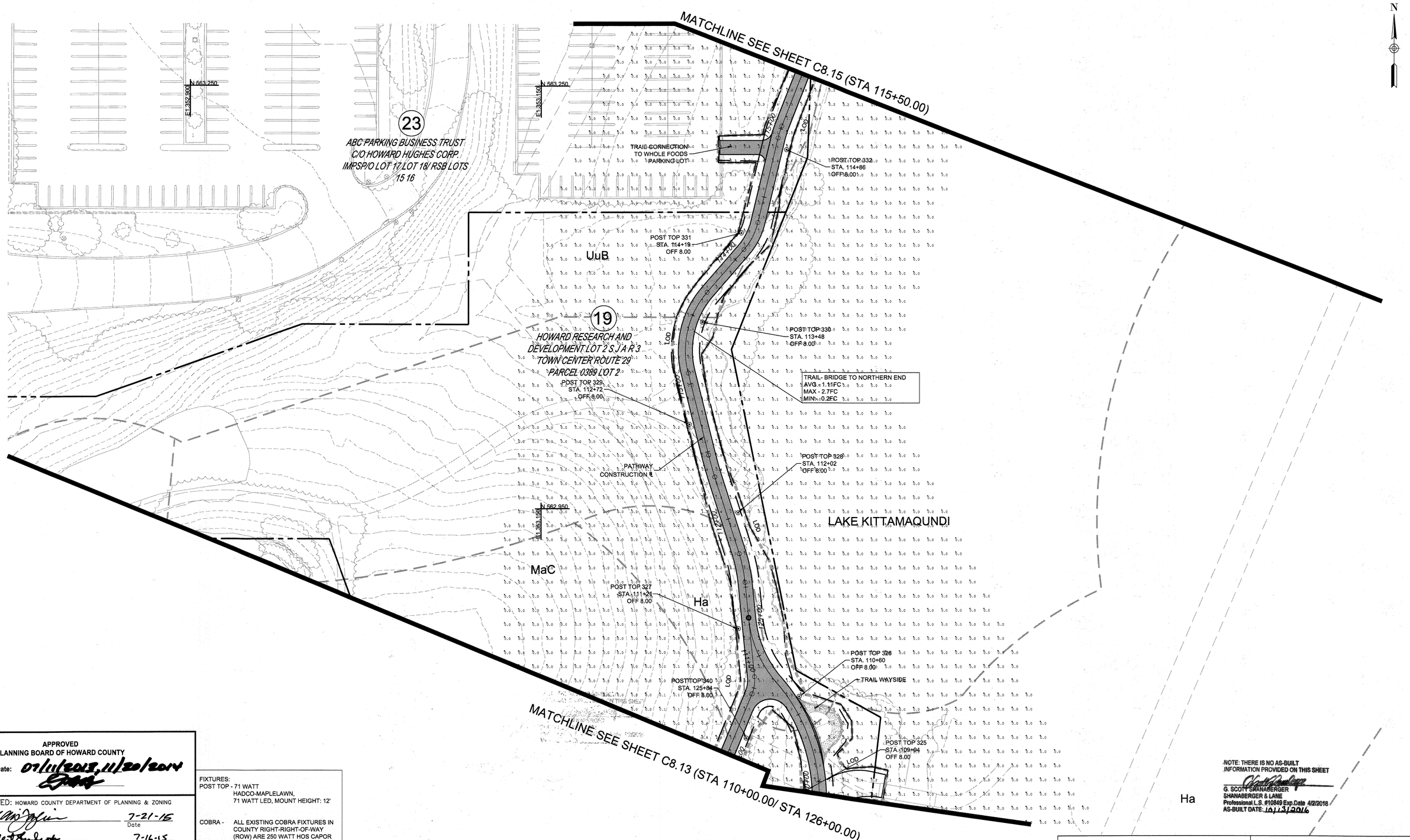
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	104 OF 171

SDP-13-020



NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15
Chief, Division of Land Development — Date 7-16-15
Chief, Development Engineering Division — Date 7.13.15

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

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NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 3 — C8.14

TooleDesignGroup
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PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — No. 35022 — REGISTERED PROFESSIONAL ENGINEER
6/1/15

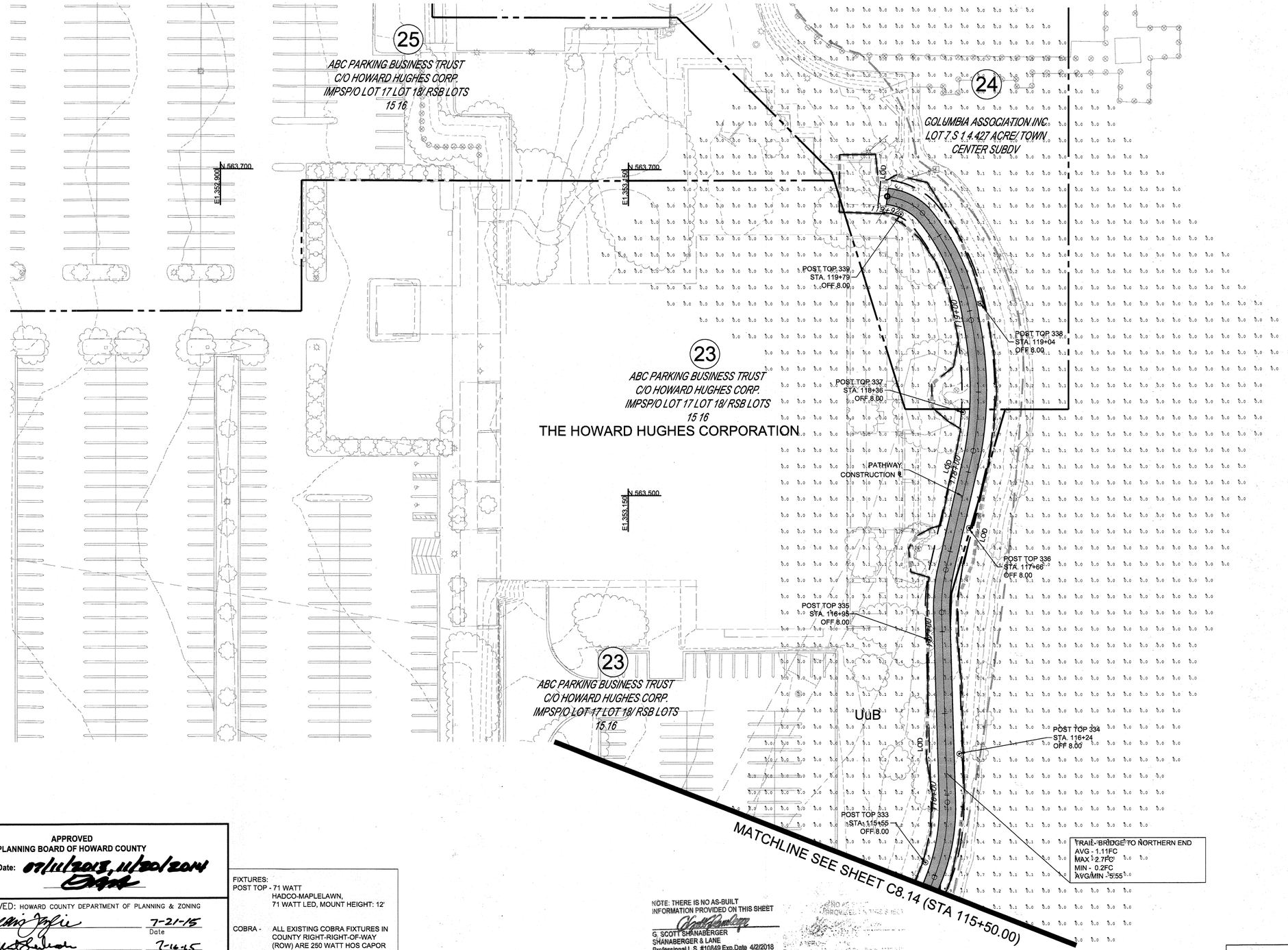
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	105 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 7-21-15
Chief, Division of Land Development	Date 7-16-15
Chief, Development Engineering Division	Date 7.13.15

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10840 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 4 — C8.15

Toole Design Group
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\2202 CEP-Blandair Trail\Site Development Plan 3\CAD\Plans\C8.15 - LIGHTING PLAN4.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35922, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MICHAEL CALLISTER BECK — No. 35922 — PROFESSIONAL ENGINEER

6/1/15

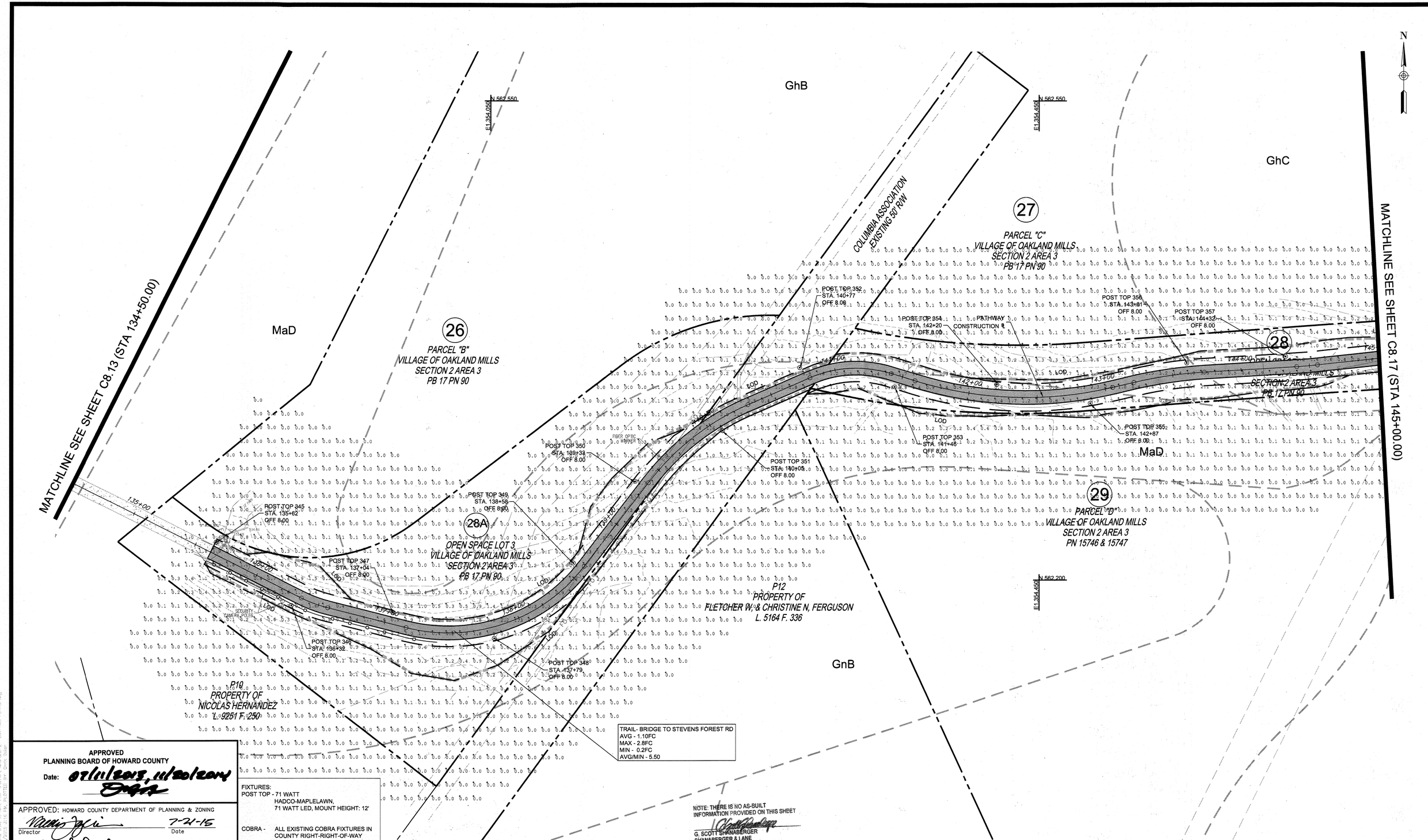
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	106 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	7-21-15 Date
Chief, Division of Land Development	7-16-15 Date
Chief, Development Engineering Division	7.13.15 Date

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 5 C8.16

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB	DRN. AG	CHK. EM

Howard Hughes.
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND
No. 35022
REGISTERED PROFESSIONAL ENGINEER
6/1/15

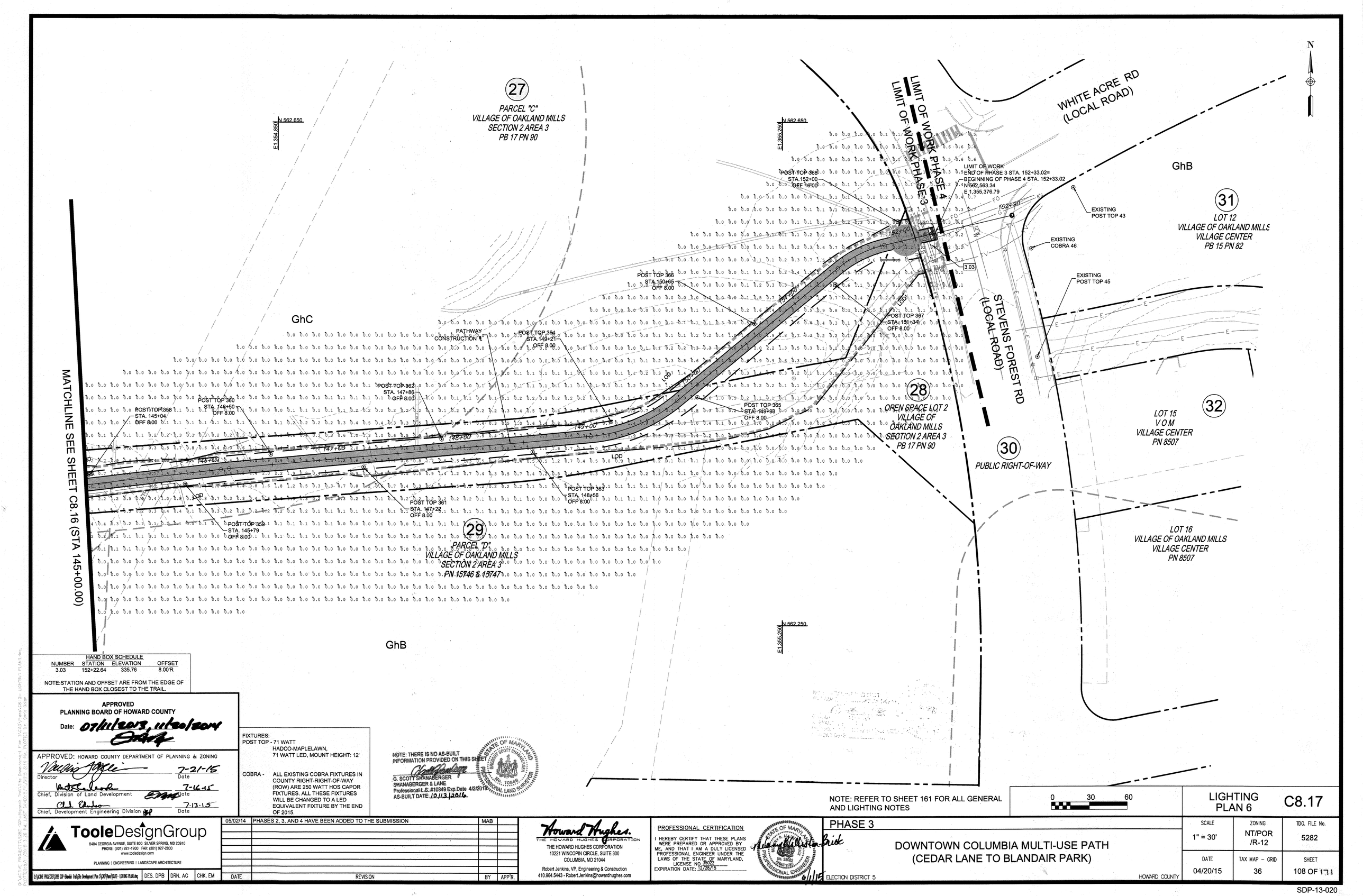
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	107 OF 171

SDP-13-020



HAND BOX SCHEDULE			
NUMBER	STATION	ELEVATION	OFFSET
3.03	152+22.64	335.76	8.00'R

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/06/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7-13-15

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 6 — C8.17

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING ! ENGINEERING ! LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\5282 CEP-Blandair Trail\Site Development Plan 3\CAD\Panel\C8.17- LIGHTING PLAN6.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — RICHARD WILLIAM KIRCHRICK — No. 35022 — PROFESSIONAL ENGINEER

6/1/15

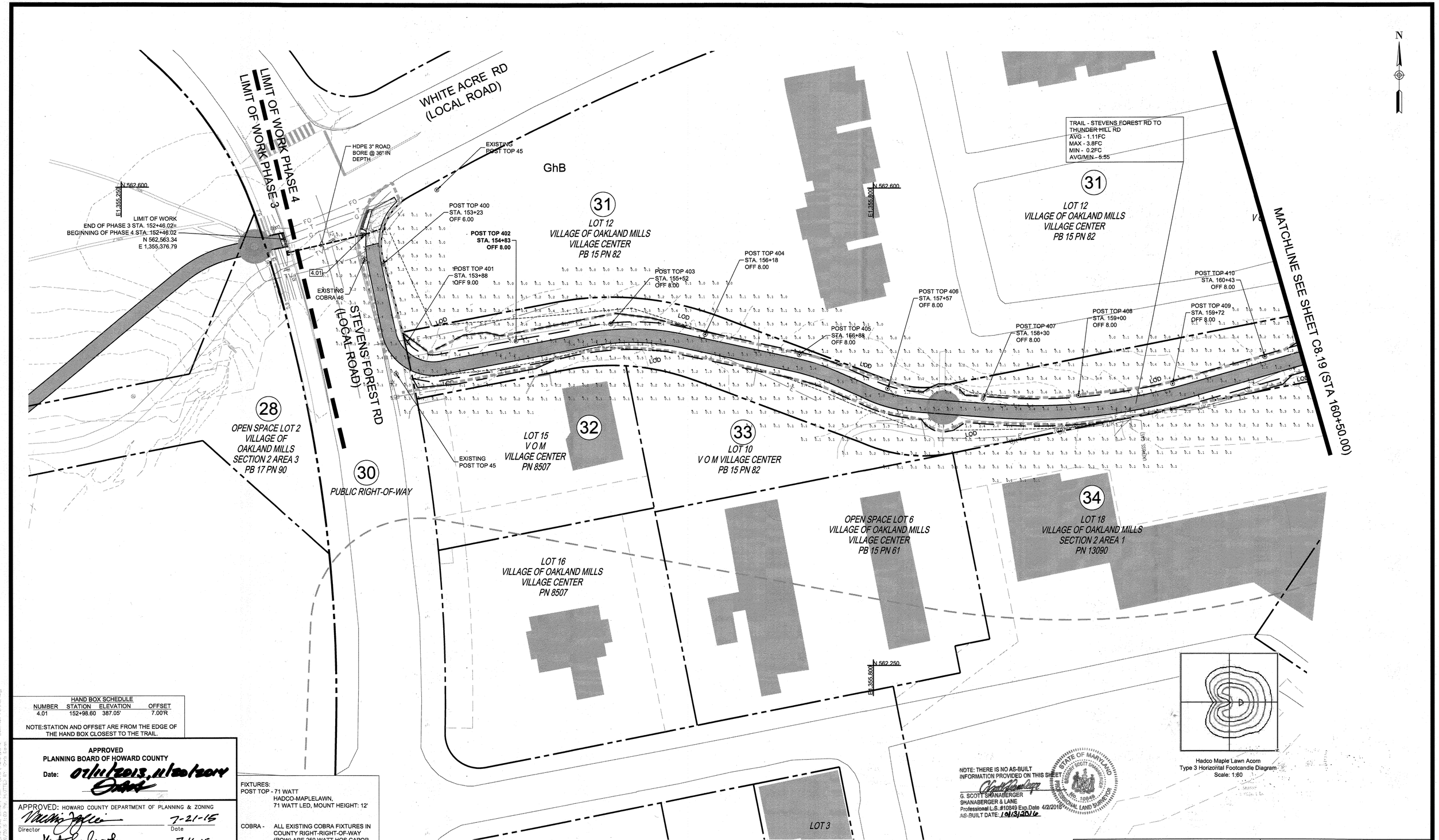
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	108 OF 171

SDP-13-020



Hadco Maple Lawn Acorn
Type 3 Horizontal Footcandle Diagram
Scale: 1:60

HAND BOX SCHEDULE

NUMBER	STATION	ELEVATION	OFFSET
4.01	152+98.60	387.05'	7.00'R

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15
Chief, Division of Land Development — Date 7-16-15
Chief, Development Engineering Division — Date 7-15-13

FIXTURES:
POST TOP - 71 WATT HADCO-MAPLELAWN, 71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 1 — C8.18

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB	DRN. AG	CHK. EM

Howard Hughes.
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15
6/1/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	109 OF 171

SDP-13-020

N

N 562,850
E 1,356,950

POST TOP 422
STA. 168+81
OFF 8.00

POST TOP 421
STA. 168+15
OFF 8.00

POST TOP 423
STA. 169+42
OFF 8.00

EXISTING
COBRA 28

POST TOP 424
STA. 170+10
OFF 8.00

POST TOP 425
STA. 170+80
OFF 8.00

POST TOP 420
STA. 167+46
OFF 8.00

POST TOP 419
STA. 166+77
OFF 8.00

POST TOP 418
STA. 166+06
OFF 8.00

POST TOP 417
STA. 165+37
OFF 8.00

POST TOP 416
STA. 164+65
OFF 8.00

POST TOP 415
STA. 163+93
OFF 8.00

POST TOP 414
STA. 163+22
OFF 8.00

POST TOP 413
STA. 162+50
OFF 8.00

POST TOP 412
STA. 161+82
OFF 8.00

POST TOP 411
STA. 161+12
OFF 8.00

LOD

ELECTRIC LINE CONTINUES BELOW GRADE TO FEED PEDESTRIAN TUNNEL LIGHTS

GhB

(31) LOT 12 VILLAGE OF OAKLAND MILLS VILLAGE CENTER PB 15 PN 82

(28) OPEN SPACE LOT 3 VILLAGE OF OAKLAND MILLS SECTION 2 AREA 3 PB 17 PN 90

(37) LOT 14 VILLAGE CENTER PB 15 PN 82

(36) LOT 14 VILLAGE OF OAKLAND MILLS SECTION 2

MATCHLINE SEE SHEET C8.20 (STA 171+00.00)

MATCHLINE SEE SHEET C8.18 (STA 160+50.00)

(28) OPEN SPACE LOT 3 VILLAGE OF OAKLAND MILLS SECTION 2 AREA 3 PB 17 PN 90

WATER RECORD

SIGN COMMON TRENCH WITH ELEC.

N 562,450
E 1,356,350

(35) OPEN SPACE LOT 13 V O M VILLAGE CENTER PB 15 PN 82

(36) LOT 14 VILLAGE OF OAKLAND MILLS SECTION 2

McD

LOT 17

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 9-17-15

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY RIGHT-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 2 — C8.19

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\SDP SDP-Blandair Trail\Site Development Plan 4\CAD\Plans\C8.18 - LIGHTING PLANS.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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PROFESSIONAL CERTIFICATION

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6/1/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	110 OF 171

SDP-13-020

MATCHLINE SEE SHEET C8.19 (STA 171+00.00)

MATCHLINE SEE SHEET C8.21 (STA 181+50.00)

WHITE ACRE RD
(LOCAL ROAD)

PUBLIC RIGHT-OF-WAY

THUNDER HILL RD
(LOCAL ROAD)

MORNINGBIRD LN
(LOCAL ROAD)

PRIVATE STREET
LOT D-107

PRIVATE STREET
LOT D-106

PRIVATE STREET
LOT D-105

VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 4
PB 18 PN 92-93

GhB

INTERSECTION - THUNDER HILL RD
AVG - 1.58FC
MAX - 6.5FC
MIN - 0.0FC
AVG/MIN - 0.00

CROSSWALK - THUNDER HILL RD
AVG - 1.14FC
MAX - 2.7FC
MIN - 0.3FC
AVG/MIN - 3.80

EXISTING COBRA 30

EXISTING COBRA 29

EXISTING COBRA 31

EXISTING COBRA 32

38

39

40

41

HDPE 3" ROAD BORE @ 36" IN DEPTH

POST TOP 426
STA. 171+51
OFF 8.00

POST TOP 427
STA. 172+12
OFF 31.51

POST TOP 428
STA. 172+89
OFF 30.25

POST TOP 429
STA. 173+32
OFF 8.00

POST TOP 430
STA. 174+08
OFF 8.00

POST TOP 431
STA. 174+83
OFF 8.00

POST TOP 432
STA. 175+54
OFF 8.00

POST TOP 433
STA. 176+23
OFF 8.00

POST TOP 434
STA. 176+92
OFF 8.00

POST TOP 435
STA. 177+62
OFF 8.00

POST TOP 436
STA. 178+31
OFF 8.00

POST TOP 437
STA. 179+02
OFF 8.00

POST TOP 438
STA. 179+73
OFF 8.00

POST TOP 439
STA. 180+44
OFF 8.00

POST TOP 440
STA. 181+16
OFF 8.00

LOT D-8
LOT D-9
LOT D-10
LOT D-11
LOT D-12
LOT D-13
LOT D-14
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LOT D-40
LOT D-41
LOT D-42
LOT D-43
LOT D-44
LOT D-45
LOT D-46

OPEN SPACE LOT 6
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 4
PB 18 PN 35

LOT 1
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA5
PB 21 PN 15-16

LOD

N 562,660
E 1,532,450

N 562,200
E 1,532,450

HAND BOX SCHEDULE			
NUMBER	STATION	ELEVATION	OFFSET
4.02	172+11.48	394.53'	7.00'R
4.03	172+69.43	396.05'	7.00'R

NOTE:STATION AND OFFSET ARE FROM THE EDGE OF THE HAND BOX CLOSEST TO THE TRAIL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/6/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

COBRA - ALL EXISTING COBRA FIXTURES IN COUNTY ~~RIGHT~~-RIGHT-OF-WAY (ROW) ARE 250 WATT HOS CAPOR FIXTURES. ALL THESE FIXTURES WILL BE CHANGED TO A LED EQUIVALENT FIXTURE BY THE END OF 2015.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2017
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 3

C8.20

TooleDesignGroup
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
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COLUMBIA, MD 21044
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PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MARIA PALLAS-BRICK — No. 35022 — PROFESSIONAL ENGINEER

6/1/15

PHASE 4

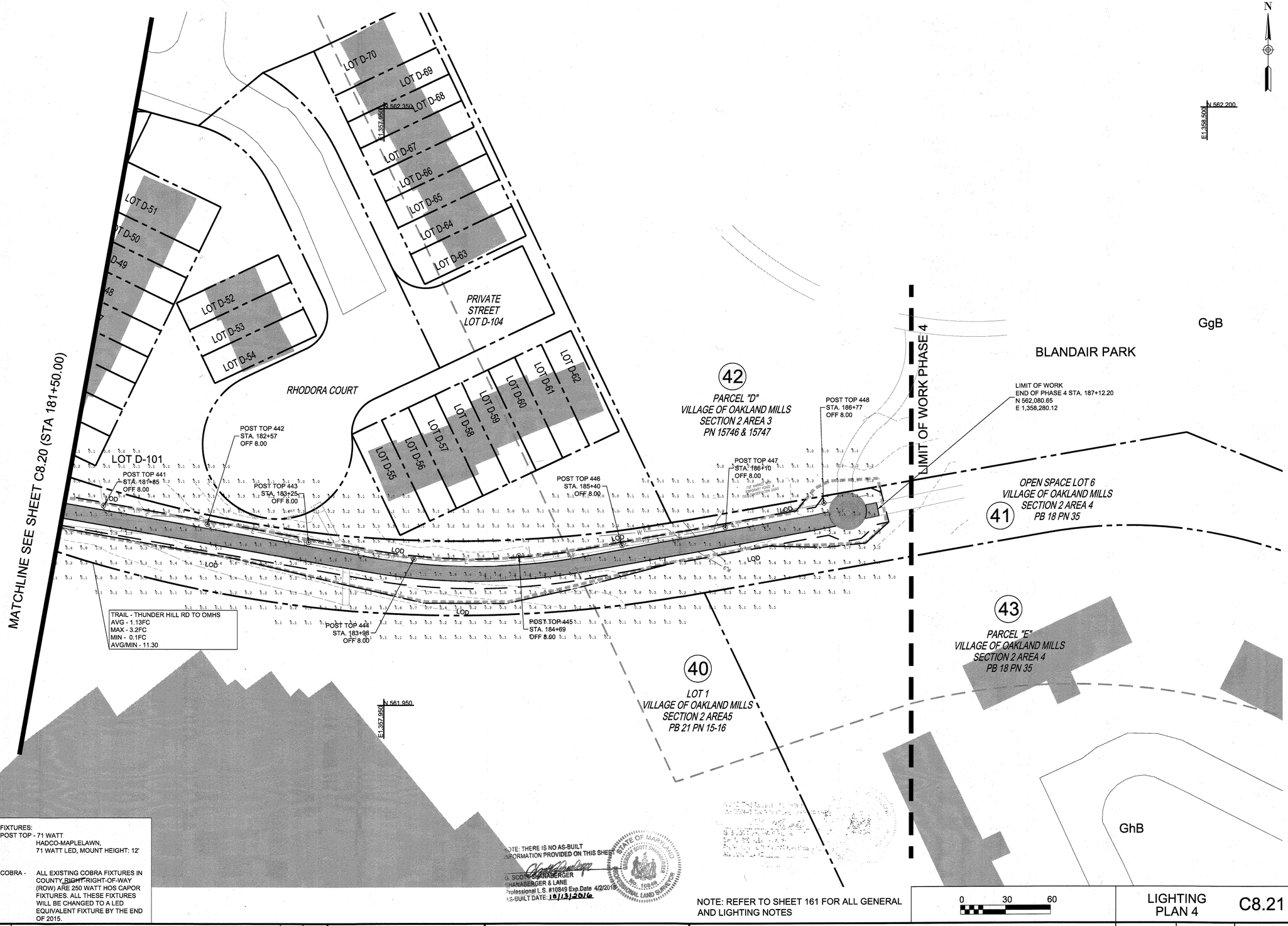
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	111 OF 171

SDP-13-020

D:\ACTIVE PROJECTS\5282 SDP-Blandair Trail\Site Development Plan 4\LEAD Sheet\C8.x - LIGHTING PLANS.dwg, 6/1/2015 4:06 PM, LAST SAVED: 6/1/2015 1:03 PM, PLOTTED BY: Chris Gorn



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2015, Mod 2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7-13-15

FIXTURES:
POST TOP - 71 WATT
HADCO-MAPLELAWN,
71 WATT LED, MOUNT HEIGHT: 12'

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NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

NOTE: REFER TO SHEET 161 FOR ALL GENERAL AND LIGHTING NOTES

0 30 60

LIGHTING PLAN 4 — C8.21

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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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PROFESSIONAL CERTIFICATION

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STATE OF MARYLAND — MARY CHRISTINA REED — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 6/1/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	112 OF 171

SDP-13-020

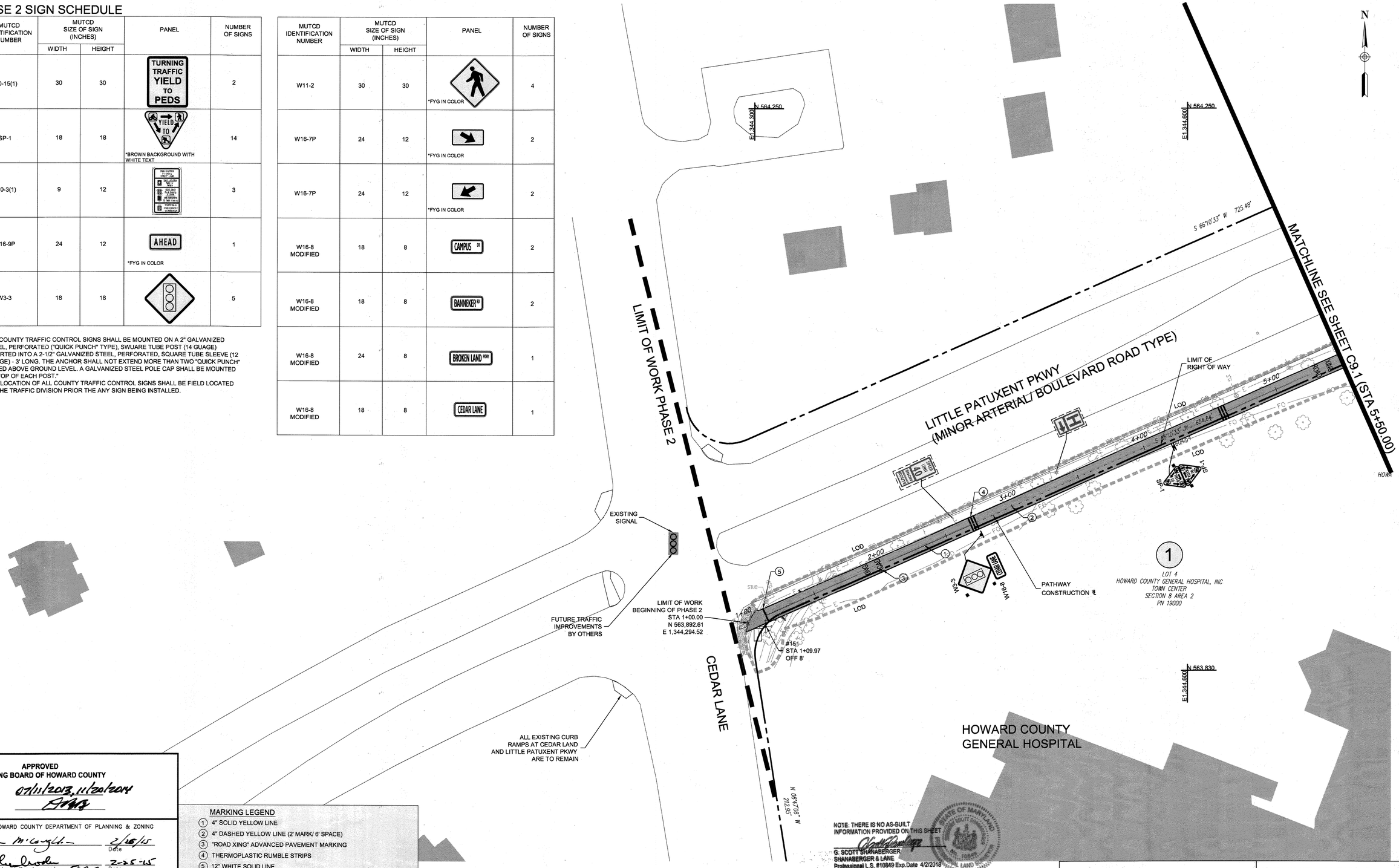
D:\ACTIVE PROJECTS\5282 HOP-Blandair Trail\Site Development Plan 4\CAD\Plans\C8.21 - LIGHTING PLANS.dwg, Plot:"ED3.01_22x34 4.08 HAL LASP SHADY 5/10/2015 1:02:24 PM, PLOTTED: 6th Chris Lacon

PHASE 2 SIGN SCHEDULE

MUTCD IDENTIFICATION NUMBER	MUTCD SIZE OF SIGN (INCHES) WIDTH	HEIGHT	PANEL	NUMBER OF SIGNS
R10-15(1)	30	30	TURNING TRAFFIC YIELD TO PEDS	2
SP-1	18	18	YIELD TO *BROWN BACKGROUND WITH WHITE TEXT	14
R10-3(1)	9	12		3
W16-9P	24	12	AHEAD *FYG IN COLOR	1
W3-3	18	18		5

MUTCD IDENTIFICATION NUMBER	MUTCD SIZE OF SIGN (INCHES) WIDTH	HEIGHT	PANEL	NUMBER OF SIGNS
W11-2	30	30	*FYG IN COLOR	4
W16-7P	24	12	*FYG IN COLOR	2
W16-7P	24	12	*FYG IN COLOR	2
W16-8 MODIFIED	18	8	CAMPUS DR	2
W16-8 MODIFIED	18	8	BANNEKER RD	2
W16-8 MODIFIED	24	8	BROKEN LAND PKWY	1
W16-8 MODIFIED	18	8	CEDAR LANE	1

NOTE
1. ALL COUNTY TRAFFIC CONTROL SIGNS SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SWUARE TUBE POST (14 GUAGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GUAGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLED ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST."
2. THE LOCATION OF ALL COUNTY TRAFFIC CONTROL SIGNS SHALL BE FIELD LOCATED BY THE TRAFFIC DIVISION PRIOR THE ANY SIGN BEING INSTALLED.



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/18/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

MARKING LEGEND
1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

TooleDesignGroup
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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: 12/28/15

12/17/14

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	113 OF 171

SIGNING/ MARKING PLAN 1 — C9.0

SDP-13-020

D:\ACTIVE PROJECTS\5282 CDP-Blandair Trail\Site Development Plan 2\CAD\Xrefs\C9-0 - SIGN&MARKING PLANS.dwg, 8/27/2014 1:45 PM, LAST SAVED: 8/27/2014 1:44 PM, PLOTTED BY: Andrew Bulgrin

N

MATCHLINE SEE SHEET C9.2 (STA 15+00.00)

MATCHLINE SEE SHEET C9.0 (STA 5+50.00)

N 564,450
E 1,345,050

N 564,450
E 1,345,550

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

PATHWAY CONSTRUCTION

CURB RAMP AND DETECTABLE WARNING SURFACE REFER TO SHEET 141 FOR DETAILS

CURB RAMP AND DETECTABLE WARNING SURFACE REFER TO SHEET 141 FOR DETAILS

LIMIT OF RIGHT OF WAY

LOD

5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00

HOSPITAL DRIVEWAY (PRIVATE ROAD)

STOP

SP-1

HOWARD COUNTY GENERAL HOSPITAL

1

LOT 4
HOWARD COUNTY GENERAL HOSPITAL, INC
TOWN CENTER
SECTION 8 AREA 2
PN 19000

2

3

PARCEL A
HOWARD COUNTY ACQUISITION CORP
TOWN CENTER
SECTION 3 AREA 3
PB 27 PN 49

4

BULK PARCEL B
HOWARD COMMUNITY COLLEGE
TOWN CENTER
SECTION 8 AREA 2
PN 19049

HOWARD COMMUNITY COLLEGE

S 23°49'27" E 213.22'

213.22'

S 66°10'33" W 65.00'

S 66°10'33" W 389.24'

EX. 40' ROADWAY EASEMENT PN 3648

EX. WATER & UTILITY EASEMENT PN 9390

EX. 20' DRAINAGE & UTILITY EASEMENT PB 3, PN 92

EX. ACCESS EASEMENT PB 27, PN 49

S 33°39'31" E 107.46'

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

MARKING LEGEND

1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND · SCOTT ALAN SHANABERGER · No. 10849 · PROFESSIONAL LAND SURVEYOR

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| DES. DPB | DRN. AG | CHK. EM |

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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STATE OF MARYLAND · MICHAEL J. USTIN · No. 35022 · PROFESSIONAL ENGINEER

12/7/14

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

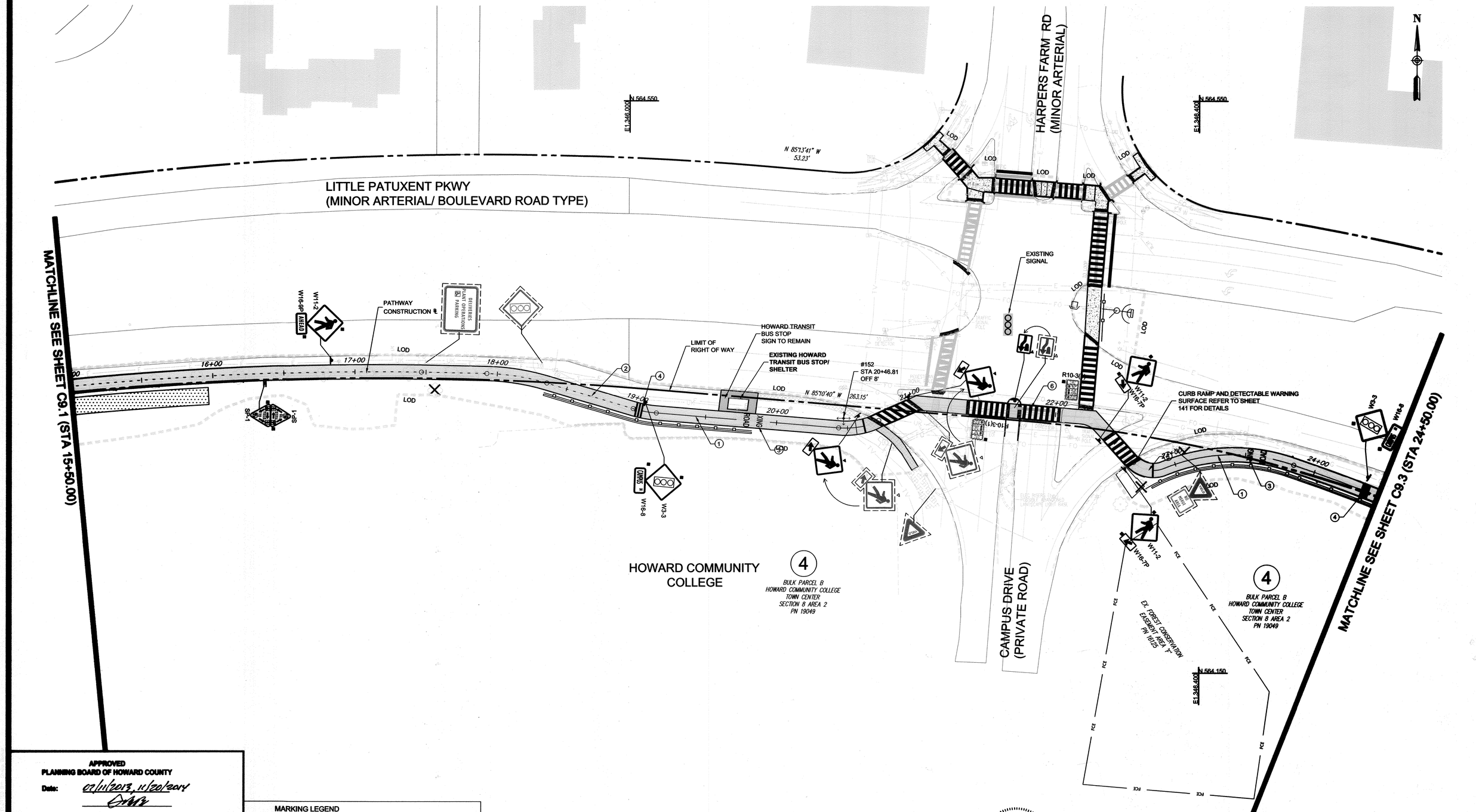
ELECTION DISTRICT 5 — HOWARD COUNTY

SIGNING/ MARKING PLAN 2 — C9.1

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	114 OF 171

SDP-13-020

G:\ACTIVE PROJECTS\SDP 13-020 - Blandair Park\Site Development Plan 2\CAD\Plans\C9-1 - SIGNAGE&MARKING PLANS.dwg, PLOTTED: 7/01/2015 1:45 PM, LAST SAVED BY: JOHN GRAHAM, PLOTTED BY: Kenneth Gamboa



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 2/25/15
Chief, Division of Land Development	Date 2-25-15
Chief, Development Engineering Division	Date 2-12-15

MARKING LEGEND

1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

SIGNING/ MARKING PLAN 3 C9.2

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 600 SILVER SPRING, MD 20910
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB | DRN. AG | CHK. EM

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10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 1/29/15

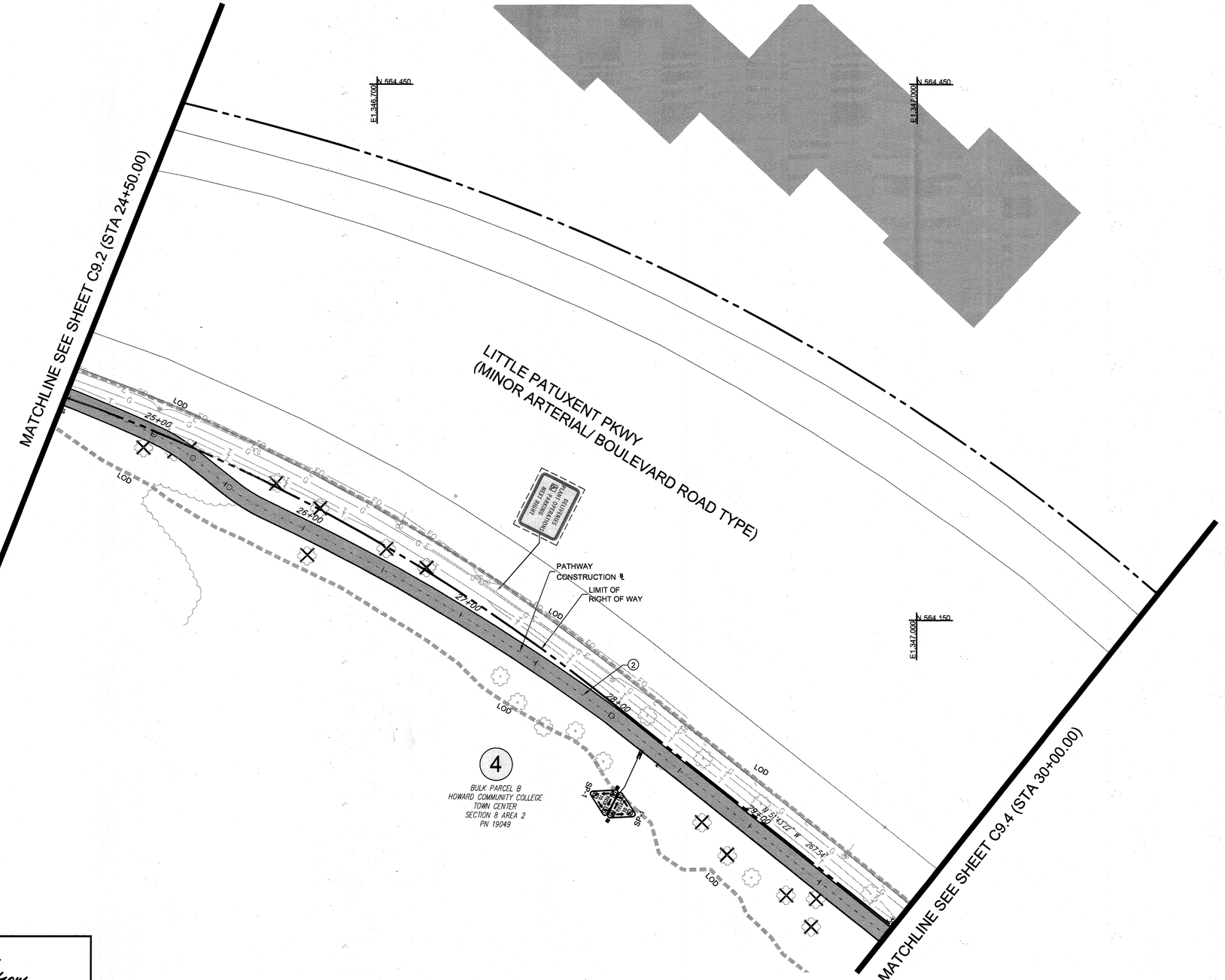
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	115 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

MARKING LEGEND

1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp. Date 4/2/2016
AS-BUILT DATE: 10/13/2016

0 30 60

SIGNING/ MARKING PLAN 4 C9.3

ToolDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
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Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

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12/7/15

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	116 OF 171

SDP-13-020

S:\ACTIVE PROJECTS\2052 HOP-Blandair Trail\Site Development Plan 2\CAD\Plans\C9-3 - SIGN&MARKING PLANS.dwg
11/20/2014 4:46 PM by: SCHROU / XREFs: ... / Plotted: ... by: Anthony Gallegos

MATCHLINE SEE SHEET C9.3 (STA 30+00.00)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

MATCHLINE SEE SHEET C9.5 (STA 39+50.00)

N

N 563,900
E1,347,250

N 563,900
E1,347,750

FACULTY DR
(PRIVATE ROAD)

XING ROAD

LOD

CURB RAMP AND DETECTABLE WARNING SURFACE REFER TO SHEET 141 FOR DETAILS

PATHWAY CONSTRUCTION ℄

APPROX. LOCATION 4" x 2" RECEIVER

#153
STA 31+56.38
OFF 8'

LIMIT OF RIGHT OF WAY

SIGNAGE ASSEMBLY SA-1

4
BULK PARCEL B
HOWARD COMMUNITY COLLEGE
TOWN CENTER
SECTION 8 AREA 2
PN 19049

STOP

STREAM

EX. PUBLIC 100 YR. FLOODPLAIN, DRAINAGE & UTILITY EASEMENT PN 19049

STREAM BUFFER

5
OPEN SPACE LOT 1
HOWARD RESEARCH AND DEVELOPMENT
COLUMBIA TOWN CENTER
SECTION 3 AREA 3
PN 13869

EX. 20' DRAINAGE & UTILITY EASEMENT PB 13 PN 94

EX. FOREST CONSERVATION EASEMENT AREA 'D' PN 16725

6

N 37°19'44" W

FUTURE SIGNALIZED INTERSECTION IMPROVEMENTS BY OTHERS

CURB RAMP AND DETECTABLE WARNING SURFACE. REFER TO SHEET 141 FOR DETAILS

N 563,658
E1,347,750

N 08°01'39" E
131.18'

EX. 30' INGRESS-EGRESS EASEMENT PB 28 PN 47

FIRESTONE COMPLETE AUTOCARE STORE

7
LOT C-2
PEVERLEY GEORGE C III
TOWN CENTER
SECTION 6 AREA 2
PB 28 PN 47

FCE
SVB
BAS

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 9/11/15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 9-15-15

Chief, Division of Land Development — Date 9-15-15

Chief, Development Engineering Division — Date 9.11.15

MARKING LEGEND
1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

0 30 60

SIGNING/ MARKING PLAN 5 C9.4

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	

Toole Design Group
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\2202 027- Howard Hughes Development Plan 7\CAD\Plans\C9-5 - SIGNAMARKING PLANS.dwg | DES. DPB | DRN. AG | CHK. EM

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — JOHN B. PHILLIPS — No. 35022 — PROFESSIONAL ENGINEER

9/11/15

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/25/15	36	117 OF 171

SDP-13-020

C:\ACTIVE PROJECTS\2202 027- Howard Hughes Development Plan 7\CAD\Plans\C9-4 - SIGNAMARKING PLANS.dwg, 9/11/2015 8:57:34 AM, AUTODESK PLOTTER DRIVER, 1:1, 1:1, By: Drew Bowen

MATCHLINE SEE SHEET C9.4 (STA 39+50.00)

N 563,900
E 1,348,200

N 563,900
E 1,348,700

N

N 86°28'41" W 281.33'

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

PATHWAY CONSTRUCTION ℄

CURB RAMP AND DETECTABLE WARNING SURFACE. REFER TO SHEET 141 FOR DETAILS

LIMIT OF RIGHT OF WAY

LOD

N 86°28'41" W 384.92'

323.19'

61.73'

XING ROAD

XING ROAD

N 70°28'41" W 432.45'

N 563,600
E 1,348,700

EXISTING HOWARD TRANSIT BUS STOP TO BE RELOCATED. COORDINATE WITH HOWARD COUNTY.

N 70°28'07" W 4

CURB RAMP AND DETECTABLE WARNING SURFACE. REFER TO SHEET 141 FOR DETAILS

MATCHLINE SEE SHEET C9.6 (STA 349+00.00)

7
LOT C-2
PEVERLEY GEORGE C III
TOWN CENTER
SECTION 6 AREA 2
PB 28 PN 47

N 08°01'19" E 149.37'

ZIPS CLEANERS

8
PARCEL D
BJG LAND INC
TOWN CENTER
SECTION 6 AREA 2
PB 18 PN 75

152.47'

10.00'

N 08°01'19" E 98.00'

S 81°58'41" E 400.00'

S 81°58'41" E 123.00'

" W 534.21'

BAS

SVB

STREAM BUFFER

FP

FLOOD PLAIN

EX. 20' DRAINAGE & UTILITY EASEMENT PB 13 PN 95

EX 20' SEWER EASEMENT PB 15 PN 85

9
OPEN SPACE LOT 1
HOWARD RESEARCH AND DEVELOPMENT
COLUMBIA TOWN CENTER
SECTION 3 AREA 3
PN 13869

MARKER, END LOCATION PER RECORD, NOT STATION PER RECORD NOT FIELD LOCATABLE

WATER SERVICE DISCONNECTED

MARKER, END LOCATION PER RECORD, NOT FIELD LOCATABLE

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-23-16

Chief, Division of Land Development — Date 3.22.16

Chief, Development Engineering Division — Date 3.18.16

MARKING LEGEND

1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTES:

1. SDP 13-020 INCLUDES A NEW EASEMENT FOR THE CONSTRUCTION, USE AND MAINTENANCE OF THE MULTIUSE PATHWAY TO BE LOCATED ON PARCEL 8 (EXXON PROPERTY). FOR ADDITIONAL INFORMATION REGARDING PARCEL 8 SEE SDP 70-001.
2. PAVEMENT MARKINGS FOR DECELERATION LANE EXTENSION SHALL BE APPROVED BY HOWARD COUNTY TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

0 30 60

SIGNING/ MARKING PLAN 6 C9.5

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TUEN LANE AT EXXON	MAB	

TooleDesignGroup
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www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

G:\[2015]\252 027-Howard Hughes Development Plan 2\[2015]Plans\13-4 - SIGNAGE PLAN.dwg | DES. DPB | DRN. AG | CHK. EM

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 36022, EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — No. 36022 — PROFESSIONAL ENGINEER — 3/4/16

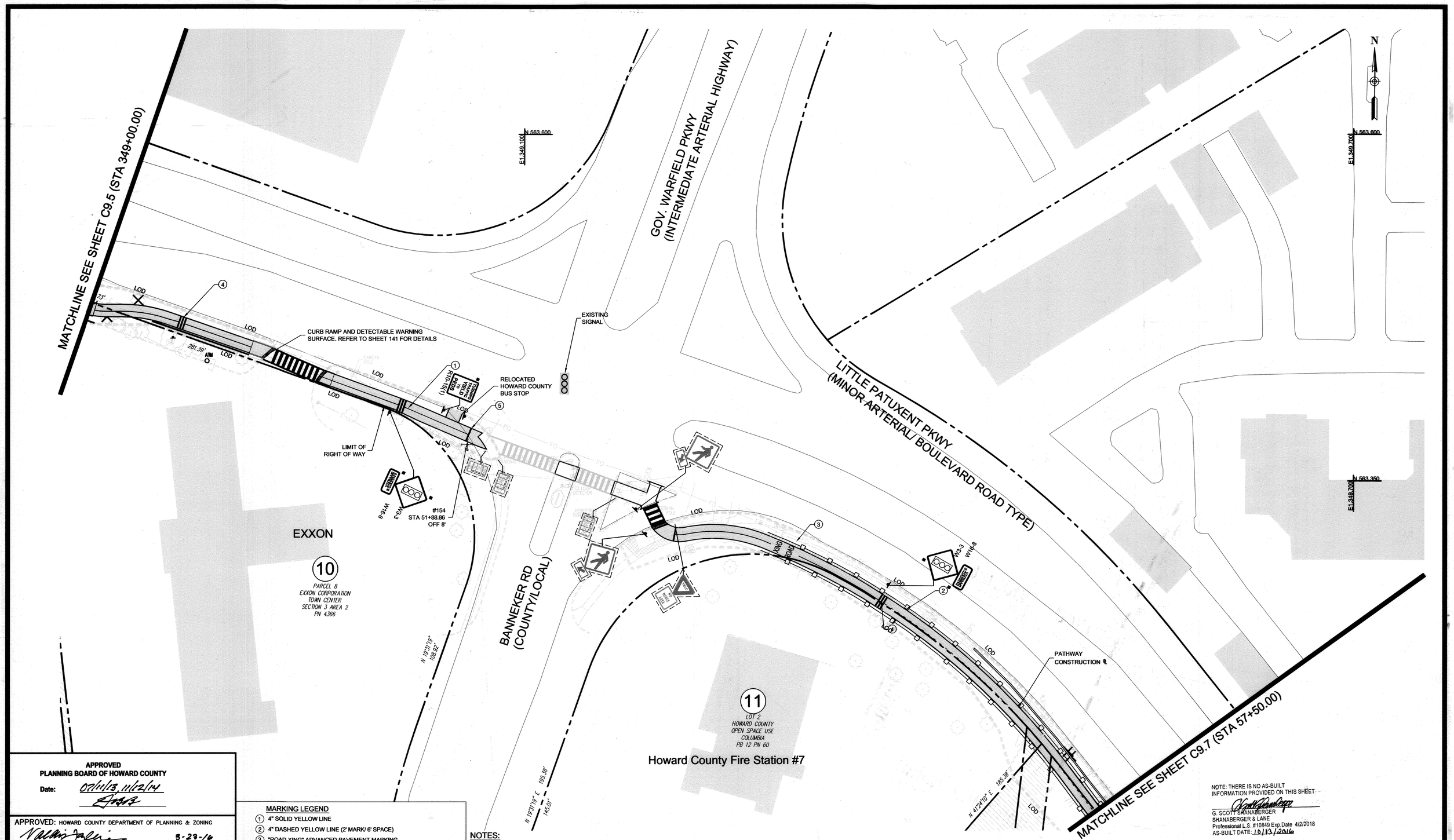
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
03/07/16	36	118 OF 171

SDP-13-020



NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3-23-16
Chief, Division of Land Development	Date 3-22-16
Chief, Development Engineering Division	Date 3-18-16

MARKING LEGEND
1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTES:

1. SDP 13-020 INCLUDES A NEW EASEMENT FOR THE CONSTRUCTION, USE AND MAINTENANCE OF THE MULTIUSE PATHWAY TO BE LOCATED ON PARCEL 8 (EXXON PROPERTY). FOR ADDITIONAL INFORMATION REGARDING PARCEL 8 SEE SDP 70-001.

0 30 60

SIGNING/ MARKING PLAN 7 C9.6

TooleDesignGroup
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PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

DES. DPB | DRN. AG | CHK. EM

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/17

STATE OF MARYLAND · NELSON R. ALLISON · No. 35022 · REGISTERED PROFESSIONAL ENGINEER

3/4/16

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
03/07/16	36	119 OF 171

SDP-13-020

MATCHLINE SEE SHEET C9.6 (STA 57+50.00)

PARCEL 7-A
TOWN CENTER
SECTION 3 AREA 2
PB 30 FN 17

EX. PUBLIC DRAINAGE & UTILITY EASEMENT PN 10724

EX. 20' STORM DRAINAGE & UTILITY EASEMENT PB 15 PN 85

EX. WATER MAIN EASEMENT PB 30 PN 17

EX. 10' STORM DRAIN EASEMENT PB 12 PN 60

S 83°21'07" E 127.68'

S 06°38'53" W 23.50'

S 55°17'14" E 66.28'

S 83°21'07" E 30.00'

S 35°13'19" E 180.00'

S 10°02'12" E 220.75'

S 22°37'39" E 43.69'

S 38°28'44" E 143.13'

S 45°12'29" E 13.11'

S 09°57'43" E 103.02'

PARCEL B
COLUMBIA TOWN CENTER
SECTION 3 AREA 2
PN 10724

OPEN SPACE LOT 12
COLUMBIA ASSOCIATION
COLUMBIA TOWN CENTER
SECTION 3 AREA 2
PN 10724

LOD

LIMIT OF RIGHT OF WAY

PATHWAY CONSTRUCTION ℄

N 563,050
E 1,348,700

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

BROKEN LAND PKWY
(INTERMEDIATE ARTERIAL HIGHWAY)

N 563,050
E 1,350,200

N 562,852
E 1,350,200

LIMIT OF WORK PHASE 2

LIMIT OF WORK PHASE 1

#155
STA 61+98.71
OFF 8'

#156
STA 63+69.40
OFF 9'

EXISTING SIGNAL

CURB RAMP AND DETECTABLE WARNING SURFACE. REFER TO SHEET 141 FOR DETAILS

LIMIT OF WORK
END OF PHASE 2 STA. 65+16.58=
BEGINNING OF PHASE 1 STA. 65+32.89
N 562,576.38
E 1,350,064.55

MARKING LEGEND

1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2017
AS-BUILT DATE: 10/13/2016

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3.23.16
Chief, Division of Land Development — Date 3-22-16
Chief, Development Engineering Division — Date 3.18.16

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

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PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

Howard Hughes.
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 39022, EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — NATHANIEL S. HEID — No. 39022 — REGISTERED PROFESSIONAL ENGINEER

3/4/16

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

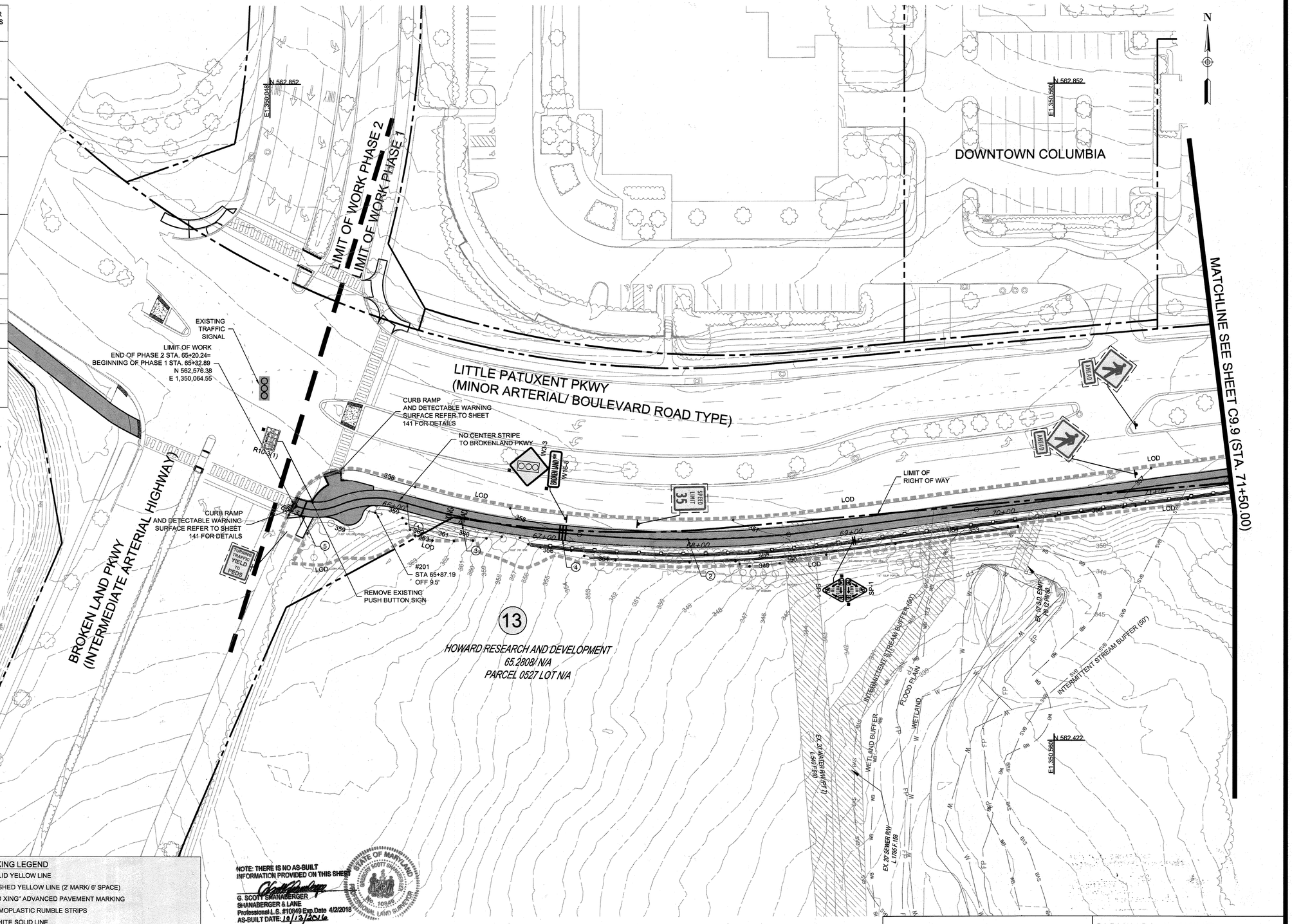
SIGNING/ MARKING PLAN 8 — C9.7

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
03/07/16	36	120 OF 171

SDP-13-020

MUTCD IDENTIFICATION NUMBER	MUTCD SIZE OF SIGN (INCHES)		PANEL	NUMBER OF SIGNS
	WIDTH	HEIGHT		
R10-15(1)	30	30	TURNING TRAFFIC YIELD TO PEDS	2
SP-1	18	18	YIELD TO *BROWN BACKGROUND WITH WHITE TEXT	8
R10-3(1)	9	12		3
W3-3	18	18		3
W16-8 MODIFIED	24	8	S. ENTRANCE RD	1
W16-8 MODIFIED	24	8	LITTEL PATUXENT PKWY	1
W16-8 MODIFIED	24	8	BROKEN LAND PKWY	1
W5-4a	18	18	PATH NARROWS	2

NOTE
1. ALL COUNTY TRAFFIC CONTROL SIGNS SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SWUARE TUBE POST (14 GUAGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GUAGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLED ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST."
2. THE LOCATION OF ALL COUNTY TRAFFIC CONTROL SIGNS SHALL BE FIELD LOCATED BY THE TRAFFIC DIVISION PRIOR THE ANY SIGN BEING INSTALLED.



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/15/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

MARKING LEGEND
1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10949 Exp.Date 4/22/2018
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10949 — PROFESSIONAL LAND SURVEYOR

ToolеDesignGroup
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PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.3531, EXPIRATION DATE: 06/16/15.

STATE OF MARYLAND — MARK ALLEN BRUDZINSKI — No. 3531 — PROFESSIONAL ENGINEER — 12/17/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	121 OF 171

SIGNING/ MARKING PLAN 1 — C9.8

SDP-13-020

© \\ACTIVE PROJECTS\5282 DGP--Blandair Trail\Site Development\ Plan\VERSION\CAD\Shifted Trail\Shifted Print\U9--9 -- Shifted\SignMarkPlan.dwg
Plotted: 12/17/2014 8:58 PM by GREGORY SHANABERGER | Xrefs: ..\..\..\

MATCHLINE SEE SHEET C9.8 (STA. 71+50.00)

MATCHLINE SEE SHEET C9.10 (STA. 80+50.00)

MALL ACCESS RD
(PRIVATE ROAD)

N 562 852
E 1,350,776

N 562 852
E 1,351,488

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

NO CENTER STRIPE

DO NOT ENTER

EXISTING TRAFFIC SIGNAL

#203
STA 79+04.91
OFF 7'

LIMIT OF RIGHT OF WAY

LOD

NO CENTER STRIPE

LIMIT OF RIGHT OF WAY

LOD

LOD

LOD

MATCHLINE SEE SHEET C9.9 (STA. 81+50.00)

LITTLE PATUXENT PKWY
(MINOR ARTERIAL/ BOULEVARD ROAD TYPE)

LIMIT OF RIGHT OF WAY

LOD

COLUMBIA ASSOCIATION, INC.
PARCEL 0293 LOT 9B S V.1,134A

14

SYMPHONY WOODS PARK
(BY OTHERS)
FDC-DC-MSW-1

15

COLUMBIA ASSOCIATION, INC.
PARCEL 0452 LOT 23 36 2326 AR
PLAT NO. 13535 & 13536
COLUMBIA TOWN CENTER
SECTION 1

MERRIWEATHER POST PAVILLION

EX. 10' S.D. ESMT.
PB 12 PG 64

HOWARD COUNTY MARYLAND
LOT 4 128 A PARCEL 0388

16

17

20

NO CENTER STRIPE

CURB RAMP
AND DETECTABLE WARNING
SURFACE REFER TO SHEET
141 FOR DETAILS

EXISTING
TRAFFIC
SIGNAL

EXISTING HOWARD TRANSIT
BUS STOP/ SHELTER

REMOVE EXISTING
PUSH BUTTON SIGN

#204
STA 87+37.39
OFF 8'

#205
STA 89+05.01
OFF 9.5'

SENTRANCE RD
(COUNTY/ LOCAL ROAD)

SHA P/O LOT 3 172B
TOWN CENTER SQ A3 ROUTE 29
PARCEL 0389 LOT 3

PROPOSED SIDEWALK
REFER TO DETAIL 33

COUNTY
LIBRARY

HOWARD COUNTY MARYLAND
IMPS LOT 5.32166
10375 LITTLE PATUXENT PKWY
PARCEL 0389 LOT 5

MATCHLINE SEE SHEET C9.11 (STA. 89+50.00)

N 562,852
E 351,750

N 562,852
E 352,468

N 562,422
E 352,468

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

MARKING LEGEND
1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/18/2016

0 30 60

SIGNING/ MARKING PLAN 3 C9.10

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

ToolеDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3531, EXPIRATION DATE: 06/16/15.

12/11/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	123 OF 174

SDP-13-020

G:\ACTIVE PROJECTS\5282 DGP-Blandair Trail\Site Development Plan\SDP\SDP Submittal Plan\SDP-13 - Sheets\Signing\Sign Plans\Sheet Sign Map Plans.dwg
Rev. Date: 12/11/2014 2:09 PM By: Andrew Gregor Plotted: 12/11/2014 2:10 PM By: Andrew Gregor

MATCHLINE SEE SHEET C9.10 (STA. 89+50.00)

N

TO 29

LOD

LIMIT OF RIGHT OF WAY

STOP

NO CENTER STRIPE

CURB RAMP AND DETECTABLE WARNING SURFACE REFER TO SHEET 141FOR DETAILS

N 562,185
E 1,351,998

N 562,185
E 1,352,687

N 562,055
E 1,352,687

LIMIT OF WORK PHASE 1
LIMIT OF WORK PHASE 3

LIMIT OF WORK
END OF PHASE 1 STA. 92+28.58=
BEGINNING OF PHASE 3 STA. 92+28.58
N 562,104.95
E 1,352,386.81

SWIFT STREAM PL
(PRIVATE ROAD)

SYMPHONY WOODS DRIVE

S ENTRANCE RD
(COUNTY/LOCAL ROAD)

18
API COLUMBIA TOWN CENTER, LLC
LOT 2 S1 AR 3
TOWN CENTER LITTLE PATUXENT PKWY
PARCEL 0389 LOT N/A

19
HOWARD RESEARCH AND DEVELOPMENT LOT 2 S 3 A R 3
TOWN CENTER ROUTE 29
PARCEL 0389 LOT 2

20

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 4/24/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2-12-15

MARKING LEGEND
1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — NO. 10849 — PROFESSIONAL LAND SURVEYOR

0 30 60

SIGNING/ MARKING PLAN 4 C9.11

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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

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STATE OF MARYLAND — MICHAEL A. LISTON-BRIDE — No. 30062 — REGISTERED PROFESSIONAL ENGINEER

12/17/14

PHASE 1

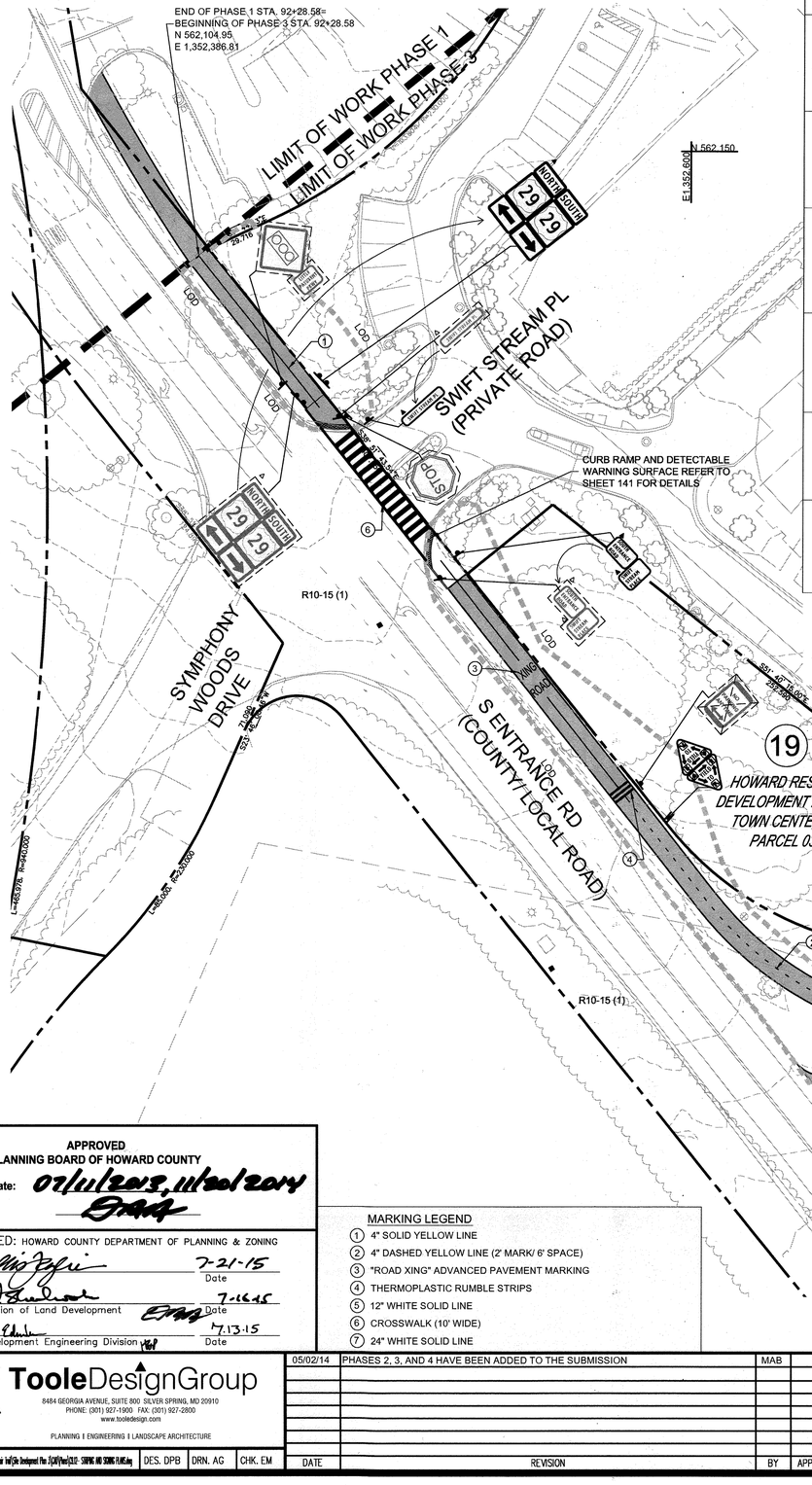
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	124 OF 171

SDP-13-020

D:\ACTIVE PROJECTS\12052 CAP-Blandair Trail\Site Development Plan\DESIGN\CAD\Drafted Trail\Drafted Plans\Ch8-8 – SignMarkingMainPlan.dwg, 12/17/2014 12:39:56 PM, DPB, 1:1, Layout: C9.11 Sign Marking Plan 4, XREFS: 30K Perspective Colors



PHASE 3 SIGN SCHEDULE

MUTCD IDENTIFICATION NUMBER	MUTCD SIZE OF SIGN (INCHES) WIDTH	MUTCD SIZE OF SIGN (INCHES) HEIGHT	PANEL	NUMBER OF SIGNS
R1-1	18	18	STOP	2
SP-1	18	18	YIELD TO	18
			*BROWN BACKGROUND WITH WHITE TEXT	
S1-1	36	36	*FYG IN COLOR	4
W16-7P	24	12	*FYG IN COLOR	2
W16-7P	24	12	*FYG IN COLOR	2

MUTCD IDENTIFICATION NUMBER	MUTCD SIZE OF SIGN (INCHES) WIDTH	MUTCD SIZE OF SIGN (INCHES) HEIGHT	PANEL	NUMBER OF SIGNS
W1-2 (R)	18	18		2
W1-2 (L)	18	18		1

NOTE
1. ALL COUNTY TRAFFIC CONTROL SIGNS SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SWUARE TUBE POST (14 GUAGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GUAGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLED ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST."
2. THE LOCATION OF ALL COUNTY TRAFFIC CONTROL SIGNS SHALL BE FIELD LOCATED BY THE TRAFFIC DIVISION PRIOR THE ANY SIGN BEING INSTALLED.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2015, 11/04/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15
Chief, Division of Land Development — Date 7-16-15
Chief, Development Engineering Division — Date 7.13.15

MARKING LEGEND
1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2015

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

0 30 60

SIGNING/ MARKING PLAN 1 C9.12

Toole Design Group
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\5282 DCP-Blandair Trail\Civ Development Plan 3\Cad\Plans\C9.12 - STRIPING AND SIGNING PLANS.dwg
DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — NOLAN PHILLIP BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 6/12/15

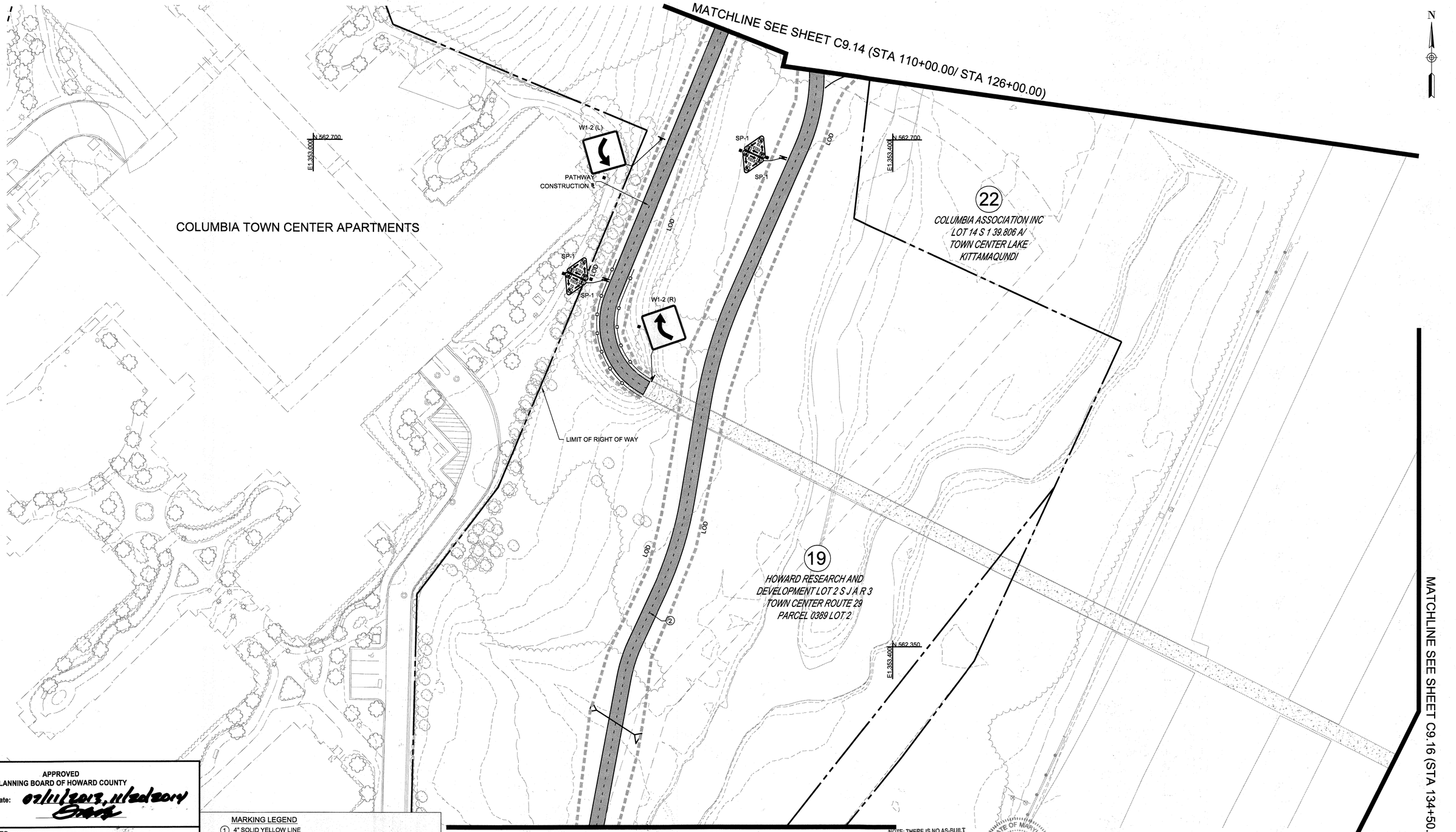
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
06/09/15	36	125 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/6/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

MARKING LEGEND

1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/19/2016

0 30 60

SIGNING/ MARKING PLAN 2 — C9.13

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

6/1/15

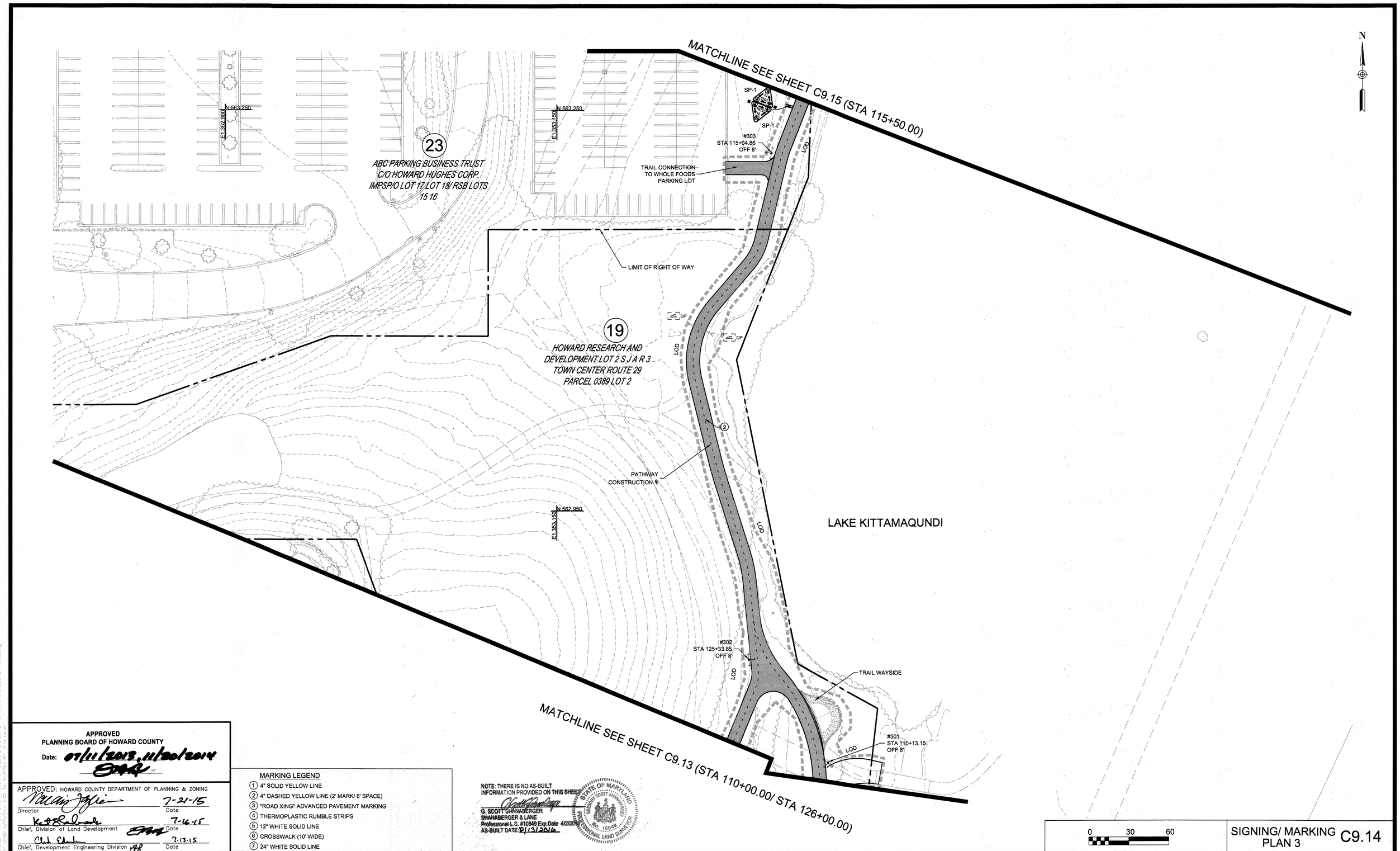
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	126 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/30/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7-13-15

MARKING LEGEND
1. 4" SOLID YELLOW LINE
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7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — GREGORY SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

SIGNING/ MARKING PLAN 3 — C9.14

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB | DRN. AG | CHK. EM

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — Melanie Allerton-Brick — No. 35022 — REGISTERED PROFESSIONAL ENGINEER
6/1/15

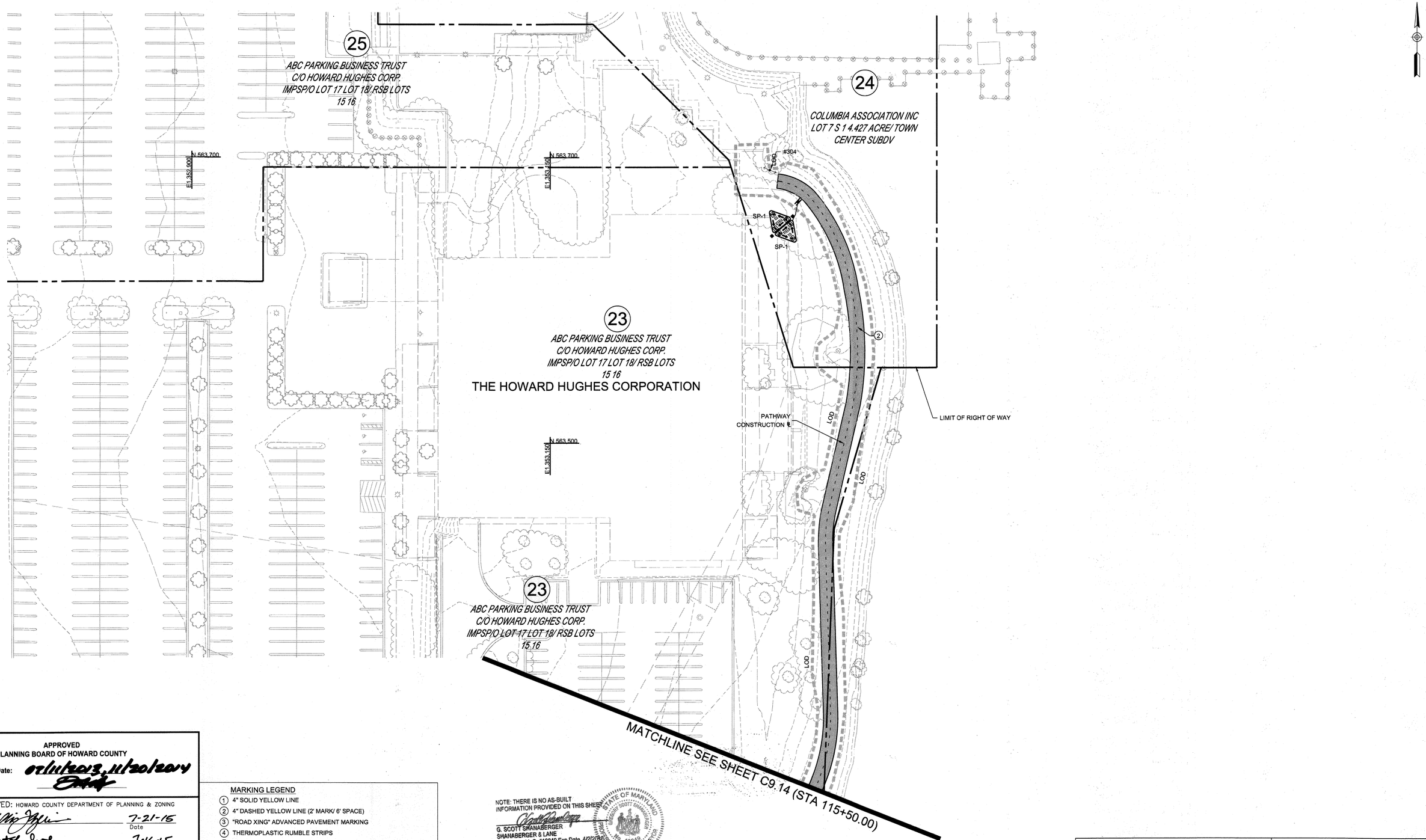
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	127 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	7-21-15 Date
Chief, Division of Land Development	7-16-15 Date
Chief, Development Engineering Division	7-13-15 Date

MARKING LEGEND
1. 4" SOLID YELLOW LINE
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6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND
GREGORY SCOTT SHANABERGER
No. 10849
PROFESSIONAL LAND SURVEYOR

0 30 60

SIGNING/ MARKING PLAN 4 C9.15

ToolеDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND
No. 35022
REGISTERED
PROFESSIONAL ENGINEER
6/1/15

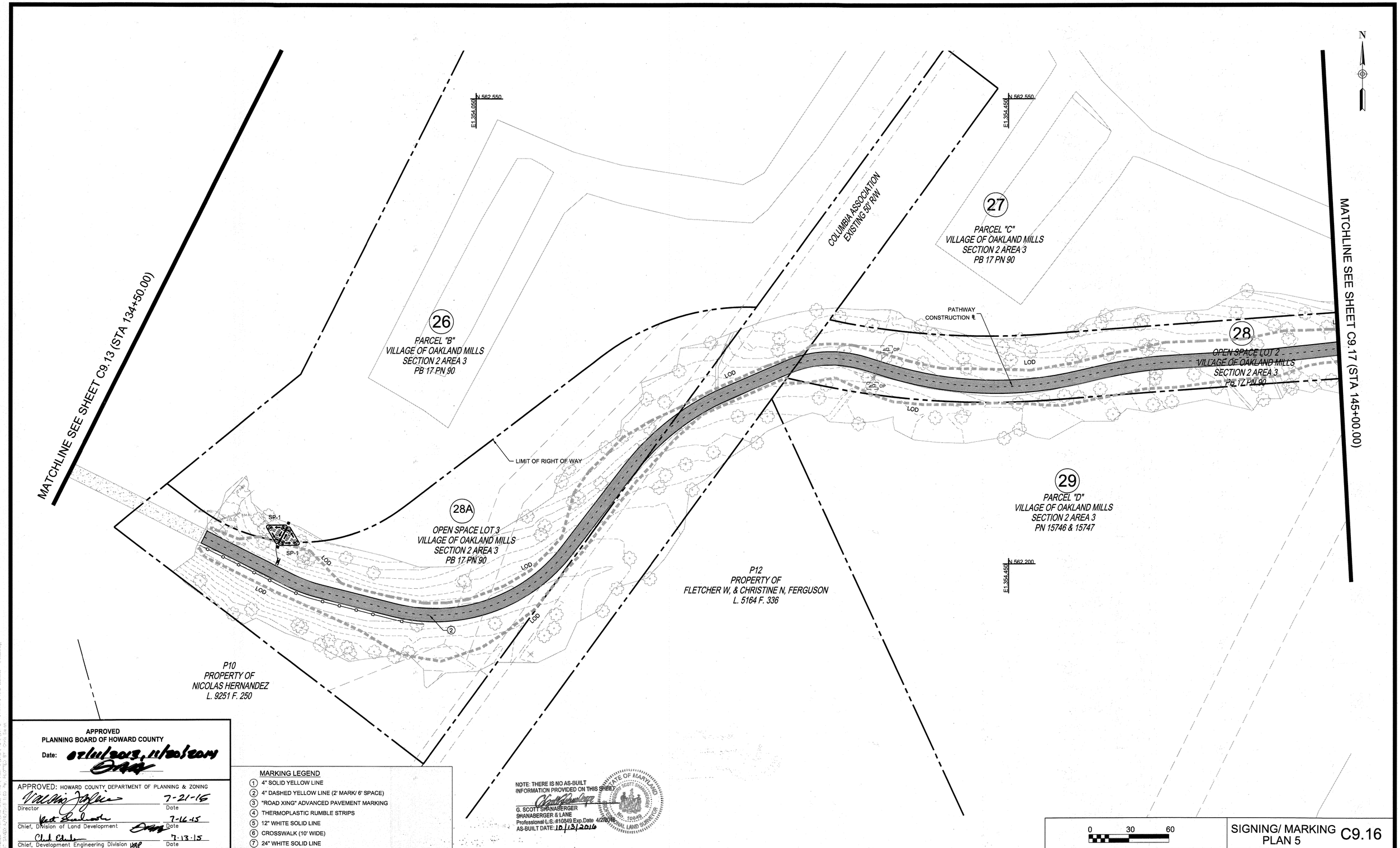
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	128 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	7-21-15 Date
Chief, Division of Land Development	7-16-15 Date
Chief, Development Engineering Division	7-13-15 Date

MARKING LEGEND

1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND
GEORGE SCOTT SHANABERGER
No. 10849
PROFESSIONAL LAND SURVEYOR

SIGNING/ MARKING PLAN 5 C9.16

Toole DesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB	DRN. AG	CHK. EM

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
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COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
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EXPIRATION DATE: 12/28/15

STATE OF MARYLAND
ALLISON DAVIS
No. 35022
REGISTERED
PROFESSIONAL ENGINEER
6/1/15

PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	129 OF 171

SDP-13-020

N

27
PARCEL "C"
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

N 562,650
E 1,355,650

N 562,650
E 1,355,250

LIMIT OF WORK PHASE 4
LIMIT OF WORK PHASE 3

WHITE ACRE RD
(LOCAL ROAD)

LIMIT OF WORK
END OF PHASE 3 STA. 152+33.02=
BEGINNING OF PHASE 4 STA. 152+33.02
N 562,563.34
E 1,355,376.79

#305
STA 153+11.88
OFF 10'

W16-7P
S1-1
R1-1
STOP

CURB RAMP AND DETECTABLE WARNING SURFACE REFER TO SHEET 141 FOR DETAILS

31
LOT 12
VILLAGE OF OAKLAND MILLS
VILLAGE CENTER
PB 15 PN 82

STEVENS FOREST RD
(LOCAL ROAD)

PROPOSED INTERIM ALIGNMENT

LIMIT OF RIGHT OF WAY
PATHWAY PHASE 3 CONSTRUCTION
LOD
SP-1

28
OPEN SPACE LOT 2
VILLAGE OF
OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

30
PUBLIC RIGHT-OF-WAY

32
LOT 15
V O M
VILLAGE CENTER
PN 8507

MATCHLINE SEE SHEET C9.16 (STA 145+00.00)

29
PARCEL "D"
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 3
PN 15746 & 15747

LOT 16
VILLAGE OF OAKLAND MILLS
VILLAGE CENTER
PN 8507

N 562,250
E 1,355,250

0 30 60

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15
Chief, Division of Land Development — Date 7-16-15
Chief, Development Engineering Division — Date 7.13.15

MARKING LEGEND
1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

SIGNING/ MARKING PLAN 6 C9.17

Toole Design Group
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

| DES. DPB | DRN. AG | CHK. EM |

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — PHILLIP D. BRADDOCK — No. 35022 — PROFESSIONAL ENGINEER
6/1/15

PHASE 3

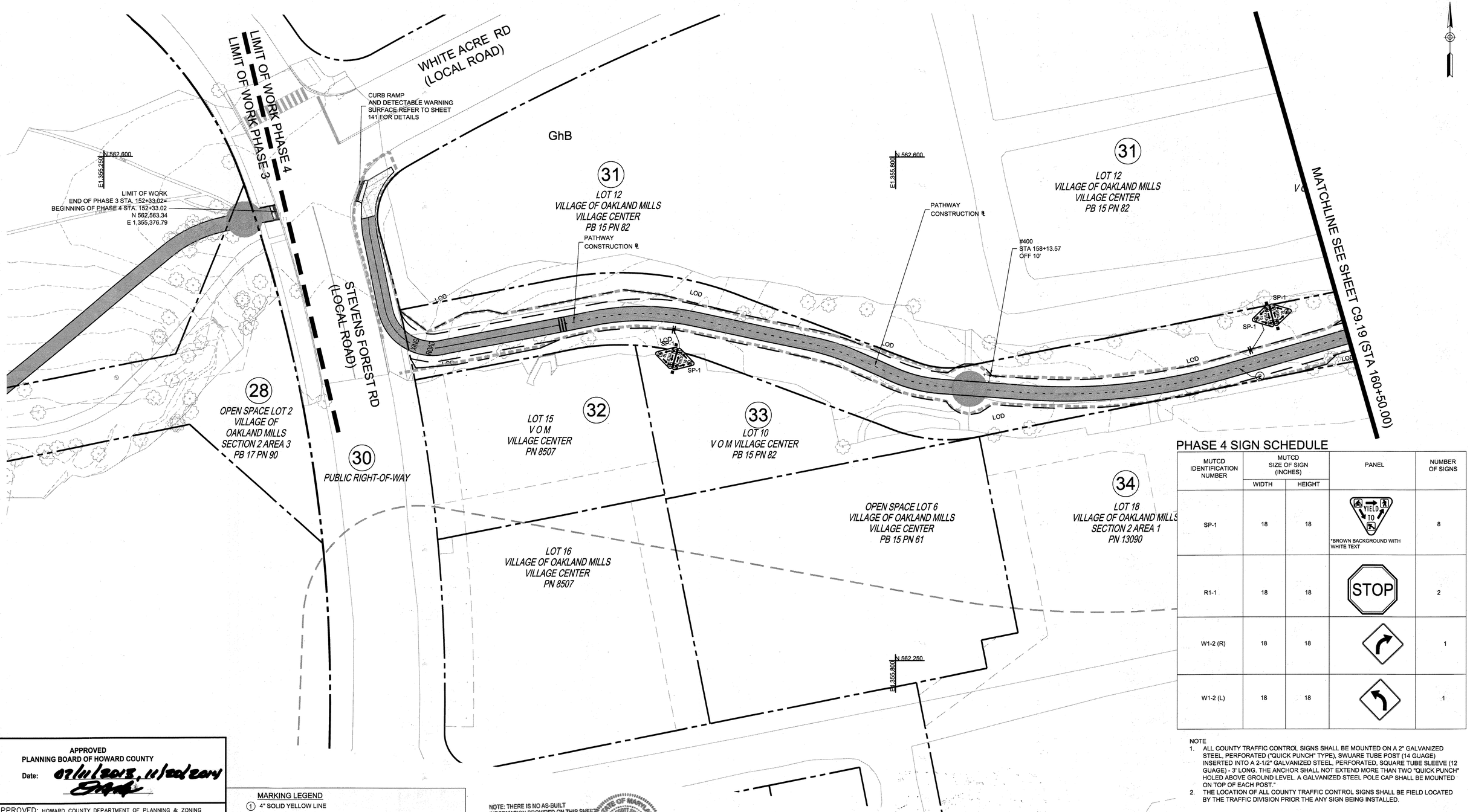
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	130 OF 171

SDP-13-020

© ACTIVE PROJECTS (2013) SDP-Revised Traffic Site Development Plan 2\DWG\Plan\2013- SIGNING AND SIGNAL PLANS.dwg, 6/1/2015 3:29:08 PM, LAST SAVED: 6/1/2015 1:03 PM, PLOTTED: BY: Chris Hayes



PHASE 4 SIGN SCHEDULE

MUTCD IDENTIFICATION NUMBER	MUTCD SIZE OF SIGN (INCHES) WIDTH	HEIGHT	PANEL	NUMBER OF SIGNS
SP-1	18	18	*BROWN BACKGROUND WITH WHITE TEXT	8
R1-1	18	18	STOP	2
W1-2 (R)	18	18		1
W1-2 (L)	18	18		1

NOTE
1. ALL COUNTY TRAFFIC CONTROL SIGNS SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH" TYPE), SWUARE TUBE POST (14 GUAGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GUAGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLED ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.*
2. THE LOCATION OF ALL COUNTY TRAFFIC CONTROL SIGNS SHALL BE FIELD LOCATED BY THE TRAFFIC DIVISION PRIOR THE ANY SIGN BEING INSTALLED.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/22/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-14-15

Chief, Development Engineering Division — Date 7.13.15

MARKING LEGEND
1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

0 30 60

SIGNING/ MARKING PLAN 1 C9.18

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
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O:\ACTIVE PROJECTS\5282 CEP-Howard Hughes Development Plan #1\ADP\Plans\5282- SIGNING AND SIGNAGE PLANS.dwg, 7/10/2015 4:07 PM, LAST SAVED: 7/10/2015 11:01 PM, PLOTTED: BY Chris Baker

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
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COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MARY ELIZABETH BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

6/11/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	131 OF 171

SDP-13-020

N

N 562,850
E1,356,350

N 562,850
E1,356,950

31
LOT 12
VILLAGE OF
OAKLAND MILLS
VILLAGE CENTER
PB 15 PN 82

#403
STA 168+81.50
OFF 10'

LOD

PATHWAY
CONSTRUCTION

SP-1

28
OPEN SPACE LOT 3
VILLAGE OF
OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

37
LOT 14
VILLAGE CENTER
PB 15 PN 82

GhB

LOT 12
M VILLAGE CENTER
PB 15 PN 82

MATCHLINE SEE SHEET C9.18 (STA 160+50.00)

#401
STA 163+50.90
OFF 10'

OPEN SPACE LOT 3
VILLAGE OF
OAKLAND MILLS
SECTION 2 AREA 3
PB 17 PN 90

28

36
LOT 14
VILLAGE OF OAKLAND MILLS
SECTION 2

MATCHLINE SEE SHEET C9.20 (STA 171+00.00)

McD

35
OPEN SPACE LOT 13
V O M
VILLAGE CENTER
PB 15 PN 82

36
LOT 14
VILLAGE OF OAKLAND MILLS
SECTION 2

N 562,450
E1,356,350

LOT 17
AGE OF OAKLAND MILLS
SECTION 2 AREA 1

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/21/2015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

MARKING LEGEND

1. 4" SOLID YELLOW LINE
2. 4" DASHED YELLOW LINE (2' MARK/ 6' SPACE)
3. "ROAD XING" ADVANCED PAVEMENT MARKING
4. THERMOPLASTIC RUMBLE STRIPS
5. 12" WHITE SOLID LINE
6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 3/31/2016
AS-BUILT DATE: 10/13/2016

0 30 60

SIGNING/ MARKING PLAN 2 C9.19

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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
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PROFESSIONAL CERTIFICATION

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STATE OF MARYLAND — MARK ALLAN BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

6/1/15

PHASE 4

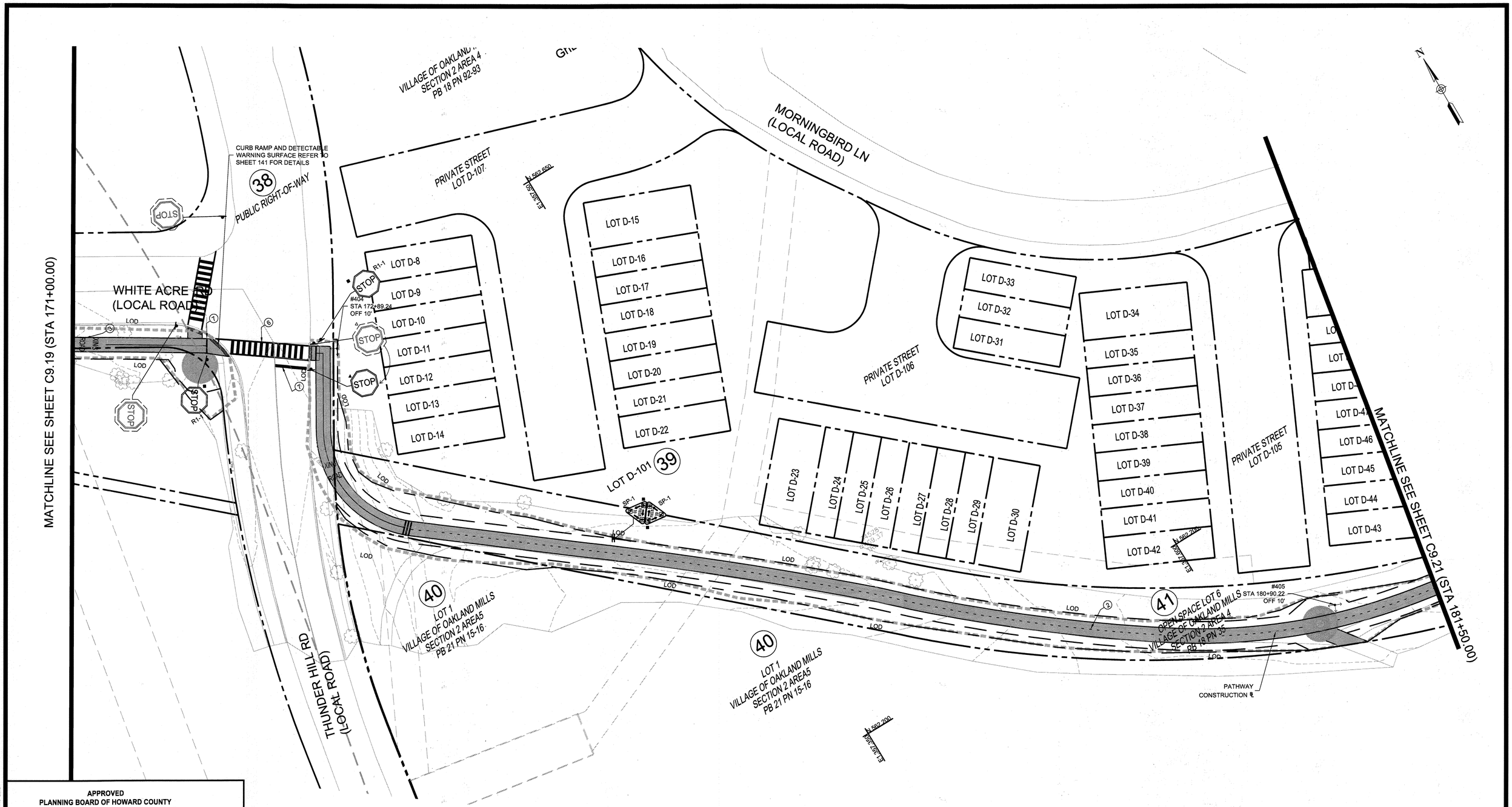
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	132 OF [illegible]

SDP-13-020

G:\ACAD PROJECTS\2012 CDP-Revised Final Dev Development Plan 4\LAYOUTS\C9.19- SIGNING AND SIGNAL PLANS.dwg
PLOTTED: 6/1/2015 4:02 PM LAST SAVED: 6/1/2015 11:01 PM PLOTTED BY: Chris Tabor



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	7-21-15 Date
Chief, Division of Land Development	7-16-15 Date
Chief, Development Engineering Division	7.13.15 Date

MARKING LEGEND
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6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND · GEORGE SCOTT SHANABERGER · No. 10849 · PROFESSIONAL LAND SURVEYOR

0 30 60

SIGNING/ MARKING PLAN 2 C9.20

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

DES. DPB	DRN. AG	CHK. EM

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PROFESSIONAL CERTIFICATION
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EXPIRATION DATE: 12/28/15

STATE OF MARYLAND · No. 35022 · REGISTERED PROFESSIONAL ENGINEER
6/1/15

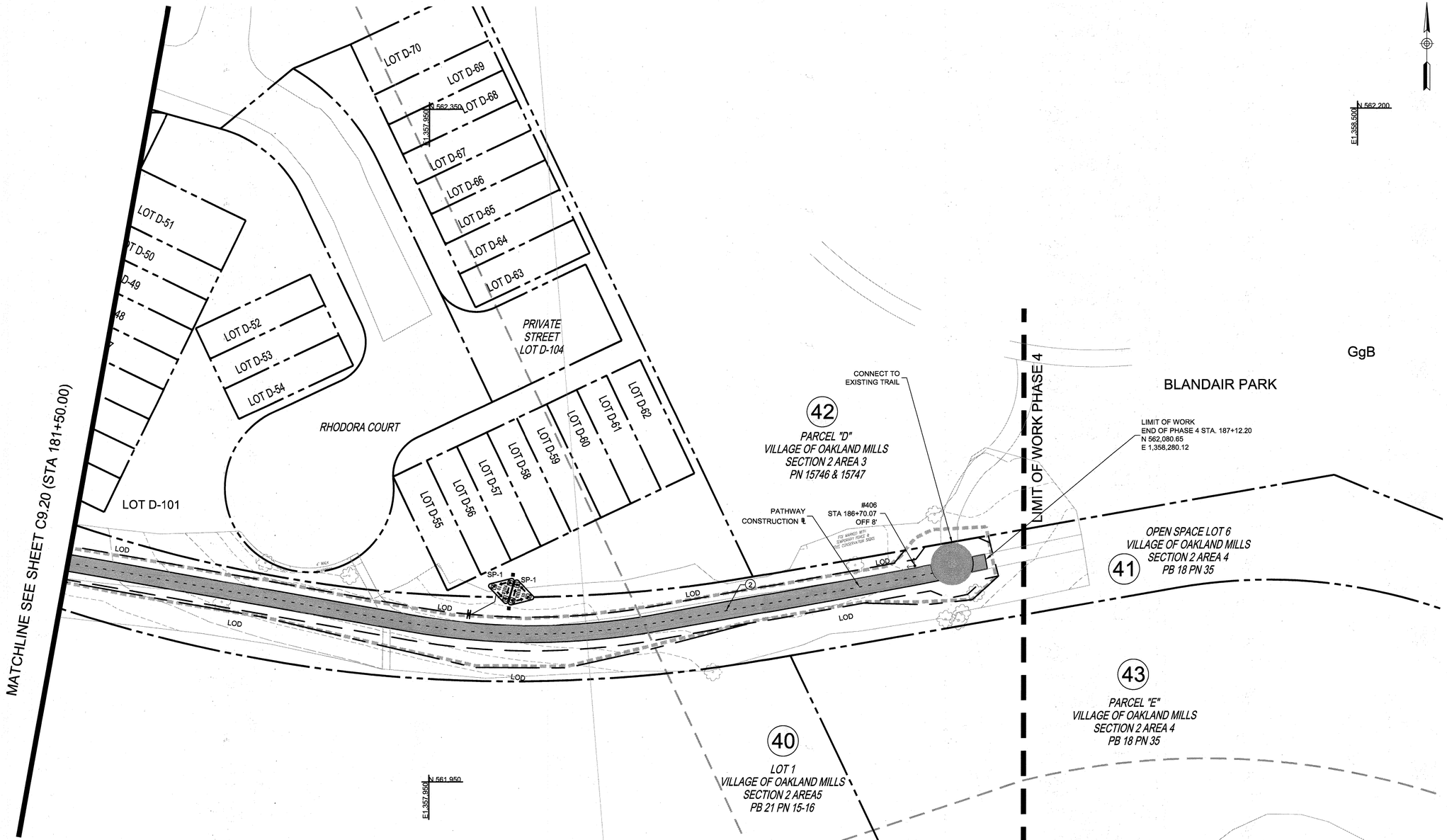
PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	133 OF 171

SDP-13-020



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/01/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

MARKING LEGEND

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6. CROSSWALK (10' WIDE)
7. 24" WHITE SOLID LINE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

0 30 60

SIGNING/ MARKING PLAN 4 C9.21

Toole Design Group
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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PROFESSIONAL CERTIFICATION

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6/1/15

PHASE 4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	134 OF 171

SDP-13-020

N

LITTLE PATUXENT PARKWAY IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

CONSTRUCTION DETAILS

A- INSTALL CONCRETE FOUNDATION WITH 8 FT. STEEL PEDESTAL POLE WITH FOUNDATION STANDARD NO MD 801.01-01, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTONS. (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE). FEED NEW WIRING FROM CONTROLLER CABINET TO PEDESTRIAN PUSHBUTTON AND PEDESTRIAN SIGNAL HEAD.
B- REMOVE PEDESTRIAN PUSHBUTTONS, R10-4(1) SIGN, PEDESTRIAN SIGNAL HEAD AND WIRING FOR PEDESTRIAN PUSHBUTTON AND SIGNAL HEADS BETWEEN MASTARM AND CONTROLLER.
C- REMOVE EXISTING STOP BAR.
D- MOUNT VIDEO DETECTION CAMERA ON EXISTING MASTARM.
E- REMOVE EXISTING PEDESTRIAN SIGNAL POLE, PEDESTRIAN SIGNAL HEAD, PUSHBUTTON AND FOUNDATION 12 IN BELOW GROUND AND BACK FILL. REMOVE EXISTING WIRING BETWEEN PEDESTAL POLE AND CONTROLLER.
F- REMOVE EXISTING PEDESTRIAN PUSHBUTTON, R10-4(1) SIGN AND WIRING BETWEEN PEDESTAL POLE AND CONTROLLER. INSTALL NEW PUSHBUTTON, R10-3(1) SIGN, AND WIRING TO CONTROLLER.
G- REMOVE HANDHOLE AND BACKFILL.
H- INSTALL HANDHOLE.
I- USE EXISTING HANDHOLE.
J- INSTALL 2 IN PVC SCHEDULE 80 ELECTRICAL CONDUIT-TRENCHED.
K- INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT- BORED.
L- INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT-BORED.
M- INSTALL 4 IN PVC SCHEDULE 80 ELECTRICAL CONDUIT TRENCHED.
N- ABANDON EXISTING LOOP DETECTORS, DISCONNECT AND REMOVE LOOP DETECTOR CABLES FROM CONDUITS, HANDHOLS, SIGNAL STRUCTURES AND CONTROLLER.
O- CAP AND ABANDON EXISTING CONDUIT.
P- REMOVE EXISTING STOP BAR AND EXISTING PAVEMENT MARKING LINE EXTENDED PAST PROPOSED STOP BAR.
Q- INSTALL HEAT APPLIED WHITE THERMOPLASTIC ARROWS.
R- REMOVE EXISTING CROSSWALK MARKINGS.
S- INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP BAR AND CROSSWALK.
T- INSTALL 12 IN. HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALK.
U- EXISTING CONDUIT TO BE USED.
V- USE EXISTING CONTROLLER CABINET.

LEGEND

PROPOSED		EXISTING
	RIGHT-OF-WAY/ PROPERTY LINE	
	MAST ARM	
	TRAFFIC SIGNAL HEAD	
	PEDESTRIAN SIGNAL HEAD	
	SIGN	
	STREET LIGHT	
	HANDHOLE	
	CONDUIT	
	PEDESTRIAN PUSH BUTTON AND SIGN	
	LOOP DETECTOR	
	CONTROLLER WITH PAD	
	SIGNAL POLE	
	FIRE HYDRANT	
	MANHOLE	
• W.V.	WATER VALVE	○ W.V.
• G.V.	GAS VALVE	○ G.V.
	GEOMETRICS	
	VIDEO DETECTION	
	VIDEO DETECTION ZONE	

PROPOSED VIDEO DETECTION

b,c

PROPOSED SIGNALS

28-32,45,46, 49,50,54,55

16" LED COUNTDOWN PEDESTRIAN SIGNAL

PROPOSED SIGNS

36,37,47, 52,56 — R 10-3(1) 9" x 15"

33,34 — R 10-3(1) 9" x 15"

38,39 — R 10-3(1) 9" x 15"

35,48,51 — R 10-3(1) 9" x 15"

EXISTING SIGNS

19 — Campus / Harpers Farm — D-3(1) 20" x Var.

24,26 — Little Patuxent — D-3(1) 16" x Var.

22 — Harpers Farm / Campus — D-3(1) 20" x Var.

20,21, 23,25,53 — ONLY — R 3-5(L) 30" x 36"

27 — R 3-6(L) 30" x 36"

EXISTING SIGNS TO REMOVE

40-46

R10-4(1) 9" x 12" (INSTALLED WITH PUSHBUTTON)

EXISTING SIGNALS TO BE REMOVE

14-18

16" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD

EXISTING SIGNALS TO REMAIN

13 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD

1, 2,5,6 — R Y G — 12"

3,4,7 8,10,12 — R Y G — 12"

9,11 — R Y G — 12"

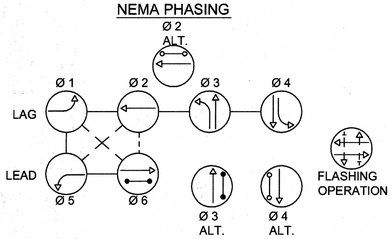
EXISTING VIDEO DETECTION

a

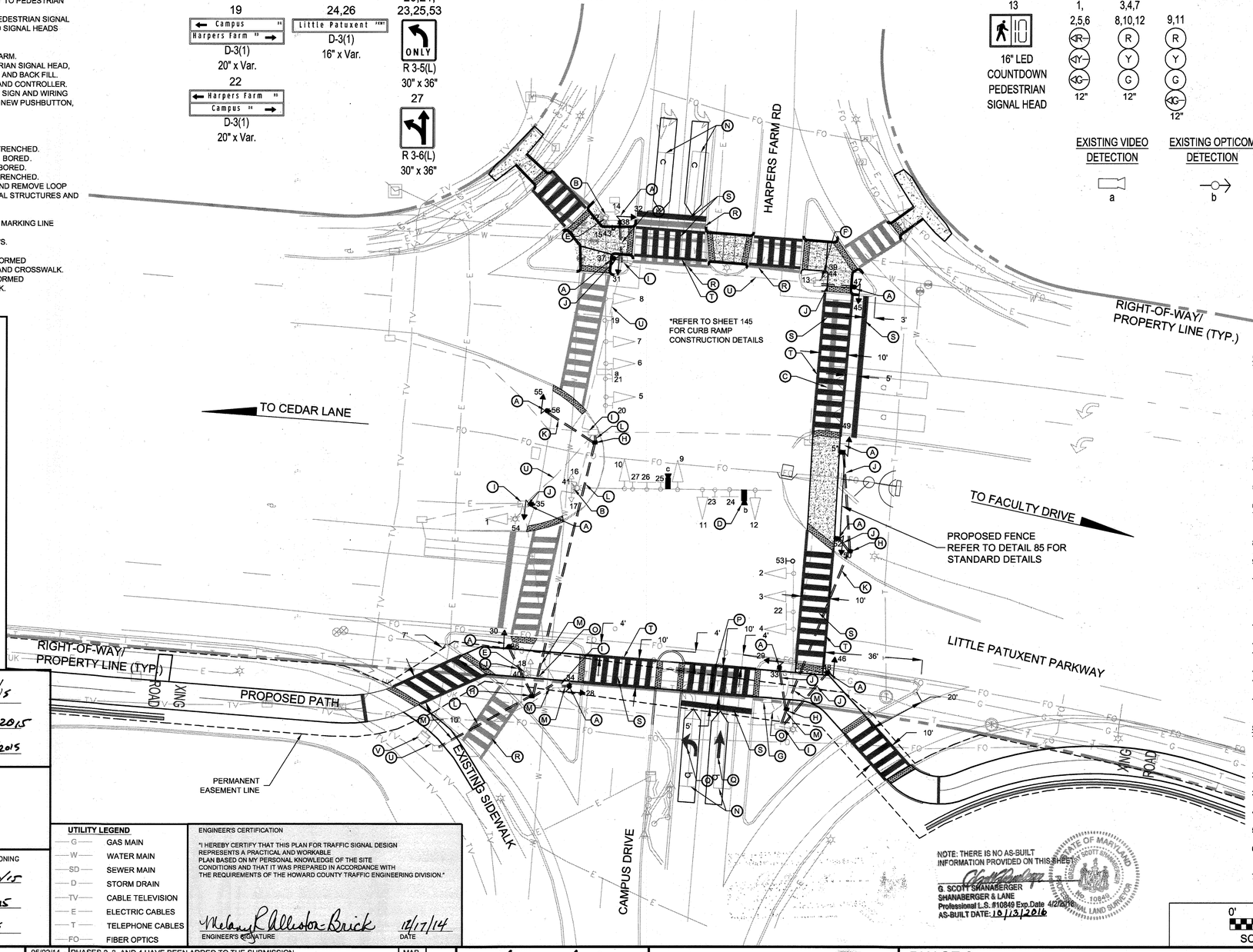
EXISTING OPTICOM DETECTION

b

NEMA PHASING



NEMA notes:
Phases associated by a dashed line will operate concurrently.
Phases associated by a solid line will not operate concurrently.



GENERAL NOTES

1. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, OR HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
2. ALL UTILITIES SHOWN ARE SCHEMATIC AND BASED ON THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL UNDERGROUND UTILITIES BY TEST PITTING PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE ENGINEER.
3. VIDEO CAMERA LOCATION AND ALIGNMENT SHALL BE COORDINATED WITH THE ENGINEER.
4. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED INCLUDING CONTROLLER, MMU, UPS SHALL BE HANDED OVER TO HOWARD COUNTY UPON COMPLETION OF THE NEW SIGNAL.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
6. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL UNUSED SIGNAL CABLE.
7. PUSHBUTTONS SHALL BE LOCATED SO THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" x 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
8. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
9. PUSHBUTTON ARROWS SHALL BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
10. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS SHALL MEET REQUIREMENTS OF MARYLAND MUTCD SEC. 4E09 AND FIG. 4E-2, AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS AND CONTACT THE ENGINEER.
11. CONTRACTOR SHALL VERIFY PROPOSED GEOMETRICS PRIOR TO INSTALLING SIGNAL EQUIPMENT.
12. ALL HANDHOLES SHALL BE INSTALLED AT FINAL GRADE.
13. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT, AT CONTRACTORS EXPENSE.
14. REFER TO SHEET 145 FOR CURB RAMP AND CONSTRUCTION DETAILS.
15. ALL SIGNAL IMPROVEMENTS SHALL MEET APPLICABLE HOWARD COUNTY OR MDSHA SPECIFICATIONS AND DETAILS.
16. IF DAMAGED DURING CONSTRUCTION, CONTRACTOR SHALL REPLACE EXISTING LOOP DETECTORS TO REMAIN AT NO ADDITIONAL COST.

SPECIAL NOTES

1. THE CONTRACTOR SHALL NOT BLOCK VIEW OF EXISTING SIGNAL INDICATIONS DURING INSTALLATION OF PROPOSED EQUIPMENT. IF PROPOSED EQUIPMENT CANNOT BE INSTALLED DUE TO CONFLICT WITH EXISTING SIGNAL INDICATORS OR SPAN WIRES, A SIGNAL OUTAGE SHALL OCCUR DURING NON-PEAK HOURS AS DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR SHALL USE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT TO AVOID DISTURBANCE OF EXISTING UNDERGROUND UTILITIES.
3. THE CONTRACTOR SHALL TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF UNDERGROUND UTILITIES PRIOR TO INSTALLING SIGNAL EQUIPMENT.
4. EQUIPMENT TO REMAIN INCLUDES MAST ARMS, CONDUIT OTHER THAN CONDUIT TO BE CAPPED AND ABANDONED, AND HANDHOLES OTHER THAN HANDHOLES TO BE REMOVED.
5. IF EXISTING CONDUIT TO REMAIN IS UNUSABLE THE CONTRACTOR SHALL CONTACT THE ENGINEER.
6. CONTRACTOR SHALL CONTACT HOWARD COUNTY'S UNDERGROUND UTILITY PERMIT DIVISION AT (410)313-4207 AT LEAST 5 BUSINESS DAYS PRIOR TO STARTING ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
7. CONTRACTOR SHALL CONTACT HOWARD COUNTY'S TRAFFIC DIVISION AT LEAST 72 HOURS PRIOR TO STARTING ANY WORK WITHIN THE PUBLIC RIGHT-OR-WAY.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Director of Public Works — Date 2/25/15

Director of Bureau of Highways — Date 2-24-2015

Chief, Traffic Division — Date 2/24/2015

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

UTILITY LEGEND

G	GAS MAIN
W	WATER MAIN
SD	SEWER MAIN
D	STORM DRAIN
TV	CABLE TELEVISION
E	ELECTRIC CABLES
T	TELEPHONE CABLES
FO	FIBER OPTICS

ENGINEER'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN FOR TRAFFIC SIGNAL DESIGN 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 COUNTY TRAFFIC ENGINEERING DIVISION."

ENGINEER'S SIGNATURE — DATE 12/17/14

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

0' 20' 40'
SCALE: 1" = 20'

TRAFFIC SIGNAL PLAN C10.0

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

ToolеDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\5282 CSP-Blandair Trail\Traffic Signal Design 2\PLANS\LP and Campus Dr.dwg | DES. DPB | DRN. AG | CHK. EM

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MELANIE LALLISTER-BRICK — No. 35022 — PROFESSIONAL ENGINEER — 12/17/14

PHASE 2

TRAFFIC SIGNAL PLAN
LITTLE PATUXENT PARKWAY AND CAMPUS DRIVE

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 20'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	135 OF 171

SDP-13-020

Q:\ACTIVE PROJECTS\5282 CSP-Blandair Trail\Traffic Signal Design 2\PLANS\LP and Campus Dr.dwg, 12/17/2014 12:38 PM, LAST SAVED: 12/5/2014 1:40 PM, PLOTTED BY: Andrew Gudgeon

PROJECT DESCRIPTION

GENERAL
THIS PROJECT INVOLVES THE ADDITION OF CROSSWALKS AND COUNTDOWN PEDESTRIAN SIGNAL HEADS ON THE EASTERN AND SOUTHERN INTERSECTION LEGS, VIDEO DETECTION FOR THE NORTHBOUND APPROACH AND SOUTHBOUND APPROACH, AND ACCESSIBLE PEDESTRIAN PUSHBUTTONS FOR ALL CROSSWALKS.

INTERSECTION OPERATION
THE INTERSECTION OPERATION WILL BE CHANGED TO PROVIDE PEDESTRIAN MOVEMENTS ACROSS THE EASTERN AND SOUTHERN INTERSECTION LEG. THE PEDESTRIAN MOVEMENT ACROSS THE SOUTHERN LEG SHALL OPERATE IN REST IN WALK AND PEDESTRIAN RECALL.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS
PUSH BUTTONS SHALL HAVE A LOCATOR TONE WHEN WALK INDICATION IS NOT SHOWN AND A RAPID TICK TONE DURING THE WALK INDICATION. SPEECH MESSAGES ARE NOT NECESSARY SINCE APS PUSH BUTTONS ARE NOT LOCATED WITHIN 10 FEET OF EACH OTHER.

LITTLE PATUXENT PARKWAY AND CAMPUS DRIVE - NORTH LEG
STREETS AT 90 DEGREES
WAIT: "WAIT TO CROSS CAMPUS AT LITTLE PATUXENT, WAIT." *
WALK: RAPID TICK

LITTLE PATUXENT PARKWAY AND CAMPUS DRIVE - SOUTH LEG
STREETS AT 90 DEGREES
WAIT: "WAIT TO CROSS CAMPUS AT LITTLE PATUXENT, WAIT." *
WALK: RAPID TICK

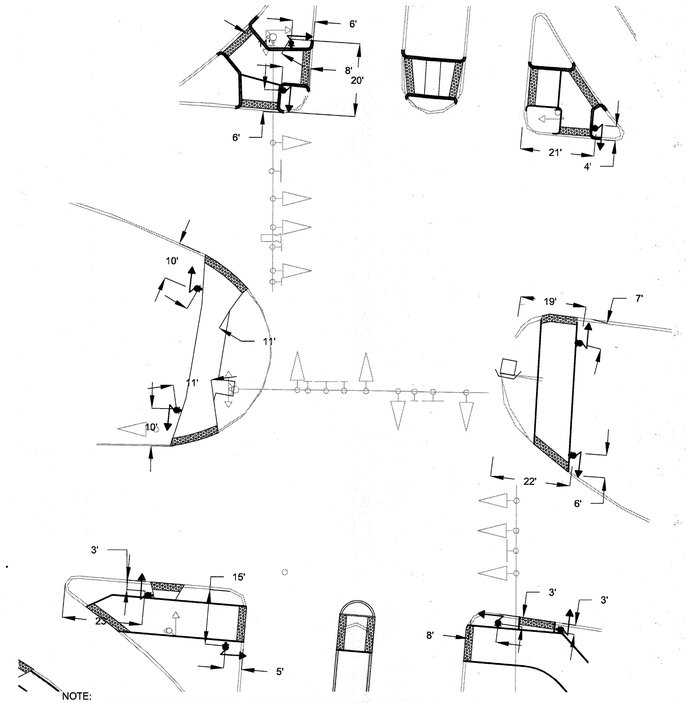
LITTLE PATUXENT PARKWAY AND CAMPUS DRIVE - EAST LEG
STREETS AT 90 DEGREES
WAIT: "WAIT TO CROSS LITTLE PATUXENT AT CAMPUS, WAIT." *
WALK: RAPID TICK

LITTLE PATUXENT PARKWAY AND CAMPUS DRIVE - WEST LEG
STREETS AT 90 DEGREES
WAIT: "WAIT TO CROSS LITTLE PATUXENT AT CAMPUS, WAIT." *
WALK: RAPID TICK

* MESSAGE USED IF DISTANCE FROM NEAREST PUSH BUTTON FOR PERPENDICULAR CROSSING IS <10'
NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM ABOVE ARE TO BE APPROVED BY HOWARD COUNTY'S TRAFFIC ENGINEERING DIVISION.

CONTROLLER REQUIREMENTS
THE EXISTING CONTROLLER WILL REMAIN.

SIGNAL POLE LOCATIONS



NOTE:
1. MEASUREMENTS ARE TAKEN FROM FACE OF CURB, EXISTING SIGNAL POLE OR TANGENT OF FACE OF CURB.
2. REFER TO SHEET 145 FOR CURB RAMP CONSTRUCTION DETAILS.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 2/24/15
Chief, Division of Land Development	Date 7-25-15
Chief, Development Engineering Division	Date 2-12-15

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Director of Public Works	Date 2/25/15
Director of Bureau of Highways	Date 2-24-2015
Chief, Traffic Division	Date 2/24/2015

ENGINEER'S CERTIFICATION

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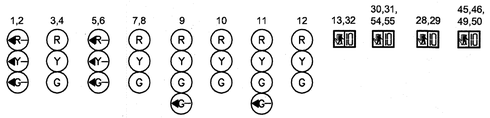
Melanie Callister-Brick — 12/17/14
ENGINEER'S SIGNATURE — DATE

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY THE COUNTY AND INSTALLED BY THE CONTRACTOR

QUANTITY	DESCRIPTION
12 EACH	AUDIBLE/ TACTILE PEDESTRIAN PUSH BUTTON STATION AND INTERFACE
11 EACH	16 IN. ONE-WAY, ONE SECTION LED (COUNTDOWN INDICATIONS) ADJUSTABLE PEDESTRIAN SIGNAL HEAD WITH POST TOP MOUNTING HARDWARE AND VISORS
2 EACH	VIDEO DETECTION CAMERA
2 EACH	VIDEO DETECTION CABLE (700 FT)

PHASE CHART



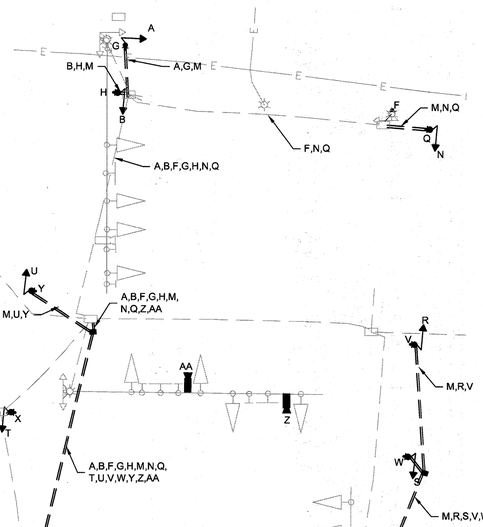
PHASE 2+5	<R	R	<G	G	R	R	R	R	DW	DW	DW	DW	←
2+5 CHANGE	<R	R	<Y	G	R	R	R	R	DW	DW	DW	DW	←
PHASE 2+6	<R	G	<R	G	R	R	R	R	DW	DW	W	DW	⇦
2+6 CHANGE	<R	G	<R	Y	R	R	R	R	DW	DW	W	DW	⇦
PHASE 1+6	<G	G	<R	R	R	R	R	R	DW	DW	W	DW	⇧
1+6 PED CLEARANCE	<G	G	<R	R	R	R	R	R	DW	DW	FDW	DW	⇧
1+6 CHANGE	<Y	Y	<R	R	R	R	R	R	DW	DW	DW	DW	⇧
PHASE 2 ALT+5	<R	R	<G	G	R	R	R	R	W	DW	DW	DW	⇦
2 ALT+5 CHANGE	<R	R	<Y	G	R	R	R	R	W	DW	DW	DW	⇦
PHASE 2 ALT+6	<R	G	<R	G	R	R	R	R	W	DW	W	DW	⇧
2 ALT+6 PED CLEARANCE	<R	G	<R	G	R	R	R	R	FDW	DW	FDW	DW	⇧
2 ALT+6 CHANGE	<R	G	<R	Y	R	R	R	R	DW	DW	DW	DW	⇧
PHASE 3	<R	R	<R	R	R	R	G/<G	G	DW	DW	DW	DW	→
3 CHANGE	<R	R	<R	R	R	R	Y	Y	DW	DW	DW	DW	→
PHASE 4	<R	R	<R	R	G/<G	G	R	R	DW	DW	DW	DW	⇩
4 CHANGE	<R	R	<R	R	Y	Y	R	R	DW	DW	DW	DW	⇩
PHASE 4 ALT	<R	R	<R	R	G/<G	G	R	R	DW	W	DW	DW	⇩
4 ALT PED CLEARANCE	<R	R	<R	R	G/<G	G	R	R	DW	FDW	DW	DW	⇩
4 ALT CHANGE	<R	R	<R	R	Y	Y	R	R	DW	DW	DW	DW	⇩
FLASHING OPERATION	<FL/Y	FL/Y	<FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	↕
PHASE 3 ALT	<R	R	<R	R	R	R	G/<G	G	DW	DW	DW	W	⇩
3 ALT PED CLEARANCE	<R	R	<R	R	R	R	G/<G	G	DW	DW	DW	FDW	⇩
3 ALT CHANGE	<R	R	<R	R	R	R	Y	Y	DW	DW	DW	DW	⇩

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

QUANTITY	DESCRIPTION
LUMP SUM	MAINTENANCE OF TRAFFIC
TBD	TEST PIT EXCAVATION
11 EACH	8 FT STEEL PEDESTAL POLE
4 EACH	HANDHOLE
2100' L.F.	5- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
2345' L.F.	2- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
205' L.F.	1- CONDUCTOR STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
115' L.F.	2 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT- TRENCHED
75' L.F.	2 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT- BORED
100' L.F.	4 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT- BORED
60' L.F.	4 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT- TRENCHED
8 C.Y.	CONCRETE FOUNDATION FOR TRAFFIC SIGNAL EQUIPMENT
1 EACH	GROUND ROD 3/4 IN. DIAMETER X 10 FT LENGTH
11 EACH	INSTALL PEDESTRIAN SIGNAL HEAD
12 EACH	INSTALL PEDESTRIAN PUSHBUTTON
12 EACH	INSTALL R10-3(1) SIGN
LUMP SUM	REMOVE AND DISPOSE OF EQUIPMENT



WIRING KEY

A,B,C,D,E,N, O,R,S,T,U	5 - CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
F,G,H,J,K,L, P,Q,V,W,X,Y	2 - CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
M	1 - CONDUCTOR STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
Z,AA	2 - VIDEO DETECTION LEAD-IN CABLE
⏚	3/4 IN. X 10 FT GROUND ROD

*PROPOSED WIRING ONLY

0' 20' 40'
SCALE: 1" = 20'

GENERAL SIGNAL INFORMATION C10.1

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15
Melanie Callister-Brick 12/17/14

PHASE 2
TRAFFIC SIGNAL PLAN
LITTLE PATUXENT PARKWAY AND CAMPUS DRIVE
ELECTION DISTRICT 5 HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 20'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	136 OF 171

SDP-13-020

O:\ACTIVE PROJECTS\5282 CEP-Glendale Trail\Traffic Signal Design 2\PLANS\LP and Campus Dr.dwg, PLOTTED:11/21/2014 12:39 PM, LAST SAVED:11/6/2014 4:48 PM, PLOTTED BY: Andrew Burgess

N

LITTLE PATUXENT PARKWAY IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

CONSTRUCTION DETAILS

A- INSTALL CONCRETE FOUNDATION WITH 8 FT. STEEL PEDESTAL POLE WITH FOUNDATION STANDARD NO MD 801.01-01, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTONS. (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE). FEED NEW WIRING FROM CONTROLLER CABINET TO PEDESTRIAN PUSHBUTTON AND PEDESTRIAN SIGNAL HEAD.

B- CUT AND REMOVE APPROXIMATELY 25 FEET LENGTH OF CONDUIT. INSTALL 1-2 IN SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS AND APPROXIMATELY 4 FEET LENGTH OF 2 INCH SCHEDULE 80 PVC ELECTRICAL CONDUIT TO NEW POLE. FEED CABLE TO PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON.

C- INSTALL CONCRETE FOUNDATION WITH 5 FT. STEEL PEDESTAL POLE WITH FOUNDATION STANDARD NO MD 801.01-01, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTONS (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

D- CUT SLOT IN EXISTING SIGNAL POLE FOUNDATION BY A METHOD APPROVED BY THE COUNTY ENGINEER , INSTALL 4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT IN EXISTING SIGNAL FOUNDATION. REMOVE PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON FOR LITTLE PATUXENT PARKWAY CROSSING. REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND R10-4(1) SIGN FOR BROKEN LAND PARKWAY CROSSING. INSTALL NEW PUSHBUTTON AND R10-3(1) SIGN FOR BROKEN LAND PARKWAY CROSSING. FEED NEW WIRING FROM CONTROLLER CABINET TO NEW PUSHBUTTON AND EXISTING SIGNAL HEAD.

E- REMOVE EXISTING PEDESTRIAN SIGNAL POLE, PEDESTRIAN SIGNAL HEAD, PUSHBUTTON AND FOUNDATION 12 IN BELOW GROUND AND BACK FILL.

F- REMOVE EXISTING PEDESTRIAN PUSHBUTTON, R10-4(1) SIGN AND WIRING BETWEEN PEDESTAL POLE AND CONTROLLER. INSTALL NEW PUSHBUTTON, R10-3(1) SIGN, AND WIRING TO CONTROLLER.

G- USE EXISTING CONTROLLER CABINET.

H- INSTALL HANDHOLE.

I- USE EXISTING HANDHOLE.

J- INSTALL 2 IN PVC SCHEDULE 80 ELECTRICAL CONDUIT-TRENCHED.

K- INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT-TRENCHED.

L- INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT-BORED.

M- INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT-BORED.

N- NOT USED

O- CAP AND ABANDON EXISTING CONDUIT BETWEEN EXISTING POLE AND HANDHOLE.

P- REMOVE EXISTING CROSSWALK.

Q-REPLACE LOOP DETECTOR IN KIND.

R- REMOVE EXISTING STOP BAR MARKINGS.

S- INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP BAR AND CROSSWALK.

T- INSTALL 12 IN. HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALK.

U- ABANDON EXISTING LOOP DETECTORS, DISCONNECT AND REMOVE LOOP DETECTOR CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES AND CONTROLLER.

V- USE EXISTING CONDUIT.

W- REMOVE EXISTING PEDESTRIAN PUSHBUTTON, R10-4(1) SIGN AND WIRING BETWEEN PUSHBUTTON AND CONTROLLER.

X- INSTALL NEW PUSHBUTTON, R10-3(1) SIGN, AND WIRING TO CONTROLLER.

EXISTING SIGNS

38,39 — Broken Land PKWY — D-3(1) 16" x Var.

40,41 — Little Patuxent PKWY — D-3(1) 16" x Var.

29,30 — ONLY — R 3-5(R) 30" x 36"

31,32 — ONLY ONLY — R 3-5(Mod) 30" x 30"

33 — NO TURN ON RED — R 10-11b 36" x 36"

34-37 — R 3-6(L) 30" x 36"

PROPOSED SIGNS

51,56 — R 10-3(1) 9" x 15"

54,59 — R 10-3(1) 9" x 15"

53,58 — R 10-3(1) 9" x 15"

52,55,57 — R 10-3(1) 9" x 15"

50 — R 10-3(1) 9" x 15"

62,63 — R 10-3(1) 9" x 15"

58 — NO TURN ON RED — R 10-11b 30" x 30"

EXISTING SIGNALS TO REMAIN

3,4,7,8,9, 12,15,16 — 12"

1,2,5,6, 10,11,13,14 — 12"

17,21 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

EXISTING SIGN TO REMOVE

42-49 — TO CROSS STREET PUSH BUTTON WAIT FOR SIGNAL — R 10-4(1) 9" x 12"

60,61 — R 9-3 18" x 18"

PROPOSED VIDEO DETECTION

a,b

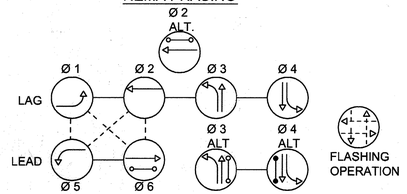
PROPOSED SIGNALS

23-28 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

EXISTING SIGNALS TO BE REMOVED

18-20,22 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

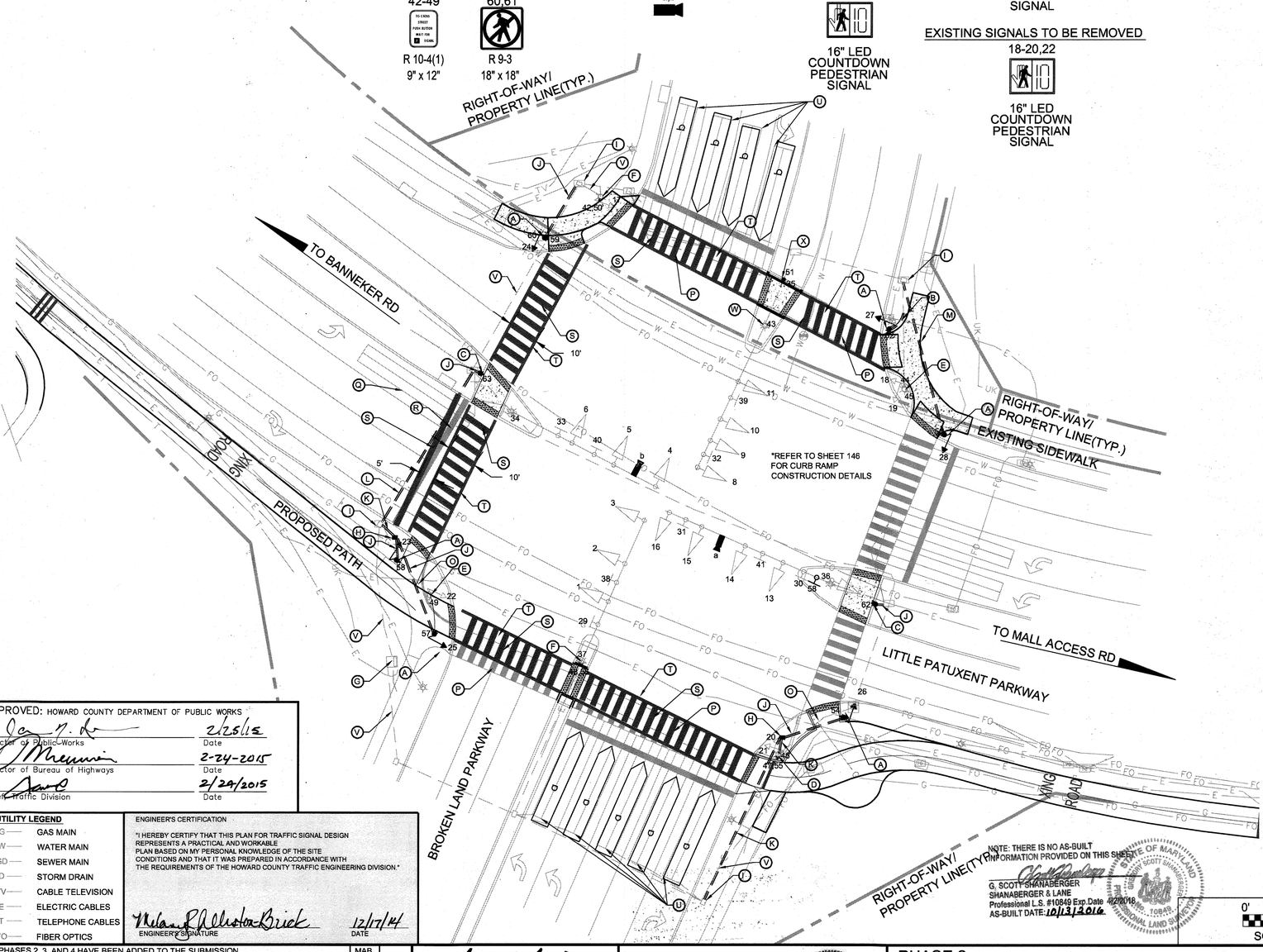
NEMA PHASING



NEMA notes:

Phases associated by a dashed line will operate concurrently.

Phases associated by a solid line will not operate concurrently.



LEGEND

PROPOSED		EXISTING
	RIGHT-OF-WAY/ PROPERTY LINE	
	MAST ARM	
	TRAFFIC SIGNAL HEAD	
	PEDESTRIAN SIGNAL HEAD	
	SIGN	
	STREET LIGHT	
	HANDHOLE	
	CONDUIT	
	PEDESTRIAN PUSH BUTTON AND SIGN	
	LOOP DETECTOR	
	CONTROLLER WITH PAD	
	SIGNAL POLE	
	FIRE HYDRANT	
	MANHOLE	
W.V.	WATER VALVE	W.V.
G.V.	GAS VALVE	G.V.
	GEOMETRICS	
	VIDEO DETECTION	
	VIDEO DETECTION ZONE	

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Director of Public Works — Date 2/25/15

Director of Bureau of Highways — Date 2-24-2015

Chief, Traffic Division — Date 2/24/2015

UTILITY LEGEND

G	GAS MAIN
W	WATER MAIN
SD	SEWER MAIN
D	STORM DRAIN
TV	CABLE TELEVISION
E	ELECTRIC CABLES
T	TELEPHONE CABLES
FO	FIBER OPTICS

ENGINEER'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN FOR TRAFFIC SIGNAL DESIGN 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 COUNTY TRAFFIC ENGINEERING DIVISION."

ENGINEER'S SIGNATURE — DATE 12/17/14

GENERAL NOTES

1. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, OR HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
2. ALL UTILITIES SHOWN ARE SCHEMATIC AND BASED ON THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL UNDERGROUND UTILITIES BY TEST PITTING PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE ENGINEER.
3. VIDEO CAMERA LOCATION AND ALIGNMENT SHALL BE COORDINATED WITH THE ENGINEER.
4. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED INCLUDING CONTROLLER, MMU, UPS SHALL BE HANDED OVER TO HOWARD COUNTY UPON COMPLETION OF THE NEW SIGNAL.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
6. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL UNUSED SIGNAL CABLE.
7. PUSHBUTTONS SHALL BE LOCATED SO THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" x 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
8. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
9. PUSHBUTTON ARROWS SHALL BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
10. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS SHALL MEET REQUIREMENTS OF MARYLAND MUTCD SEC. 4E09 AND FIG. 4E-2, AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS AND CONTACT THE ENGINEER.
11. CONTRACTOR SHALL VERIFY PROPOSED GEOMETRICS PRIOR TO INSTALLING SIGNAL EQUIPMENT.
12. ALL HANDHOLES SHALL BE INSTALLED AT FINAL GRADE.
13. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT, AT CONTRACTORS EXPENSE.
14. REFER TO SHEET 146 AND 151 FOR CURB RAMP AND INTERSECTION DESIGN/ DETAILS.
15. ALL SIGNAL IMPROVEMENTS SHALL MEET APPLICABLE HOWARD COUNTY OR MDSHA SPECIFICATIONS AND DETAILS.
16. IF DAMAGED DURING CONSTRUCTION, CONTRACTOR SHALL REPLACE EXISTING LOOP DETECTORS TO REMAIN AT NO ADDITIONAL COST.

SPECIAL NOTES

1. THE CONTRACTOR SHALL NOT BLOCK VIEW OF EXISTING SIGNAL INDICATIONS DURING INSTALLATION OF PROPOSED EQUIPMENT. IF PROPOSED EQUIPMENT CANNOT BE INSTALLED DUE TO CONFLICT WITH EXISTING SIGNAL INDICATORS OR SPAN WIRES, A SIGNAL OUTAGE SHALL OCCUR DURING NON-PEAK HOURS AS DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR SHALL USE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT TO AVOID DISTURBANCE OF EXISTING UNDERGROUND UTILITIES.
3. THE CONTRACTOR SHALL TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF UNDERGROUND UTILITIES PRIOR TO INSTALLING SIGNAL EQUIPMENT.
4. EQUIPMENT TO REMAIN INCLUDES MAST ARMS, CONDUIT OTHER THAN CONDUIT TO BE CAPPED AND ABANDONED, AND HANDHOLES OTHER THAN HANDHOLES TO BE REMOVED.
5. IF EXISTING CONDUIT TO REMAIN IS UNUSABLE THE CONTRACTOR SHALL CONTACT THE ENGINEER.
6. CONTRACTOR SHALL CONTACT HOWARD COUNTY'S UNDERGROUND UTILITY PERMIT DIVISION AT (410)313-4207 AT LEAST 5 BUSINESS DAYS PRIOR TO STARTING ANY WORK WITHIN THE PUBLIC RIGHT-OR-WAY.
7. CONTRACTOR SHALL CONTACT HOWARD COUNTY'S TRAFFIC DIVISION AT LEAST 72 HOURS PRIOR TO STARTING ANY WORK WITHIN THE PUBLIC RIGHT-OR-WAY.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2018
AS-BUILT DATE: 10/13/2016

0' 20' 40'
SCALE: 1" = 20'

TRAFFIC SIGNAL PLAN C10.2

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\5282 GDP-Ellicott Trail\Traffic Signal Design 2\PLANS\LP and BLP.dwg, PLOTTED:11/21/2014 11:48 AM, LAST SAVED:11/5/2014 1:38 PM, PLOTTED BY: Andrew Gudgeon

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 39022, EXPIRATION DATE: 12/28/15

12/17/14

PHASE 2

TRAFFIC SIGNAL PLAN
LITTLE PATUXENT PARKWAY AND
BROKEN LAND PARKWAY

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 20'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	137 OF 171

SDP-13-020

PROJECT DESCRIPTION

GENERAL
THIS PROJECT INVOLVES THE ADDITION OF A CROSSWALK AND COUNTDOWN PEDESTRIAN SIGNAL HEADS ON THE WESTERN INTERSECTION LEG, VIDEO DETECTION FOR THE NORTHBOUND APPROACH AND SOUTHBOUND APPROACH, AND ACCESSIBLE PEDESTRIAN PUSHBUTTONS FOR ALL CROSSWALKS.

INTERSECTION OPERATION
THE INTERSECTION OPERATION WILL BE CHANGED TO PROVIDE PEDESTRIAN MOVEMENTS ACROSS THE WESTERN INTERSECTION LEG. THE PEDESTRIAN MOVEMENT ACROSS THE SOUTHERN LEG SHALL OPERATE IN REST IN WALK AND PEDESTRIAN RECALL.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS
PUSH BUTTONS SHALL HAVE A LOCATOR TONE WHEN WALK INDICATION IS NOT SHOWN AND A RAPID TICK TONE DURING THE WALK INDICATION. SPEECH MESSAGES ARE NOT NECESSARY SINCE APS PUSH BUTTONS ARE NOT LOCATED WITHIN 10 FEET OF EACH OTHER.

LITTLE PATUXENT PARKWAY AND BROKEN LAND PARKWAY - NORTH LEG
STREETS AT 90 DEGREES
WAIT: "WAIT TO CROSS BROKEN LAND AT LITTLE PATUXENT, WAIT." *
WALK: RAPID TICK

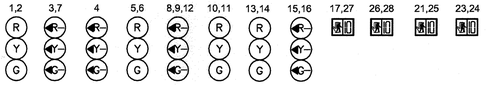
LITTLE PATUXENT PARKWAY AND BROKEN LAND PARKWAY - SOUTH LEG
STREETS AT 90 DEGREES
WAIT: "WAIT TO CROSS BROKEN LAND AT LITTLE PATUXENT, WAIT." *
WALK: RAPID TICK

LITTLE PATUXENT PARKWAY AND BROKEN LAND PARKWAY - EAST LEG
STREETS AT 90 DEGREES
WAIT: "WAIT TO CROSS LITTLE PATUXENT AT BROKEN LAND, WAIT." *
WALK: RAPID TICK

LITTLE PATUXENT PARKWAY AND BROKEN LAND PARKWAY - WEST LEG
STREETS AT 90 DEGREES
WAIT: "WAIT TO CROSS LITTLE PATUXENT AT BROKEN LAND, WAIT." *
WALK: RAPID TICK

CONTROLLER REQUIREMENTS
THE EXISTING CONTROLLER WILL REMAIN.

PHASE CHART



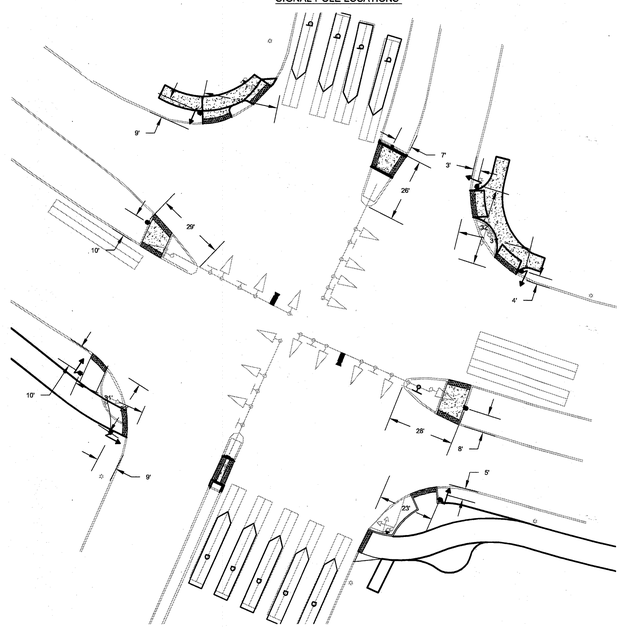
PHASE 2+5	R	<R	<R	R	<G	G	R	<R	DW	DW	DW	DW	←
2+5 CHANGE	R	<R	<R	R	<Y	G	R	<R	DW	DW	DW	DW	←
PHASE 2+6	G	<R	<R	R	<R	G	R	<R	DW	DW	W	DW	← ◇
2+6 CHANGE	G	<R	<R	R	<R	Y	R	<R	DW	DW	W	DW	← ◇
PHASE 1+6	G	<G	<R	R	<R	R	R	<R	DW	DW	W	DW	↰ ◇
1+6 PED CLEARANCE	G	<G	<R	R	<R	R	R	<R	DW	DW	FDW	DW	↰ ◇
1+6 CHANGE	Y	<Y	<R	R	<R	R	R	<R	DW	DW	DW	DW	↰ ◇
PHASE 2 ALT+5	R	<R	<R	R	<G	G	R	<R	W	DW	DW	DW	◇
2 ALT+5 CHANGE	R	<R	<R	R	<Y	G	R	<R	W	DW	DW	DW	◇
PHASE 2 ALT+6	G	<R	<R	R	<R	G	R	<R	W	DW	W	DW	◇
2 ALT+6 PED CLEARANCE	G	<R	<R	R	<R	G	R	<R	FDW	DW	FDW	DW	◇
2 ALT+6 CHANGE	G	<R	<R	R	<R	Y	R	<R	DW	DW	DW	DW	◇
PHASE 3	R	<R	<R	R	<R	R	G	<G	DW	DW	DW	DW	↑
3 CHANGE	R	<R	<R	R	<R	R	Y	<Y	DW	DW	DW	DW	↑
PHASE 3 ALT	R	<R	<R	R	<R	R	G	<G	DW	W	DW	DW	↑
3 ALT PED CLEARANCE	R	<R	<R	R	<R	R	G	<G	DW	FDW	DW	DW	↑
3 ALT CHANGE	R	<R	<R	R	<R	R	Y	<Y	DW	DW	DW	DW	↑
PHASE 4	R	<R	<G	G	<R	R	R	<R	DW	DW	DW	DW	↓
4 CHANGE	R	<R	<Y	Y	<R	R	R	<R	DW	DW	DW	DW	↓
PHASE 4 ALT	R	<R	<G	G	<R	R	R	<R	DW	DW	DW	W	↓
4 ALT PED CLEARANCE	R	<R	<G	G	<R	R	R	<R	DW	DW	DW	FDW	↓
4 ALT CHANGE	R	<R	<Y	Y	<R	R	R	<R	DW	DW	DW	DW	↓
FLASHING OPERATION	FL/R	FL/<R	FL/<R	FL/R	FL/<R	FL/R	FL/R	FL/<R	DARK	DARK	DARK	DARK	↕

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY THE COUNTY AND INSTALLED BY THE CONTRACTOR

QUANTITY	DESCRIPTION
12 EACH	AUDIBLE/ TACTILE PEDESTRIAN PUSH BUTTON STATION AND INTERFACE
6 EACH	16 IN. ONE-WAY, ONE SECTION LED (COUNTDOWN INDICATIONS) ADJUSTABLE PEDESTRIAN SIGNAL HEAD WITH POST TOP MOUNTING HARDWARE AND VISORS
2 EACH	VIDEO DETECTION CAMERA
2 EACH	VIDEO DETECTION CABLE (700 FT)

SIGNAL POLE LOCATIONS



NOTES:
1. MEASUREMENTS ARE TAKEN FROM FACE OF CURB, EXISTING SIGNAL POLE OR TANGENT OF FACE OF CURB.
2. REFER TO SHEET 146 FOR CURB RAMP CONSTRUCTION DETAILS.

EQUIPMENT LIST "B"

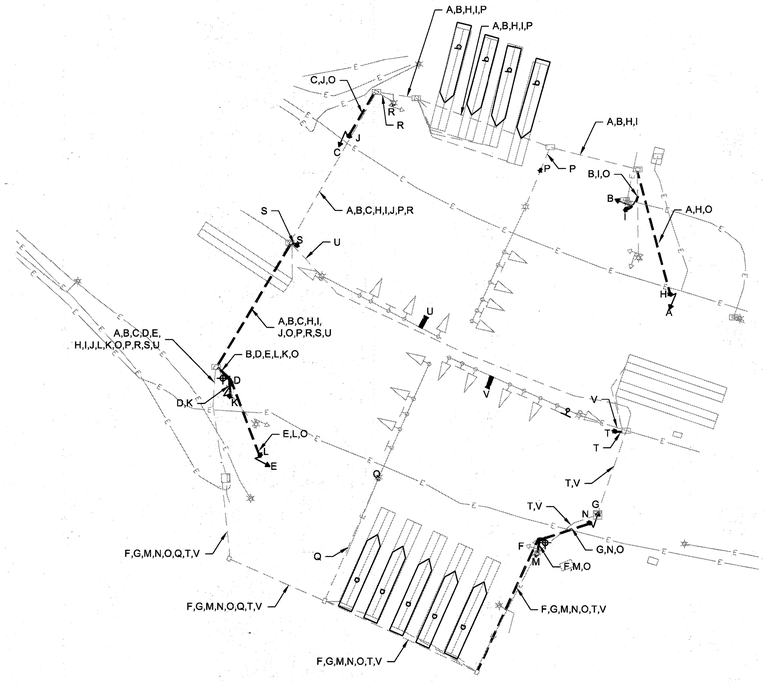
B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

QUANTITY	DESCRIPTION
LUMP SUM	MAINTENANCE OF TRAFFIC
TBD	TEST PIT EXCAVATION
6 EACH	8 FT STEEL PEDESTAL POLE
2 EACH	5 FT STEEL PEDESTAL POLE
1 EACH	R10-11 SIGN
2 EACH	HANDHOLE
1510' L.F.	5- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
2300' L.F.	2- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
461' L.F.	1- CONDUCTOR STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
115' L.F.	2 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT- TRENCHED
70' L.F.	4 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT- TRENCHED
45' L.F.	2 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT- BORED
60' L.F.	4 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT- BORED
5.5 C.Y.	CONCRETE FOUNDATION FOR TRAFFIC SIGNAL EQUIPMENT
2 EACH	GROUND ROD 3/4 IN. DIAMETER X 10 FT LENGTH
6 EACH	INSTALL PEDESTRIAN SIGNAL HEAD
12 EACH	INSTALL PEDESTRIAN PUSHBUTTON
12 EACH	INSTALL R10-3(1) SIGN
LUMP SUM	REMOVE AND DISPOSE OF EQUIPMENT

WIRING KEY

A,B,C,D,E,F,G,P	5 - CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
H,I,J,K,L,M,N,P,Q,R,S,T	2 - CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
O	1 - CONDUCTOR STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
U,V	2 - VIDEO DETECTION LEAD-IN CABLE
⏚	3/4 IN. X 10 FT GROUND ROD

*PROPOSED WIRING ONLY



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 2/24/15
Chief, Division of Land Development	Date 2-25-15
Chief, Development Engineering Division	Date 2-12-15

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Director of Public Works	Date 2/25/15
Director of Bureau of Highways	Date 2-24-2015
Chief, Traffic Division	Date 2/24/2015

ENGINEER'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN FOR TRAFFIC SIGNAL DESIGN 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 COUNTY TRAFFIC ENGINEERING DIVISION."

Melany K Allston-Brick — 12/17/14
ENGINEER'S SIGNATURE — DATE

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

0' 30' 60'
SCALE: 1" = 30'

GENERAL SIGNAL INFORMATION C10.3

Toole Design Group
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\5282 CDP-Glendon Trail\Traffic Signal Design 2\PLANS\LP and BLP.dwg	DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

Melany K Allston-Brick — 12/17/14

PHASE 2

TRAFFIC SIGNAL PLAN
LITTLE PATUXENT PARKWAY AND
BROKEN LAND PARKWAY

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 30'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	138 OF 171

SDP-13-020

O:\ACTIVE PROJECTS\5282 CDP-Glendon Trail\Traffic Signal Design 2\PLANS\LP and BLP.dwg
PLOTTED: 11/21/2014 10:34 PM, LAST SAVED: 11/5/2014 1:38 PM, PLOTTED BY: Andrew Gudgeon

CONSTRUCTION DETAILS

A- INSTALL CONCRETE FOUNDATION WITH 8 FT. STEEL PEDESTAL POLE WITH FOUNDATION STANDARD NO MD 801.01-01, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTONS. ((INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

B- CUT SLOT IN EXISTING SIGNAL POLE FOUNDATION, INSTALL 4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT IN EXISTING SIGNAL FOUNDATION. INSTALL NEW VEHICULAR SIGNAL HEADS ADJACENT TO EXISTING HEADS. FEED NEW WIRING THROUGH EXISTING MAST ARM TO NEW VEHICULAR SIGNAL HEADS AND VIDEO DETECTION.

C- CUT SLOT IN EXISTING SIGNAL POLE FOUNDATION, INSTALL 4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT IN EXISTING SIGNAL FOUNDATION. INSTALL NEW VEHICULAR SIGNAL HEAD. FEED WIRING THROUGH EXISTING POLE TO NEW VEHICULAR SIGNAL HEAD.

D- CUT SLOT IN EXISTING SIGNAL POLE FOUNDATION, INSTALL 4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT IN EXISTING SIGNAL FOUNDATION. INSTALL NEW VEHICULAR SIGNAL HEADS ADJACENT TO EXISTING HEADS. FEED NEW WIRING TO NEW SIGNAL HEADS. REMOVE PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON.

E- REMOVE EXISTING PEDESTRIAN SIGNAL POLE, PEDESTRIAN SIGNAL HEAD, PUSH BUTTON AND FOUNDATION 12 IN BELOW GROUND AND BACK FILL.

F- CONTRACTOR TO COORDINATE WITH HOWARD COUNTY DPW/ BUREAU OF HIGHWAYS TO DISCONNECT BACK LOOP CABLE FROM EXISTING CABINET AND REPLACE LOOP WIRE FROM SPLICE TO NEW CABINET USING EXISTING CONDUIT.

G- MOUNT VIDEO DETECTION CAMERAS ON EXISTING MAST ARM.

H- INSTALL HANDHOLE.

I- USE EXISTING HANDHOLE.

J- INSTALL 2 IN PVC SCHEDULE 80 ELECTRICAL CONDUIT-TRENCHED.

K- INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT-TRENCHED.

L- INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT-BORED.

M- REMOVE EXISTING HANDHOLE, AND BACKFILL.

N- ABANDON EXISTING LOOP DETECTOR. DISCONNECT AND REMOVE LOOP DETECTOR CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES AND CONTROLLER.

O- CAP AND ABANDON EXISTING CONDUIT AFTER THE NEW CABINET IS OPERATIONAL.

P- REMOVE EXISTING STOP BAR AND EXISTING PAVEMENT MARKING LINE EXTENDED PAST PROPOSED STOP BAR.

Q- INSTALL HEAT APPLIED WHITE THERMOPLASTIC ARROWS.

R- NOT USED

S- INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP BAR AND CROSSWALK.

T- INSTALL 12 IN. HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALK.

U- INSTALL HANDHOLE ON TOP OF EXISTING CONDUIT APPROXIMATELY 5 FEET EAST OF THE EXISTING HANDHOLE.

V- CONTRACTOR TO COORDINATE WITH HOWARD COUNTY DPW/ BUREAU OF HIGHWAYS TO DISCONNECT BACK LOOP CABLE FROM EXISTING CABINET. CUT AND REMOVE APPROXIMATELY 15 FEET LENGTH OF CONDUIT. INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS AND APPROXIMATELY 4 FEET LENGTH OF 2 IN. SCHEDULE 8 PVC ELECTRICAL CONDUIT TO NEW HANDHOLE. AFTER NEW HANDHOLES AND CONDUIT HAVE BEEN INSTALLED, RE-FEED BACK LOOP CABLE AND CONNECT TO NEW CABINET.

W- INSTALL 2 - 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.

X- INSTALL GROUND MOUNT CONTROLLER CABINET (HOWARD COUNTY MODIFIED DETAIL T-4.01), CONTROLLER AND UPS BATTERY BACKUP, GROUND RODS AND NECESSARY EQUIPMENT FOR ELECTRICAL SERVICE (INSTALL 2- 2 IN. AND 2- 4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUITS IN CABINET BASE).

Y- REMOVE EXISTING BASE MOUNTED CABINET AND CONTROLLER, REMOVE FOUNDATION 12 IN. BELOW GRADE, AND BACKFILL.

Z- INSTALL 4" CONDUIT WITH ¼" PULL STRING WITHIN 5 FEET OF BG&E'S TRANSFORMER FOR POWER FEED.

AA- CONTRACTOR TO COORDINATE WITH HOWARD COUNTY DPW/BUREAU OF HIGHWAYS TO DISCONNECT INTERCONNECT FROM EXISTING CABINET AND PULL BACK TO HANDHOLE. AFTER ALL NEW HANDHOLES AND CONDUIT HAVE BEEN INSTALLED, CONTRACTOR TO RE-FEED INTERCONNET AND CONNECT TO NEW CABINET.

EXISTING SIGNS

28 — South Entrance →
D-3(1)
16" x Var.

29 — ← South Entrance
D-3(1)
16" x Var.

17 — LEFT TURN YIELD ON GREEN
R 10-12
36" x 42"

EXISTING SIGN TO REMOVE

18,27 — TO CASS STREET PUSH BUTTON WAIT FOR WALK SIGNAL
R 10-4(1)
9" x 12"

PROPOSED SIGNS

19 — NO TURN ON RED
R 10-11
36" x 48"

21 — PUSH BUTTON TO CROSS LITTLE PATUXENT PKWY; WAIT FOR WALK SIGNAL; DON'T START WHEN "DON'T WALK" IS FLASHING; Ped. Movement in Two Stages; PUSHBUTTON IS 36" FROM CURB; STREET NAME SMALL TYPE 2
R 10-3(1)
9" x 15"

20,24,25 — PUSH BUTTON TO CROSS LITTLE PATUXENT PKWY; WAIT FOR WALK SIGNAL; DON'T START WHEN "DON'T WALK" IS FLASHING; Ped. Movement in Two Stages; PUSHBUTTON IS 36" FROM CURB; STREET NAME SMALL TYPE 2
R 10-3(1)
9" x 15"

26 — TURNING TRAFFIC YIELD TO PEDS
R 10-15(1)
30" x 30"

22, 23 — PUSH BUTTON TO CROSS South Entrance Rd; WAIT FOR WALK SIGNAL; DON'T START WHEN "DON'T WALK" IS FLASHING; Ped. Movement in Two Stages; PUSHBUTTON IS 36" FROM CURB; STREET NAME SMALL TYPE 2
R 10-3(1)
9" x 15"

EXISTING SIGNALS TO BE REPLACED

1-3,6-8 — R, Y, G
12"

4 — R, Y, G, Y, G
12"/8"

5 — R, Y, G, Y, G
12"

EXISTING SIGNALS TO BE REMOVED

9,10 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

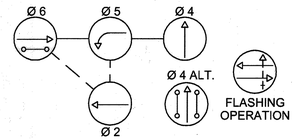
PROPOSED SIGNALS

11-16 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

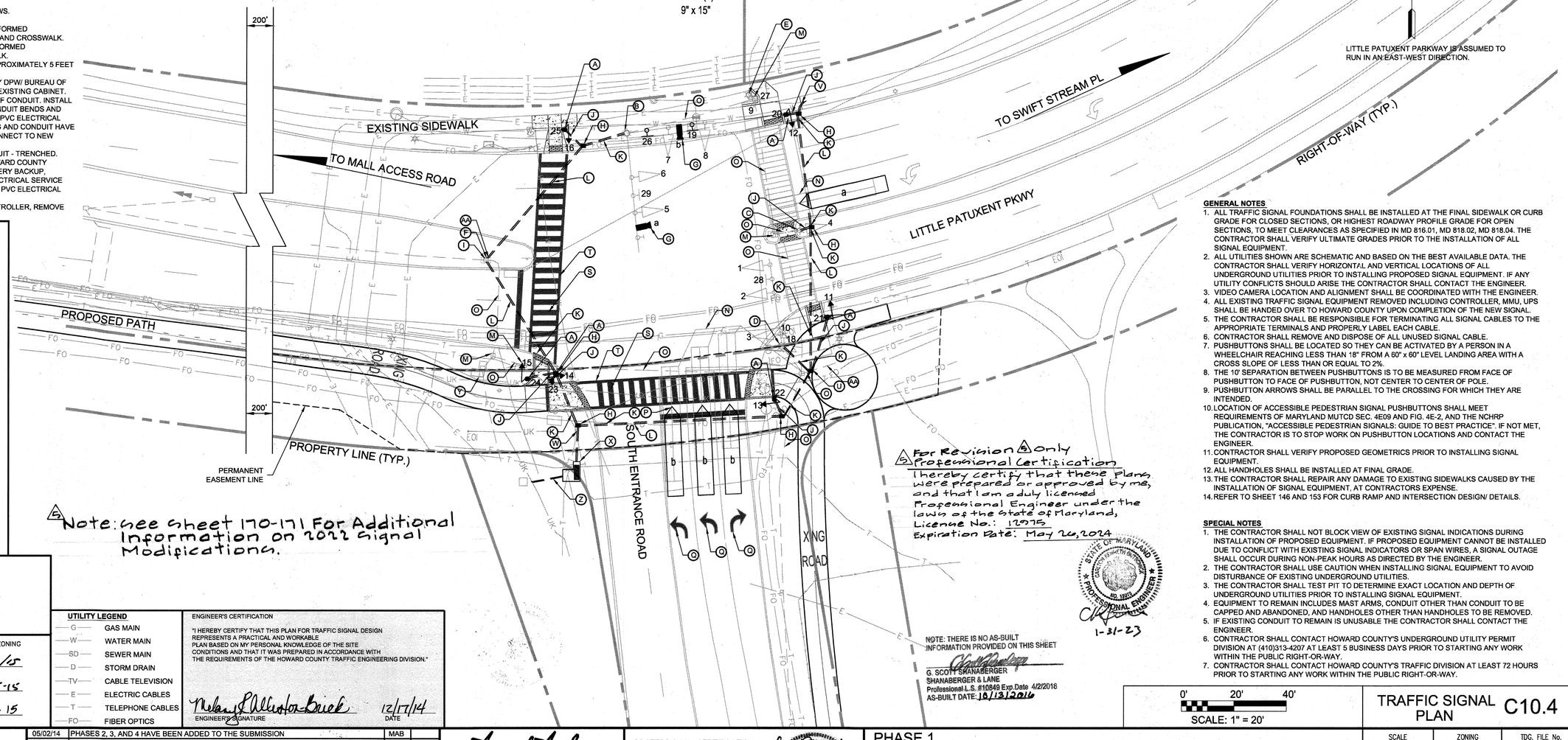
a, b — PROPOSED VIDEO DETECTION

a, b — VIDEO ZONE DETECTION

NEMA PHASING



NEMA notes:
Phases associated by a dashed line will operate concurrently.
Phases associated by a solid line will not operate concurrently.



Note: See Sheet 170-171 For Additional Information on 2022 Signal Modifications.

LEGEND

PROPOSED		EXISTING
——●	MAST ARM	——○
——◀●	TRAFFIC SIGNAL HEAD	——◁○
←——	PEDESTRIAN SIGNAL HEAD	←——
⊢—	SIGN	⊢—
✳	STREET LIGHT	✳
■	HANDHOLE	□
═══	CONDUIT	═══
	PEDESTRIAN PUSH BUTTON AND SIGN	
	LOOP DETECTOR	
	CONTROLLER WITH PAD	
●	SIGNAL POLE	○
	FIRE HYDRANT	
Ⓜ	MANHOLE	Ⓜ
• W.V.	WATER VALVE	○ W.V.
• G.V.	GAS VALVE	○ G.V.
═══	GEOMETRICS	═══
▬	VIDEO DETECTION	▭
◀▬	VIDEO DETECTION ZONE	◁▭

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2.12.15

UTILITY LEGEND

—G—	GAS MAIN
—W—	WATER MAIN
—SD—	SEWER MAIN
—D—	STORM DRAIN
—TV—	CABLE TELEVISION
—E—	ELECTRIC CABLES
—T—	TELEPHONE CABLES
—FO—	FIBER OPTICS

ENGINEER'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN FOR TRAFFIC SIGNAL DESIGN 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 COUNTY TRAFFIC ENGINEERING DIVISION."

ENGINEER'S SIGNATURE — DATE 12/17/14

1 For Revision 5 Only
5 Professional Certification
I hereby certify that these plans 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.: 12975
Expiration Date: May 20, 2024

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 12975 — PROFESSIONAL ENGINEER
1-31-23

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

GENERAL NOTES

1. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, OR HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
2. ALL UTILITIES SHOWN ARE SCHEMATIC AND BASED ON THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE ENGINEER.
3. VIDEO CAMERA LOCATION AND ALIGNMENT SHALL BE COORDINATED WITH THE ENGINEER.
4. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED INCLUDING CONTROLLER, MMU, UPS SHALL BE HANDED OVER TO HOWARD COUNTY UPON COMPLETION OF THE NEW SIGNAL.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
6. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL UNUSED SIGNAL CABLE.
7. PUSHBUTTONS SHALL BE LOCATED SO THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" x 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
8. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
9. PUSHBUTTON ARROWS SHALL BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
10. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS SHALL MEET REQUIREMENTS OF MARYLAND MUTCD SEC. 4E09 AND FIG. 4E-2, AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS AND CONTACT THE ENGINEER.
11. CONTRACTOR SHALL VERIFY PROPOSED GEOMETRICS PRIOR TO INSTALLING SIGNAL EQUIPMENT.
12. ALL HANDHOLES SHALL BE INSTALLED AT FINAL GRADE.
13. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT, AT CONTRACTORS EXPENSE.
14. REFER TO SHEET 146 AND 153 FOR CURB RAMP AND INTERSECTION DESIGN/ DETAILS.

SPECIAL NOTES

1. THE CONTRACTOR SHALL NOT BLOCK VIEW OF EXISTING SIGNAL INDICATIONS DURING INSTALLATION OF PROPOSED EQUIPMENT. IF PROPOSED EQUIPMENT CANNOT BE INSTALLED DUE TO CONFLICT WITH EXISTING SIGNAL INDICATORS OR SPAN WIRES, A SIGNAL OUTAGE SHALL OCCUR DURING NON-PEAK HOURS AS DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR SHALL USE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT TO AVOID DISTURBANCE OF EXISTING UNDERGROUND UTILITIES.
3. THE CONTRACTOR SHALL TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF UNDERGROUND UTILITIES PRIOR TO INSTALLING SIGNAL EQUIPMENT.
4. EQUIPMENT TO REMAIN INCLUDES MAST ARMS, CONDUIT OTHER THAN CONDUIT TO BE CAPPED AND ABANDONED, AND HANDHOLES OTHER THAN HANDHOLES TO BE REMOVED.
5. IF EXISTING CONDUIT TO REMAIN IS UNUSABLE THE CONTRACTOR SHALL CONTACT THE ENGINEER.
6. CONTRACTOR SHALL CONTACT HOWARD COUNTY'S UNDERGROUND UTILITY PERMIT DIVISION AT (410)313-4207 AT LEAST 5 BUSINESS DAYS PRIOR TO STARTING ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
7. CONTRACTOR SHALL CONTACT HOWARD COUNTY'S TRAFFIC DIVISION AT LEAST 72 HOURS PRIOR TO STARTING ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.

0' 20' 40'
SCALE: 1" = 20'

TRAFFIC SIGNAL PLAN C10.4

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP. Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — No. 35022 — PROFESSIONAL ENGINEER

PHASE 1

TRAFFIC SIGNAL PLAN
LITTLE PATUXENT PARKWAY AND
SOUTH ENTRANCE ROAD

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 20'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	139 OF 171

SDP-13-020

© \ACTIVE PROJECTS\5282 CEP-Glendale Trail\Traffic Signal Design\Plans\LLP and S Entrance Rd.dwg, PLOTTED: 12/17/2014 10:28 AM, LAST SAVED: 12/5/2014 4:13 PM, PLOTTED BY: Andrea Gudjonsson

PROJECT DESCRIPTION

GENERAL
THIS PROJECT INVOLVES THE ADDITION OF CROSSWALKS AND COUNTDOWN PEDESTRIAN SIGNAL HEADS ON THE WESTERN AND SOUTHERN INTERSECTION LEGS, VIDEO DETECTION FOR THE NORTHBOUND APPROACH AND WESTBOUND LEFT-TURN LANE, AND ACCESSIBLE PEDESTRIAN PUSHBUTTONS FOR ALL CROSSWALKS. THE EXISTING VEHICULAR SIGNAL HEADS CONTROLLER AND CONTROLLER PAD WILL BE REPLACED. THE NEW EQUIPMENT, FOUNDATIONS, SUPPORTS, HANDHOLES AND CONDUIT WILL BE INSTALLED PRIOR TO REMOVING AND ABANDONING EXISTING EQUIPMENT.

INTERSECTION OPERATION
THE INTERSECTION OPERATION WILL BE CHANGED TO PROVIDE PEDESTRIAN MOVEMENTS ACROSS THE WESTERN AND SOUTHERN INTERSECTION LEGS. THE PEDESTRIAN MOVEMENT ACROSS THE SOUTHERN LEG SHALL OPERATE IN REST IN WALK AND PEDESTRIAN RECALL.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

LITTLE PATUXENT PARKWAY AND SOUTH ENTRANCE ROAD - SOUTH LEG
STREETS AT 90 DEGREES
WAIT: "WAIT TO CROSS SOUTH ENTRANCE ROAD AT LITTLE PATUXENT PARKWAY, WAIT." *
WALK: RAPID TICK

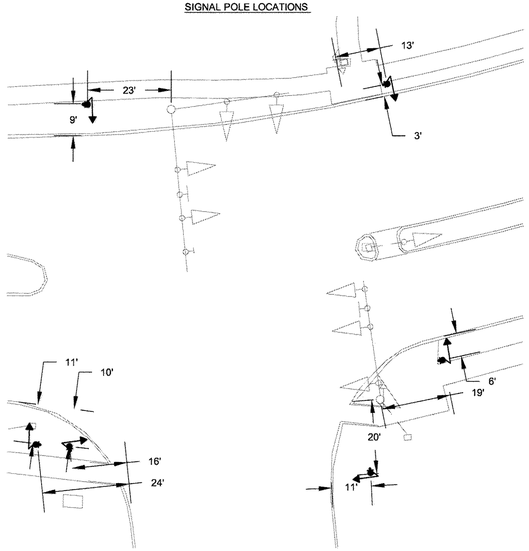
LITTLE PATUXENT PARKWAY AND SOUTH ENTRANCE ROAD - EAST LEG
STREETS AT 90 DEGREES
WAIT: "WAIT TO CROSS LITTLE PATUXENT PARKWAY AT SOUTH ENTRANCE ROAD, WAIT." *
WALK: RAPID TICK

LITTLE PATUXENT PARKWAY AND SOUTH ENTRANCE ROAD - WEST LEG
STREETS AT 90 DEGREES
WAIT: "WAIT TO CROSS SOUTH ENTRANCE ROAD AT SOUTH ENTRANCE ROAD, WAIT." *
WALK: RAPID TICK

* MESSAGE USED IF DISTANCE FROM NEAREST PUSH BUTTON FOR PERPENDICULAR CROSSING IS <10'
NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM ABOVE ARE TO BE APPROVED BY HOWARD COUNTY'S TRAFFIC ENGINEERING DIVISION.

CONTROLLER REQUIREMENTS
AN EIGHT PHASE, FULL TRAFFIC ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH INTERSECTION MONITOR HARNESS, BATTERY BACK-UP, VIDEO DETECTION EQUIPMENT AND ACCESSIBLE PEDESTRIAN PUSHBUTTON EQUIPMENT INSTALLED IN A BASE MOUNTED CABINET ARE TO BE INSTALLED AT THIS LOCATION.

SIGNAL POLE LOCATIONS



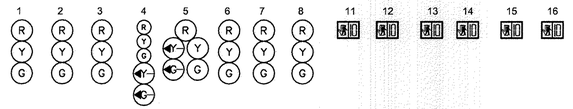
*NOTE: MEASUREMENTS ARE TAKEN FROM FACE OF CURB, EXISTING SIGNAL POLE OR TANGENT OF FACE OF CURB.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY THE COUNTY AND INSTALLED BY THE CONTRACTOR

QUANTITY	DESCRIPTION
2 EACH	VIDEO DETECTION CAMERA
2 EACH	VIDEO DETECTION CABLE (700' L.F.)
6 EACH	AUDIBLE/ TACTILE PEDESTRIAN PUSH BUTTON STATION, SIGNS, AND INTERFACE
1 EACH	TRAFFIC SIGNAL CONTROLLER, BASE MOUNTED CABINET, AND VIDEO DETECTION INTERFACE
6 EACH	12 IN. ONE-WAY, THREE SECTION LED (R,Y,G) ADJUSTABLE YELLOW FACED TRAFFIC SIGNAL HEAD WITH MAST MOUNTING HARDWARE AND TUNNEL VISORS
1 EACH	12 IN. ONE-WAY, STANDARD FIVE SECTION LED (R,YA,Y,GA,G) ADJUSTABLE YELLOW FACED TRAFFIC SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE AND TUNNEL VISORS
1 EACH	8 IN./ 12 IN. ONE-WAY, VERTICAL FIVE SECTION LED (R,Y,G,YA,GA) ADJUSTABLE YELLOW FACED TRAFFIC SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE AND TUNNEL VISORS
6 EACH	16 IN. ONE-WAY, ONE SECTION LED (COUNTDOWN INDICATIONS) ADJUSTABLE PEDESTRIAN SIGNAL HEAD WITH POST TOP MOUNTING HARDWARE AND VISORS
1 EACH	BATTERY BACK-UP SYSTEM

PHASE CHART

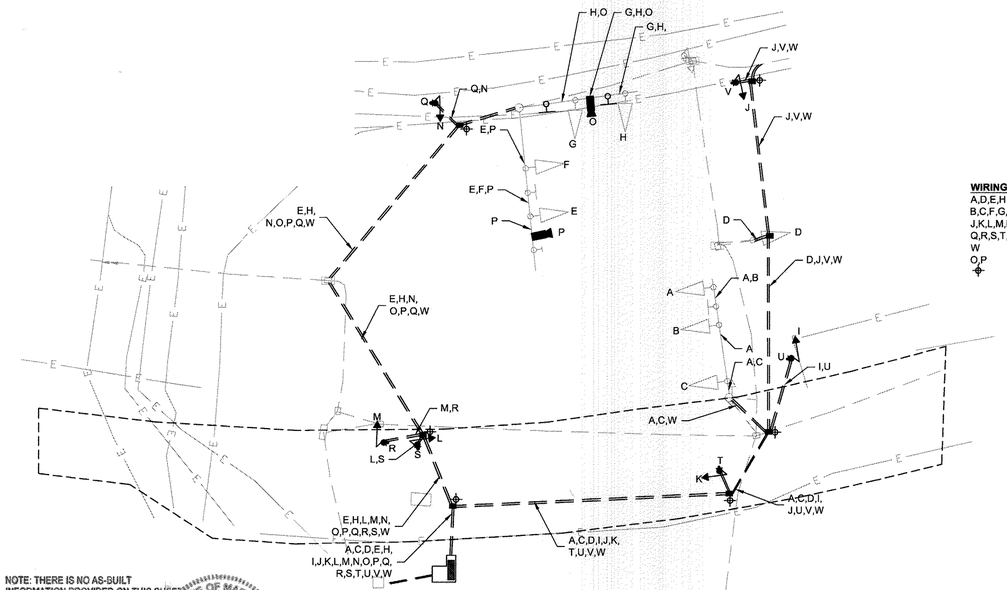


PHASE 2+5	G	G	G	G	G	G	R	R	DW	DW	WK	WK	DW	DW	
2+5 PED CLEARANCE	G	G	G	G	G	G	R	R	DW	DW	FL/DW	FL/DW	DW	DW	
2+5 CHANGE	Y	Y	Y	G	G	G	R	R	DW	DW	WK	WK	DW	DW	
PHASE 2+6	R	R	R	◂G/G	◂G/G	G	R	R	DW	DW	DW	DW	DW	DW	
2+6 CHANGE	R	R	R	◂Y/Y	◂Y/Y	Y	R	R	DW	DW	DW	DW	DW	DW	
PHASE 4	R	R	R	R	R	R	G	G	DW	DW	DW	DW	DW	DW	
4 CHANGE	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW	
PHASE 4 ALT	R	R	R	R	R	R	G	G	WK	WK	DW	DW	WK	WK	
4 ALT PED CLEARANCE	R	R	R	R	R	R	G	G	FL/DW	FL/DW	DW	DW	FL/DW	FL/DW	
4 CHANGE	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

QUANTITY	DESCRIPTION
LUMP SUM	MAINTENANCE OF TRAFFIC
TBD	TEST PIT EXCAVATION
6 EACH	8 FT STEEL PEDESTAL POLE
1 EACH	R10-11 SIGN
7 EACH	HANDHOLE
895' L.F.	7- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
1120' L.F.	5- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
910' L.F.	2- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
480' L.F.	1- CONDUCTOR STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
65' L.F.	2 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT- TRENCHED
150' L.F.	4 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT- TRENCHED
205' L.F.	4 IN. POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT- BORED
5 C.Y.	CONCRETE FOUNDATION FOR TRAFFIC SIGNAL EQUIPMENT
6 EACH	GROUND ROD 3/4 IN. DIAMETER X 10 FT LENGTH
6 EACH	INSTALL PEDESTRIAN SIGNAL HEAD
6 EACH	INSTALL PEDESTRIAN PUSHBUTTON AND SIGN
2 EACH	INSTALL VIDEO CAMERA DETECTOR WITH COUNTY SUPPLIED CLAMP
105' L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKING LINES
300' L.F.	12 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
385' L.F.	24 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
3 EACH	PAVEMENT MARKING PAINT LEGENDS AND SYMBOLS
LUMP SUM	REMOVE AND DISPOSE OF EQUIPMENT



WIRING KEY

A,D,E,H	7 - CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
B,C,F,G,I	5 - CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
J,K,L,M,N	5 - CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Q,R,S,T,U,V	2 - CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
W	1 - CONDUCTOR STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
O,P	VIDEO CAMERA DETECTION LEAD-IN CABLE
⏚	3/4 IN. X 10 FT GROUND ROD

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.17.15

ENGINEER'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN FOR TRAFFIC SIGNAL DESIGN 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 COUNTY TRAFFIC ENGINEERING DIVISION."

ENGINEER'S SIGNATURE — DATE 12/17/14

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/23/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

0' 20' 40'
SCALE: 1" = 20'

GENERAL SIGNAL INFORMATION C10.5

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MELANY L. ALLISTON-BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 12/17/14

PHASE 1

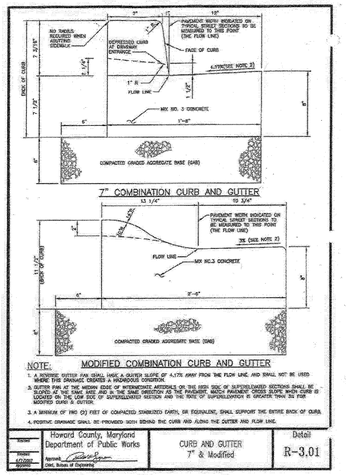
TRAFFIC SIGNAL PLAN
LITTLE PATUXENT PARKWAY AND
SOUTH ENTRANCE ROAD

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 20'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	140 OF 167

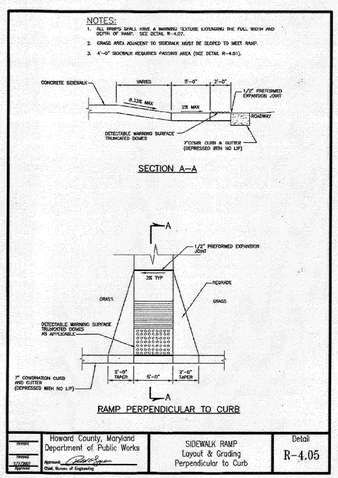
SDP-13-020

G:\ACTIVE PROJECTS\SDP-13-020 - Brandon Trail\Traffic Signal Design\Plans\SDP and S Entrance Rdway.dgn 12/17/2014 11:37:29 AM {AS BAKED} by Alyssa Gutgsell



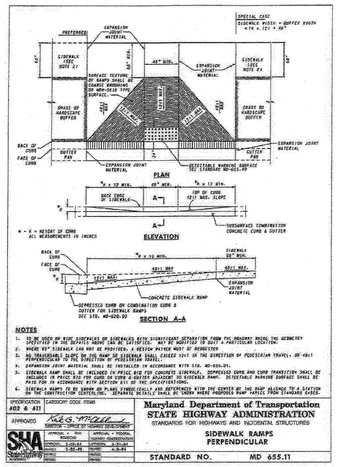
NOTE:
1. A MONTHS CURB FOR USE WITH A GUTTER SLOPE OF 4.17% AWAY FROM THE FLOW LINE, AND SHALL NOT BE USED WHERE SIDE DRAINAGE CREATES A HAZARDOUS CONDITION.
2. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. NO. MD-605.01.
3. A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EARTH, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.
4. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.

SIGNED:	Howard County, Maryland Department of Public Works	CURB AND GUTTER 7" & Modified	Detail R-3.01
DESIGNED:	Approved: Chief, Bureau of Engineering		
APPROVED:			
DATE:			



NOTES:
1. ALL RAMPS SHALL HAVE A WARNING TEXTURE EXTENDING THE FULL WIDTH AND DEPTH OF RAMP. SEE DETAIL M-6.02.
2. GRADE AREA ADJACENT TO SIDEWALK MUST BE SLOPED TO MEET RAMP.
3. 4'-0" SIDEWALK REQUIRES PASSING AREA. (SEE DETAIL R-4.01).

SIGNED:	Howard County, Maryland Department of Public Works	SIDEWALK RAMP Layout & Grading Perpendicular to Curb	Detail R-4.05
DESIGNED:	Approved: Chief, Bureau of Engineering		
APPROVED:			
DATE:			

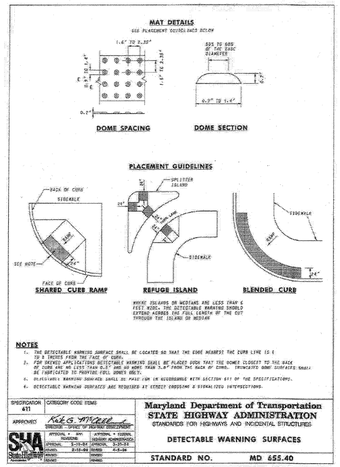


NOTES
1. THE USES OF RAMP, SIDEWALK OR SIDEWALKS WITH SIGNIFICANT DEVIATION FROM THE DIAGRAMS MUSING THE GEOMETRY SPECIFIED IN THE DETAILS ABOVE CAN BE SATISFIED, MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. NO TRANSVERSE SLOPES ON THE RAMP OF SIDEWALK SHALL EXCEED 1in1 OR 7.0% DIRECTION OF PEDESTRIAN TRAVEL, OR 4in1 OR 2.0% IN THE DIRECTION OF VEHICULAR TRAVEL.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. NO. MD-605.01.
5. SIDEWALK RAMP SHALL BE INCLUDED IN PRICE BID FOR CONCRETE SIDEWALK. DEPRESSED CURB AND CURB TRANSITION SHALL BE INCLUDED IN PRICE BID FOR CURB OR CURB & GUTTER. DETECTABLE WARNING SURFACE SHALL BE INCLUDED IN PRICE BID FOR SIDEWALK RAMP. DETECTABLE WARNING SURFACE SHALL BE PAID FOR IN ACCORDANCE WITH SECTION 611.07 OF THE SPECIFICATIONS.
6. SIDEWALK RAMPS TO BE SHOWN ON PLANS STAKED ELECTRONICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD SHOWN.

SPECIFICATION 602 & 611	CATEGORY CODE ITEMS
APPROVED: Kirk G. Mallett, DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	

APPROVAL #	DATE	APPROVAL #	DATE
GENERAL	5-31-13	GENERAL	5-31-13
HIGHWAY	5-30-13	HIGHWAY	5-31-13
BRIDGE	5-30-13	BRIDGE	5-31-13
ENVIRON.		ENVIRON.	
HIGHWAY		HIGHWAY	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SIDEWALK RAMPS PERPENDICULAR
STANDARD NO. MD 655.11

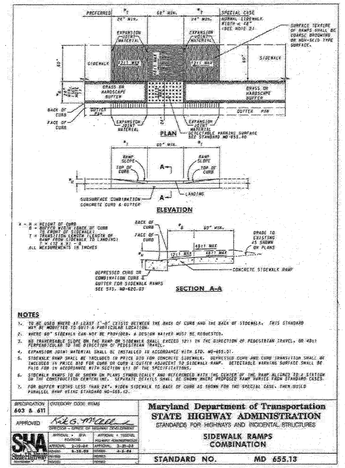


NOTES
1. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 TO 8 INCHES FROM THE FACE OF CURB.
2. AT CURB RAMPS, DETECTABLE WARNING SURFACE SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF CURB ARE APPROXIMATELY ALIGNED AS WIDE FROM 1.6" FROM THE BACK OF CURB. TOLERANCE SHALL BE ±0.2". DETECTABLE WARNING SURFACE SHALL BE FABRICATED TO PROVIDE FULL DOMES ONLY.
3. DETECTABLE WARNING SURFACES SHALL BE PLACED FOR THE FULL LENGTH OF THE CUT THROUGH THE ISLAND OR MEDIAN
4. DETECTABLE WARNING SURFACES ARE REQUIRED AT STREET CROSSING & DRIVEWAY CROSS INTERSECTIONS.

SPECIFICATION 611	CATEGORY CODE ITEMS
APPROVED: Kirk G. Mallett, DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	

APPROVAL #	DATE	APPROVAL #	DATE
GENERAL	5-31-13	GENERAL	5-31-13
HIGHWAY	5-30-13	HIGHWAY	5-31-13
BRIDGE	5-30-13	BRIDGE	5-31-13
ENVIRON.		ENVIRON.	
HIGHWAY		HIGHWAY	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
DETECTABLE WARNING SURFACES
STANDARD NO. MD 655.40

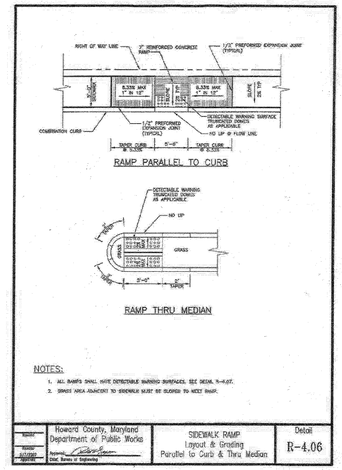


NOTES
1. THE 4FT LEVEL AREA AT LEAST 4'-0" LONG EXISTS BETWEEN THE BACK OF CURB AND THE BACK OF SIDEWALK. THIS STANDARD MAY BE USED WHERE IT EXISTS & CONFORMS TO THIS.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. NO TRANSVERSE SLOPES ON THE RAMP OF SIDEWALK SHALL EXCEED 1in1 OR 7.0% DIRECTION OF PEDESTRIAN TRAVEL, OR 4in1 OR 2.0% IN THE DIRECTION OF VEHICULAR TRAVEL.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. NO. MD-605.01.
5. SIDEWALK RAMP SHALL BE INCLUDED IN PRICE BID FOR CONCRETE SIDEWALK. DEPRESSED CURB AND CURB TRANSITION SHALL BE INCLUDED IN PRICE BID FOR CURB OR CURB & GUTTER. DETECTABLE WARNING SURFACE SHALL BE PAID FOR IN ACCORDANCE WITH SECTION 611.07 OF THE SPECIFICATIONS.
6. SIDEWALK RAMPS TO BE SHOWN ON PLANS STAKED ELECTRONICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD SHOWN.
7. FOR BUFFER WIDTHS LESS THAN 24", NUMBER SIDEWALK TO BACK OF CURB AS SHOWN FOR TWO SPECIAL CASES. THEN BUILD PARALLEL RAMP WITH STRAIGHTER MD-655.01.

SPECIFICATION 603 & 611	CATEGORY CODE ITEMS
APPROVED: Kirk G. Mallett, DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	

APPROVAL #	DATE	APPROVAL #	DATE
GENERAL	5-31-13	GENERAL	5-31-13
HIGHWAY	5-30-13	HIGHWAY	5-31-13
BRIDGE	5-30-13	BRIDGE	5-31-13
ENVIRON.		ENVIRON.	
HIGHWAY		HIGHWAY	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SIDEWALK RAMPS COMBINATION
STANDARD NO. MD 655.13



NOTES:
1. ALL RAMPS SHALL HAVE DETECTABLE WARNING SURFACES. SEE DETAIL M-6.02.
2. GRADE AREA ADJACENT TO SIDEWALK MUST BE SLOPED TO MEET RAMP.

SIGNED:	Howard County, Maryland Department of Public Works	SIDEWALK RAMP Layout & Grading Parallel to Curb & Thru Median	Detail R-4.06
DESIGNED:	Approved: Chief, Bureau of Engineering		
APPROVED:			
DATE:			

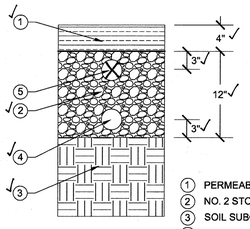
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

A. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING OR COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.

B. THE OWNER SHALL PERIODICALLY CLEAN DRAINAGE PIPES, INLETS, STONE EDGE DRAINS AND OTHER STRUCTURES WITH OR DRAINING TO THE SUBBASE.

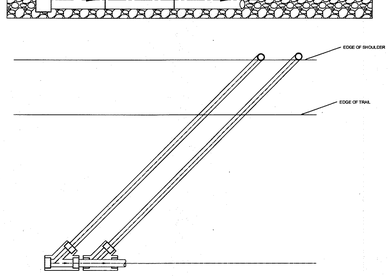
C. THE OWNER SHALL USE DEICERS IN MODERATION. DEICERS SHOULD BE NON-TOXIC AND BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT.

D. THE OWNER SHALL ENSURE SNOW PLOWING IS PERFORMED CAREFULLY WITH BLADES SET ONE INCH ABOVE THE SURFACE. PLOWED SNOW PILES AND SNOW MELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

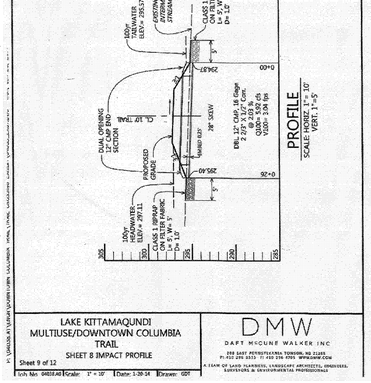


1. PERMEABLE ASPHALT
2. NO. 2 STONE
3. SOIL SUBGRADE
4. UNDERDRAIN (3") TO BE PROVIDED AS NEEDED OR PLANS AT INTERSECTIONS AND LOW POINTS IN PATH PROFILE,
5. ~~OVERDRAIN (3")~~ NO OVERDRAIN

5 PERMABLE ASPHALT PAVING ENLARGEMENT
NTS



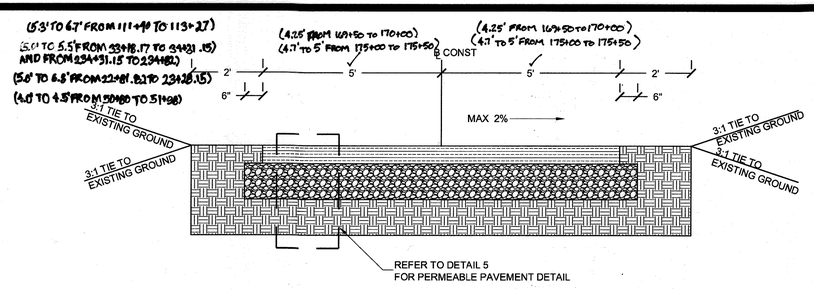
6 OVERDRAIN AND UNDERDRAIN CLEANOUT DETAIL
NTS



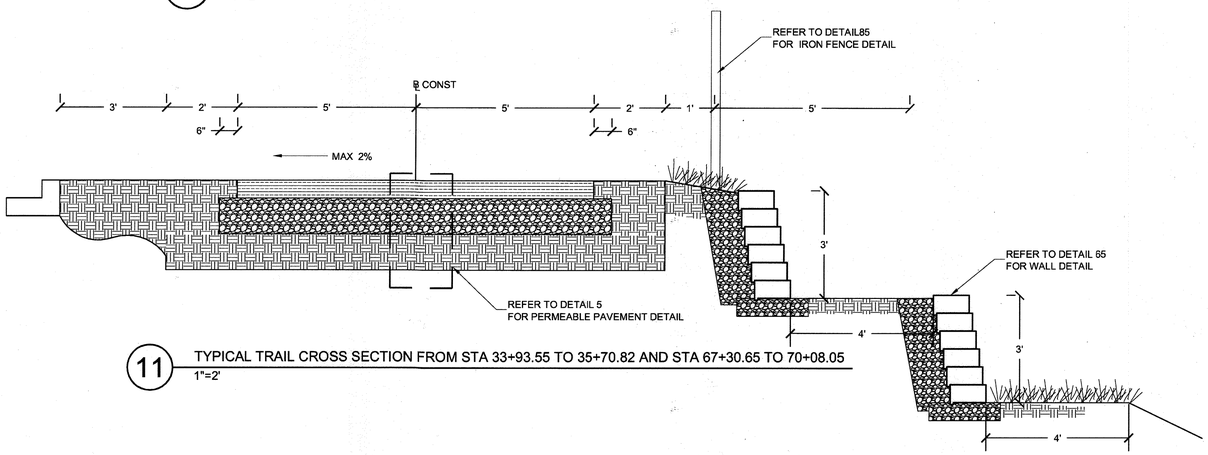
(5.3' TO 6.7' FROM 111+40 TO 113+27)
(5.0' TO 5.5' FROM 33418.17 TO 34423.15) AND FROM 29451.15 TO 29482.)
(5.5' TO 6.5' FROM 22981.82 TO 23426.15)
(4.0' TO 4.5' FROM 50480 TO 51+98)

(4.25' FROM 169+50 TO 170+00)
(4.7' TO 5' FROM 175+00 TO 175+50)

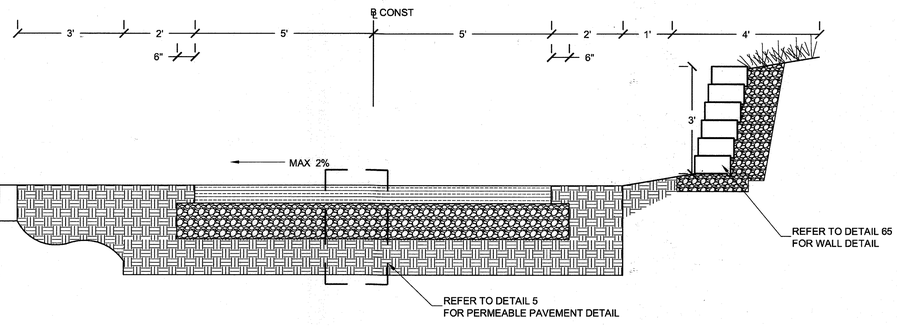
(4.25' FROM 169+50 TO 170+00)
(4.7' TO 5' FROM 175+00 TO 175+50)



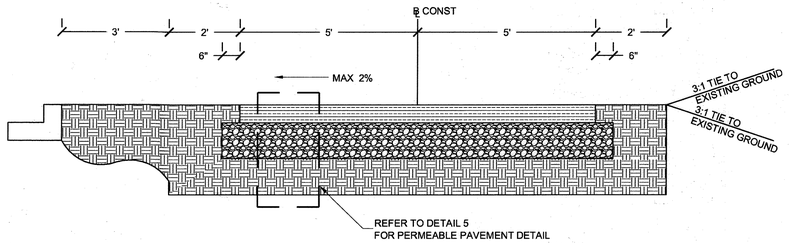
8 TYPICAL TRAIL CROSS SECTION FROM S ENTRANCE ROAD TO BLANDAIR PARK
1"=2'



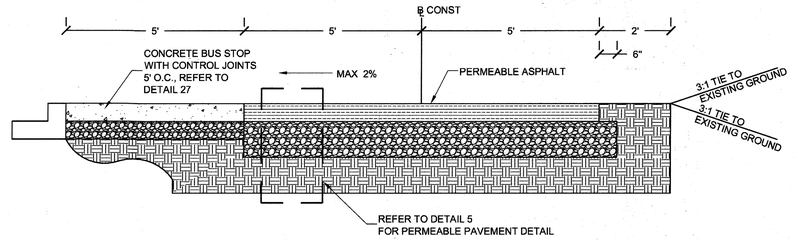
11 TYPICAL TRAIL CROSS SECTION FROM STA 33+93.55 TO 35+70.82 AND STA 67+30.65 TO 70+08.05
1"=2'



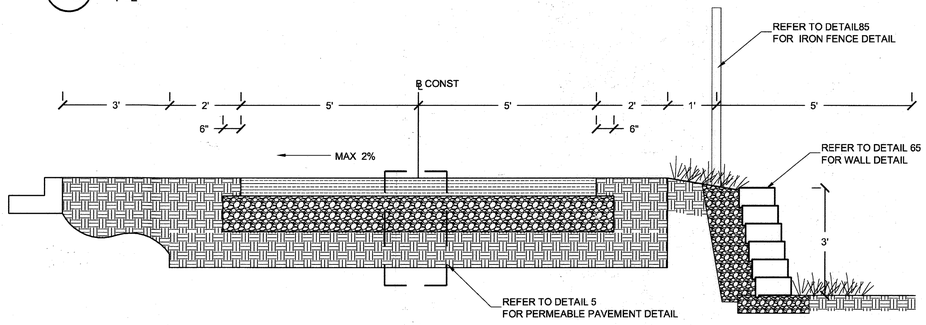
13 TYPICAL TRAIL CROSS SECTION FROM STA 55+01.64 TO 56+81.77
1"=2'



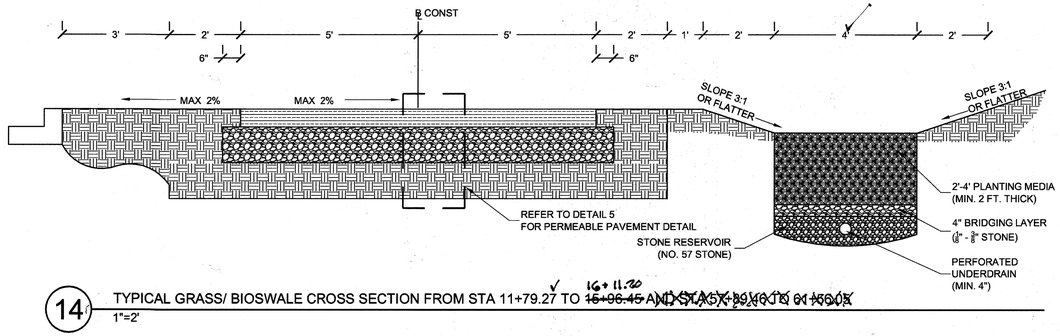
9 TYPICAL TRAIL CROSS SECTION FROM CEDAR LANE TO E ENTRANCE ROAD
1"=2'



10 TYPICAL BUS STOP PAD CROSS SECTION REFER TO SHEET C5.5/51 FOR PLAN REFERENCE
1"=2'



12 TYPICAL TRAIL CROSS SECTION FROM STA 18+35.41 TO 19+82.90, STA 22+83.44 TO 24+50.29, STA 33+52.52 TO STA 33+93.55, STA 35+70.82 TO 35+90.41, STA 44+78.32 TO 45+75.47, STA 66+91.91 TO 67+30.65, AND STA 70+08.05 TO 71+83.32
1"=2'



14 TYPICAL GRASS/ BIOSWALE CROSS SECTION FROM STA 11+79.27 TO ~~15+06.45~~ 16+11.20 AND STA ~~45+89.40~~ TO ~~46+50.15~~
1"=2'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/6/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY SEAL, THAT THE UTILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS AS-BUILT PLAN MEET THE CURRENT APPROVED PLANS AND SPECIFICATIONS.
G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10849
SHANABERGER & LANE
LICENSE EXPIRATION DATE 4/7/2016
AS-BUILT SURVEY DATE 7/28/2016, 10/3/16

05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB
DATE	REVISION	BY / APP'R.

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

O:\ACTIVE PROJECTS\5282 DEP-Blandair Trail\Site Development Plan General\CAD\Plans\C3-1 - TrailNts.dwg | DES. DPB | DRN. AG | CHK. EM

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15
12/1/14

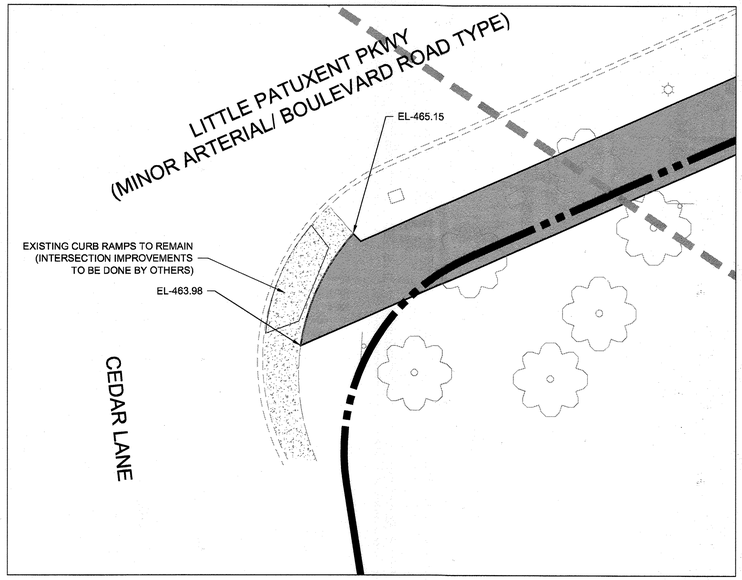
TRAIL CROSS SECTIONS C11.1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)
ELECTION DISTRICT 5 — HOWARD COUNTY

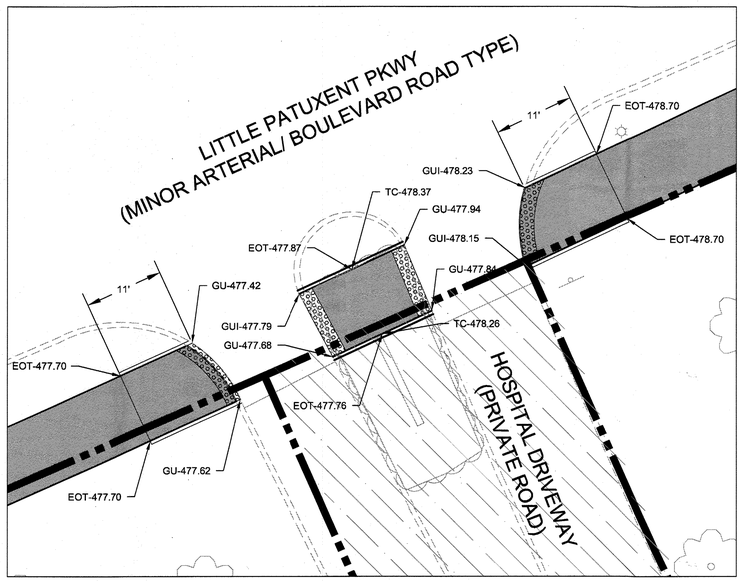
SCALE	ZONING	TDG. FILE No.
AS SHOWN	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	142 OF 171

SDP-13-020

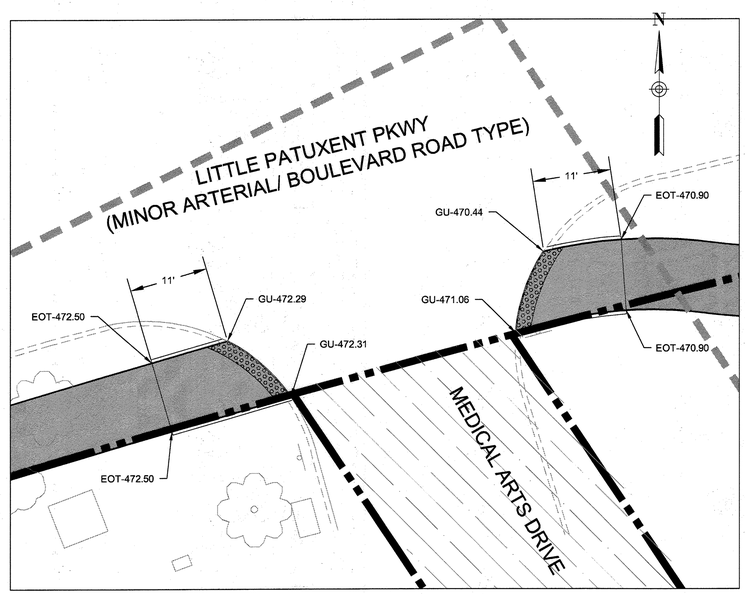
G:\ACTIVE PROJECTS\5282 DEP-Blandair Trail\Site Development Plan General\CAD\Plans\C3-1 - TrailNts.dwg, PLOTTED:11/20/2014 11:27 AM, LAST SAVED:11/4/2014 5:08 PM, PLOTTED BY: Andrew Gudgeon



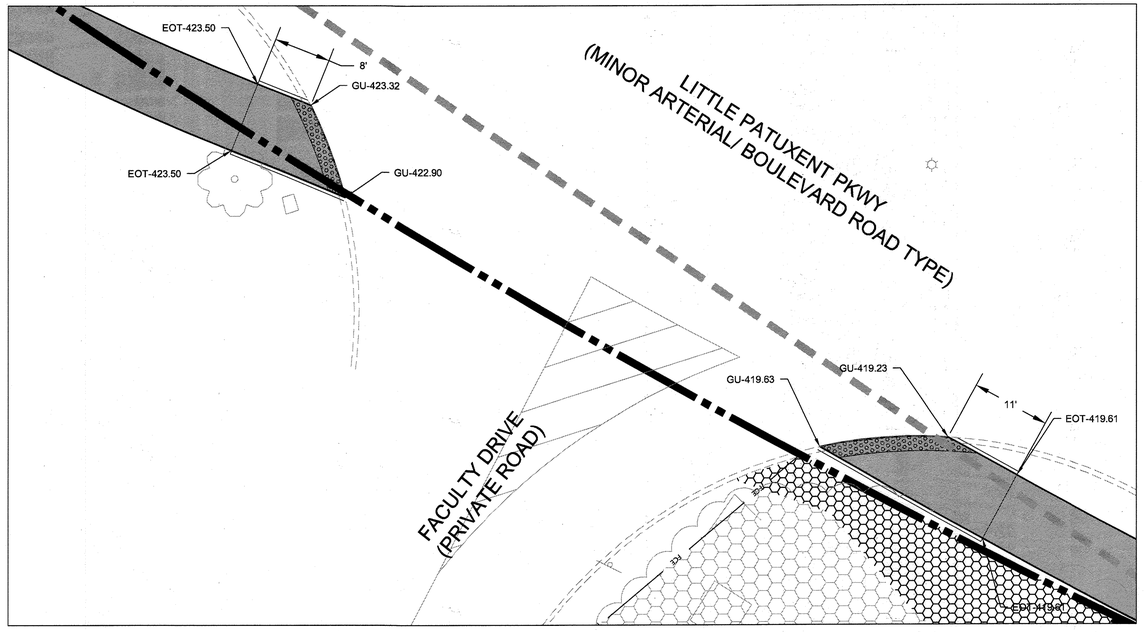
21 CURB RAMP DETAIL - CEDAR LANE
1"=10'



22 CURB RAMP DETAIL - HOSPITAL DRIVEWAY
1"=10'



23 CURB RAMP DETAIL - MEDICAL ARTS DRIVE
1"=10'



24 CURB RAMP DETAIL - FACULTY DRIVE
1"=10'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/24/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

0' 10' 20'
SCALE: 1" = 10'

CURB RAMP ENALRGEMENT 1 — C11.2

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Q:\ACTIVE PROJECTS\5282 GDP-Blandair Trail\Site Development Plan 2\CAD\Sheet\C2-1 - Curb Ramp Details.dwg, PLOTTED:11/21/2014 1:37 PM, LAST SAVED:11/21/2014 1:36 PM, PLOTTED BY: Andrew Gudgeon

Q:\ACTIVE PROJECTS\5282 GDP-Blandair Trail\Site Development Plan 2\CAD\Sheet\C2-1 - Curb Ramp Details.dwg

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

12/1/14

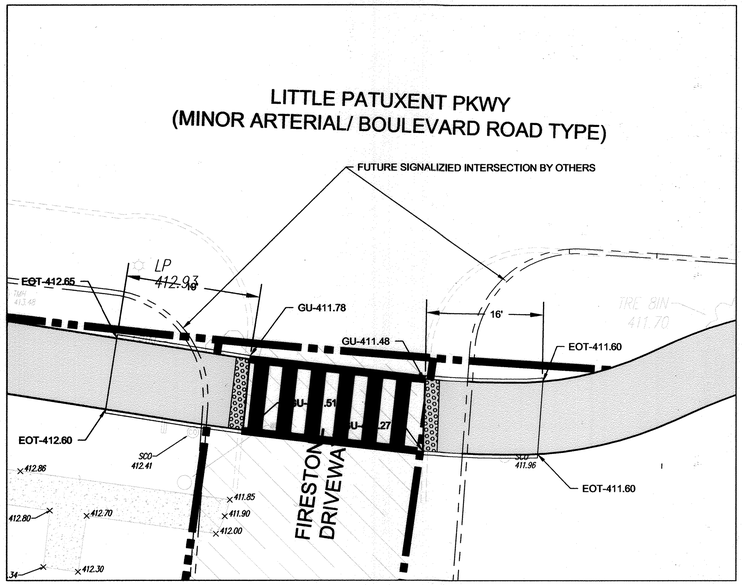
PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

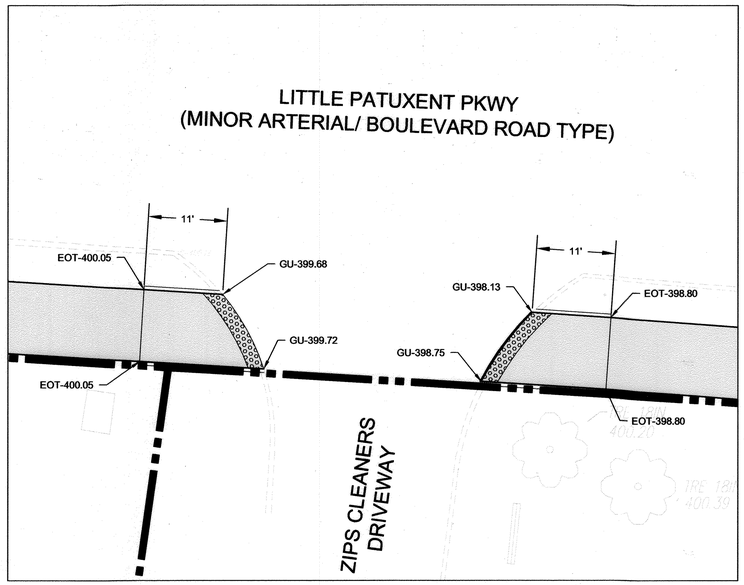
ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 10'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	143 OF 171

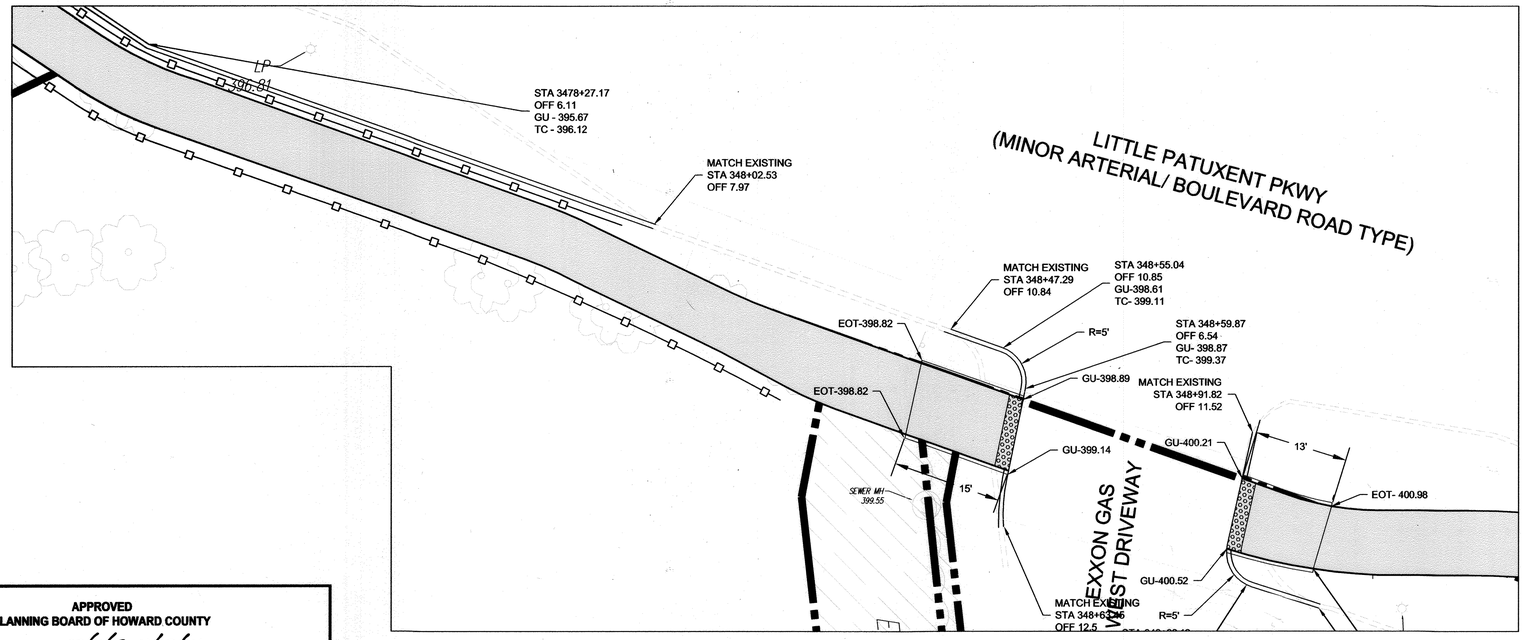
SDP-13-020



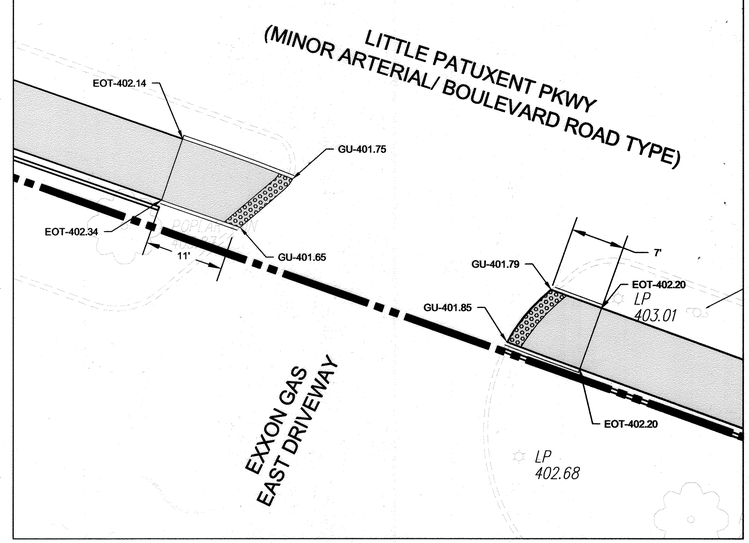
25 CURB RAMP DETAIL - LONG AND FOSTER ENTRANCE
1"=10'



26 CURB RAMP DETAIL - ZIPS ENTRANCE
1"=10'



27 CURB RAMP DETAIL - EXXON STATION WESTSIDE ENTRANCE
1"=10'



28 CURB RAMP DETAIL - EXXON STAITON EASTSIDE ENTRANCE
1"=10'

0' 10' 20'
SCALE: 1" = 10'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 03/14/13, 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3-29-16
Chief, Division of Land Development — Date 3-22-16
Chief, Development Engineering Division — Date 3-18-16

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	
03/04/16	REVISED SITE DEVELOPMENT PLAN TO EXTEND RIGHT TURN LANE AT EXXON	MAB	

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H:\52000\52027-Columbia Trail\Site Development Plan 2\[52027Plan(12)-1 - Curb Ramp Details.dwg | DES. DPB | DRN. AG | CHK. EM

Howard Hughes
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10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 39022, EXPIRATION DATE: 12/28/17

STATE OF MARYLAND — MARK A. BRUCH — No. 39022 — REGISTERED PROFESSIONAL ENGINEER

3/4/16

PHASE 2

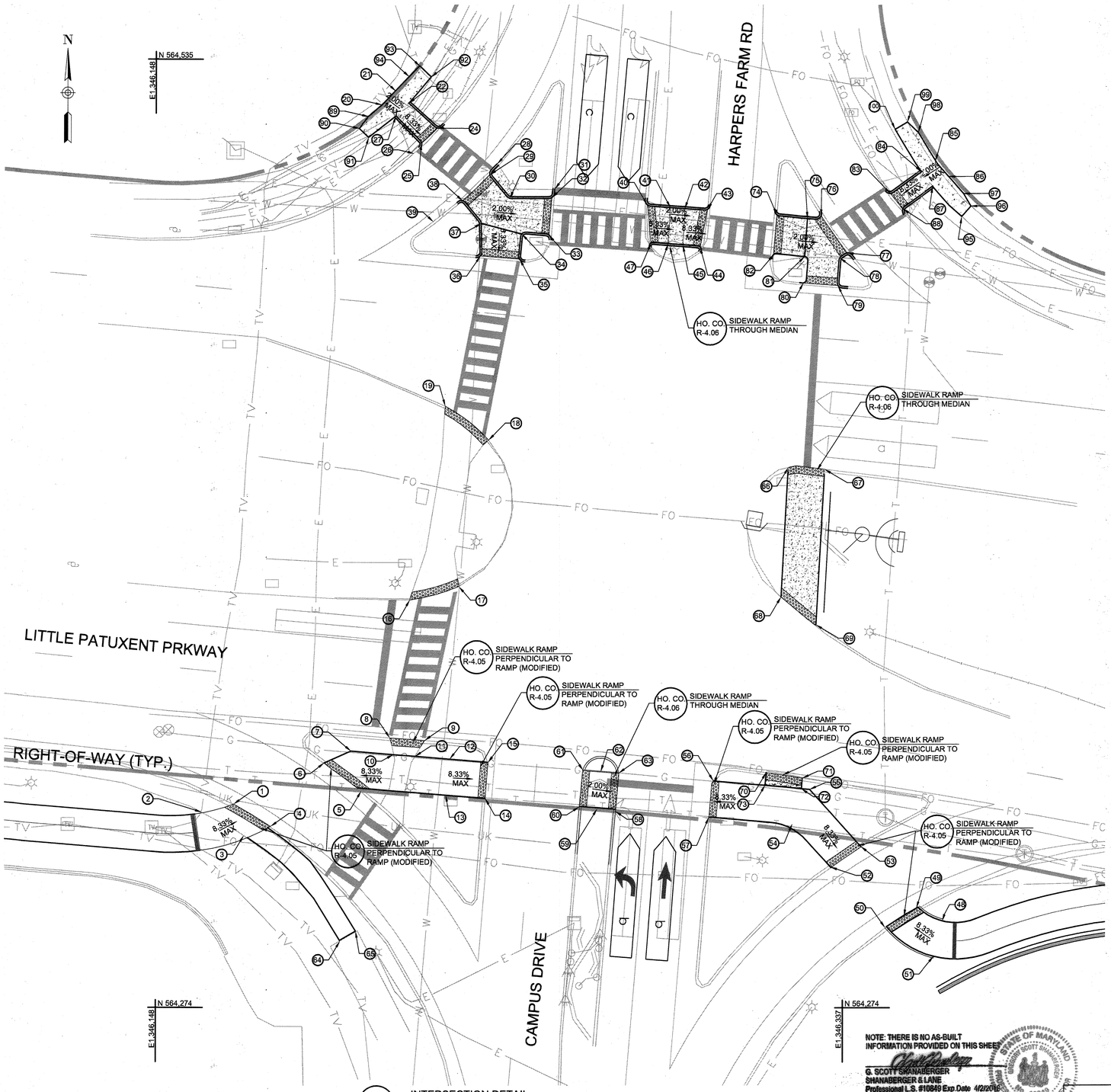
DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

CURB RAMP ENLARGEMENT 2 — C11.3

SCALE	ZONING	TDG. FILE No.
1" = 10'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
03/07/16	36	144 OF 177

SDP-13-020



29 INTERSECTION DETAIL
1"=15'

CURB/ RAMP LOCATIONS

POINT	NORTHING	EASTING	TC ELEV.	FLOWLINE ELEV.	OTHER ELEV.	DESCRIPTION
1	564,329.85	1,346,169.55	-	467.28	-	MATCH EX. TC/FLOWLINE
2	564,327.41	1,346,161.19	-	-	468.25	SIDEWALK
3	564,321.04	1,346,173.60	-	-	467.58	SIDEWALK
4	564,323.71	1,346,179.70	-	466.83	-	MATCH EX. TC/FLOWLINE
5	564,334.32	1,346,203.52	-	467.22	-	MATCH EX. TC/FLOWLINE
6	564,341.22	1,346,194.43	-	467.74	-	MATCH EX. TC/FLOWLINE
7	564,344.50	1,346,201.79	-	-	468.18	EDGE OF TRAIL
8	564,348.11	1,346,212.46	-	467.32	-	MATCH EX. TC/FLOWLINE
9	564,347.34	1,346,222.06	-	467.02	-	MATCH EX. TC/FLOWLINE
10	564,343.42	1,346,213.62	-	-	467.36	EDGE OF TRAIL
11	564,343.05	1,346,219.43	-	-	467.27	EDGE OF TRAIL
12	564,342.23	1,346,228.88	-	-	467.27	EDGE OF TRAIL
13	564,332.27	1,346,228.05	-	-	467.09	EDGE OF TRAIL
14	564,331.38	1,346,238.73	-	466.36	-	MATCH EX. TC/FLOWLINE
15	564,341.34	1,346,239.56	-	466.70	-	MATCH EX. TC/FLOWLINE
16	564,386.06	1,346,217.95	-	468.12	-	EX. RAMP COMPLIES, N/A
17	564,389.70	1,346,231.48	-	467.84	-	EX. RAMP COMPLIES, N/A
18	564,430.08	1,346,239.62	-	468.36	-	EX. RAMP COMPLIES, N/A
19	564,439.43	1,346,227.69	-	468.66	-	EX. RAMP COMPLIES, N/A
20	564,522.54	1,346,210.20	-	-	470.29	EDGE OF SIDEWALK
21	564,526.44	1,346,213.99	-	-	470.25	EDGE OF SIDEWALK
22	564,522.99	1,346,217.63	-	-	470.18	EDGE OF SIDEWALK
23	564,517.44	1,346,227.72	469.58	-	-	MATCH EX. TC
24	564,516.02	1,346,225.49	469.60	469.32	-	TC/FLOWLINE
25	564,511.78	1,346,221.17	469.62	469.37	-	TC/FLOWLINE
26	564,509.02	1,346,219.01	469.67	-	-	MATCH EX. TC
27	564,519.42	1,346,214.02	-	-	470.22	EDGE OF SIDEWALK
28	564,506.10	1,346,242.01	469.82	-	-	MATCH EX. TC
29	564,503.07	1,346,239.85	469.88	469.49	-	TC/FLOWLINE
30	564,496.59	1,346,245.37	-	-	469.40	EDGE OF RAMP
31	564,499.14	1,346,257.84	469.65	469.27	-	MATCH EX. TC
32	564,496.81	1,346,257.05	469.70	-	-	TC/FLOWLINE
33	564,486.74	1,346,256.30	469.51	469.11	-	TC/FLOWLINE
34	564,486.74	1,346,248.70	-	-	469.20	EDGE OF RAMP
35	564,479.80	1,346,248.08	469.48	469.03	-	TC/FLOWLINE
36	564,480.73	1,346,237.34	469.50	469.09	-	TC/FLOWLINE
37	564,489.74	1,346,237.49	-	-	469.44	EDGE OF RAMP
38	564,495.97	1,346,232.39	470.02	469.52	-	TC/FLOWLINE
39	564,490.22	1,346,224.32	470.02	-	-	MATCH EX. TC
40	564,494.66	1,346,283.41	469.39	469.15	-	TC/FLOWLINE
41	564,494.03	1,346,289.68	469.10	-	468.66	TC/BC
42	564,493.68	1,346,293.66	468.93	-	468.58	TC/BC
43	564,493.46	1,346,299.98	468.64	468.10	-	TC/FLOWLINE
44	546,483.71	1,346,297.86	468.69	468.25	-	TC/FLOWLINE
45	564,483.71	1,346,,293.08	468.90	-	468.56	TC/BC
46	564,484.05	1,346,289.08	469.03	-	468.64	TC/BC
47	564,484.25	1,346,284.30	469.22	468.95	-	TC/BC
48	564,294.21	1,346,364.57	-	-	461.96	EDGE OF TRAIL
49	564,301.28	1,346,357.52	-	461.19	-	MATCH EX. TC/FLOWLINE
50	564,295.96	1,346,348.85	-	461.38	-	MATCH EX. TC/FLOWLINE
51	564,287.18	1,346,356.76	-	-	461.95	EDGE OF TRAIL
52	564,312.59	1,346,333.97	-	462.39	-	MATCH EX. TC/FLOWLINE
53	564,318.15	1,346,342.28	-	462.23	-	MATCH EX. TC/FLOWLINE
54	564,324.22	1,346,323.36	-	-	463.60	EDGE OF TRAIL
55	564,333.87	1,346,328.13	-	-	463.76	EDGE OF TRAIL
56	564,336.21	1346,301.38	-	464.43	-	MATCH EX. TC/FLOWLINE
57	564,326.17	1,346,300.39	-	464.21	-	MATCH EX. TC/FLOWLINE
58	564,328.28	1,346,274.75	-	465.11	-	MATCH EX. FLOWLINE
59	564,328.79	1,346,269.74	-	-	465.21	EDGE OF TRAIL
60	564,329.23	1,346,264.73	-	465.30	-	MATCH EX. FLOWLINE
61	564,339.16	1,346,265.69	-	465.55	-	MATCH EX. FLOWLINE
62	564,338.75	1,346,270.63	-	-	465.49	EDGE OF TRAIL
63	564,338.28	1,346,275.50	-	465.34	-	MATCH EX. FLOWLINE
64	564,292.49	1,346,198.70	-	-	465.23	MATCH EX.
65	564,295.04	1,346,203.06	-	-	465.38	MATCH EX.
66	564,422.51	1,346,322.22	-	466.09	-	MATCH EX. FLOWLINE
67	564,422.08	1,346,322.22	-	465.82	-	MATCH EX. FLOWLINE
68	564,386.79	1,346,320.20	-	465.44	-	MATCH EX. FLOWLINE
69	564,379.08	1,346,329.59	-	464.96	-	MATCH EX. FLOWLINE
70	564,338.47	1,346,316.16	-	463.95	-	MATCH EX. FLOWLINE
71	564,337.02	1,346,326.08	-	463.51	-	MATCH EX. FLOWLINE
72	564,334.14	1,346,325.84	-	464.10	-	EDGE OF TRAIL
73	564,334.97	1,346,315.87	-	463.91	-	EDGE OF TRAIL
74	564,492.02	1,346,319.04	468.19	467.92	-	TC/FLOWLINE
75	564,491.08	1,346,327.40	-	-	467.55	EDGE OF RAMP
76	564,491.84	1,346,331.20	467.96	467.48	-	TC/FLOWLINE
77	564,481.58	1,346,338.25	467.65	467.41	-	TC/FLOWLINE
78	564,480.29	1,346,336.36	-	-	467.46	EDGE OF RAMP
79	564,472.67	1,346,335.83	467.64	467.30	-	TC/FLOWLINE
80	564,473.41	1,346,326.32	467.85	467.52	-	TC/FLOWLINE
81	564,480.64	1,346,326.67	-	-	467.62	EDGE OF RAMP
82	564,481.11	1,346,318.56	468.22	467.88	-	TC/FLOWLINE
83	564,497.96	1,346,350.29	467.60	467.10	-	TC/FLOWLINE
84	564,503.96	1,346,358.82	-	-	467.98	EDGE OF SIDEWALK
85	564,50.96	1,346,362.79	-	-	468.18	EDGE OF SIDEWALK
86	564,502.59	1,346,366.37	-	-	468.09	EDGE OF SIDEWALK
87	564,499.94	1,346,361.96	-	-	467.92	EDGE OF SIDEWALK
88	564,493.77	1,346,353.67	467.50	467.00	-	TC/FLOWLINE
89	564,519.25	1,346,206.49	-	-	470.34	EDGE OF SIDEWALK
90	564,515.96	1,346,204.00	-	-	470.38	MEET EX. SIDEWALK
91	564,513.42	1,346,206.53	-	-	470.30	MEET EX. SIDEWALK
92	564,530.26	1,346,223.56	-	-	470.04	MEET EX. SIDEWALK
93	564,533.44	1,346,220.09	-	-	470.14	MEET EX. SIDEWALK
94	564,530.30	1,346,217.16	-	-	470.18	EDGE OF SIDEWALK
95	564,491.60	1,346,369.94	-	-	467.62	MEET EX. SIDEWALK
96	564,494.44	1,346,372.44	-	-	467.82	MEET EX. SIDEWALK
97	564,497.99	1,346,370.43	-	-	468.92	EDGE OF SIDEWALK
98	564,514.84	1,346,357.96	-	-	468.34	EDGE OF SIDEWALK
99	564,517.73	1,346,354.95	-	-	468.44	MEET EX. SIDEWALK
100	564,515.73	1,346,351.53	-	-	468.36	MEET EX. SIDEWALK

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — GEORGE SCOTT SHANABERGER — NO. 10849 — PROFESSIONAL LAND SURVEYOR

0' 15' 30'
SCALE: 1" = 15'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/24/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2-12-15

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\5282 GCP-Glendale Trail\Traffic Signal Design 2\PLANS\L2\P and Campus Dr.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

Robert Jenkins — 12/17/14

PHASE 2

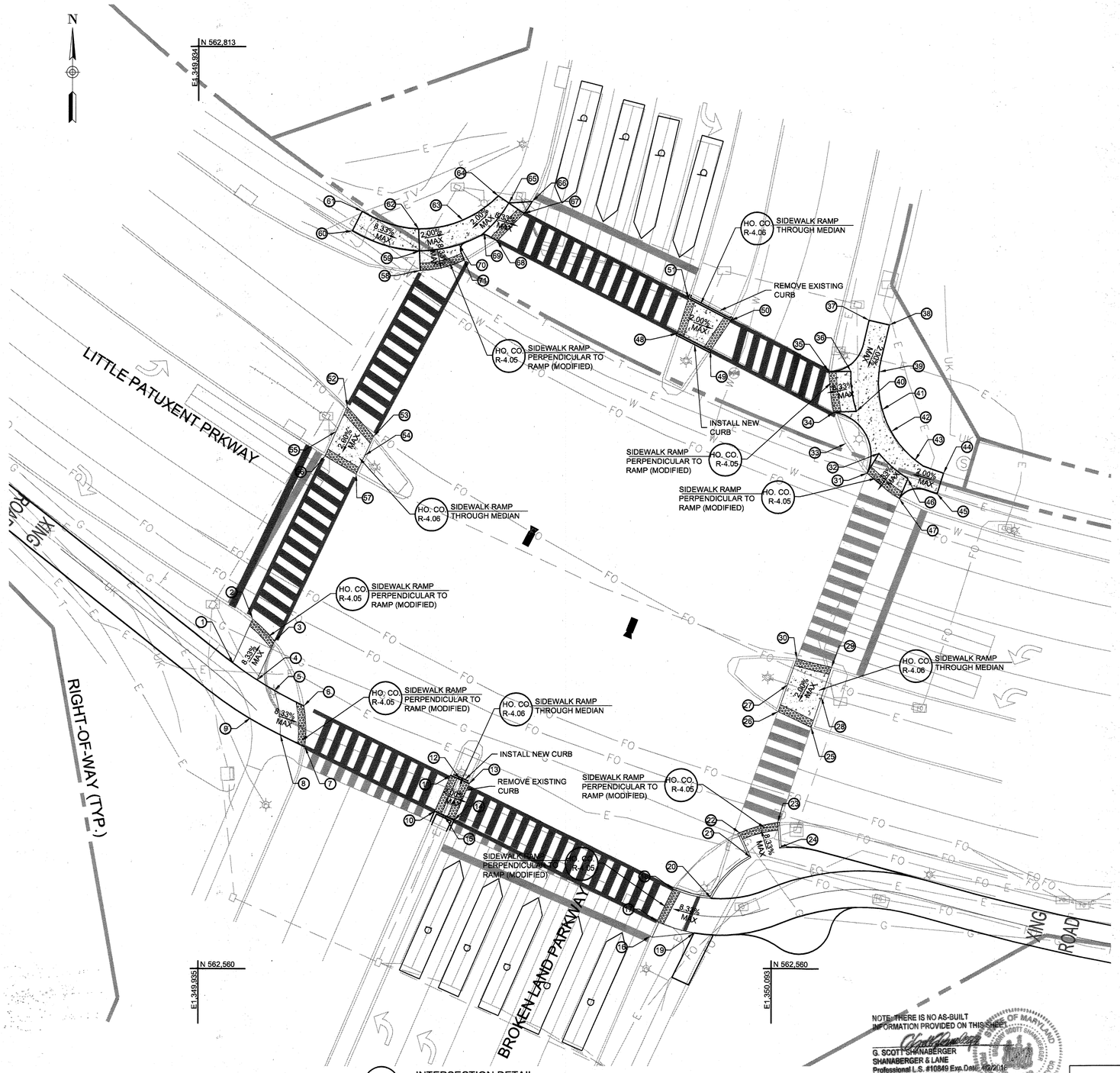
LITTLE PATUXENT PARKWAY AND CAMPUS DRIVE

ELECTION DISTRICT 5 — HOWARD COUNTY

INTERSECTION SITE PLAN C11.4

SCALE	ZONING	TDG. FILE No.
1" = 15'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	145 OF 171

SDP-13-020



30 INTERSECTION DETAIL
1"=15'

CURB/ RAMP LOCATIONS

POINT	NORTHING	EASTING	TC ELEV.	FLOWLINE ELEV.	OTHER ELEV.	DESCRIPTION
1	562,643.30	1,349,944.41	-	-	359.83	EDGE OF TRAIL
2	562,655.52	1,349,949.89	-	359.26	-	MATCH EX. TC/FLOWLINE
3	562,649.43	1,349,955.97	-	359.18	-	MATCH EX. TC/FLOWLINE
4	562,638.62	1,349,951.22	-	-	359.45	EDGE OF TRAIL
5	562,635.79	1,349,955.93	-	-	359.39	EDGE OF TRAIL
6	562,631.62	1,349,964.08	-	359.02	-	MATCH EX. TC/FLOWLINE
7	562,620.25	1,349,964.35	-	358.93	-	MATCH EX. TC/FLOWLINE
8	562,623.68	1,349,957.48	-	-	359.49	SIDEWALK
9	562,628.32	1,349,949.33	-	-	359.65	EDGE OF TRAIL
10	562,602.66	1,349,999.94	-	358.34	-	MATCH EX. TC/FLOWLINE
11	562,612.49	1,350,004.34	-	358.54	-	MATCH EX. TC/FLOWLINE
12	562,611.42	1,350,006.91	-	-	358.60	EDGE OF TRAIL
13	562,610.29	1,350,009.47	-	358.67	-	MATCH EX. TC/FLOWLINE
14	562,600.25	1,350,005.22	-	358.49	-	MATCH EX. TC/FLOWLINE
15	562,601.52	1,350,002.62	-	-	358.64	EDGE OF TRAIL
16	562,568.25	1,350,059.84	358.31	-	-	MATCH EX. TOP OF CURB
17	562,572.52	1,350,061.16	-	357.78	-	MATCH EX. TC/FLOWLINE
18	562,581.50	1,350,065.53	-	358.02	-	MATCH EX. TC/FLOWLINE
19	562,569.41	1,350,071.35	-	-	358.25	MATCH EXISTING
20	562,578.89	1,350,076.08	-	-	358.25	EDGE OF TRAIL
21	562,590.05	1,350,086.99	-	-	358.16	EDGE OF TRAIL
22	562,596.80	1,350,083.81	-	358.05	-	MATCH EX. TC/FLOWLINE
23	562,599.58	1,350,094.32	-	357.25	-	MATCH EX. TC/FLOWLINE
24	562,592.59	1,350,094.32	-	-	358.18	EDGE OF TRAIL
25	562,625.74	1,350,103.51	-	357.25	-	EX. RAMP COMPLIES, N/A
26	562,630.01	1,350,094.43	-	357.27	-	EX. RAMP COMPLIES, N/A
27	562,637.29	1,350,096.98	-	-	357.17	EX. RAMP COMPLIES, N/A
28	562,633.99	1,350,106.30	-	-	357.16	EX. RAMP COMPLIES, N/A
29	562,642.23	1,350,109.10	-	357.07	-	EX. RAMP COMPLIES, N/A
30	562,644.57	1,350,099.54	-	357.06	-	EX. RAMP COMPLIES, N/A
31	562,695.70	1,350,118.81	-	355.66	-	FLOWLINE
32	562,701.19	1,350,122.12	-	-	356.14	EDGE OF SIDEWALK
33	562,703.96	1,350,113.05	-	355.80	-	FLOWLINE
34	562,712.49	1,350,109.69	-	356.02	-	FLOWLINE
35	562,723.70	1,350,108.31	-	356.24	-	FLOWLINE
36	562,723.78	1,350,114.38	-	-	356.65	EDGE OF SIDEWALK
37	562,737.83	1,350,119.38	-	-	357.44	EDGE OF SIDEWALK
38	562,736.52	1,350,124.97	-	-	357.49	EDGE OF SIDEWALK
39	562,723.78	1,350,122.15	-	-	356.68	EDGE OF SIDEWALK
40	562,712.73	1,350,115.90	-	-	356.43	EDGE OF SIDEWALK
41	562,713.19	1,350,123.05	-	-	356.46	EDGE OF SIDEWALK
42	562,707.14	1,350,125.53	-	-	356.25	EDGE OF SIDEWALK
43	562,699.21	1,350,132.07	-	-	356.09	EDGE OF SIDEWALK
44	562,695.62	1,350,139.90	-	-	356.20	EDGE OF SIDEWALK
45	562,689.81	1,350,138.19	-	-	356.27	EDGE OF SIDEWALK
46	562,694.06	1,350,130.07	-	-	355.99	EDGE OF SIDEWALK
47	562,688.64	1,350,127.77	-	355.50	-	FLOWLINE
48	562,734.01	1,350,066.64	-	356.90	-	MEET EXISTING FLOWINE
49	562,729.34	1,350,075.73	-	356.82	-	MEET EXISTING FLOWLINE
50	562,737.70	1,350,081.40	-	357.22	-	MEET EXISTING FLOWLINE
51	562,743.79	1,350,069.68	-	357.24	-	MEET EXISTING FLOWLINE
52	562,714.03	1,349,975.90	-	358.08	-	EX. RAMP COMPLIES, N/A
53	562,705.97	1,349,983.14	-	358.02	-	EX. RAMP COMPLIES, N/A
54	562,700.70	1,349,980.72	-	-	357.92	EX. RAMP COMPLIES, N/A
55	562,704.78	1,349,971.64	-	-	358.00	EX. RAMP COMPLIES, N/A
56	562,700.49	1,349,969.78	-	357.83	-	EX. RAMP COMPLIES, N/A
57	562,695.53	1,349,978.30	-	357.82	-	EX. RAMP COMPLIES, N/A
58	562,751.61	1,349,995.89	-	356.73	-	FLOWLINE
59	562,756.96	1,349,995.68	-	-	357.14	EDGE OF SIDEWALK
60	562,762.49	1,349,977.28	-	-	357.76	EDGE OF SIDEWALK
61	562,767.87	1,349,979.95	-	-	357.88	EDGE OF SIDEWALK
62	562,762.95	1,349,995.45	-	-	357.26	EDGE OF SIDEWALK
63	562,765.40	1,350,007.64	-	-	357.39	EDGE OF SIDEWALK
64	652,772.12	1,350,017.34	-	-	357.58	EDGE OF SIDEWALK
65	562,770.11	1,350,020.24	-	-	357.54	EDGE OF SIDEWALK
66	562,770.54	1,350,026.65	-	-	357.53	EDGE OF SIDEWALK
67	562,767.26	1,350,024.41	-	357.27	-	FLOWLINE
68	562,759.68	1,350,017.07	-	357.05	-	FLOWLINE
69	562,762.01	1,350,013.51	-	-	357.30	EDGE OF SIDEWALK
70	562,758.68	1,350,006.57	-	-	357.27	EDGE OF SIDEWALK
71	562,754.40	1,350,008.00	-	356.92	-	FLOWLINE
72	x	x	-	-	-	EDGE OF SIDEWALK
73	x	x	-	-	-	EDGE OF SIDEWALK
74	x	x	-	-	-	EDGE OF SIDEWALK
75	x	x	-	-	-	EDGE OF SIDEWALK
76	x	x	-	-	-	EDGE OF SIDEWALK
77	x	x	-	-	-	EDGE OF SIDEWALK
78	x	x	-	-	-	EDGE OF SIDEWALK

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp. Date: 4/2/2016
AS-BUILT DATE: 10/13/2016

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2-12-15

0' 15' 30'
SCALE: 1" = 15'

INTERSECTION SITE PLAN C11.5

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

12/11/14

PHASE 2

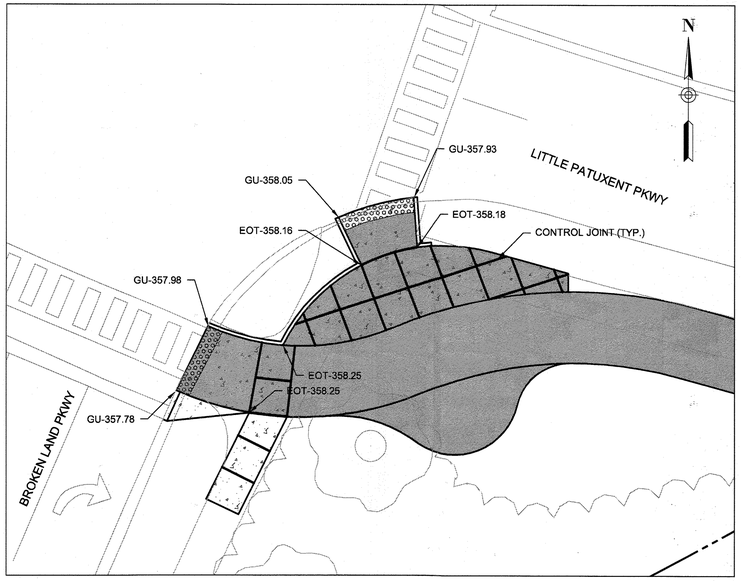
LITTLE PATUXENT PARKWAY AND BROKEN LAND PARKWAY

HOWARD COUNTY ELECTION DISTRICT 5

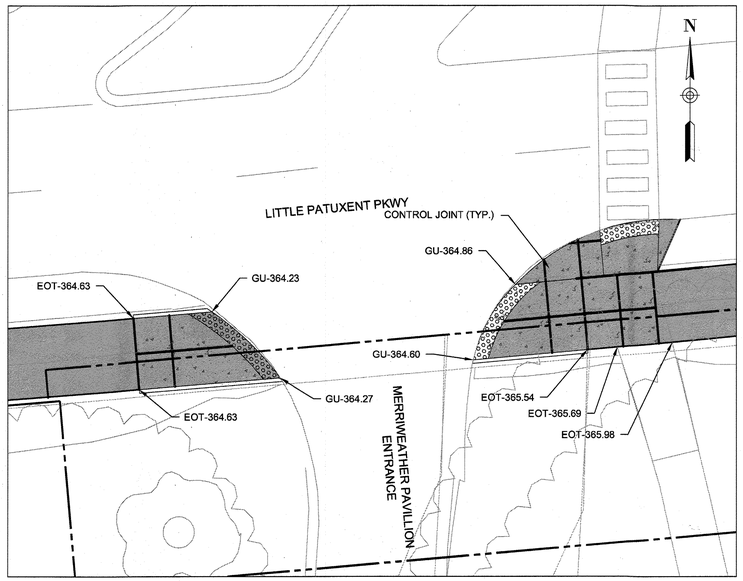
SCALE	ZONING	TDG. FILE No.
1" = 15'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	146 OF 171

SDP-13-020

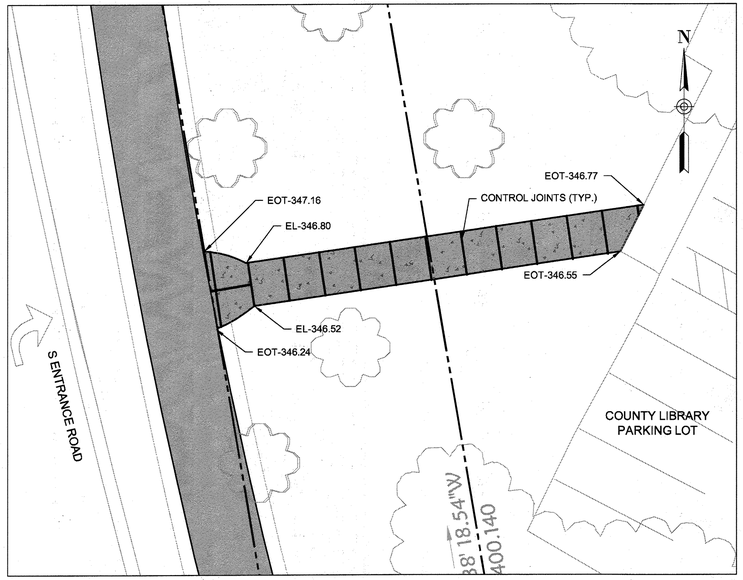
G:\ACTIVE PROJECTS\5282 CGP-Blandair Trail\Traffic Signal Design 2\PLANS\LP and BLP.dwg PLOTTED: 11/21/2014 11:39 AM, LAST SAVED: 11/6/2014 1:38 PM, PLOTTED BY: Andrew Gudgeon



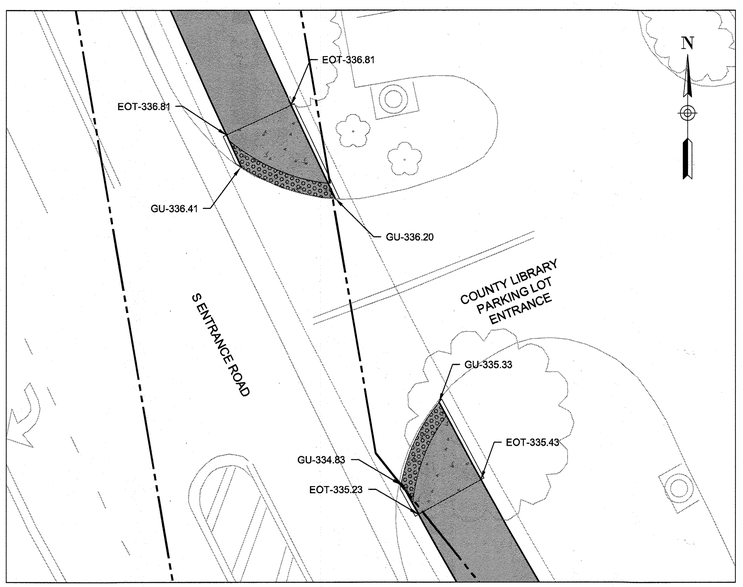
31 CURB RAMP DETAIL - LPP & BLP
1"=10'



32 CURB RAMP DETAIL - MERRIWEATHER ENTRANCE
1"=10'



33 SIDEWALK DETAIL - TRAIL TO COUNTY LIBRARY
1"=10'



34 CURB RAMP DETAIL - COUNTY LIBRARY ENTRANCE
1"=10'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/12/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	2/20/15 Date
Chief, Division of Land Development	2-25-15 Date
Chief, Development Engineering Division	2-12-15 Date

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

0' 10' 20'
SCALE: 1" = 10'

CURB RAMP ENLARGEMENT 1 C11.6

TooleDesignGroup
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PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
07/22/14	ADDED EVERSON WOODS SCHEDULE TO CONSTRUCTION NOTES	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

12/1/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 HOWARD COUNTY

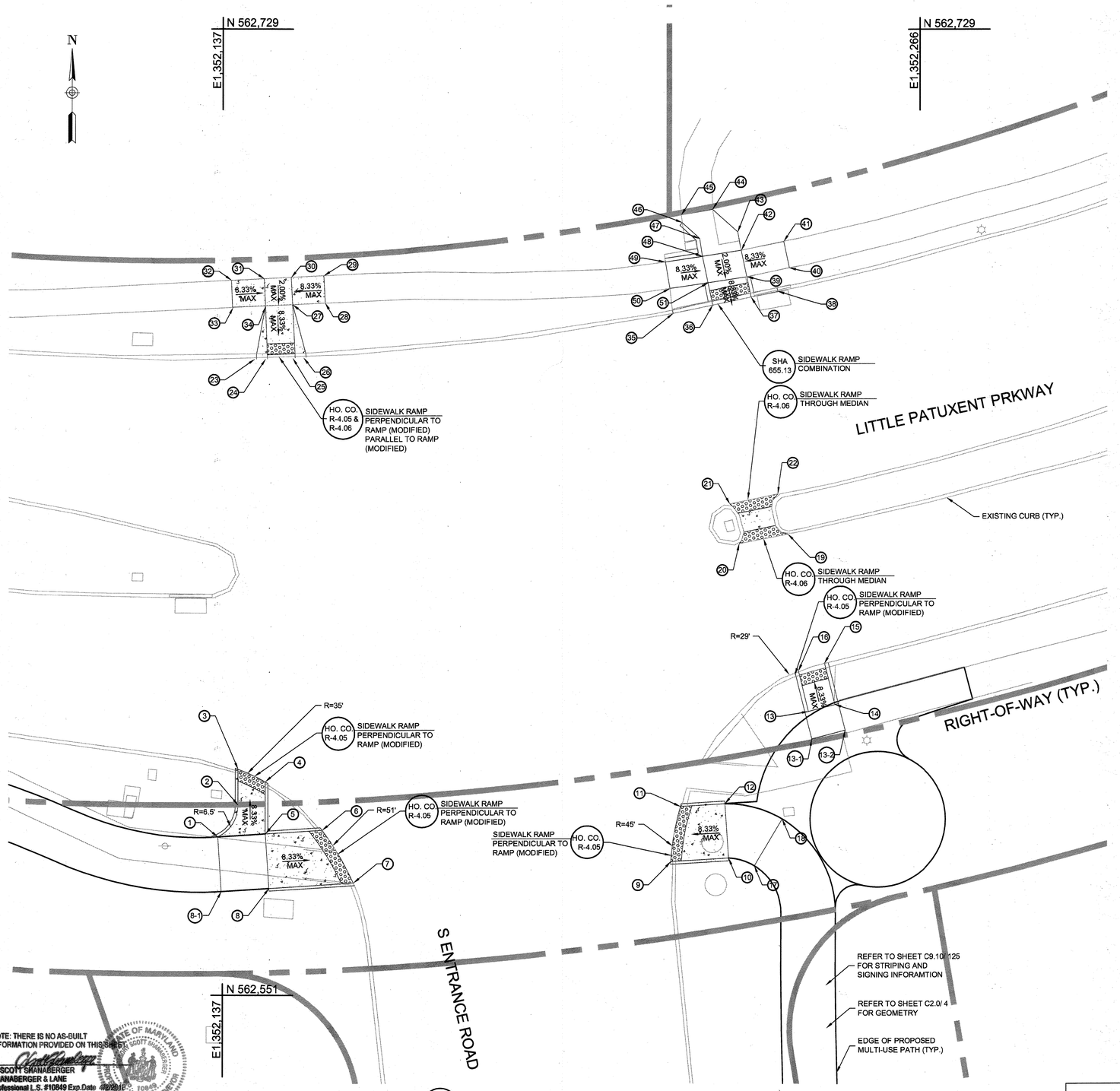
SCALE	ZONING	TDG. FILE No.
1" = 10'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	147 OF 171

SDP-13-020

O:\ACTIVE PROJECTS\5282 CDP-Blandair Trail\Site Development Plan\DESIGN\CAD\3-Sht\Red Trail\Sht\Set Plan\A2A - Sht\MiscSurfaceRamps\Ltr.dwg, PLOTTED:11/21/2014 12:59 PM, LAST SAVED:11/4/2014 5:14 PM, PLOTTED BY: Andrew Gallagher

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY SPECIFICATIONS AND DETAILS FOR CONSTRUCTION PLUS MDSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING OR NEW STRUCTURES SHALL BE PERMITTED WITHIN WETLANDS, STREAMS, WETLAND OR STREAM BUFFERS, 100-YEAR FLOODPLAIN, OR FOREST CONSERVATION EASEMENTS UNLESS APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING.
5. THIS PROJECT IS EXEMPT FROM THE REQUIREMENT OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION PER SECTION 16.1200(B)(1)(IV) AS IT IS WITHIN A PLANNED UNIT DEVELOPMENT WITH PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND WAS SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.
6. THE COORDINATES SHOWN HEREON ARE BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM: HORIZONTAL NAD83 AND VERTICAL NAVD88.
   HOWARD COUNTY MONUMENTS USED FOR THIS PROJECT:
   36AA: N 562,804.8537, E 1,349,906.1701, ELEV. 359.151
   30GA: N 566,053.5979, E 1,352,177.5307, ELEV. 339.878
7. THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY DATA WITH 2' CONTOUR INTERVALS PREPARED BY GUTSCHICK LITTLE AND WEBER, PA. DATED AUGST 2007 AND AUGMENTED WITH FIELD SURVEY DATED APRIL 2013.
8. SUBSURFACE DATA IS PROVIDED BY AIDATA, INC ON DECEMBER 2012 AND MAY 2013.
9. APPROXIMATE LOCATION AND INVERTS OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN AN UNINTERRUPTED SERVICE. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES BY TEST PIT OR OTHER MEANS OF INVESTIGATION APPROVED BY THE OWNER WELL IN ADVANCE OF CONSTRUCTION. ANY DAMAGE BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
10. ALL PROPOSED TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF MDSHA'S MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL PROPOSED TRAFFIC SIGNS SHALL CONFORM TO THE LATEST VERSION OF MDSHA'S STANDARD SIGN BOOK.
11. LETTERS SHALL BE OBTAINED PRIOR TO GRADING PERMIT APPROVAL FROM ADJACENT PROPERTY OWNERS AUTHORIZING OFF-SITE ACTIVITIES.
12. ALL COORDINATES AND ELEVATIONS ALONG THE CURB ARE AT THE BASE OF THE CURB, ALONG THE FLOW LINE.
13. ALL CURB RAMPS SHALL BE FLUSH ALONG THE FLOW LINE OF THE CURB AND HAVE NO LIP.
14. ALL TRENCHES CREATED FOR UTILITY INSTALLATION SHALL BE BACKFILLED, COMPACTED AND STABILIZED AT THE END OF EACH WORKING DAY. EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH. TRENCH SHALL NOT BE OPENED IF IT CANNOT BE STABILIZED THE SAME DAY. IF AN AREA MUST BE LEFT UNSTABILIZED OVERNIGHT, SILT FENCE WILL BE PLACED IMMEDIATELY DOWNSTREAM OF ALL DISTURBED AREAS AND STOCKPILED, AND APPROPRIATE SAFETY MEASURES WILL BE INSTALLED AS REQUIRED.
15. STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEED MIX AND MULCH.
16. WHERE NEW CURB IS TO BE BUILT OVER EXISTING PAVEMENT, SAWCUT EXISTING PAVEMENT 2 FEET BEYOND PROPOSED WORK AND REMOVE. PLACE NEW HOT MIX ASPHALT PAVEMENT TO MATCH EXISTING SECTION.



35 INTERSECITON DETAIL
1"=10'

0' 10' 20'
SCALE: 1" = 10'

CURB/ RAMP LOCATIONS

POINT	NORTHING	EASTING	TC ELEV.	FLOWLINE ELEV.	OTHER ELEV.	DESCRIPTION
1	562,580.58	1,352,136.76	-	-	358.11	FLUSH CURB/EDGE OF TRAIL
2	562,586.47	1,352,140.48	-	-	357.84	PC
3	562,593.11	1,352,140.48	357.75	357.34	-	MATCH EX. TC/FLOWLINE
4	562,590.79	1,352,145.48	357.72	357.25	-	MATCH EX. TC/FLOWLINE
5	562,581.16	1,352,145.52	-	-	357.74	FLUSH CURB @ CORNER
6	562,581.85	1,352,155.96	357.52	356.93	-	MATCH EX. TC/FLOWLINE
7	562,572.21	1,352,161.68	357.20	356.67	-	MATCH EX. TC/FLOWLINE
8	562,571.18	1,352,146.18	-	-	357.94	FLUSH CURB
8-1	562,570.60	1,352,137.42	-	-	358.12	EDGE OF TRAIL
9	562,575.65	1,352,220.08	356.95	356.35	-	MATCH EX. TC/FLOWLINE
10	562576.73	1,352,230.73	-	-	357.17	FLUSH CURB
11	562,586.22	1,352,221.86	357.25	356.65	-	
12	562,586.73	1,352,230.05	-	-	357.26	FLUSH CURB
13	562,603.69	1,352,245.40	-	-	358.03	FLUSH CURB
13-1	562,598.69	1,352,246.01	-	-	358.13	
13-2	562,600.28	1,352,252.14	-	-	358.15	
14	562,604.96	1,352,250.24	-	-	358.05	FLUSH CURB
15	562,612.56	1,352,248.36	357.98	357.38	-	MATCH EX. TC/FLOWLINE
16	562,611.18	1,352,243.55	357.98	357.38	-	
17	562,575.33	1,352,235.48	-	-	357.17 +/-.1	NO SURVEY AT THIS POINT
18	562,583.92	1,352,240.59	-	-	357.72+/-.22	NO SURVEY AT THIS POINT
19	562,636.36	1,352,241.83	-	356.07	-	MATCH EXISTING
20	562,634.55	1,352,232.64	-	356.05	-	MATCH EXISTING
21	562,641.92	1,352,230.92	-	355.70	-	MATCH EXISTING
22	562,643.79	1,352,239.74	-	355.68	-	MATCH EXISTING
23	562,668.51	1,352,143.82	354.92	354.67	-	MATCH EX. TC/FLOWLINE
24	562,668.58	1,352,145.83	-	354.65	-	MATCH EX. FLOWLINE/FLUSH
25	562,668.79	1,352,150.92	-	354.60	-	MATCH EX. FLOWLINE/FLUSH
26	562,668.89	1,352,152.92	354.89	354.59	-	MATCH EX. TC/FLOWLINE
27	562,678.57	1,352,150.47	-	-	355.35	FLUSH CURB
28	562,678.85	1,352,156.46	-	-	355.72	MATCH EXISTING
29	562,683.91	1,352,156.19	-	-	355.89	MATCH EXISTING
30	562,683.60	1,352,150.21	-	-	355.45	EDGE OF SW
31	562,683.35	1,352,145.22	-	-	355.50	EDGE OF SW
32	562,683.04	1,352,139.22	-	-	356.01	EDGE OF SW
33	562,683.05	1,352,139.48	-	-	355.90	MATCH EXISTING
34	562,678.33	1,352,145.48	-	-	355.40	FLUSH CURB
35	562,676.92	1,352,220.47	354.47	354.17	-	MATCH EX. TC/FLOWLINE
36	562,678.47	1,352,227.75	354.68	354.08	-	MATCH EX. FLOWLINE
37	562,679.96	1,352,234.81	354.59	353.99	-	MATCH EX. FLOWLINE
38	562,681.00	1,352,239.72	354.36	353.92	-	MATCH EX. TC/FLOWLINE
39	562,683.71	1,352,234.01	-	-	354.25	FLUSH CURB
40	562,685.34	1,352,241.84	-	-	354.67	MATCH EXISTING
41	562,690.20	1,352,240.83	-	-	354.93	MATCH EXISTING
42	562,688.54	1,352,233.00	-	-	354.35	EDGE OF SW
43	562,691.91	1,352,232.34	-	-	354.52	EDGE OF SW
44	562,696.08	1,352,227.73	-	-	355.82	MATCH EXISTING/ PROP LINE
45	562,695.07	1,352,221.98	-	-	355.59	MATCH EXISTING/ PROP LINE
46	562,693.61	1,352,222.16	-	-	355.43	FLUSH CURB/MATCH EXISTING
47	562,690.71	1,352,225.36	355.13	354.65	-	CURB AROUND SIGNAL BOX
48	562,687.44	1,352,225.86	355.13	354.48	-	CURB AROUND SIGNAL BOX
49	562,686.39	1,352,219.07	-	-	354.99	MATCH EXISTING
50	562,681.51	1,352,219.88	-	-	354.70	MATCH EXISTING
51	562,682.56	1,352,226.91	-	-	354.38	FLUSH CURB

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date
Chief, Division of Land Development — Date: 2-25-15
Chief, Development Engineering Division — Date: 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\5282 CDP-Master Trail\Site Development Plans\USER\GDS\Sidewalk Trees\Sidewalk Plans\C9-10 - SidewalkRamps.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MARY CATHERINE BIRD — No. 35022 — PROFESSIONAL ENGINEER — 12/17/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

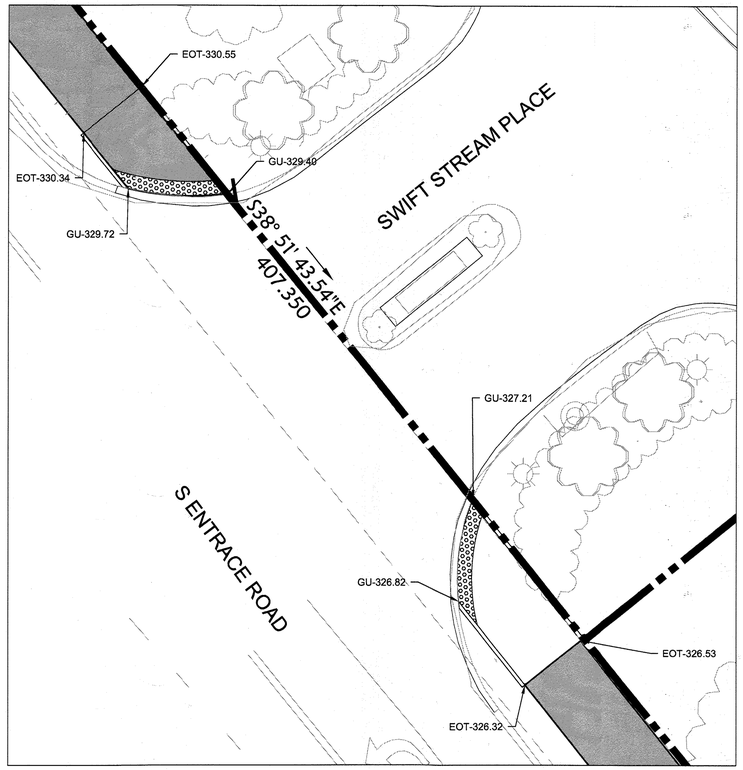
ELECTION DISTRICT 5 — HOWARD COUNTY

INTERSECTION SITE PLAN — C11.7

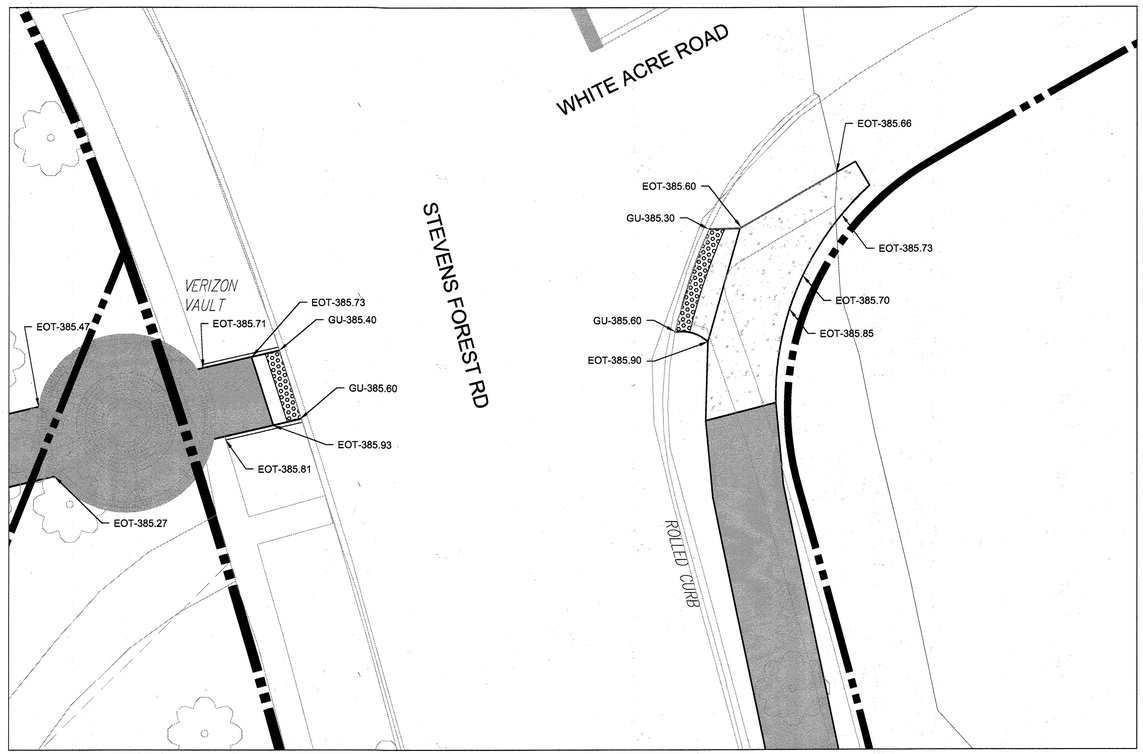
SCALE	ZONING	TDG. FILE No.
1" = 10'	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
08/05/14	36	148 OF 171

SDP-13-020

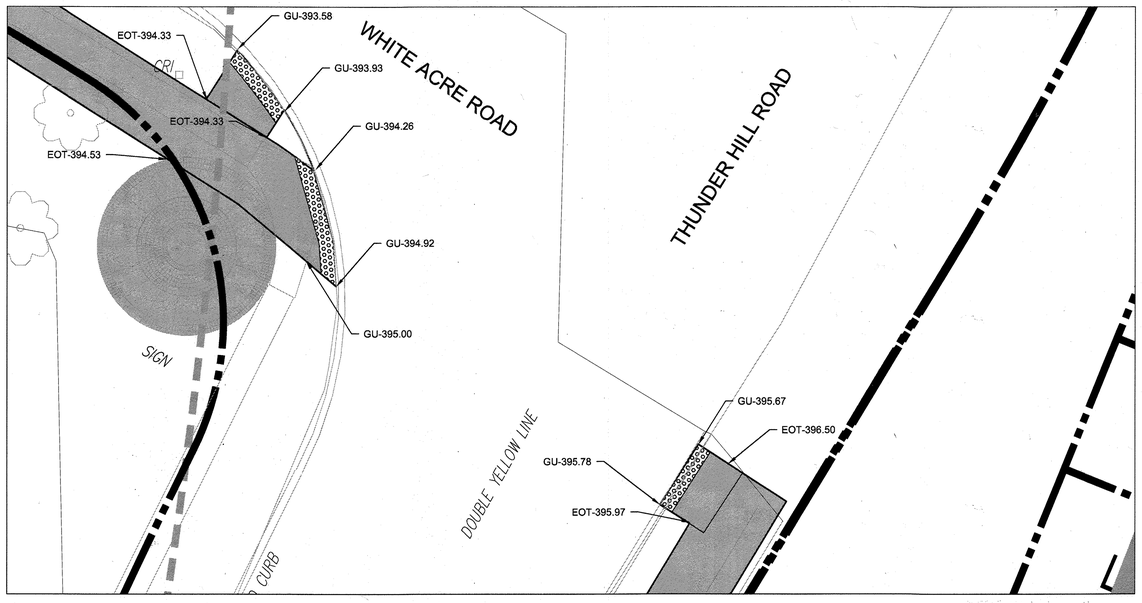
G:\ACTIVE PROJECTS\5282 CDP-Master Trail\Site Development Plans\USER\GDS\Sidewalk Trees\Sidewalk Plans\C9-10 - SidewalkRamps.dwg, 1/21/2014 1:08 PM, LAST SAVED 1/14/2014 1:08 PM, PLOTTED BY: Andrew Goodwin



37 CURB RAMP DETAIL - SWIFT STREAM PLACE
1"=10'



38 CURB RAMP DETAIL - STEVENS FOREST ROAD
1"=10'



39 CURB RAMP DETAIL - THUNDER HILL ROAD
1"=10'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2015, 11/06/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

0' 10' 20'
SCALE: 1" = 10'

CURB RAMP ENALRGEMENT 1 — C11.8

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
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10221 WINCOPIN CIRCLE, SUITE 300
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Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 33022, EXPIRATION DATE: 12/28/15

6/1/15

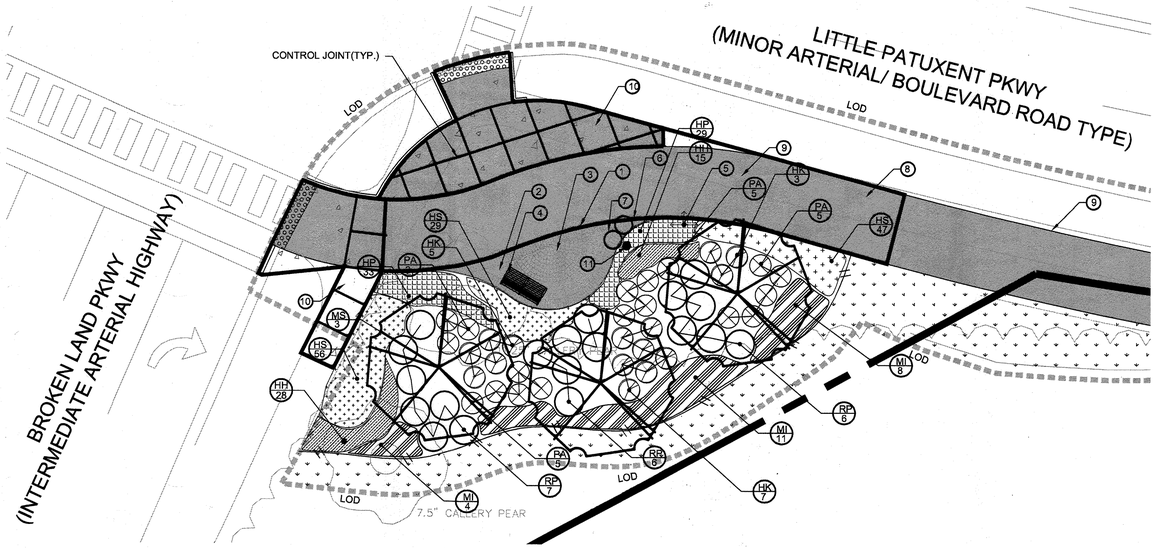
PHASE 3/4

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 10'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	149 OF 171

SDP-13-020



43 TRAIL WAYSIDE ENLARGEMENT: BROKENLAND PKWY AND LITTLE PATUXENT PKWY

1" = 10'-0"

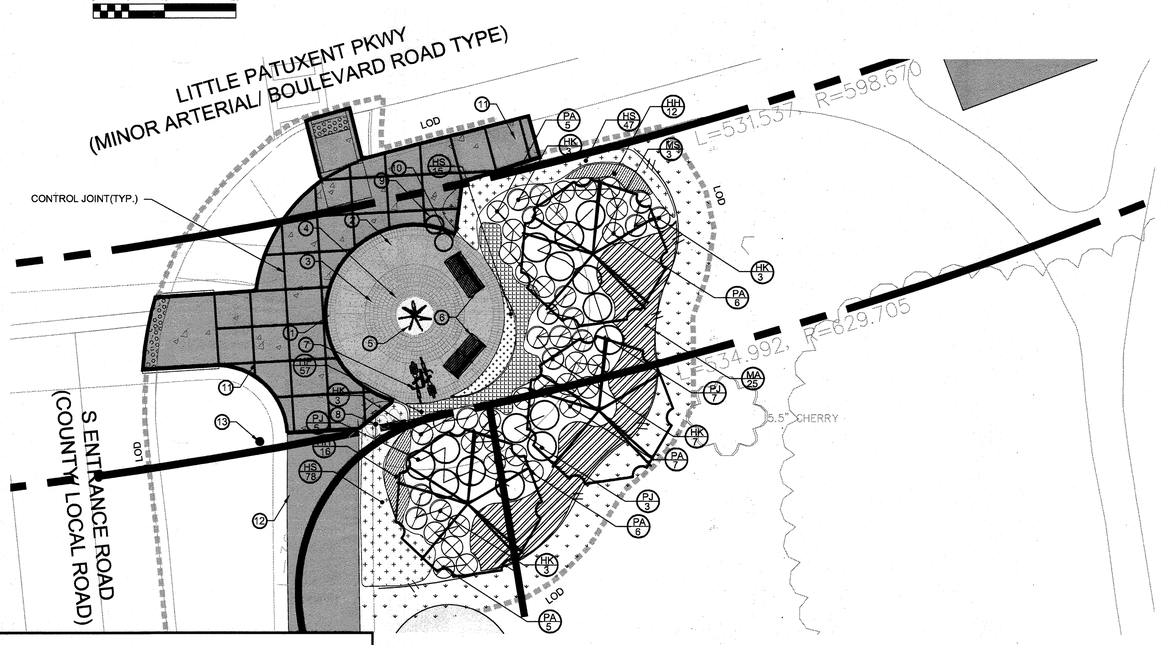
0 5' 10' 20'

1. PAVESTONE CONCRETE PAVERS HOLLAND STONE - HERITAGE TUMBLED AND INVERTED, COLOR: EDDINGTON 60MM 7 13/16 x 3 7/8 DOUBLE LAYER BAND SEE DETAIL
2. CONCRETE WITH SCORING TROWEL FINISH; INTEGRAL COLOR, SEE DETAIL, COLOR: PALOMINO 5447
3. PAVESTONE CONCRETE PAVERS PLAZA IV STONE CIRCLE WEDGE 60MM, COLOR: EDDINGTON 5 1/2" x 4 1/8 " (FULL CIRCLE PACK) SEE DETAIL
4. 6' BENCH. REFER TO DETAIL 83
5. WAYFINDING LOCATION #201. REFER TO DETAIL 101
6. TYPICAL TRASH RECEPTACLE. REFER TO DETAIL 80
7. TYPICAL RECYCLING RECEPTACLE. REFER TO DETAIL 81
8. STANDARD NON-PERMEABLE ASPHALT. REFER TO DETAIL 66
9. PERMEABLE ASPHALT. REFER TO DETAIL
10. CONCRETE WITH SCORING TROWEL FINISH: STANDARD GREY COLOR. REFER TO DETAIL 60
11. POST TOP LIGHT FIXTURE 100W. REFER TO SHEET 161

PLANTING SCHEDULE:

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Deciduous Trees		
MS	Magnolia x soulangiana	Saucer Magnolia	6' - 8' ht. b&b
	Deciduous Shrubs		
RP	Rhododendron 'PJM'	PJM Rhododendron	2' - 2.5' ht.
	Perennials/ Ornamental Grasses		
HH	Hemerocallis x 'Happy Returns'	Happy Returns Day Lily	1 gal./cont.
HP	Hemerocallis x 'Pardon Me'	Pardon Me Day Lily	1 gal./cont.
HS	Hemerocallis x 'Stella D'oro'	Stella D'oro Day Lily	1 gal./cont.
HK	Hypericum Kalmianum 'Gemo'	Gemo St. John's Wort	1 gal./cont.
MI	Miscanthus sinensis var. 'Yaku Jima'	Dwarf Malden Grass	1 gal./cont.
PA	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	1 gal./cont.

NOTES:



44 TRAIL WAYSIDE ENLARGEMENT: LITTLE PATUXENT PKWY AND S ENTRANCE ROAD

1" = 10'-0"

0 5' 10' 20'

1. PAVESTONE CONCRETE PAVERS HOLLAND STONE - HERITAGE TUMBLED AND INVERTED, COLOR: EDDINGTON 60MM 7 13/16 x 3 7/8 DOUBLE LAYER BAND SEE DETAIL
2. CONCRETE WITH SCORING TROWEL FINISH; INTEGRAL COLOR, SEE DETAIL, COLOR: PALOMINO 5447
3. PAVESTONE CONCRETE PAVERS PLAZA IV STONE CIRCLE WEDGE 60MM, COLOR: EDDINGTON 5 1/2" x 4 1/8 " (FULL CIRCLE PACK) SEE DETAIL
4. PAVESTONE CONCRETE PAVERS HOLLAND STONE - HERITAGE TUMBLED AND INVERTED, COLOR: EDDINGTON, PAVESTONE 60MM 7 13/16 x 3 7/8 SINGLE LAYER BAND SEE DETAIL
5. CONCRETE FORM LINER GRAPHIC. REFER TO DETAIL 67
6. (2) 6' BENCHES. REFER TO DETAIL 83
7. BIKE RACK. REFER TO DETAIL 82
8. WAYFINDING LOCATION #204. REFER TO DETAIL 204
9. TYPICAL TRASH RECEPTACLE. REFER TO DETAIL 80
10. TYPICAL RECYCLING RECEPTACLE. REFER TO DETAIL 81
11. CONCRETE WITH SCORING TROWEL FINISH: STANDARD GREY COLOR. REFER TO DETAIL 60
12. STANDARD NON-PERMEABLE ASPHALT. REFER TO DETAIL 66
13. POST TOP LIGHT FIXTURE 100W. REFER TO SHEET 161

PLANTING SCHEDULE:

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Deciduous Trees		
MS	Magnolia x soulangiana	Saucer Magnolia	6' - 8' ht. b&b
	Perennials/ Ornamental Grasses		
HH	Hemerocallis x 'Happy Returns'	Happy Returns Day Lily	1 gal./cont.
HP	Hemerocallis x 'Pardon Me'	Pardon Me Day Lily	1 gal./cont.
HS	Hemerocallis x 'Stella D'oro'	Stella D'oro Day Lily	1 gal./cont.
HK	Hypericum Kalmianum 'Gemo'	Gemo St. John's Wort	1 gal./cont.
MA	Miscanthus sinensis 'Arabesque'	Arabesque Silver Grass	1 gal./cont.
PA	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	1 gal./cont.
PJ	Pieris japonica 'Compacta'	Compact Japanese Andromeda	1 gal./cont.

NOTES:

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/27/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND · G. SCOTT SHANABERGER · No. 10849 · PROFESSIONAL LAND SURVEYOR

LANDSCAPE ENLARGEMENTS C11.9

ToolDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/29/14	~~PAVERS ARE PROVIDED WHERE TONED CONCRETE SAW CUTS OR PAVERS.~~	MAB	
05/29/14	ADD LINES SHOWING CONCRETE SCORING AT 5 FOOT INTERVALS		

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND · JOHN R. KLOSTERMAN · No. 35022 · REGISTERED PROFESSIONAL ENGINEER

12/11/14

PHASE 1

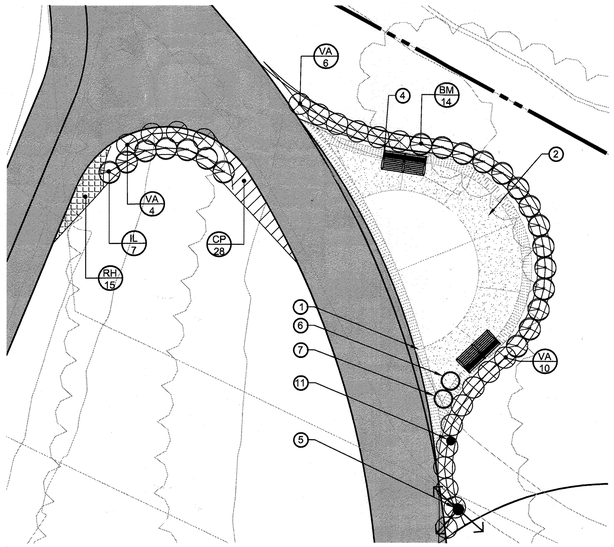
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
1" = 10'-0"	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	150 OF 171

SDP-13-020

C:\ACTIVE PROJECTS\5282 CDP-Blandair Trail\Site Development Plan\JOBS\SHEETS\Shifted Trail\Shifted Plans\C9-X – Skyline&Landscape.dwg
PLOTTED: 11/26/2014 8:09 AM, LAST SAVED: 11/21/2014 11:06 PM, PLOTTED BY: Andrew Gudgeon



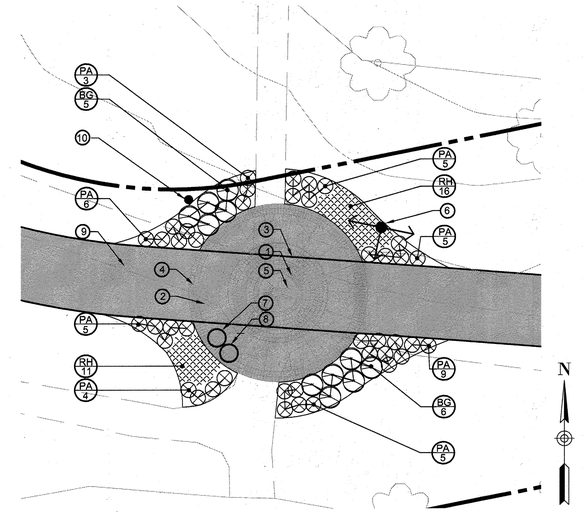
NOTES:

1. PAVESTONE CONCRETE PAVERS HOLLAND STONE - HERITAGE TUMBLED AND INVERTED, COLOR: EDDINGTON 60MM 7 3/16 x 3 1/8 DOUBLE LAYER BAND SEE DETAIL
2. CONCRETE WITH SCORING TROWEL FINISH; INTEGRAL COLOR, SEE DETAIL, COLOR: PALOMINO 5447
3. PAVESTONE CONCRETE PAVERS PLAZA IV STONE CIRCLE WEDGE 60MM, COLOR: EDDINGTON 5 1/2" x 4 1/8" (FULL CIRCLE PACK) SEE DETAIL
4. (2) 6' BENCH. REFER TO DETAIL 83
5. WAYFINDING LOCATION #301. REFER TO DETAIL 301
6. TYPICAL TRASH RECEPTACLE. REFER TO DETAIL 80
7. TYPICAL RECYCLING RECEPTACLE. REFER TO DETAIL 81
8. STANDARD NON-PERMEABLE ASPHALT. REFER TO DETAIL 66
9. PERMEABLE ASPHALT. REFER TO DETAIL 64
10. CONCRETE WITH SCORING TROWEL FINISH: STANDARD GREY COLOR. REFER TO DETAIL 60
11. POST TOP LIGHT FIXTURE 100W. REFER TO SHEET 160

PLANTING SCHEDULE:

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Accent Shrubs		
BM	Buxus microphylla	Wintergreen boxwood	2' - 2.5' ht.
IL	Ilex verticillata	Common Winterberry	3' - 4' ht.
VA	Vaccinium corymbosum	High bush Blueberry	2' - 2.5' ht.
	Perennials/ Ornamental Grasses		
CP	Carex pensylvanica	Pennsylvania Sedge	1gal./cont.
RH	Rudbeckia hirta	Black Eyed Susan	1gal./cont.

45 TRAIL WAYSIDE ENLARGEMENT: LAKE KITTAMAQUNDI
1" = 10'-0"
0 5' 10' 20'



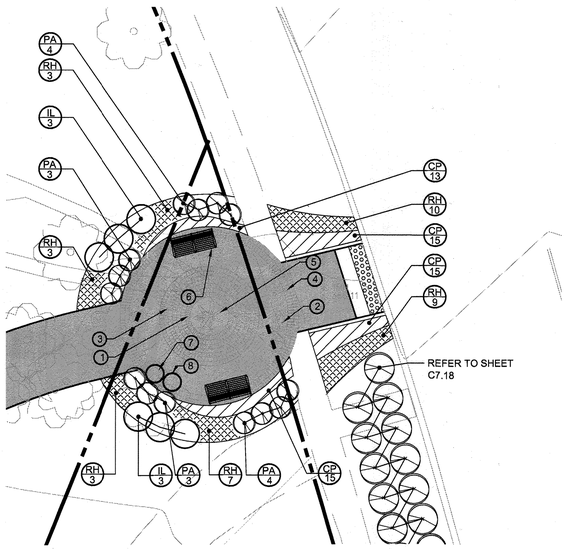
47 TRAIL WAYSIDE ENLARGEMENT: OAKLAND MILLS VILLAGE CENTER
1" = 10'-0"
0 5' 10' 20'

NOTES:

1. PAVESTONE CONCRETE PAVERS HOLLAND STONE - HERITAGE TUMBLED AND INVERTED, COLOR: EDDINGTON 60MM 7 3/16 x 3 1/8 DOUBLE LAYER BAND SEE DETAIL
2. CONCRETE WITH SCORING TROWEL FINISH; INTEGRAL COLOR, SEE DETAIL, COLOR: PALOMINO 5447
3. PAVESTONE CONCRETE PAVERS PLAZA IV STONE CIRCLE WEDGE 60MM, COLOR: EDDINGTON 5 1/2" x 4 1/8" (FULL CIRCLE PACK) SEE DETAIL
4. PAVESTONE CONCRETE PAVERS HOLLAND STONE - HERITAGE TUMBLED AND INVERTED, COLOR: EDDINGTON, PAVESTONE 60MM 7 3/16 x 3 1/8 SINGLE LAYER BAND SEE DETAIL
5. CONCRETE FORM LINER GRAPHIC. REFER TO DETAIL 67
6. WAYFINDING LOCATION #402. REFER TO DETAIL 402
7. TYPICAL TRASH RECEPTACLE. REFER TO DETAIL 80
8. TYPICAL RECYCLING RECEPTACLE. REFER TO DETAIL 81
9. PERMEABLE ASPHALT. REFER TO DETAIL 64
10. POST TOP LIGHT FIXTURE 100W. REFER TO SHEET 160

PLANTING SCHEDULE:

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Accent Shrubs		
BG	Buxus microphylla X 'Green Gem'	Green Gem Boxwood	3gal./cont.
	Perennials/ Ornamental Grasses		
PA	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	1gal./cont.
RH	Rudbeckia hirta	Black Eyed Susan	1gal./cont.



NOTES:

1. PAVESTONE CONCRETE PAVERS HOLLAND STONE - HERITAGE TUMBLED AND INVERTED, COLOR: EDDINGTON 60MM 7 3/16 x 3 1/8 DOUBLE LAYER BAND SEE DETAIL
2. CONCRETE WITH SCORING TROWEL FINISH; INTEGRAL COLOR, SEE DETAIL, COLOR: PALOMINO 5447
3. PAVESTONE CONCRETE PAVERS PLAZA IV STONE CIRCLE WEDGE 60MM, COLOR: EDDINGTON 5 1/2" x 4 1/8" (FULL CIRCLE PACK) SEE DETAIL
4. PAVESTONE CONCRETE PAVERS HOLLAND STONE - HERITAGE TUMBLED AND INVERTED, COLOR: EDDINGTON, PAVESTONE 60MM 7 3/16 x 3 1/8 SINGLE LAYER BAND SEE DETAIL
5. CONCRETE FORM LINER GRAPHIC. REFER TO DETAIL 67
6. (2) 6' BENCHES. REFER TO DETAIL 83
7. TYPICAL TRASH RECEPTACLE. REFER TO DETAIL 80
8. TYPICAL RECYCLING RECEPTACLE. REFER TO DETAIL 81

46 TRAIL WAYSIDE ENLARGEMENT: STEVENS FOREST ROAD
1" = 10'-0"
0 5' 10' 20'

PLANTING SCHEDULE:

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Accent Shrubs		
IL	Ilex verticillata	Common Winterberry	3' - 4' ht.
	Perennials/ Ornamental Grasses		
CP	Carex pensylvanica	Pennsylvania Sedge	1gal./cont.
PA	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	1gal./cont.
RH	Rudbeckia hirta	Black Eyed Susan	1gal./cont.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/01/2015, 11/02/2015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

Q. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — Q. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

NOTES:

Toole Design Group
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\5282 CEP-Blandair Trail\Site Development Plan 3\C10\Plan\C10-1 - LandEnlgmnts.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MARY ALLISON BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

Mary Allison Brick 6/1/15

PHASE 3/4

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

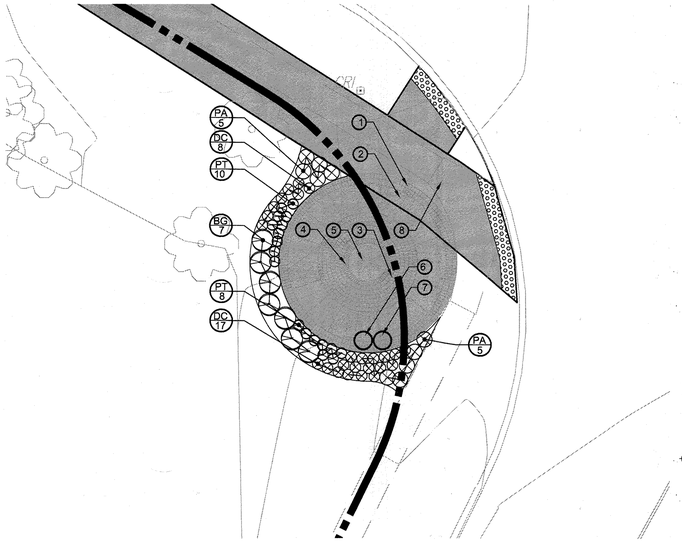
ELECTION DISTRICT 5 — HOWARD COUNTY

LANDSCAPE ENLARGEMENTS C11.10

SCALE	ZONING	TDG. FILE No.
1" = 10'-0"	NT/POR /R-12	5282
DATE	TAX MAP - GRID	SHEET
04/20/15	36	151 OF 174

SDP-13-020

G:\ACTIVE PROJECTS\5282 CEP-Blandair Trail\Site Development Plan 3\C10\Plan\C10-1 - LandEnlgmnts.dwg, PLOTTED:5/1/2015 4:19 PM, LAST SAVED:5/29/2015 4:21 PM, PLOTTED BY Chris Dalen



NOTES:

1. PAVESTONE CONCRETE PAVERS HOLLAND STONE - HERITAGE TUMBLED AND INVERTED, COLOR: EDDINGTON 60MM 7 13/16 x 3 7/8 DOUBLE LAYER BAND SEE DETAIL
2. CONCRETE WITH SCORING TROWEL FINISH; INTEGRAL COLOR, SEE DETAIL, COLOR: PALOMINO 5447
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5. CONCRETE FORM LINER GRAPHIC. REFER TO DETAIL 67
6. TYPICAL TRASH RECEPTACLE. REFER TO DETAIL 80
7. TYPICAL RECYCLING RECEPTACLE. REFER TO DETAIL 81
8. STANDARD NON-PERMEABLE ASPHALT. REFER TO DETAIL 66

N

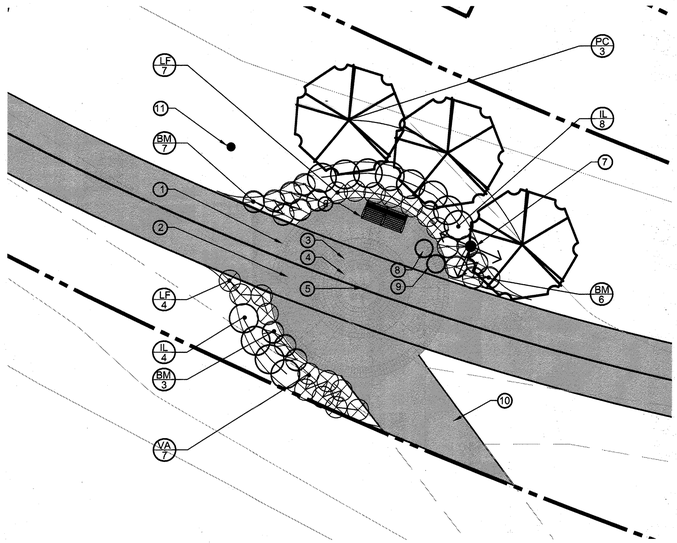
48 TRAIL WAYSIDE ENLARGEMENT: THUNDER HILL ROAD

1" = 10'-0"

0 5' 10' 20'

PLANTING SCHEDULE:

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Accent Shrubs		
BG	Buxus microphylla X 'Green Gem'	Green Gem Boxwood	3 gal./cont.
	Perennials/ Ferns/ Groundcover		
PT	Pulmonaria x 'Trevi Fountain'	Lungwort	1 gal./cont.
DC	Dryopteris championii	Champion's Wood Fern	1 gal./cont.
PA	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	1 gal./cont.



NOTES:

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5. CONCRETE FORM LINER GRAPHIC. REFER TO DETAIL 67
6. 6' BENCHES. REFER TO DETAIL 83
7. WAYFINDING LOCATION #405. REFER TO DETAIL 405
8. TYPICAL TRASH RECEPTACLE. REFER TO DETAIL 80
9. TYPICAL RECYCLING RECEPTACLE. REFER TO DETAIL 81
10. STANDARD NON-PERMEABLE ASPHALT. REFER TO DETAIL 66
11. POST TOP LIGHT FIXTURE 100W. REFER TO SHEET 161

N

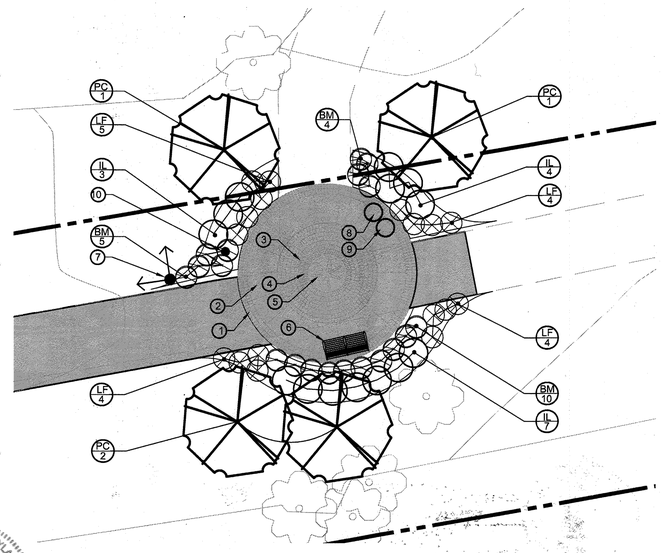
49 TRAIL WAYSIDE ENLARGEMENT: OAKLAND MILLS HIGH SCOOL

1" = 10'-0"

0 5' 10' 20'

PLANTING SCHEDULE:

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Deciduous Trees		
PC	Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane Tree	2.5 - 3" CAL./ B&B
	Accent Shrubs		
BM	Buxus microphylla	Wintergreen boxwood	2' - 2.5' ht.
IL	Ilex verticillata	Common Winterberry	3' - 4' ht.
LF	Leucothoe fantanesiana	Droping Leucothoe	2' - 2.5' ht.
VA	Vaccinium corymbosum	High bush Blueberry	2' - 2.5' ht.



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5. CONCRETE FORM LINER GRAPHIC. REFER TO DETAIL 67
6. 6' BENCHES. REFER TO DETAIL 83
7. WAYFINDING LOCATION #406. REFER TO DETAIL 406
8. TYPICAL TRASH RECEPTACLE. REFER TO DETAIL 80
9. TYPICAL RECYCLING RECEPTACLE. REFER TO DETAIL 81
10. POST TOP LIGHT FIXTURE 100W. REFER TO SHEET 161

N

PLANTING SCHEDULE:

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/TYPE
	Deciduous Trees		
PC	Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane Tree	2.5 - 3" CAL./ B&B
	Accent Shrubs		
BM	Buxus microphylla	Wintergreen boxwood	2' - 2.5' ht.
IL	Ilex verticillata	Common Winterberry	3' - 4' ht.
LF	Leucothoe fantanesiana	Droping Leucothoe	2' - 2.5' ht.

50 TRAIL WAYSIDE ENLARGEMENT: END OF TRAIL CONNECTION

1" = 10'-0"

0 5' 10' 20'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp. Date: 4/2/2016
AS-BUILT DATE: 10/13/2015

STATE OF MARYLAND — G. SCOTT SHANABERGER — 10849 — PROFESSIONAL LAND SURVEYOR

ToolDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
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Q:\ACTIVE PROJECTS\5200 CEP-Blandair Trail\Site Development Plan 2\CAD\Plans\C2-1 - LandEnlargmnts.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
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Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MELANIE PALLESTER KRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

6/1/15

PHASE 4

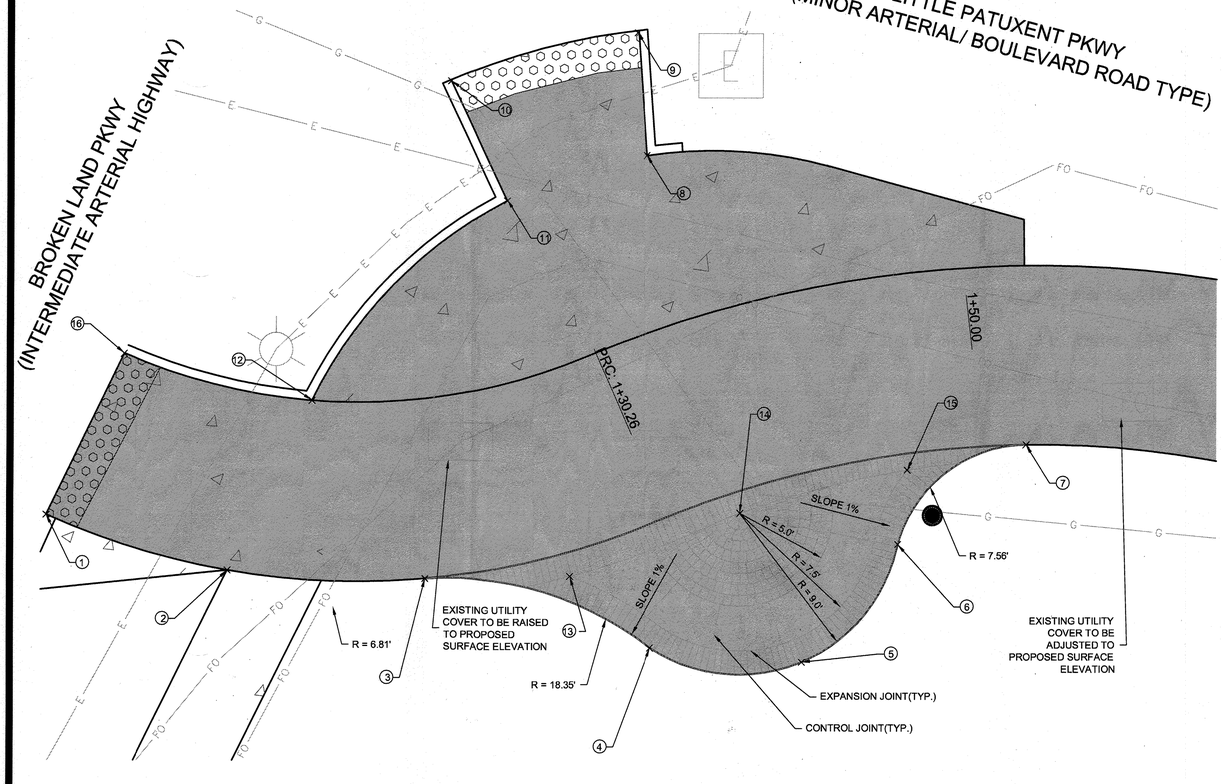
DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

LANDSCAPE ENLARGEMENTS C11.11

SCALE	ZONING	TDG. FILE No.
1" = 10'-0"	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	152 OF 171

SDP-13-020

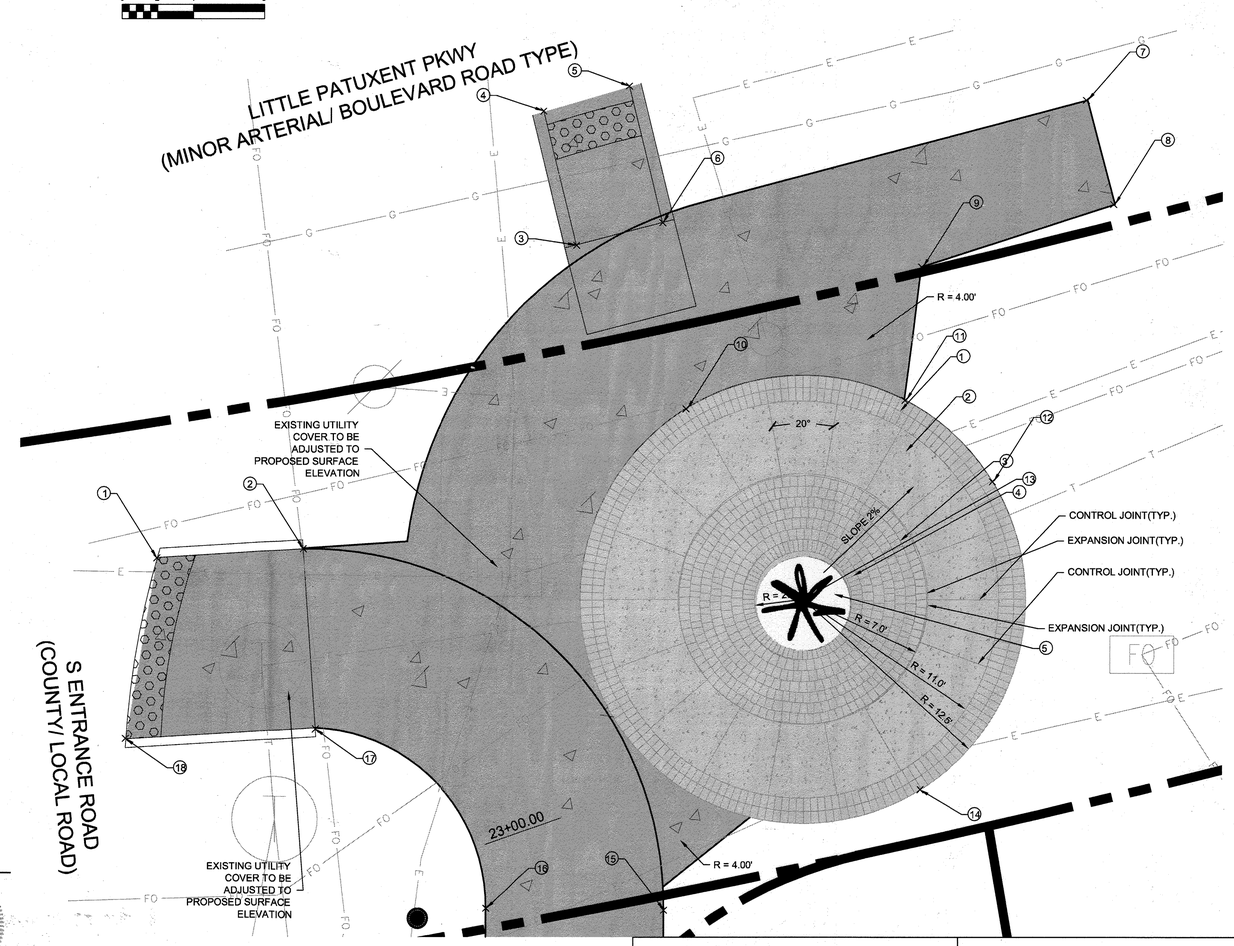


LANDSCAPE ENLARGEMENT AREA #1			
POINT NUMBER	STATION	OFFSET	ELEVATION
①	65+32.89	5.00'	357.78'
②	65+40.89	5.00'	358.25'
③	65+50.74	5.00'	358.47'
④	65+60.23	11.47'	358.63'
⑤	65+68.67	15.15'	358.74'
⑥	65+76.94	10.20'	358.66'
⑦	65+85.75	5.00'	358.60'
⑧	65+68.54	14.42'	358.18'
⑨	65+69.70	21.23'	357.93'
⑩	65+59.98	21.97'	358.05'
⑪	65+61.28	14.73'	358.16'
⑫	65+44.40	5.00'	358.25'
⑬	65+57.72	6.31'	358.54'
⑭	65+67.59	6.19'	358.55'
⑮	65+78.34	5.92'	358.60'
⑯	65+33.52	5.00'	357.98'

51 TRAIL WAYSIDE ENLARGEMENT: BROKEN LAND PKWY AND LITTLE PATUXENT PKWY

1/4"=1'

0 2' 4' 8'



LANDSCAPE ENLARGEMENT AREA #2			
POINT NUMBER	STATION	OFFSET	ELEVATION
①	87+08.35	5.00'	356.65'
②	87+14.35	5.05'	357.26'
③	87+20.14	24.90'	358.03'
④	87+18.67	31.36'	357.38'
⑤	87+19.96	34.24'	357.38'
⑥	87+21.54	28.08'	358.05'
⑦	87+26.07	47.33'	358.38'
⑧	87+27.37	44.46'	358.47
⑨	87+25.83	34.61'	357.89'
⑩	87+24.10	19.90'	357.89'
⑪	87+27.43	28.91'	357.40'
⑫	87+29.71	30.17'	357.40'
⑬	87+29.60	17.68'	357.15'
⑭	87+35.06	20.08'	356.90'
⑮	87+38.03	5.00'	356.93'
⑯	87+38.03	5.00'	356.73'
⑰	87+14.38	5.00'	357.17'
⑱	87+05.94	5.00'	356.35'

52 TRAIL WAYSIDE ENLARGEMENT: LITTLE PATUXENT PKWY AND S ENTRANCE ROAD

1/4"=1'

0 2' 4' 8'

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 02/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 4/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

D:\ACTIVE PROJECTS\5282 DPB-Blandair Trail\Site Development Plan\DESIGN\CAD\Shifted Trail\Shifted Plans\DCP-X - Shiftedtrailsdpb.dwg, PLOTTED: 11/25/2014 5:30 PM, LAST SAVED: 11/25/2014 1:05 PM, PLOTTED BY: Andrew Gudgeon

DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
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PROFESSIONAL CERTIFICATION

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STATE OF MARYLAND — MELANIE K. KEBLER-CRIST — No. 35022 — PROFESSIONAL ENGINEER

12/17/14

PHASE 1

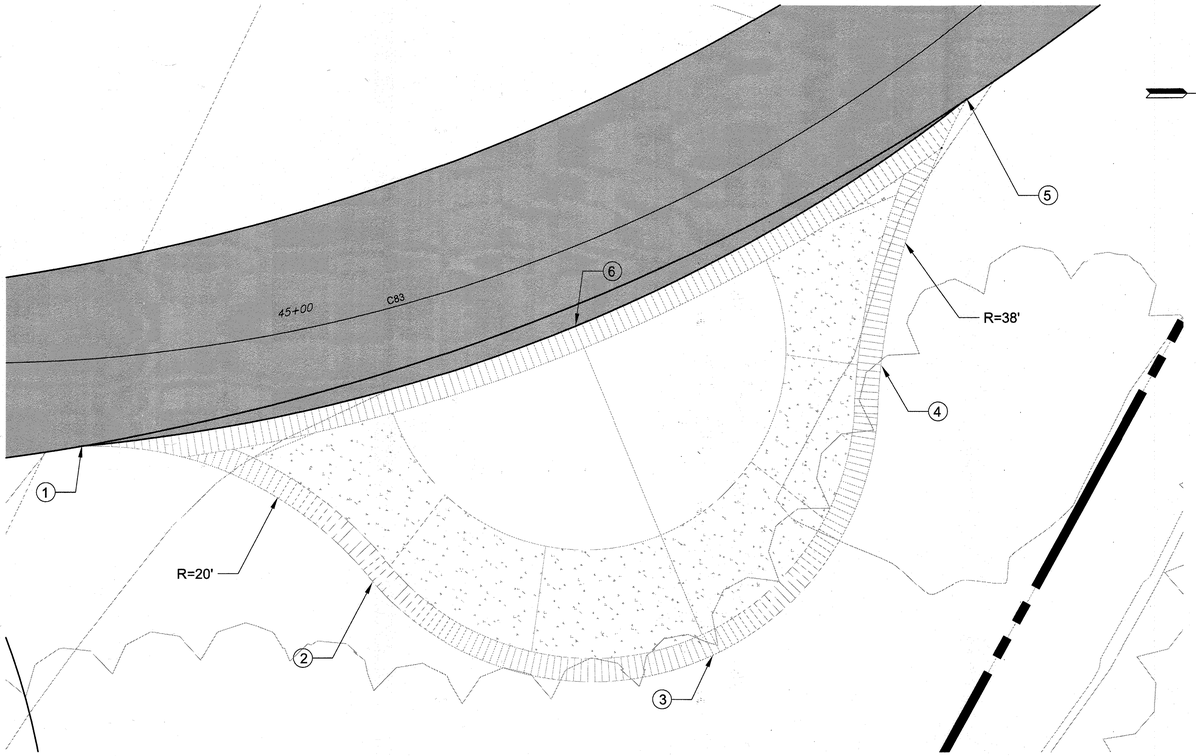
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

HARDSCAPE ENLARGEMENT C11.12

SCALE	ZONING	TDG. FILE No.
1/4" = 1'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	153 OF 171

SDP-13-020

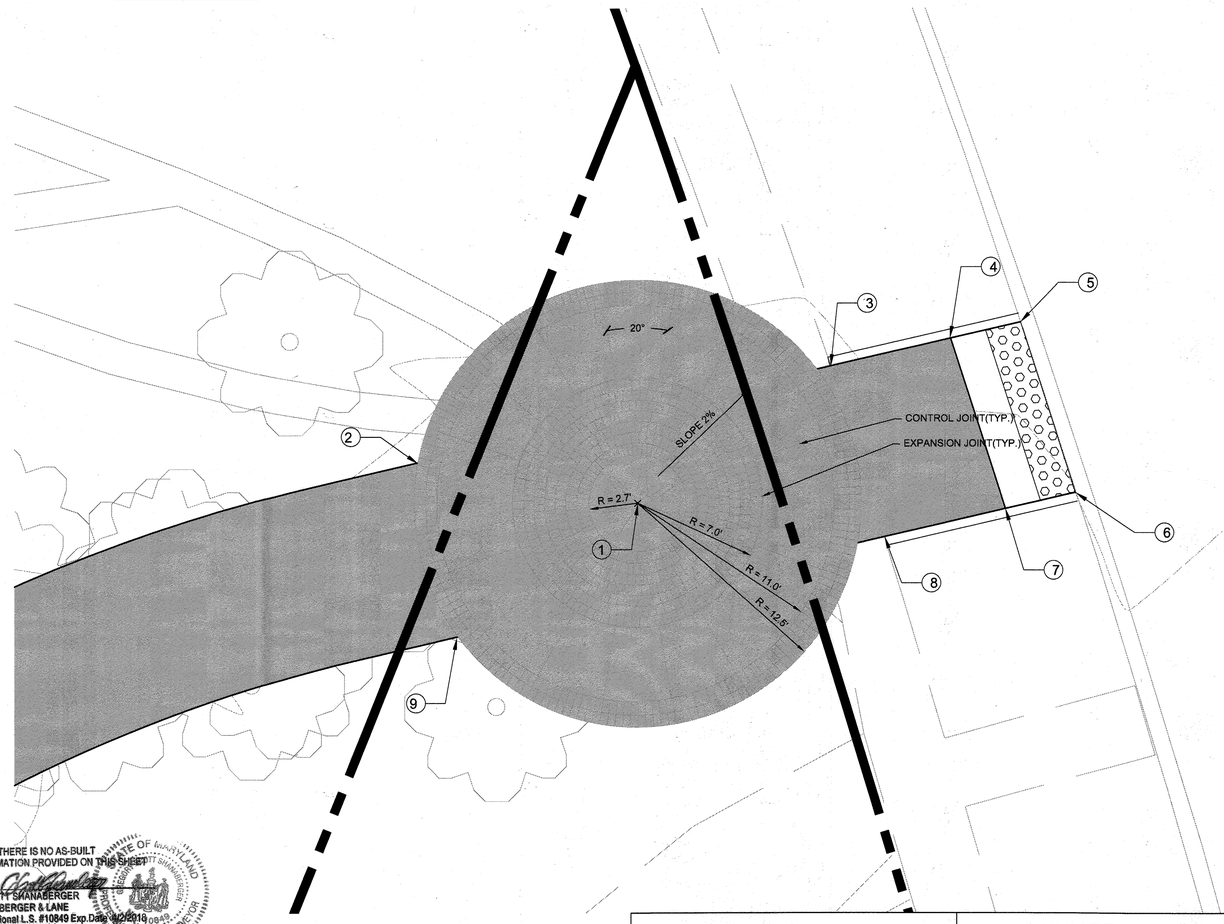


LANDSCAPE ENLARGEMENT AREA #1			
POINT NUMBER	STATION	OFFSET	ELEVATION
1	110+09.20	5.00'	299.41'
2	110+22.61	16'	299.29'
3	110+36.73	26'	299.04'
4	110+49.96	15.5'	300.14'
5	110+60.88	5.00'	300.13'
6	110+36.58	6.00'	299.68'
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

54 TRAIL WAYSIDE ENLARGEMENT: LAKE KITTAMAQUNDI
1/4"=1'

0 2' 4' 8'

LANDSCAPE ENLARGEMENT AREA #2			
POINT NUMBER	STATION	OFFSET	ELEVATION
1	152+03.08	0'	385.40
2	151+91.67	5'	385.47
3	152+15.33	5'	385.71
4	152+22.29	5'	385.73
5	152+26.29	5'	385.40
6	152+27.11	5'	385.60
7	152+23.11	5'	385.93
8	152+16.15	5'	385.81
9	151+91.67	5'	385.27
10			
11			
12			
13			
14			
15			
16			
17			
18			



55 TRAIL WAYSIDE ENLARGEMENT: STEVENS FOREST RD
1/4"=1'

0 2' 4' 8'

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15
Chief, Division of Land Development — Date 7-16-15
Chief, Development Engineering Division — Date 7.13.15

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DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Q:\ACTIVE PROJECTS\5282 GDP-Blandair Trail\Site Development Plan 3\CAD\Plans\C11-13 - HardscapeSite.dwg | DES. DPB | DRN. AG | CHK. EM

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EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 6/11/15

PHASE 3

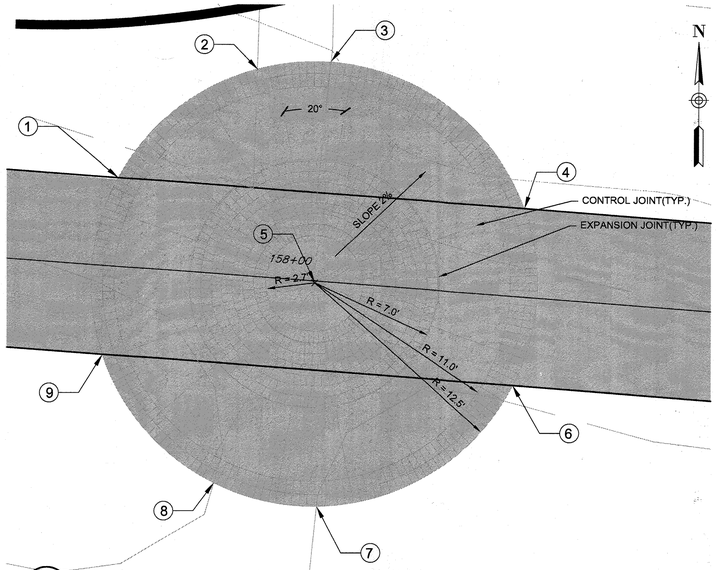
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

HARDSCAPE ENLARGEMENT C11.13

SCALE	ZONING	TDG. FILE No.
1/4" = 1'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	154 OF 171

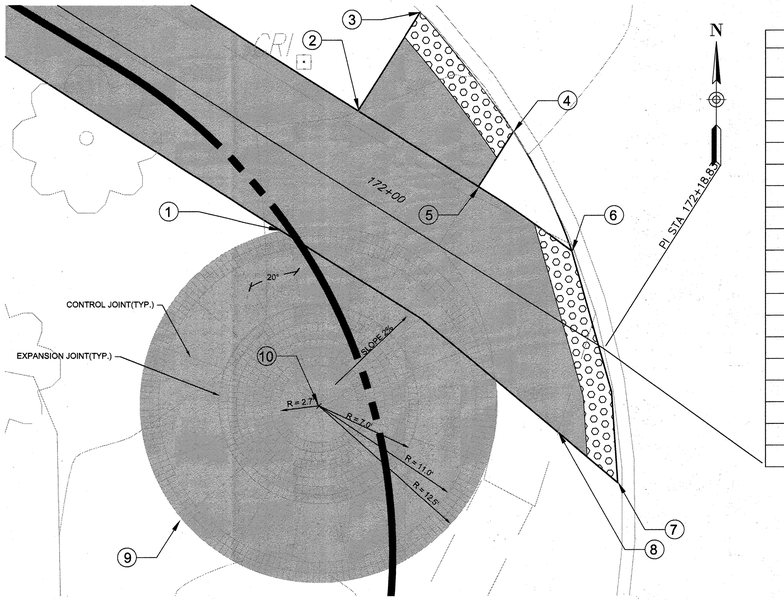
SDP-13-020



LANDSCAPE ENLARGEMENT AREA #2			
POINT NUMBER	STATION	OFFSET	ELEVATION
①	157+97.49	5.00'	403.09'
②	157+99.34	11.67'	403.32'
③	158+00.37	12.37'	403.32'
④	158+03.23	5.00'	403.29'
⑤	158+00.38	0.00'	403.09'
⑥	158+03.25	5.00'	403.09'
⑦	158+00.63	12.60'	402.82'
⑧	157+99.18	11.71'	402.82'
⑨	157+97.49	5.00'	402.89'
⑩			
⑪			
⑫			
⑬			
⑭			
⑮			
⑯			
⑰			
⑱			

0 2' 4' 8'

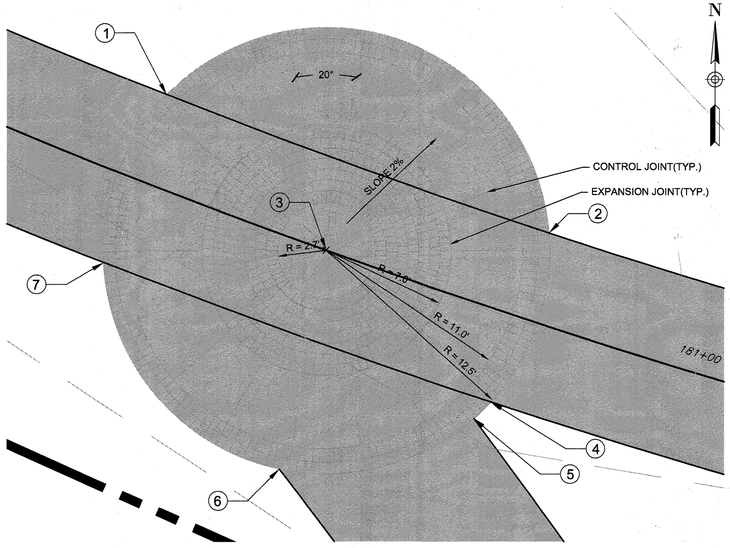
56 TRAIL WAYSIDE ENLARGEMENT: OAKLAND MILLS VILLAGE CENTER
1/4"=1'



LANDSCAPE ENLARGEMENT AREA #2			
POINT NUMBER	STATION	OFFSET	ELEVATION
①	171+99.05	5.00'	394.53'
②	171+99.06	5.00'	394.33'
③	171+99.06	13.5'	393.58'
④	172+01.06	10.0'	393.93'
⑤	172+01.06	5.00'	394.33'
⑥	172+02.60	5.37'	394.26'
⑦	172+20.09	5.00'	394.92'
⑧	172+18.83	5.00'	395.00'
⑨	172+00.05	25.82'	395.00'
⑩	172+00.82	14.00'	394.73'
⑪			
⑫			
⑬			
⑭			
⑮			
⑯			
⑰			
⑱			

0 2' 4' 8'

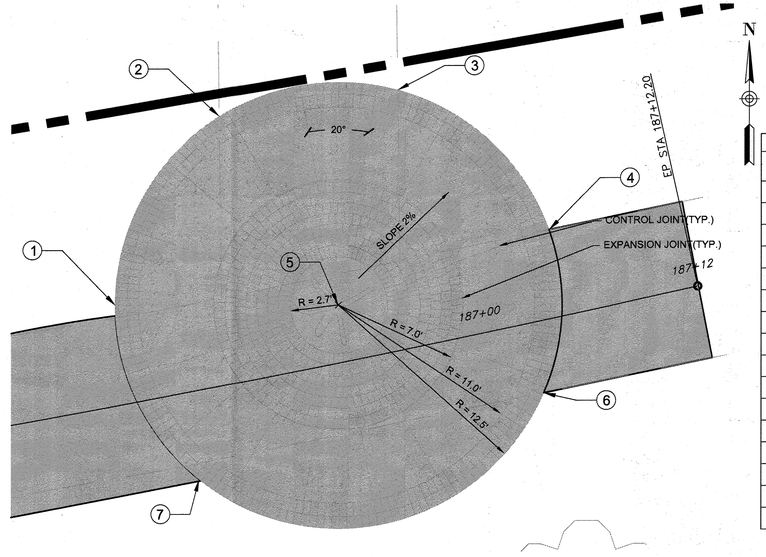
57 TRAIL WAYSIDE ENLARGEMENT: THUNDER HILL ROAD
1/4"=1'



LANDSCAPE ENLARGEMENT AREA #1			
POINT NUMBER	STATION	OFFSET	ELEVATION
①	180+91.60	5.00'	417.25'
②	180+97.45	5.00'	417.40'
③	180+94.45	0.00'	417.22'
④	180+97.40	5.00'	417.20'
⑤	180+97.25	6.18'	417.17'
⑥	180+94.93	12.40'	417.02'
⑦	180+91.71	5.00'	417.05'
⑧			
⑨			
⑩			
⑪			
⑫			
⑬			
⑭			
⑮			
⑯			

0 2' 4' 8'

58 TRAIL WAYSIDE ENLARGEMENT: OAKLAND MILLS HIGH SCHOOL
1/4"=1'



LANDSCAPE ENLARGEMENT AREA #1			
POINT NUMBER	STATION	OFFSET	ELEVATION
①	186+95.00	5.35'	427.83'
②	186+96.96	14.51'	427.41'
③	186+99.53	14.00'	427.20'
④	187+01.18	4.66'	427.20'
⑤	186+98.07	2.83'	427.45'
⑥	187+00.63	4.25'	427.13'
⑦	186+95.72	5.14'	427.60'
⑧			
⑨			
⑩			
⑪			
⑫			
⑬			
⑭			
⑮			
⑯			

59 TRAIL WAYSIDE ENLARGEMENT: END OF TRAIL CONNECTION
1/4"=1'

0 2' 4' 8'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 6/11/2015, 11 Zoning Hearing

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/30/2018
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — 10849 — PROFESSIONAL LAND SURVEYOR

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8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

Q:\ACTIVE PROJECTS\5282 CDP-Blandair Trail\Site Development Plan 3\Cad\Plans\C3-X - HardscpDtls.dwg | DES. DPB | DRN. AG | CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MICHAEL CHRISTIAN BRICK — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

6/11/15

PHASE 4

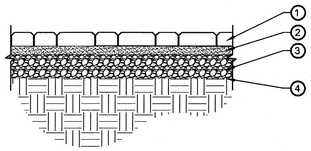
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

HARDSCAPE ENLARGEMENT C11.14

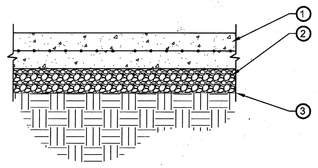
SCALE	ZONING	TDG. FILE No.
1/4" = 1'	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	155 OF 171

SDP-13-020



1. PAVESTONE CONCRETE PAVER 2 3/8" MIN. THICKNESS
2. 1" TO 1 ½" BEDDING SAND
3. 4" MIN. COMPACTED AGGREGATE BASE ON COMPACTED SUBGRADE
4. GEOTEXTILE FABRIC - TURNED UP AT SIDES

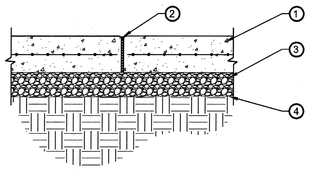
59 CONCRETE PAVER TYPICAL DETAIL
1"=1'



1. 6" CONCRETE WITH 4X4 WWF. INTEGRAL COLOR: PALOMINO 5447
2. 4" MIN. COMPACTED AGGREGATE BASE ON COMPACTED SUBGRADE
3. GEOTEXTILE FABRIC - TURNED UP AT SIDES

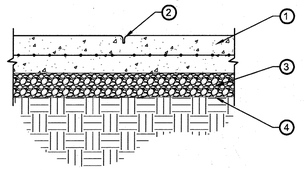
NOTE: STANDARD GREY COLOR TO BE USED IN STANDARD SIDEWALK SECTIONS

60 REINFORCED CONCRETE PAVEMENT
1"=1'



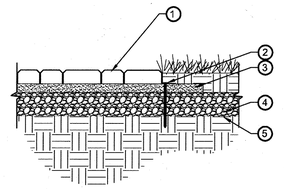
1. 6" CONCRETE WITH 4X4 WWF. INTEGRAL COLOR: PALOMINO 5447
2. ⅜" PREMOLDED FELT EXPANSION JOINT WITH TEAR-OFF CAP. REMOVE CAP AFTER CONCRETE CURING, AND FILL WITH ELASTOMETRIC SEALANT. COLOR TO MATCH CONCRETE. 18' TO 20' SPACING OR AS NOTED ON PLANS
3. 4" MIN. COMPACTED AGGREGATE BASE ON COMPACTED SUBGRADE
4. GEOTEXTILE FABRIC - TURNED UP AT SIDES

61 CONCRETE EXPANSION JOINT DETAIL
1"=1'



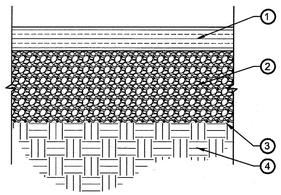
1. 6" CONCRETE WITH 4X4 WWF. INTEGRAL COLOR: PALAMINO 5447
2. ¼" x 1-½ " DEEP TOOLED CONTROL JOINT, SPACED 5' MIN OR AS NOTED ON PLANS
3. 4" MIN. COMPACTED AGGREGATE BASE ON COMPACTED SUBGRADE
4. GEOTEXTILE FABRIC - TURNED UP AT SIDES

62 CONCRETE CONTROL JOINT DETAIL
1"=1'



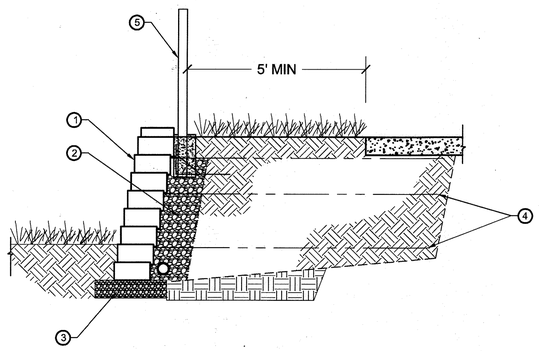
1. PAVESTONE CONCRETE PAVER 2 3/8"MIN THICKNESS
2. ALUMINUM EDGING, 1-½" X 1-⅜" AT 8' LENGTHS. ANCHOR WITH 12" COMMON SPIKE EVENLY SPACED
3. 1" TO 1½" BEDDING SAND EXTENDED 6" BEYOND EDGING
4. 4" MIN. COMPACTED AGGREGATE BASE ON COMPACTED SUBGRADE
5. GEOTEXTILE FABRIC - TURNED UP AT SIDES

63 PAVER EDGING DETAIL
1"=1'



1. 4" PERMEABLE ASPHALT COURSE(MIN 30% VOIDS)
2. 12" COMPACTED NO 2 STONE BASE
3. NON-WOVEN GEOTEXTILE(SIDES AND BOTTOM)
4. SOIL SUBGRADE MIN COMPACTION. SCARIFY TO ¼" OF SURFACE PRIOR TO GEOTEXTILE PLACEMENT

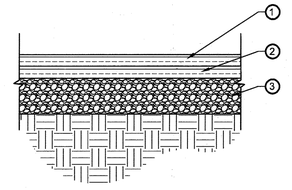
64 PERMEABLE ASPHALT DETAIL
1"=1'



1. CONCRETE SEGMENTAL RETAINING WALL. ANCHOR DIAMOND PRO STRAIGHT (18⅝" x 12" x 8" BLOCKS) COLOR::CHESAPEAKE BLEND
2. 12" MIN AGGREGATE BACKFILL WITH 4" DIA DRAIN PIPE
3. 6" MIN COMPACTED GRANULAR BASE LEVELING PAD (24" MIN WIDTH)
4. GEOSYNTHETIC REINFORCEMENT
5. WOOD FENCE WITH SLEEVE-IT CANTILEVER BASE SET IN CONCRETE. , REFER TO TYPICAL 3-RAIL FENCE DETAIL. MAINTAIN 5' MIN SETBACK FROM EDGE OF PATHWAY

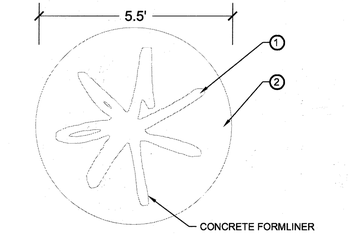
NOTE: **SEGMENTAL RETAINING WALL SYSTEM SHALL BE DESIGNED ACCORDING TO MANUFACTURERS SPECIFICATIONS AND DETAILS**

65 SEGMENTAL RETAINING WALL TYPICAL DETAIL
1"=2'



1. 2" ASPHALT SUPERPAVE SURFACE COURSE
2. 2" ASPHALT SUPERPAVE BASE COURSE
3. 6" COMPACTED AGGREGATE BASE ON COMPACTED SUBGRADE

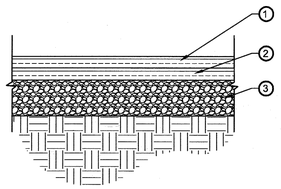
66 NON-PERMEABLE ASPHALT DETAIL
1"=1'



1. CONCRETE COLOR: DARK BROWN
2. CONCRETE COLOR: TAN

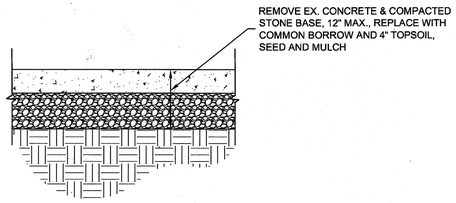
NOTE: **REFER TO DETAIL 60 FOR REINFORCED CONCRETE PAVEMENT DETAIL**

67 CONCRETE FORMLINER GRAPHIC
1"=2'

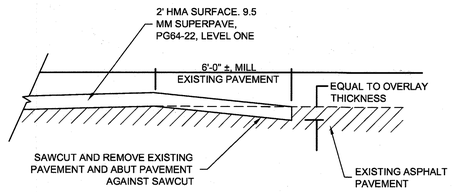


1. 1.5" ASPHALT SUPERPAVE SURFACE COURSE 9.5MM
2. 2.5" ASPHALT SUPERPAVE BASE COURSE 12.5 MM
3. 6" COMPACTED AGGREGATE BASE ON COMPACTED SUBGRADE

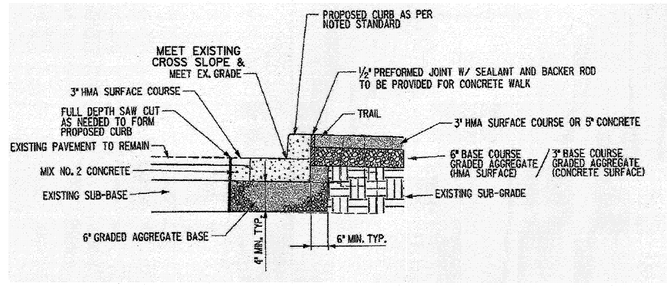
68 NON-PERMEABLE MEDIUM-DUTY ASPHALT DETAIL
1"=1'



69 EXISTING PAVEMENT REMOVAL
1"=1'



70 PAVEMENT FEATHERING DETAIL
NTS



71 CURB INSTALATION
NTS

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2.12.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2/2018
AS-BUILT DATE: 10/13/2016

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 39082, EXPIRATION DATE: 12/28/15
12/17/14

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)
ELECTION DISTRICT 5 — HOWARD COUNTY

HARDSCAPE DETAILS 1 — C11.15

SCALE	ZONING	TDG. FILE No.
N/A	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	156 OF 171

SDP-13-020

O:\ACTIVE PROJECTS\5282 GDP-Blandair Trail\Site Development Plan General\CAD\Plans\C2-x – HowardPlate.dwg, PLOTTED: 11/20/2014 3:28 PM, LAST SAVED: 11/20/2014 2:35 PM, PLOTTED BY: Andrew Gudjonsson

HARDSCAPE CONCRETE PAVER SPECIFICATIONS

1. QUALITY ASSURANCE:
   A. A COPY OF SUBCONTRACTOR'S CURRENT CERTIFICATE FROM THE INTERLOCKING CONCRETE PAVEMENT INSTITUTE PAVER INSTALLER CERTIFICATION PROGRAM.
   B. JOB REFERENCES FROM PROJECTS OF A SIMILAR SIZE AND COMPLEXITY. PROVIDE OWNER/CLIENT/GENERAL CONTRACTOR NAMES, POSTAL ADDRESS, PHONE, FAX, AND EMAIL ADDRESS.
   C. APPLICABLE SPECIFICATIONS AND STANDARDS: HOWARD COUNTY ZONING ORDINANCE, AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM), INTERLOCKING CONCRETE PAVEMENT INSTITUTE (ICPI)
   D. IF SITE CONDITIONS VARY FROM PLAN, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION
2. SUBMITTALS: SUBMIT THE FOLLOWING TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
   A. COPIES OF MANUFACTURER'S DATA FOR ALL MATERIALS REQUIRED.
   B. SIEVE ANALYSIS PER ASTEM C 136 FOR GRADING OF BEDDING AND JOINT SAND.
   C. SAMPLES OF REQUIRED CONCRETE PAVERS:
      1) FOUR REPRESENTATIVE FULL-SIZE SAMPLES OF EACH PAVER TYPE, THICKNESS, COLOR, FINISH THAT INDICATE THE RANGE OF COLOR VARIATION AND TEXTURE EXPECTED IN THE FINISHED INSTALLATION. COLOR(S) SELECTED BY LANDSCAPE ARCHITECT FROM MANUFACTURER'S AVAILABLE COLORS.
      2) ACCEPTED SAMPLES BECOME THE STANDARD OF ACCEPTANCE FOR THE WORK.
      3) TEST RESULTS FROM AN INDEPENDENT TESTING LABORATORY FOR COMPLIANCE OF CONCRETE PAVERS WITH ASTM C 936.
      4) MANUFACTURER'S CATALOG PRODUCT DATA, INSTALLATION INSTRUCTIONS, AND MATERIAL SAFETY DATA SHEETS FOR THE SAFE HANDLING OF THE SPECIFIED MATERIALS AND PRODUCTS.
   D. LIST OF PROPOSED SOURCES FOR ALL MATERIALS.
   E. MOCK-UPS: BEFORE LAYERING OUT MATERIALS, A MOCK-UP AREA SHOULD BE COMPLETED.
      1) INSTALL A 7FT X 7FT PAVER AREA.
      2) USE THIS AREA TO DETERMINE SURCHARGE OF THE BEDDING SAND LAYER, JOINT SIZES, LINES, LAYING PATTERN(S), COLOR(S) AND TEXTURE OF THE JOB.
      3) THIS AREA WILL BE USED AS THE STANDARDS BY WHICH THE WORK WILL BE JUDGED.
      4) SUBJECT TO ACCEPTANCE BY OWNER, MOCK-UP MAY BE RETAINED AS PART OF FINISHED WORK.
      5) IF MOCK-UP IS NOT RETAINED, REMOVE AND PROPERLY DISPOSE OF MOCK-UP.
3. DELIVERY, HANDLING, AND STORAGE:
   A. DELIVERY: DELIVER MATERIALS IN MANUFACTURER'S ORIGINAL, UNOPENED, UNDAMAGED CONTAINERS PACKAGING WITH IDENTIFICATION LABELS INTACT.
      1) DELIVER CONCRETE PAVERS TO THE SITE IN STEEL BANNED, PLASTIC BANDED OR PLASTIC WRAPPED PACKAGING CAPABLE OF TRANSFER BY FORKLIFT OR CLAMP LIFT.
      2) UNLOAD PAVERS AT JOB SITE IN SUCH A MANNER THAT NO DAMAGE OCCURS TO THE PRODUCT.
   D. STORAGE AND PROTECTION: STORE MATERIALS PROTECTED SUCH THAT THEY ARE KEPT FREE FROM MUD, DIRT, AND OTHER FOREIGN MATERIALS.
      1) COVER BEDDING SAND AND JOIN SAND WITH WATERPROOF COVERING IF NEEDED TO PREVENT EXPOSURE TO RAINFALL OR REMOVAL BY WIND. SECURE THE COVERING PLACE.
4. MATERIALS AND PRODUCTS:
   A. MANUFACTURER: PAVESTONE COMPANY 800-245-7283
      1) CONTACT: HAGERSTOWN, MD 240-420-3780
   B. INTERLOCKING CONCRETE PAVERS:
      1) PAVER TYPE: HOLLAND STONE - HERITAGE SERIES
         A. MATERIAL STANDARD: COMPLY WITH MATERIAL STANDARDS SET FORTH IN ASTM C 936.
         B. COLOR AND FINISH: BUFF; TUMBLED AND INVERTED
         C. COLOR PIGMENT MATIERAL STANDARD: COMPLY WITH ASTM C 979
         D. SIZE: 7 1⅜6 INCHES X 3 ⅛ INCHES X 2 ⅜ INCHES THICK
         E. AVERAGE COMPRESSIVE STRENGTH (C140): 8000 PSI WITH NON INDIVIDUAL UNIT UNDER 7200 PSI PER ASTM C 140.
         F. AVERAGE WATER ABSORPTION (ASTM C 140): 5% WITH NO UNIT GREATER THAN 7%.
         G. FREEZE/HAW RESISTANCE (ASTM C 1645): 25 FREEZE-THAW CYCLES WITH NO GREATER LOSS THAN 200 G/M2 OF PAVER SURFACE AREA OR NO GREATER LOSS THAN 500 G/M2 OF PAVER SURFACE AREA AFTER 50 FREEZE-THAW CYCLES. FREEZE-THAW TESTING REQUIREMENTS SHALL BE WAIVED FOR APPLICATIONS NOT EXPOSED TO FREEZING CONDITIONS.
   C. BEDDING AND JOINT SAND: PROVIDE BEDDING AND JOINT SAND AS FOLLOWS
      1) WASHED, CLEAN, NON-PLASTIC, FREE FROM DELETERIOUS OR FOREIGN MATTER, SYMMETRICALLY SHAPED, NATURAL OR MANUFACTURED FROM CRUSHED ROCK.
      2) DO NOT USE LIMESTONE SCREENINGS, STONE DUST, OR SAND FOR THE BEDDING MATERIAL THAT DOES NOT CONFORM TO THE REQUIREMENTS OF ASTM C 33.
      3) DO NOT USE MASON SAND OR SAND CONFORMING TO ASTM C 144 FOR THE BEDDING SAND.
      4) WHERE CONCRETE PAVERS ARE SUBJECT TO VEHICULAR TRAFFIC, UTILIZE SANDS THAT ARE AS HARD AS PRACTICALLY AVAILABLE.
      5) SIEVE ACCORDING TO ASTM C 136.
      6) BEDDING SAND MATERIAL REQUIREMENTS: CONFORM TO THE GRADING REQUIREMENTS OF ASTM C 33 WITH MODIFICATIONS AS SHOWN IN TABLE 1.

TABLE 1
GRADING REQUIREMENTS FOR BEDDING SAND
ASTM C 33

SIEVE SIZE	PERCENT PASSING
3/8 IN.(9.5 MM)	100
NO. 4 (4.75 MM)	95 TO 100
NO. 8 (2.36 MM)	85 TO 100
NO. 16 (1.18 MM)	50 TO 85
NO. 30 (0.600 MM)	25 TO 60
NO. 50 (0.300 MM)	10 TO 30
NO. 100 (0.150 MM)	2 TO 10
NO. 200 (0.075 MM)	0 TO 1

   7) JOINT SAND MATERIAL REQUIREMENTS: CONFORM TO THE GRADING REQUIREMENTS OF ASTM C 144 WITH MODIFICATIONS AS SHOWN IN TABLE 2.

TABLE 2
GRADING REQUIREMENTS FOR JOINT SAND

	ASTM C 144 NATURAL SAND	ASTM C 144 MANUFACTURED SAND
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING
NO. 4 (4.75 MM)	100	100
NO. 8 (2.36 MM)	95 TO 100	95 TO 100
NO. 16 (1.18 MM)	70 TO 100	70 TO 100
NO. 30 (0.600 MM)	40 TO 75	40 TO 100
NO. 50 (0.300 MM)	10 TO 35	20 TO 40
NO. 100 (0.150 MM)	2 TO 15	10 TO 25
NO. 200 (0.075 MM)	0 TO 1	0 TO 10

   D. EDGE RESTRAINTS: PROVIDE EDGE RESTRAINTS INSTALLED AROUND PERIMETER OF ALL INTERLOCKING CONCRETE PAVING UNIT AREAS AS INDICATED IN HARDSCAPE DETAIL SHEET:
      1) PAVESTONE
      2) STEEL
      3) STANDARD: TBD
   H. GEOFABRIC: PROVIDE GEOTEXTILE FABRIC AS INDICATED IN HARDSCAPE DETAIL SHEET:
      1) MATERIAL TYPE AND DESCRIPTION: TBD
      2) MATERIAL STANDARD: TBD
      3) MANUFACTURER: TBD
7. PREPARATION:
   A. ACCEPTANCE OF SITE VERIFICATION OF CONDITIONS:
      1) GENERAL CONTRACTOR SHALL INSPECT, ACCEPT AND CERTIFY IN WRITING TO THE PAVER INSTALLATION SUBCONTRACTOR THAT SITE CONDITIONS MEET SPECIFICATIONS FOR THE FOLLOWING ITEMS PRIOR TO INSTALLATION OF INTERLOCKING CONCRETE PAVERS
         A. VERIFY THAT SUBGRADE PREPARATION, COMPACTED DENSITY AND ELEVATIONS CONFORM TO SPECIFIED REQUIREMENTS.
         B. VERIFY THAT GEOTEXTILES, IF APPLICABLE, HAVE BEEN PLACED ACCORDING TO DRAWINGS AND SPECIFICATIONS.
         C. VERIFY THAT AGGREGATE BASE MATERIALS,THICKNESS, COMPACTED DENSITY, SURFACE TOLERANCES AND ELEVATIONS CONFORM TO SPECIFIED REQUIREMENTS.
         D. PROVIDE WRITTEN DENSITY TEST RESULTS FOR SOIL SUBGRADE, AGGREGATE BASE MATERIALS TO THE OWNER, GENERAL CONTRACTOR AND PAVER INSTALLATION SUBCONTRACTOR.
         E. VERIFY LOCATION, TYPE, AND ELEVATIONS OF EDGE RESTRAINTS, UTILITY STRUCTURES, AND DRAINAGE INLETS.
      2) DO NOT PROCEED WITH INSTALLATION OF BEDDING SAND AND INTERLOCKING CONCRETE PAVERS UNTIL BASE CONDITIONS ARE CORRECTED BY THE GENERAL CONTRACTOR.
   B. PREPERATION
      1) VERIFY BASE IS DRY, CERTIFIED BY GENERAL CONTRACTOR AS MEETING MATEIRAL, INSTALLATION AND GRADE SPECIFICATIONS.
      2) VERIFY THAT BASE AND GEOTEXTILE IS READY TO SUPPORT SAND, EDGE RESTRAINTS, AND PAVERS AND IMPOSED LOADS.
      3) EDGE RESTRAINT PREPARATION:
         A. INSTALL EDGE RESTRAINTS PER THE DRAWINGS AND MANUFACTURER'S RECOMMENDATIONS.
         B. MOUNT DIRECTLY TO FINISHED BASE. DO NOT INSTALL ON BEDDING SAND.
         C. THE MINIMUM DISTANCE FROM THE OUTSIDE EDGE OF THE BASE TO THE SPIKES SHALL BE EQUAL TO THE THICKNESS OF THE BASE.
8. INSTALLATION:
   A. SPREAD BEDDING SAND EVENLY OVER THE BASE COURSE AND SCREED TO A NOMINAL 1 IN (25 MM) THICKNESS, NOT EXCEEDING 1 1/2 IN. (40MM) THICKNESS. SPREAD BEDDING SAND EVENLY OVER THE BASE COURSE AND SCREED RAILS, USING THE RAILS AND OR EDGE RESTRAINTS TO PRODUCE A NOMINAL 1 IN. (25 MM) THICKNESS, ALLOWING FOR SPECIFIED VARIATION IN THE BASE SURFACE.
      1) DO NOT DISTURB SCREENED SAND.
      2) SCREENED AREA SHALL NOT BE SUBSTANTIALLY EXCEED THAT WHICH IS COVERED BY PAVERS IN ONE DAY.
      3) DO NOT USE BEDDING SAND TO FILL DEPRESSIONS IN THE BASE SURFACE.
   B. LAY PAVERS IN PATTERN(S) SHOWN IN DRAWINGS. PLACE UNITS HAND TIGHT WITHOUT USING HAMMERS. MAKE HORIZONTAL ADJUSTMENTS TO PLACEMENT OF LAID PAVERS WITH RUBBER HAMMERS AND PRY BARS AS REQUIRED.
   C. PROVIDE JOINTS BETWEEN PAVERS BETWEEN [1/16 IN. AND 3/16 IN. (2 AND 5 MM)] WIDE. NO MORE THAN 5% OF THE JOINTS SHALL EXCEED [1/4 IN. (6 MM)] WIDE TO ACHIEVE STRAIGHT BOND LINES.
   D. JOINT LINES SHALL NOT DEVIATE MORE THAN ±1/2 IN. (±15 MM) OVER 50 FT. (15 M) FROM STRING LINES.
   E. FILL GAPS AT THE EDGES OF THE PAVED AREA WITH CUT PAVERS OR EDGE UNITS.
   F. CUT PAVERS TO BE PLACED ALONG THE EDGE WITH A MASONRY SAW.
   G. KEEP LAID STEEER AND FORKLIFT EQUIPMENT OFF NEWLY LAID PAVERS THAT HAVE NOT RECEIVED INITIAL COMPACTION AND JOINT SAND.
   H. USE A LOW-AMPLITUDE PLATE COMPACTOR CAPABLE OF AT LEAST MINIMUM OF 4,000 LBF (18 KN) AT A FREQUENCY OF 75 TO 100 HZ TO VIBRATE THE PAVERS INTO THE SAND. REMOVE ANY CRACKED OR DAMAGED PAVERS AND REPLACE WITH NEW UNITS.
   I. SIMULTANEOUSLY SPREAD, SWEEP AND COMPACT DRY JOINT SAND INTO JOINTS CONTINUOUSLY UNTIL FULL. THIS WILL REQUIRE AT LEAST 4 TO 6 PASSES WITH A PLATE COMPACTOR. DO NOT COMPACT WITHIN 6 FT (2 M) OF UNRESTRAINED EDGES OF PAVING UNITS.
   J. ALL WORK WITHIN 6 FT. (2 M) OF THE LAYING FACE MUST SHALL BE LEFT FULLY COMPACTED WITH SAND-FILLED JOINTS AT THE END OF EACH DAY OR COMPACTED UPON ACCEPTANCE OF THE WORK. COVER THE LAYING FACE OR ANY INCOMPLETE AREAS WITH PLASTIC SHEETS OVERNIGHT IF NOT CLOSED WITH CUT AND COMPACTED PAVERS WITH JOINT SAND TO PREVENT EXPOSED BEDDING SAND FROM BECOMING SATURATED FROM RAINFALL.
   K. REMOVE EXCESS SAND FROM SURFACE WHEN INSTALLATION IS COMPLETE.
   L. ALLOW EXCESS JOINT SAND TO REMAIN ON SURFACE TO PROTECT PAVERS FROM DAMAGE FROM OTHER TRADES. REMOVE ACCESS SAND WHEN DIRECTED BY OWNER. DO NOT ALLOW VEHICULAR TRAFFIC ON PAVERS WITH SAND ON TOP OF THE SURFACE.
   M. SURFACE SHALL BE BROOM CLEAN AFTER REMOVAL OF EXCESS JOINT SAND.
9. QUALITY CONTROL:
   A. THE SURFACE TOLERANCE FROM GRADE ELEVATIONS SHALL NOT DEVIATE MORE THAN ±3/8IN. (±10 MM) UNDER A 10 FT (3 M) STRIGHTEDGE.
   B. CHECK FINAL SURFACE ELEVATIONS FOR CONFORMANCE TO DRAWINGS.
   C. THE SURFACE ELEVATION OF PAVERS SHALL BE 1/8 IN. TO 1/4 IN. (3 TO 6 MM) ABOVE ADJACENT DRAINAGE INLETS, CONCRETE COLLARS OR CHANNELS.
   D. LIPPAGE: NO GREATER THAN 1/8 IN. (3 MM) DIFFERENCE IN HEIGHT BETWEEN ADJACENT PAVERS. SEAL CONCRETE PAVERS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS.
10. INSPECTION
   A. EXAMINE THE AREAS AND CONDITIONS WHERE PAVERS ARE TO BE INSTALLED AND NOTIFY THE OWNER OF CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK. DO NOT PROCEED WITH THE WORK UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED TO PERMIT PROPER INSTALLATION OF THE WORK.
11. PROTECTION:
   A. AFTER WORK IN THIS SECTION IS COMPLETE, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING WORK FROM DAMAGE DUE TO SUBSEQUENT CONSTRUCTION ACTIVITY ON THE SITE.

CONCRETE SEGMENTAL RETAINING WALL SPECIFICATIONS

1. QUALITY ASSURANCE:
   A. JOB REFERENCES FROM PROJECTS OF A SIMILAR SIZE AND COMPLEXITY. PROVIDE OWNER/CLIENT/GENERAL CONTRACTOR NAMES, POSTAL ADDRESS, PHONE, FAX, AND EMAIL ADDRESS.
   B. APPLICABLE SPECIFICATIONS AND STANDARDS: HOWARD COUNTY ZONING ORDINANCE, AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) FEDERAL HIGHWAY ADMINISTRATION (FHA) NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
   C. IF SITE CONDITIONS VARY FROM PLAN, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION
2. SUBMITTALS: SUBMIT THE FOLLOWING FOR REVIEW AND APPROVAL.
   A. PRODUCT DATA: MATERIAL DESCRIPTION AND INSTALLATION INSTRUCTIONS FOR EACH MANUFACTURED PRODUCT SPECIFIED.
   B. SHOP DRAWINGS: RETAINING WALL SYSTEM DESIGN, INCLUDING WALL ELEVATION VIEWS, GEOSYNTHETIC REINFORCEMENT LAYOUT, PERTINENT DETAILS, AND DRAINAGE PROVISIONS. THE SHOP DRAWINGS SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND.
   C. DESIGN CALCULATIONS: ENGINEERING DESIGN CALCULATIONS PREPARED IN ACCORDANCE WITH THE NCMA *DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS,* OR THE AASHTO *STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES,* SECTION 5.8 (WHICHEVER IS APPLICABLE). ANALYSIS OF GLOBAL STABILITY MUST BE ADDRESSED AND INCORPORATED INTO THE SHOP DRAWINGS.
   D. SAMPLES:
      1) FURNISH ONE UNIT IN THE COLOR AND FACE PATTERN SPECIFIED.
      2) FURNISH 12-INCH SQUARE OR LARGER PIECE OF THE GEOSYNTHETIC REINFORCEMENT SPECIFIED.
      3) TEST REPORTS: INDEPENDENT LABORATORY REPORTS STATING MOISTURE ABSORPTION AND COMPRESSIVE STRENGTH PROPERTIES OF THE CONCRETE RETAINING WALL UNITS MEET THE PROJECT SPECIFICATIONS WHEN TESTED IN ACCORDANCE WITH ASTM C140, SECTIONS 6, 8 AND 9.
3. DELIVERY, HANDLING, AND STORAGE:
   A. CONCRETE RETAINING WALL UNITS AND ACCESSORIES: DELIVER, STORE, AND HANDLE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, IN SUCH A MANNER AS TO PREVENT DAMAGE. CHECK THE MATERIALS UPON DELIVERY TO ASSURE THAT PROPER MATERIAL HAS BEEN RECEIVED. STORE ABOVE GROUND ON WOOD PALLETS OR BLOCKING. REMOVE DAMAGED OR OTHERWISE UNSUITABLE MATERIAL, WHEN SO DETERMINED, FROM THE SITE.
   B. EXPOSED FACES OF CONCRETE WALL UNITS SHALL BE FREE OF CHIPS, CRACKS, STAINS, AND OTHER IMPERFECTIONS DETRACTING FROM THEIR APPEARANCE, WHEN VIEWED FROM A DISTANCE OF 10 FEET.
   C. PREVENT MUD, WET CEMENT, ADHESIVES AND SIMILAR MATERIALS THAT MAY HARM APPEARANCE OF UNITS, FROM COMING IN CONTACT WITH SYSTEM COMPONENTS.
   D. GEOSYNTHETICS (INCLUDING GEOSYNTHETIC REINFORCEMENT, GEOTEXTILE FILTER, PREFABRICATED DRAINAGE COMPOSITE) SHALL BE DELIVERED, STORED, AND HANDLED IN ACCORDANCE WITH ASTM D4873.
4. PRODUCTS AND MATERIALS:
   A. CONCRETE RETAINING WALL UNITS: PAVESTONE'S "ANCHOR™ DIAMOND RETAINING WALL UNITS" AS MANUFACTURED UNDER LICENSE FROM ANCHOR WALL SYSTEMS.
      1) PHYSICAL REQUIREMENTS:
         A. MEET REQUIREMENTS OF ASTM C1372, EXCEPT THE MAXIMUM WATER ABSORPTION SHALL BE LIMITED TO 7 PERCENT, AND UNIT HEIGHT DIMENSIONS SHALL NOT VARY MORE THAN PLUS OR MINUS 1/16 INCH FROM THAT SPECIFIED IN THE ASTM REFERENCE, NOT INCLUDING TEXTURED FACE.
         B. UNIT FACE AREA: NOT LESS THAN 0.67 SQUARE FEET.
         C. COLOR: SELECTED BY THE PROJECT DESIGNER FROM MANUFACTURER'S FULL RANGE OF STANDARD COLORS.
         D. FACE PATTERN GEOMETRY: STRAIGHT FACE.
         E. TEXTURE: SPLIT-ROCK FACE.
         F. INCLUDE AN INTEGRAL CONCRETE SHEAR CONNECTION FLANGE/LOCATOR.
   B. GEOSYNTHETIC REINFORCEMENT: POLYESTER FIBER GEOGRID OR GEOTEXTILE, OR POLYPROPYLENE WOVEN GEOTEXTILE, AS SHOWN ON THE DRAWINGS.
   C. LEVELING PAD BASE:
      1) AGGREGATE BASE: CRUSHED STONE OR GRANULAR FILL MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D448:

SIEVE SIZE	PERCENT PASSING
1 INCH	100
NO. 4	35 TO 70
NO. 40	10 TO 35
NO. 200	3 TO 10

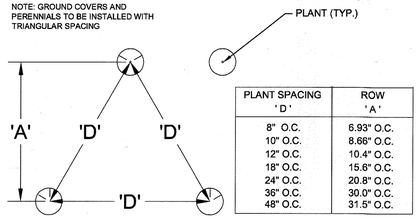
      A. BASE THICKNESS: 6 INCHES (MINIMUM COMPACTED THICKNESS).
      2) CONCRETE BASE: NONREINFORCED LEAN CONCRETE BASE.
         A. COMPRESSIVE STRENGTH: 3,000 PSI (MINIMUM).
         B. BASE THICKNESS: AT LEAST 2 INCHES
   D. DRAINAGE AGGREGATE: CLEAN CRUSHED STONE OR GRANULAR FILL MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D448:

SIEVE SIZE	PERCENT PASSING
1 INCH	100
3/4 INCH	75 TO 100
NO. 4	0 TO 60
NO. 40	0 TO 50
NO. 200	0 TO 5

   E. BACKFILL: SOIL FREE OF ORGANICS AND DEBRIS AND CONSISTING OF EITHER GP, GW, SP, SW, OR SM TYPE; CLASSIFIED IN ACCORDANCE WITH ASTM D2487 AND THE USCS CLASSIFICATION SYSTEM.
      1) SOILS CLASSIFIED AS SC, ML AND CL ARE CONSIDERED SUITABLE SOILS FOR SEGMENTAL RETAINING WALLS WITH A TOTAL HEIGHT OF LESS THAN 10 FEET UNLESS THE PLASTICITY INDEX (PI) IS 20 OR MORE.
      2) MAXIMUM PARTICLE SIZE FOR BACKFILL IS 4 INCHES.
      3) UNSUITABLE SOILS ARE ORGANIC SOILS AND THOSE SOILS CLASSIFIED AS CH, OH, MH, OL, OR PT.
   F. IMPERVIOUS MATERIAL: CLAYEY SOIL OR OTHER SIMILAR MATERIAL WHICH WILL PREVENT PERCOLATION INTO THE DRAINAGE ZONE BEHIND THE WALL.
   G. DRAINAGE PIPE: PERFORATED OR SLOTTED PVC OR CORRUGATED HDPE PIPE MANUFACTURED IN ACCORDANCE WITH D3034 AND/OR ASTM F405. THE PIPE MAY BE COVERED WITH A GEOTEXTILE FILTER FABRIC TO FUNCTION AS A FILTER.
   H. CONSTRUCTION ADHESIVE: EXTERIOR GRADE ADHESIVE AS RECOMMENDED BY THE RETAINING WALL UNIT MANUFACTURER.
5. PREPARATION:
   A. ENSURE SURROUNDING STRUCTURES ARE PROTECTED FROM THE EFFECTS OF WALL EXCAVATION.
   B. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTIES AND STRUCTURES.
   C. FOUNDATION PREPARATION: EXCAVATE FOUNDATION SOIL AS REQUIRED FOR FOOTING OR BASE DIMENSION SHOWN ON THE DRAWINGS.
      1) THE PROJECT DESIGNER WILL EXAMINE FOUNDATION SOIL TO ENSURE THAT THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THAT INDICATED ON THE DRAWINGS. REMOVE SOIL NOT MEETING THE REQUIRED STRENGTH. OVERSIZE RESULTING SPACE SUFFICIENTLY FROM THE FRONT OF THE BLOCK TO THE BACK OF THE REINFORCEMENT, AND BACKFILL WITH SUITABLE COMPACTED BACKFILL SOILS.
      2) THE PROJECT DESIGNER WILL DETERMINE IF THE FOUNDATION SOILS WILL REQUIRE SPECIAL TREATMENT OR CORRECTION TO CONTROL TOTAL AND DIFFERENTIAL SETTLEMENT.
      3) FILL OVER-EXCAVATED AREAS WITH SUITABLE COMPACTED BACKFILL, AS RECOMMENDED BY THE PROJECT DESIGNER.
   D. BASE COURSE PREPARATION: PLACE BASE MATERIALS TO THE DEPTHS AND WIDTHS SHOWN ON THE DRAWINGS, UPON UNDISTURBED SOILS, OR FOUNDATION SOILS PREPARED IN ACCORDANCE WITH ARTICLE 3.04.
      1) EXTEND THE LEVELING PAD LATERALLY AT LEAST 6 INCHES IN FRONT AND BEHIND THE LOWERMOST CONCRETE RETAINING WALL UNIT.
      2) PROVIDE AGGREGATE BASE COMPACTED TO 6 INCHES THICK (MINIMUM).
      3) THE CONTRACTOR MAY AT THEIR OPTION, PROVIDE A CONCRETE LEVELING PAD AS SPECIFIED IN SUBPARAGRAPH 2.01.C.2, IN LIEU OF THE AGGREGATE BASE.
      4) WHERE A REINFORCED FOOTING IS REQUIRED BY LOCAL CODE OFFICIAL, PLACE FOOTING BELOW FROST DEPTH.
   B. COMPACT AGGREGATE BASE MATERIAL TO PROVIDE A LEVEL, HARD SURFACE ON WHICH TO PLACE THE FIRST COURSE OF UNITS.
   C. PREPARE BASE MATERIALS TO ENSURE COMPLETE CONTACT WITH RETAINING WALL UNITS. GAPS ARE NOT ALLOWED.
D. INSTALLATION:

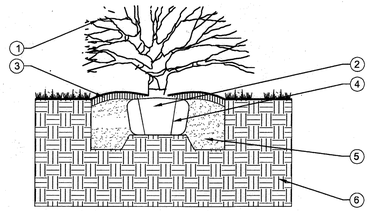
GENERAL: ERECT UNITS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS, AND AS SPECIFIED HEREIN.
   A. PLACE FIRST COURSE OF CONCRETE WALL UNITS ON THE PREPARED BASE MATERIAL. CHECK UNITS FOR LEVEL AND ALIGNMENT. MAINTAIN THE CORRECT ELEVATION AT THE TOP OF EACH UNIT WITHIN EACH SECTION OF THE BASE COURSE.
   B. ENSURE THAT FOUNDATION UNITS ARE IN FULL CONTACT WITH NATURAL OR COMPACTED SOIL BASE.
   C. PLACE CONCRETE WALL UNITS SIDE-BY-SIDE FOR FULL LENGTH OF WALL ALIGNMENT. ALIGNMENT MAY BE DONE BY USING A STRING LINE MEASURED FROM THE BACK OF THE BLOCK. GAPS ARE NOT ALLOWED BETWEEN THE FOUNDATION CONCRETE WALL UNITS.
   D. PLACE 12 INCHES (MINIMUM) OF DRAINAGE AGGREGATE BETWEEN, AND DIRECTLY BEHIND, THE CONCRETE WALL UNITS. FILL VOIDS IN RETAINING WALL UNITS WITH DRAINAGE AGGREGATE. PROVIDE A DRAINAGE ZONE BEHIND THE WALL UNITS TO WITHIN 9 INCHES OF THE FINAL GRADE. CAP THE BACKFILL AND DRAINAGE AGGREGATE ZONE WITH 9 INCHES OF IMPERVIOUS MATERIAL.
   E. INSTALL DRAINAGE PIPE AT THE LOWEST ELEVATION POSSIBLE, TO MAINTAIN GRAVITY FLOW OF WATER TO OUTSIDE OF THE REINFORCED ZONE. SLOPE THE MAIN COLLECTION DRAINAGE PIPE, LOCATED JUST BEHIND THE CONCRETE RETAINING WALL UNITS, 2 PERCENT (MINIMUM) TO PROVIDE GRAVITY FLOW TO THE DAYLIGHTED AREAS. DAYLIGHT THE MAIN COLLECTION DRAINAGE PIPE THROUGH THE FACE OF THE WALL, AND/OR TO AN APPROPRIATE LOCATION AWAY FROM THE WALL SYSTEM AT EACH LOW POINT OR AT 50-FOOT (MAXIMUM) INTERVALS ALONG THE WALL. ALTERNATELY, THE DRAINAGE PIPE CAN BE CONNECTED TO A STORM SEWER SYSTEM AT 50-FOOT (MAXIMUM) INTERVALS.
   F. REMOVE EXCESS FILL FROM TOP OF UNITS AND INSTALL NEXT COURSE. ENSURE DRAINAGE AGGREGATE AND BACKFILL ARE COMPACTED BEFORE INSTALLATION OF NEXT COURSE.
   G. CHECK EACH COURSE FOR LEVEL AND ALIGNMENT. ADJUST UNITS AS NECESSARY TO MAINTAIN LEVEL AND ALIGNMENT PRIOR TO PROCEEDING WITH EACH ADDITIONAL COURSE.
   H. INSTALL EACH SUCCEEDING COURSE. BACKFILL AS EACH COURSE IS COMPLETED. PULL THE UNITS FORWARD UNTIL THE LOCATING SURFACE OF THE UNIT CONTACTS THE LOCATING SURFACE OF THE UNITS IN THE PRECEDING COURSE. INTERLOCK WALL SEGMENTS THAT MEET AT CORNERS BY OVERLAPPING SUCCESSIVE COURSES. ATTACH CONCRETE RETAINING WALL UNITS AT EXTERIOR CORNERS WITH ADHESIVE SPECIFIED.
   I. INSTALL GEOSYNTHETIC REINFORCEMENT IN ACCORDANCE WITH GEOSYNTHETIC MANUFACTURER'S RECOMMENDATIONS AND THE SHOP DRAWINGS.
      1) ORIENT GEOSYNTHETIC REINFORCEMENT WITH THE HIGHEST-STRENGTH AXIS PERPENDICULAR TO THE WALL FACE.
      2) PRIOR TO GEOSYNTHETIC REINFORCEMENT PLACEMENT, PLACE THE BACKFILL AND COMPACT TO THE ELEVATION OF THE TOP OF THE WALL UNITS AT THE ELEVATION OF THE GEOSYNTHETIC REINFORCEMENT.
      3) PLACE GEOSYNTHETIC REINFORCEMENT AT THE ELEVATIONS AND TO THE LENGTHS SHOWN ON THE DRAWINGS.
      4) LAY GEOSYNTHETIC REINFORCEMENT HORIZONTALLY ON TOP OF THE CONCRETE RETAINING WALL UNITS AND THE COMPACTED BACKFILL SOILS. PLACE THE GEOSYNTHETIC REINFORCEMENT WITHIN ONE INCH OF THE FACE OF THE CONCRETE RETAINING WALL UNITS. PLACE THE NEXT COURSE OF CONCRETE RETAINING WALL UNITS ON TOP OF THE GEOSYNTHETIC REINFORCEMENT.
      5) THE GEOSYNTHETIC REINFORCEMENT SHALL BE IN TENSION AND FREE FROM WRINKLES PRIOR TO PLACEMENT OF THE BACKFILL SOILS. PULL GEOSYNTHETIC REINFORCEMENT HAND-TAUT AND SECURE IN PLACE WITH STAPLES, STAKES, OR BY HAND-TENSIONING UNTIL THE GEOSYNTHETIC REINFORCEMENT IS COVERED BY 6 INCHES OF LOOSE FILL.
      6) THE GEOSYNTHETIC REINFORCEMENTS SHALL BE CONTINUOUS THROUGHOUT THEIR EMBEDMENT LENGTHS. SPLICES IN THE GEOSYNTHETIC REINFORCEMENT STRENGTH DIRECTION ARE NOT ALLOWED.
      7) DO NOT OPERATE TRACKED CONSTRUCTION EQUIPMENT DIRECTLY ON THE GEOSYNTHETIC REINFORCEMENT. AT LEAST 6 INCHES OF COMPACTED BACKFILL SOIL IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOSYNTHETIC REINFORCEMENT. KEEP TURNS OF TRACKED CONSTRUCTION EQUIPMENT TO A MINIMUM.
      8) RUBBER-TIRED EQUIPMENT MAY PASS OVER THE GEOSYNTHETIC REINFORCEMENT AT SPEEDS OF LESS THAN 5 MILES PER HOUR. TURNING OF RUBBER-TIRED EQUIPMENT IS NOT ALLOWED ON THE GEOSYNTHETIC REINFORCEMENT.
J. BACKFILL PLACEMENT
   1) PLACE REINFORCED BACKFILL, SPREAD AND COMPACT IN A MANNER THAT WILL MINIMIZE SLACK IN THE REINFORCEMENT.
   2) PLACE FILL WITHIN THE REINFORCED ZONE AND COMPACT IN LIFTS NOT EXCEEDING 6 TO 8 INCHES (LOOSE THICKNESS) WHERE HAND-OPERATED COMPACTION EQUIPMENT IS USED, AND NOT EXCEEDING 12 INCHES (LOOSE THICKNESS) WHERE HEAVY, SELF-PROPELLED COMPACTION EQUIPMENT IS USED.
   3) ONLY LIGHTWEIGHT HAND-OPERATED COMPACTION EQUIPMENT IS ALLOWED WITHIN 4 FEET OF THE BACK OF THE RETAINING WALL UNITS. IF THE SPECIFIED COMPACTION CANNOT BE ACHIEVED WITHIN 4 FEET OF THE BACK OF THE RETAINING WALL UNITS, REPLACE THE REINFORCED SOIL IN THIS ZONE WITH DRAINAGE AGGREGATE MATERIAL.
   4) COMPACTION TESTING SHALL BE DONE IN ACCORDANCE WITH ASTM D1556 OR ASTM D2922. NOTE TO SPECIFIER: IN PARAGRAPH BELOW, SELECT REVISED MODIFIED PROCTOR DENSITIES IF NECESSARY, IN LIEU OF STANDARD PROCTOR DENSITIES SPECIFIED
   5) MINIMUM COMPACTION REQUIREMENTS FOR FILL PLACED IN THE REINFORCED ZONE
      A. THE MINIMUM COMPACTION REQUIREMENT SHALL BE DETERMINED BY THE PROJECT DESIGNER TESTING THE COMPACTION. AT NO TIME SHALL THE SOIL COMPACTION REQUIREMENTS BE LESS THAN 95 PERCENT OF THE SOIL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698) MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTMD1557) FOR THE ENTIRE WALL HEIGHT
      B. U

NOTE: GROUND COVERS AND PERENNIALS TO BE INSTALLED WITH TRIANGULAR SPACING



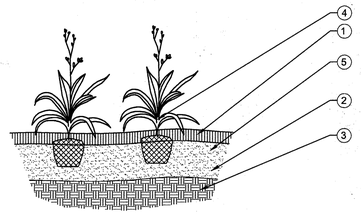
PLANT SPACING 'D'	ROW 'A'
8" O.C.	6.93" O.C.
10" O.C.	8.66" O.C.
12" O.C.	10.4" O.C.
18" O.C.	15.6" O.C.
24" O.C.	20.8" O.C.
36" O.C.	30.0" O.C.
48" O.C.	31.5" O.C.

72 PERENNIAL/GROUNDCOVER PLANT SPACING
NTS



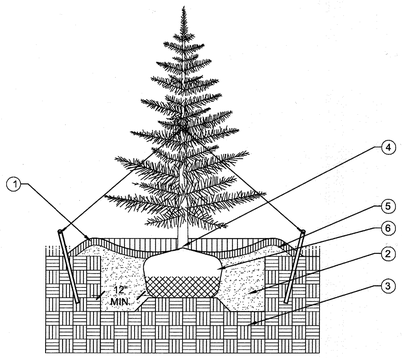
1. THIN BRANCHES BY 1/3 RETAINING PROPER FORM
2. SET SHRUB ABOVE FINISHED GRADE 1/8 DEPTH OF ROOT BALL
3. 2" SHREDDED HARDWOOD MULCH OVER ENTIRE SHRUB BED
4. MAKE (3) - 1" CUTS IN SIDES OF ROOTBALL
5. PREPARED BACKFILL SOIL MIXTURE. SEE SPECS
6. UNDISTURBED SOIL PEDESTAL

73 DECIDUOUS SHRUB PLANTING
NTS



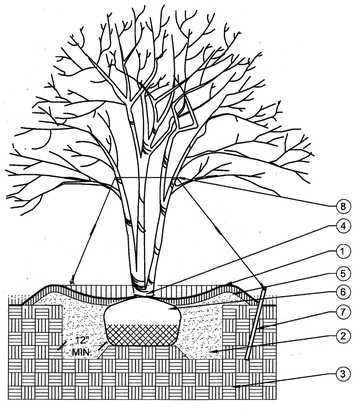
1. 2" SHREDDED HARDWOOD MULCH OVER ENTIRE BED
2. PREPARED BACKFILL SOIL MIXTURE. SEE SPECS
3. UNDISTURBED SOIL PEDESTAL
4. SET GROUNDCOVERS AND PERENNIALS IN STAGGERED ROWS AT SPECIFIED SPACING
5. EXCAVATE ENTIRE BED TO DEPTH OF 8" AND PLACE PLANTING SOIL MIX

74 PERENNIAL/GROUNDCOVER PLANTING
NTS



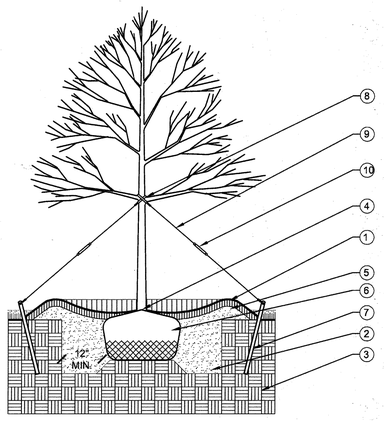
1. 2" SHREDDED HARDWOOD MULCH
2. PREPARED BACKFILL SOIL MIXTURE. SEE SPECS
3. UNDISTURBED SOIL PEDESTAL
4. SET TREE ABOVE THE ORIGINAL GRADE ⅛ DEPTH OF ROOT BALL
5. SOIL SAUCER: USE PREPARED SOIL, 6" MIN.
6. ROPES AT TOP OF BALL SHALL BE CUT. REMOVE TOP ½ OF BURLAP. NON-BIODEGRADEABLE MATERIAL SHALL BE TOTALLY REMOVED

75 EVERGREEN TREE PLANTING
NTS



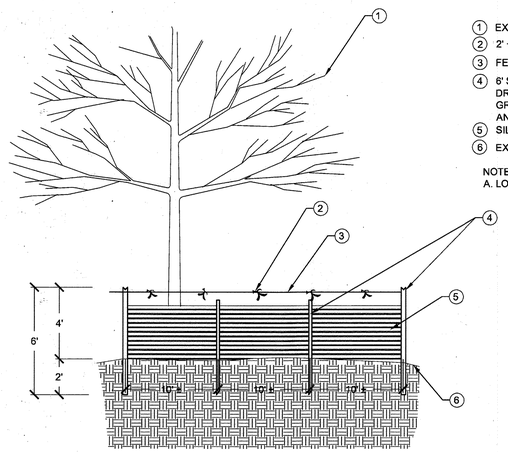
1. 2" SHREDDED HARDWOOD MULCH
2. PREPARED BACKFILL SOIL MIXTURE. SEE SPECS
3. UNDISTURBED SOIL PEDESTAL
4. SET TREE ABOVE THE ORIGINAL GRADE ⅛ DEPTH OF ROOT BALL
5. SOIL SAUCER: USE PREPARED SOIL, 6" MIN.
6. ROPES AT TOP OF BALL SHALL BE CUT. REMOVE TOP ½ OF BURLAP. NON-BIODEGRADEABLE MATERIAL SHALL BE TOTALLY REMOVED
7. HARDWOOD STAKES
8. RUBBER HOSE AT BARK ON EACH MAJOR STEM. ALL MAJOR STEMS SHOULD BE WIRED TOGETHER.

76 MULTI-STEM DECIDUOUS TREE PLANTING
NTS



1. 2" SHREDDED HARDWOOD MULCH
2. PREPARED BACKFILL SOIL MIXTURE. SEE SPECS
3. UNDISTURBED SOIL PEDESTAL
4. SET TREE ABOVE THE ORIGINAL GRADE ⅛ DEPTH OF ROOT BALL
5. SOIL SAUCER: USE PREPARED SOIL, 6" MIN.
6. ROPES AT TOP OF BALL SHALL BE CUT. REMOVE TOP ½ OF BURLAP. NON-BIODEGRADEABLE MATERIAL SHALL BE TOTALLY REMOVED
7. HARDWOOD STAKES
8. RUBBER HOSE AT BARK ON EACH MAJOR STEM. ALL MAJOR STEMS SHOULD BE WIRED TOGETHER.
9. (3) GUY WIRES, WHITE FLAG ON 2 STRANDS OF EACH TWISTED GALVANIZED WIRE
10. (3) TURNBUCKLE, GALVANIZED

78 DECIDUOUS TREE PLANTING
NTS



1. EXISTING TREES TO REMAIN
2. 2' +/- ORANGE STREAMERS 3' +/- O.C.
3. FENCE WIRE
4. 6' STEEL "T-BAR" STAKE AT ROOT ZONE OF TREES DRIVEN INTO GROUND OR YELLOW PINE POST IN GROUND 2'. AVOID ROOT DAMAGE WHEN PLACING ANCHOR POSTS.
5. SILT FENCE TO BE HEELED IN THE SOIL
6. EXISTING GRADE

NOTES:
A. LOCATE FENCE OUTSIDE THE CRITICAL ROOT ZONE.

77 TREE PROECTION DETAIL
1/4"=1'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 4/24/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/30/2016
AS-BUILT DATE: 10/12/2016

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

ToolеDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\5282 DTP-Blandair Trail\Site Development Plan General\CAD\Plans\C5-X-4 - LndscpDtls.dwg | DES. DPB | DRN. AG | CHK. EM

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022, EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — ROBERT LEE JENKINS — No. 35022 — REGISTERED PROFESSIONAL ENGINEER

12/11/14

ELECTION DISTRICT 5 — HOWARD COUNTY

LANDSCAPE DETAILS C11.17

DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

SCALE	ZONING	TDG. FILE No.
N/A	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	158 OF 171

SDP-13-020

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PLANTING SPECIFICATIONS

1. QUALITY ASSURANCE:
   A. LANDSCAPE PLANTING AND RELATED WORK SHALL BE PERFORMED BY A FIRM WITH A MINIMUM OF FIVE YEARS EXPERIENCE SPECIALIZING IN THIS TYPE AND SCALE OF WORK.
   B. APPLICABLE SPECIFICATIONS AND STANDARDS: HOWARD COUNTY ZONING ORDINANCE, AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METROPOLITAN AREAS, LATEST EDITION, LANDSCAPE CONTRACTORS ASSOCIATION.
   C. IF SITE CONDITIONS VARY FROM PLAN, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION
2. SUBMITTALS:
SUBMIT THE FOLLOWING TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK:
   A. COPIES OF MANUFACTURER'S DATA FOR ALL MATERIALS REQUIRED.
   B. SAMPLES OF REQUIRED MULCH MATERIAL.
   C. CHEMICAL AND MECHANICAL ANALYSIS AND SAMPLES OF ALL EXISTING SOIL, TOPSOIL, ORGANIC MATTER AND SOIL MIX TO BE USED.
   D. PLANTING SCHEDULE SHOWING THE DATES (EARLIEST AND LATEST) PROPOSED FOR EACH TYPE OF PLANT SPECIFIED, SCHEDULE EACH TYPE OF PLANTING WITHIN THE NORMAL PLANTING SEASONS FOR SUCH WORK. INCLUDE REQUESTS FOR ANY PROPOSED CHANGES IN THE APPROVED PLANTING SEASON AND A LIST OF PROPOSED SOURCES FOR ALL PLANT MATERIALS.
   E. LIST OF PROPOSED SOURCES FOR ALL PLANT MATERIAL.
3. DELIVERY, HANDLING, AND STORAGE:
   A. DELIVER PACKAGED MATERIALS IN MANUFACTURER'S UNOPENED CONTAINERS OR BUNDLES, FULLY IDENTIFIED WITH NAME, BRAND, TYPE, WEIGHT, AND ANALYSIS. STORE PACKAGED MATERIALS IN SUCH A MANNER AS TO PREVENT DAMAGE OR INTRUSION OF FOREIGN MATTER.
   B. DIG BALLED AND BURLAPPED (B&B) PLANTS WITH FIRM, NATURAL BALLS OF EARTH, OF A DIAMETER NOT LESS THAN THAT SHOWN ON THE PLANT LIST NOR LESS THAN RECOMMENDED BY THE AMERICAN STANDARD FOR NURSERY STOCK, AND OF SUFFICIENT DEPTH TO INCLUDE THE FIBROUS AND FEEDING ROOTS. B&B PLANTS WILL NOT BE ACCEPTED IF THE BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.
   C. DELIVER TREES AND SHRUBS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED. DO NOT BEND, BIND, OR TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES OR DESTROY NATURAL SHAPE. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST BY HEELING-IN BARE ROOT STOCK AND COVERING PLANT BALLS WITH SOIL, PEAT MOSS OR OTHER ACCEPTABLE MATERIAL FOR BALLED STOCK. PLANTS SHALL BE KEPT WELL WATERED AND SHALL NOT REMAIN UNPLANTED FOR LONGER THAN TEN (10) DAYS AFTER DELIVERY.
   D. PLANTS SHALL BE LIFTED AND HANDLED FROM THE BOTTOM OF THE BALL ONLY.
   E. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS UNTIL PLANTING TIME.
4. DRAINAGE:
BEFORE PLANTING, DETERMINE THAT AREAS TO RECEIVE PLANT MATERIAL HAVE ADEQUATE SUBDRAINAGE.
   A. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DRAINAGE TESTS AS NECESSARY TO IDENTIFY ANY PROBLEMS PRIOR TO BEGINNING PLANTING OPERATIONS. UPON COMMENCEMENT OF PLANTING OPERATIONS THE LANDSCAPE CONTRACTOR ASSUMES RESPONSIBILITY FOR SOIL CONDITIONS.
   B. DIG PLANTING PITS TO FULL DEPTH AND DIMENSIONS INDICATED ON DRAWINGS.
   C. AT BOTTOM OF PLANTING PIT, EXCAVATE RECTANGULAR PIT 12 INCHES BY 12 INCHES BY 18 INCHES DEEP. QUICKLY POUR WATER INTO PIT TO A DEPTH OF 6 INCHES (APPROXIMATELY 3-3 3/4 GALLON). NOTE TIME REQUIRED FOR WATER TO BE COMPLETELY ABSORBED. DIVIDE TIME NOTED BY 6 TO ACHIEVE AVERAGE RATE OF ABSORPTION FOR 1 INCH OF WATER. WHERE RATE OF ABSORPTION EXCEEDS 60 MINUTES PER INCH, NOTIFY OWNER IMMEDIATELY FOR DIRECTIONS ON HOW TO PROCEED.
5. PLANTING DATES:
PLANTING SHALL BE DONE ONLY WITHIN THE FOLLOWING DATES EXCEPT AS APPROVED BY OWNER.
   A. DECIDUOUS TREES AND SHRUBS: MARCH 1 TO MAY 31 AND OCTOBER 15 TO DECEMBER 15.
   B. EVERGREEN TREES, SHRUBS AND VINES: MARCH 1 TO MAY 31 AND SEPTEMBER 1 TO NOVEMBER 15.
   C. ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF 1 YEAR FROM THE DATE FINAL ACCEPTANCE TO BE IN GOOD, HEALTHY AND FLOURISHING CONDITION.
6. MATERIALS FOR PLANTING:
   A. TOPSOIL: SHALL BE A FERTILE, FRIABLE NATURAL LOAM, UNIFORM IN COMPOSITION, FREE OF STONES, LUMPS, PLANTS AND THEIR ROOTS, DEBRIS AND OTHER EXTRANEOUS MATTER OVER 1 INCH IN DIAMETER, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. SOIL SHALL BE HARVESTED AT A SINGLE SOURCE FROM T ***HE O AND/OR A H*** ORIZONS OF THE SOIL PROFILE.
      1)TOPSOIL SHALL HAVE A PH RANGE OF 5.5 TO 7.5.
      2)TOPSOIL SHALL CONTAIN 1.5-5% ORGANIC MATTER BY DRY WEIGHT .
      3)SOIL TEXTURE: SANDY LOAM, SANDY CLAY LOAM WITH THE FOLLOWING PARTICLE SIZE DISTRIBUTION:

GRAVEL	LESS THAN 10%
SILT	15-30%
CLAY	20-35%

      CHEMICAL LEVELS SHALL BE:

MAGNESIUM MG	100+ UNITS
PHOSPHORUS P205	150+ UNITS
POTASSIUM - K20	120+ UNITS

      4)SOLUBLE SALTS/ CONDUCTIVITY - NOT TO EXCEED 900 PPM/0.9 MMHOS/CM (IN SOIL); NOT TO EXCEED 3000 PPM/2.5 MMHOS/CM (IN HIGH ORGANIC MIX)
      5) CATION EXCHANGE CAPACITY SHALL BE A MINIMUM OF 8 MEQ/100G.
   B. CLAY LOAM TO SANDY CLAY LOAM SOIL SHALL BE A FERTILE, FRIABLE NATURAL LOAM, UNIFORM IN COMPOSITION, FREE OF STONES, LUMPS, PLANTS AND THEIR ROOTS, DEBRIS AND OTHER EXTRANEOUS MATTER OVER 1 INCH IN DIAMETER, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH.
      1) SOIL SHALL HAVE A PH RANGE OF 5.5 TO 6.5.
      2) SOIL SHALL CONTAIN 2-5% ORGANIC CONTENT BY VOLUME.
      3) SOIL TEXTURE: CLAY LOAM TO SANDY CLAY LOAM WITH THE FOLLOWING PARTICLE SIZE DISTRIBUTION:

GRAVEL	LESS THAN 10%
SAND	20-50%
SILT	<35%
CLAY	20-40%

      4) CHEMICAL LEVELS SHALL BE:

MAGNESIUM MG	100+ UNITS
PHOSPHORUS P205	150+ UNITS
POTASSIUM - K20	120+ UNITS

      5) SOLUBLE SALTS/ CONDUCTIVITY - NOT TO EXCEED 900 PPM/0.9 MMHOS/CM (IN SOIL); NOT TO EXCEED 3000 PPM/2.5 MMHOS/CM (IN HIGH ORGANIC MIX)
   C. COMPOST: COMPOST SHALL BE MATURE, STABLE, WEED FREE, AND PRODUCED BY AEROBIC DECOMPOSITION OF ORGANIC MATTER. COMPOST FEEDSTOCK SHALL BE PLANT MATTER, SUCH AS HIGH LIGNIN FORESTRY PRODUCTS OR YARD WASTE (LEAVES, BRUSH AND YARD TRIMMINGS).
      1) THE PRODUCT MUST NOT CONTAIN ANY VISIBLE REFUSE OR OTHER PHYSICAL CONTAMINANTS, SUBSTANCES TOXIC TO PLANTS, OR OVER 5% SAND, SILT, CLAY OR ROCK MATERIAL BY DRY WEIGHT.
      2) COMPOST SHALL BE SAMPLED AND TESTED AS REQUIRED BY THE SEAL OF TESTING ASSURANCE PROGRAM OF THE UNITED STATES COMPOSTING COUNCIL (USCC) AND SHALL MEET THE PHYSICAL REQUIREMENTS FOR COMPOST AS DETERMINED BY USCC.
      3) THE PRODUCT SHALL POSSESS NO OBJECTIONABLE ODORS. THE PRODUCT MUST MEET ALL APPLICABLE USEPA CFR, TITLE 40, PART 503 STANDARDS FOR CLASS A BIOSOLIDS.
      4) THE MOISTURE LEVEL SHALL BE SUCH THAT NO VISIBLE WATER OR DUST IS PRODUCED WHEN HANDLING THE MATERIAL.
   D. COMPOSTED PINE BARK FINES: SHALL BE APPROVED COMPOSTED, GROUND PINE BARK HAVING NO PARTICLE WITH A DIMENSION GREATER THAN 3/4 INCH. NO MORE THAN 10% SHALL BE WOOD.
   E. SAND: SHALL BE QUARTZ BASED SHARP CONCRETE SAND, ASTM C-33 FINE/AGGREGATE, WITH A FINES MODULUS INDEX BETWEEN 2.8 AND 3.2.
   F. PERLITE: COARSE HORTICULTURAL GRADE EXPANDED, VOLCANIC PERLITE. MAXIMUM DENSITY SHALL BE 8 LB./FT3.
      1) PH SHALL BE 6.5 TO 7.5.
      2) PERLITE SHALL BE MEET THE PERLITE INSTITUTE'S STANDARDS FOR GRADATION FOR HORTICULTURAL PERLITE FOR COARSE PERLITE WITH NO MORE THAN 70% PASSING THROUGH A #16 STANDARD SIEVE.
   G. HUMUS: SHALL BE MATURE, STABLE, WEED FREE, AND PRODUCED BY AEROBIC DECOMPOSITION OF ORGANIC MATTER. COMPOST FEEDSTOCK SHALL BE PLANT MATTER, SUCH AS HIGH LIGNIN FORESTRY PRODUCTS OR YARD WASTE (LEAVES, BRUSH AND YARD TRIMMINGS).
      1) HUMUS SHALL HAVE A PH BETWEEN 6 AND 7.5.
      2) SOLUBLE SALT CONCENTRATION SHALL BE LESS THAN 10DS/M.
      3) CATION EXCHANGE CAPACITY RATE SHALL BE 100-250.
      4) THE PRODUCT MUST NOT CONTAIN ANY VISIBLE REFUSE OR OTHER PHYSICAL CONTAMINANTS, SUBSTANCES TOXIC TO PLANTS, OR OVER 5% SAND, SILT, CLAY OR ROCK MATERIAL BY DRY WEIGHT.
      5) THE PRODUCT SHALL POSSESS NO OBJECTIONABLE ODORS. THE PRODUCT MUST MEET ALL APPLICABLE USEPA CFR, TITLE 40, PART 503 STANDARDS FOR CLASS A BIOSOLIDS.
      6) THE MOISTURE LEVEL SHALL BE SUCH THAT NO VISIBLE WATER OR DUST IS PRODUCED WHEN HANDLING THE MATERIAL.
   H. TRACE ELEMENTS: SHALL BE COMMERCIALLY AVAILABLE SLOW RELEASE MATERIALS CONTAINING ZINC (ZN), MOLYBDENUM (MO), COPPER (CU), BORON (B), AND MAGNESIUM (MN).
   I. FERTILIZER: A COMMERCIAL FERTILIZER FOR ORNAMENTAL TREES, SHRUBS AND GROUND COVER WITH AN ANALYSIS OF 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM SHALL BE USED. THIS FERTILIZER SHALL BE GRANULAR WITH A MINIMUM OF 50% OF THE TOTAL NITROGEN IN ORGANIC FORM. 14-14-14-OSMOCOTE (OR APPROVED EQUAL) SHALL BE APPLIED AT A RATE OF 10 LBS. PER SQUARE FOOT, TILLED TO A DEPTH OF 8 INCH, SHALL BE USED FOR PERENNIALS.
   J. SOIL SEPARATOR: SHALL BE ROT RESISTANT NON-WOVEN POLYPROPYLENE FILTER FABRIC, WATER PERMEABLE, AND UNAFFECTED BY FREEZING AND THAWING. ACCEPTABLE PRODUCTS INCLUDE: MIRAFI 140N, MIRAFI CIVIL ENGINEERING CO., OR STABILENKA TYPE T-80, AMERICAN ENKA CO., ENKA, N.C.
7. PLANT MATERIALS:
(REFER TO THE PLANT LIST ON THE DRAWINGS FOR SPECIFIC TYPES AND QUANTITIES OF PLANTS):
   A. PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES. PLANTS SHALL EITHER BE OBTAINED FROM LOCAL NURSERIES AND/OR OTHERS, WHICH HAVE SOIL (HEAVY CLAY) AND CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT.
   B. PLANT MATERIAL GROWN IN SANDY, WELL-DRAINED SOIL WILL NOT BE APPROVED FOR THIS PROJECT. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY AND UNLESS SPECIFICALLY NOTED OTHERWISE, ALL PLANTS SHALL BE OF SPECIMEN QUALITY, EXCEPTIONALLY HEAVY, SYMMETRICAL, TIGHTLY-KNIT PLANTS, SO TRAINED OR FAVORED IN THEIR DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY.
   C. PLANTS SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF, FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE AND SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS. THEY SHALL BE FREE FROM PHYSICAL DAMAGE OR ANY CONDITIONS THAT WOULD PREVENT THRIVING HEALTH AND THE DESIRED APPEARANCE.
   D. TREES, WHICH HAVE A DAMAGED OR CROOKED LEADER, OR MULTIPLE LEADERS, UNLESS SPECIFIED IN THE PLANT LIST, WILL BE REJECTED. TREES WITH ABRASION OF THE BARK, SUN SCALD, DISFIGURING KNOTS, OR PRUNING CUTS MORE THAN 1 1/4 INCH DIAMETER WHICH HAVE NOT COMPLETELY CALLUSED, WILL BE REJECTED.
   E. PLANTS SHALL CONFORM TO MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULES EXCEPT THAT PLANTS LARGER THAN SPECIFIED MAY BE USED IF ACCEPTABLE TO THE LANDSCAPE ARCHITECT OR OWNER. USE OF SUCH PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. IF LARGER PLANTS ARE ACCEPTED, THE ROOT BALL SHALL BE SIZED FOR THE LARGER PLANT.
   F. CALIPER MEASUREMENT: SHALL BE TAKEN AT A POINT ON THE TRUNK 6 INCHES ABOVE NATURAL GROUND LINE FOR TREES UP TO 4 INCHES DIAMETER, AND AT A POINT 12 INCHES ABOVE THE NATURAL GROUND LINE FOR TREES OVER 4 INCHES DIAMETER.
   G. PLANTS SHALL BE MEASURED WHEN BRANCHES ARE IN THE NORMAL POSITION. HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO THE MAIN BODY OF THE PLANT AND NOT FROM BRANCH TIP TO TIP.
8. SOIL MIXING PROCEDURES:
   A. TOPSOIL USED IN SAND/SOIL MIXES SHALL BE SCREENED OR SHREDDED PRIOR TO MIXING IN SANDS. MAXIMUM CLOD INCLUSION FOR SOIL MIXES SHALL NOT EXCEED:

CLOD SIZE (LARGEST DIMENSION) %	OF THE SOIL MIX VOLUME
LESS THAN 1"	UNLIMITED
1 TO 3 INCHES	20%
3 TO 6 INCHES	5%
>6 INCHES	LESS THAN 2%

   B. SOURCE MATERIAL AND SOIL MIX STOCKPILES SHALL BE PROTECTED FROM RAIN BY COVERING WITH FILTER CLOTH.
9. INSPECTION:
   A. EXAMINE THE AREAS AND CONDITIONS WHERE SOIL MIX IS TO BE INSTALLED AND NOTIFY THE ARCHITECT OF CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK. DO NOT PROCEED WITH THE WORK UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED TO PERMIT PROPER INSTALLATION OF THE WORK.
   B.COOPERATE WITH OTHER CONTRACTORS AND TRADES WORKING IN AND ADJACENT TO OTHER WORK AREAS. EXAMINE DRAWINGS WHICH SHOW DEVELOPMENT OF ENTIRE PROJECT AND BECOME FAMILIAR WITH SCOPE OF OTHER WORK REQUIRED.
10. SOIL INSTALLATION - GENERAL PROCEDURES:
   A. IF SUBGRADE SOIL COMPACTION EXCEEDS 80%, EXISTING SOIL SHALL BE RIPPED TO A DEPTH OF 12 INCH TO ALLEVIATE COMPACTION WHICH HAS TAKEN PLACE DURING CONSTRUCTION. PRIOR TO LOOSENING OF SOIL, CONTRACTOR MUST LOCATE EXISTING UTILITIES AND COORDINATE WITH OWNER ANY UNDERGROUND ELECTRIC LINES, DRAINAGE PIPES, CONDUITS, ETC.
   B. PREPARE THE SUBGRADE BY ROUGHENING THE TOP 3" OF THE SUBSOIL BY DRAGGING THE TEETH OF A BACKHOE BUCKET ACROSS THE SURFACE.
   C. BEGIN SOIL INSTALLATION AS SOON AS SUBSOIL IS PREPARED. USE LOW IMPACT EQUIPMENT WITH TRACK BELTS, LARGE TIRES, OR LOW TIRE PRESSURE TO LOWER COMPACTION AND SOIL DAMAGE DURING INSTALLATION.
   D. MONITOR COMPACTION DURING INSTALLATION AND LOOSEN SOILS AS NEEDED IF COMPACTION EXCEEDS 80%.
   E. INSTALL SPECIFIED SOIL IN 12"-18" THICK LIFTS. COMPACT EACH LIFT SUFFICIENTLY TO REDUCE SETTLING BUT NOT ENOUGH TO PREVENT THE MOVEMENT OF WATER AND FEEDER ROOTS THROUGH THE SOIL. THE SOILS IN EACH LIFT SHOULD FEEL FIRM TO THE FOOT IN ALL AREAS AND MAKE ONLY SLIGHT HEEL PRINTS.
11. INSTALLATION OF SOIL MIX FOR LAWN AREAS ON GRADE:
   A. SOIL MIX FOR LAWNS ON GRADE: SHALL CONSIST OF 10% COMPOST AND 90% TOPSOIL, BY VOLUME. THESE MATERIALS MUST MEET SPECIFICATIONS DESCRIBED IN SECTION 2.00.
   B. LOOSEN SUBGRADE LAWN AREAS TO A MINIMUM OF 3". REMOVE STONES MORE THAN 1-1/2" IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER. LIMIT PREPARATION TO AREAS WHICH WILL BE PLANTED PROMPTLY AFTER PREPARATION.
   C.SPREAD SOIL MIX FOR LAWN AREAS ON GRADE TO A MINIMUM DEPTH OF 8" AS REQUIRED TO MEET GRADE AND ELEVATIONS SHOWN ON DRAWINGS, AFTER LIGHTLY ROLLING AND NATURAL SETTLEMENT. ALLOW FOR SOD THICKNESS IN AREAS TO BE SODDED.
12. INSTALLATION OF SOIL MIX FOR TREE PITS ON GRADE
   A. CONFIRM THAT NATIVE SUBSOIL DRAINS AT A RATE OF AT LEAST ½" PER HOUR. IF DRAINAGE IS LESS THAN ½" PER HOUR, PROVIDE SUBSURFACE DRAINAGE LINES.
   B. INSTALL 30-36" OF SOIL MIX FOR TREE PIT BACKFILL ON GRADE:
      1) SHALL CONSIST OF CLAY LOAM TO SANDY CLAY LOAM SOIL, SAND, AND COMPOSTED PINE BARK FINES AT A RATE OF 5:5:1 TO 10:5:1.5 TO ACHIEVE THE FOLLOWING:
         (A) CLAY CONTENT OF SOIL MIX SHALL BE 10-20% OF THE SOIL MIX, BY VOLUME.
         (B) MINIMUM AMOUNT OF COARSE TO MEDIUM SAND IN THE MIX SHALL BE 55%.
         (C) MINIMUM INFILTRATION RATE AT 80-85% COMPACTION SHALL BE 1-3 INCHES PER HOUR.
   C. COMPOSTED PINE BARK FINES SHALL NOT EXCEED 10% OF THE TOTAL SOIL MIX BY VOLUME.
   D. TILL 4" OF COMPOST INTO THE TOP 6" OF THE INSTALLED SOIL MIX FOR TREE PIT BACKFILL ON GRADE.
13. INSTALLATION OF SOIL MIX FOR MULCHED SHRUB AND PERENNIAL BEDS:
   A. CONFIRM THAT NATIVE SUBSOIL DRAINS AT A RATE OF AT LEAST ½" PER HOUR. IF DRAINAGE IS LESS THAN ½" PER HOUR, PROVIDE SUBSURFACE DRAINAGE LINES.
   B. INSTALL 14" OF SOIL MIX FOR MULCHED SHRUB AND PERENNIAL BEDS ON GRADE:
      1) SHALL CONSIST OF CLAY LOAM TO SANDY CLAY LOAM SOIL, SAND, AND COMPOSTED PINE BARK FINES AT A RATE OF 5:5:1 TO 10:5:1.5 TO ACHIEVE THE FOLLOWING:
         (A) CLAY CONTENT OF SOIL MIX SHALL BE 10-20% OF THE SOIL MIX, BY VOLUME.
         (B) MINIMUM AMOUNT OF COARSE TO MEDIUM SAND IN THE MIX SHALL BE 55%
         (C) MINIMUM INFILTRATION RATE AT 80-85% COMPACTION SHALL BE 1-3 INCHES PER HOUR.
      2) COMPOSTED PINE BARK FINES SHALL NOT EXCEED 10% OF THE TOTAL SOIL MIX BY VOLUME.
   C. TILL 4" OF COMPOST INTO THE TOP 6" OF THE INSTALLED SOIL MIX FOR TREE PIT BACKFILL ON GRADE.
14. EROSION CONTROL MATERIAL AND PLANTING ON STEEP SLOPES:
   A. MATERIAL MEETING THE REQUIREMENTS OF THE SPECIFICATIONS SHALL BE INSTALLED AND MAINTAINED ON THE DESIGNATED AREAS AS SHOWN AND SPECIFIED. THE AREAS TO BE COVERED SHALL BE PREPARED AND FERTILIZED AS SPECIFIED BEFORE THE EROSION MATERIAL IS PLACED. IMMEDIATELY PRIOR TO THE PLANTING OPERATIONS, THE MATERIAL SHALL BE LAID EVENLY, SMOOTHLY AND IN CONTACT WITH THE SOIL THROUGHOUT.
   B. LAY EROSION CONTROL MATERIALS WITH ONE INCH NOMINAL OPENINGS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. UNROLL IN DIRECTION OF WATER FLOW. OVERLAP SHEETS BY AT LEAST 6 INCHES. WHERE STRIPS ARE TO BE SPLICED LENGTHWISE, OVERLAP STRIPS BY 8 INCHES. UPGRADE SECTION SHALL BE ON TOP OF ALL SPLICES.
   C. THE CONTRACTOR SHALL MAINTAIN AND PROTECT THE EROSION CONTROL MATERIAL UNTIL THE FINAL INSPECTION. MAINTENANCE SHALL CONSIST OF REPAIRS MADE NECESSARY BY EROSION, WIND OR ANY OTHER CAUSE. FOLLOWING THE RESTORATION OF DAMAGED AREAS UNDER PLANT AND TURF GUARANTEE AND ESTABLISHMENT REQUIREMENTS FOR APPLICABLE UNDERLYING ITEMS; THE EROSION CONTROL MATERIAL SHALL BE REPAIRED OR REPLACED TO MEET THE ORIGINAL REQUIREMENTS AND MAINTAINED UNTIL THE FINAL INSPECTION.
15. GENERAL PLANT INSTALLATION:
   A. EXCAVATION: EXCAVATE ALL TREE PITS AND PLANTING AREAS TO THE WIDTH AND DEPTH SHOWN IN THE PLANTING DETAILS.
   B. CENTER PLANT IN PIT AND ORIENT FOR THE BEST VISUAL EFFECT. SET PLANTS PLUMB AND HOLD RIGIDLY IN POSITION UNTIL SOIL HAS BEEN TAMPED FIRMLY AROUND ROOT BALL.
   C. MULCH WITHIN 48 HOURS AFTER PLANTING AND AFTER APPLYING THE PRE-EMERGENT HERBICIDE, EXCEPT GROUND COVER AREAS (WHICH SHALL HAVE ORGANIC MATERIAL PLACED BEFORE PLANTING) WITH A 2" LAYER OF MULCH IMMEDIATELY AFTER PLANTING. ALL BED LINES SHALL BE CUT WITH A SMOOTH CONSISTENT EDGE TO A MINIMUM DEPTH OF 3 INCHES. KEEP MULCH OUT OF THE CROWNS OF SHRUBS AND OFF BUILDINGS, SIDEWALKS, LIGHT STANDARDS, AND OTHER STRUCTURES.
   D. ALL PLANTING AREAS TO CONFORM TO SPECIFIED GRADES AFTER FULL SETTLEMENT HAS OCCURRED AND MULCH HAS BEEN APPLIED. PROVIDE SAUCERS AROUND TREE PITS AS SHOWN ON PLANTING DETAILS. REMOVE ALL TAGS, LABELS, STRINGS, ETC. FROM ALL PLANTS.
16. PERMANENT SEEDING OR SODDING FOR GRASS AREAS:
   A. LAWN SEED OR SOD VARIETIES SHALL BE AN IMPROVED VARIETY TURF-TYPE TALL FESCUE BLEND. THE LANDSCAPE CONTRACTOR SHALL SELECT FROM VARIETIES APPROVED BY THE MARYLAND OR VIRGINIA DEPARTMENT OF AGRICULTURE.
   B. REFER TO THE MARYLAND EROSION AND SEDIMENT CONTROL HANDBOOK, FOR GUIDELINES, SPECIFICATIONS AND INSTALLATION TECHNIQUES OF SEED AND SOD.
   C. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT AND LAWN AREA IS INSTALLED AND SHALL CONTINUE UNTIL 90 DAYS AFTER FINAL ACCEPTANCE OF THE LAST SECTION.

PHASE 1 PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	SPACING
		Deciduous Trees			
MS	6	Magnolia x soulangiana	Saucer Magnolia	6' - 8' ht. b&b	15' o.c.
PC	3	Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane Tree	2.5 - 3" cal./ b&b	As shown
		Deciduous Shrubs			
RP	19	Rhododendron 'PJM'	PJM Rhododendron	2' - 2.5' ht. b&b	As Shown
		Perennials/ Ornamental Grasses			
CB	16	Carex buchananii "Red Rooster"	Red Rooster Leather Leaf Sedge	1 gal./cont.	48" o.c.
HH	93	Hemerocallis x 'Happy Returns'	Happy Returns Day Lily	1 gal./cont.	18" o.c.
HP	128	Hemerocallis x 'Pardon Me'	Pardon Me Day Lily	1 gal./cont.	18" o.c.
HS	284	Hemerocallis x 'Stella D'oro'	Stella D'oro Day Lily	1 gal./cont.	18" o.c.
HK	34	Hypericum Kalmianum 'Gemo'	Gemo St. John's Wort	1 gal./cont.	36" o.c.
MA	46	Miscanthus sinensis 'Arabesque'	Arabesque Silver Grass	1 gal./cont.	48" o.c.
MI	15	Miscanthus sinensis var. 'Yaku Jima'	Dwarf Maiden Grass	1 gal./cont.	48" o.c.
MC	15	Muhlenbergia capillaris	Pink Muhly Grass	1 gal./cont.	48" o.c.
PA	47	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	1 gal./cont.	48" o.c.
PJ	15	Pieris japonica 'Compacta'	Compact Japanese Andromeda	1 gal./cont.	48" o.c.

PHASE 2 PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	SPACING
		Deciduous Trees			
LT	2	Liriodendron tulipifera	Tuliptree	2.5 - 3" cal./ b&b	As shown
PC	10	Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane Tree	2.5 - 3" cal./ b&b	As shown
PS	3	Prunus serrulata 'Kwanzan'	Kwanzan Cherry	1.5" - 2" cal./b&b	As shown
		Accent Shrubs			
BM	33	Buxus microphylla	Wintergreen boxwood	2' - 2.5' ht.	As Shown
IL	18	Ilex verticillata	Common Winterberry	3' - 4' ht.	As Shown
LF	32	Leucothoe fantanesiana	Droping Leucothoe	2' - 2.5' ht.	As Shown
RA	7	Rhus aromatic	Fragrant Sumac	2' - 2.5' ht.	As Shown
VA	35	Vaccinium corymbosum	High bush Blueberry	2' - 2.5' ht.	As Shown
VD	20	Viburnum dentatum	Arrowwood Viburnum	2.5' - 3' ht.	As Shown
		Perennials/ Ornamental Grasses			
CP	91	Carex pensylvanica	Pennsylvania Sedge	1gal./cont.	18" o.c.
EV	26	Elymus virginicus	Virginia Wild Rye	1gal./cont.	18" o.c.
HK	111	Hypericum kalmianum ' Gemo'	Gemo St. John's Wort	1gal./cont.	18" o.c.
HP	68	Hemerocallis x ' Pardon Me'	Pardon Me Daylily	1gal./cont.	18" o.c.
HS	216	Hemerocallis ' Stella d' Oro'	Daylily	1gal./cont.	18" o.c.
LC	87	Lobelia cardinals	Cardinal Flower	1gal./cont.	18" o.c.
PV	178	Panicum virgatum	Red Switch Grass	1gal./cont.	18" o.c.
RH	150	Rudbeckia hirta	Black Eyed Susan	1gal./cont.	18" o.c.

PHASE 3 PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	SPACING
		Accent Shrubs			
BM	14	Buxus microphylla	Wintergreen boxwood	2' - 2.5' ht.	As Shown
IL	13	Ilex verticillata	Common Winterberry	3' - 4' ht.	As Shown
VA	20	Vaccinium corymbosum	High bush Blueberry	2' - 2.5' ht.	As Shown
		Perennials/ Ornamental Grasses			
CP	63	Carex pensylvanica	Pennsylvania Sedge	1gal./cont.	18" o.c.
PA	21	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	1 gal./cont.	48" o.c.
PJ	14	Pieris japonica 'Compacta'	Compact Japanese Andromeda	1 gal./cont.	48" o.c.
RH	37	Rudbeckia hirta	Black Eyed Susan	1gal./cont.	18" o.c.

PHASE 4 PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	SPACING
		Deciduous Trees			
PC	9	Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane Tree	2.5 - 3" cal./ b&b	As shown
		Accent Shrubs			
BM	46	Buxus microphylla	Wintergreen boxwood	2' - 2.5' ht.	As Shown
IL	45	Ilex verticillata	Common Winterberry	3' - 4' ht.	As Shown
LF	28	Leucothoe fantanesiana	Droping Leucothoe	2' - 2.5' ht.	As Shown
VA	32	Vaccinium corymbosum	High bush Blueberry	2' - 2.5' ht.	As Shown
		Perennials/Ornamental Grasses			
CP	20	Carex pensylvanica	Pennsylvania Sedge	1gal./cont.	18" o.c.
HK	22	Hypericum kalmianum ' Gemo'	Gemo St. John's Wort	1gal./cont.	18" o.c.
PA	24	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	1 gal./cont.	48" o.c.
PJ	6	Pieris japonica 'Compacta'	Compact Japanese Andromeda	1 gal./cont.	48" o.c.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/24/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

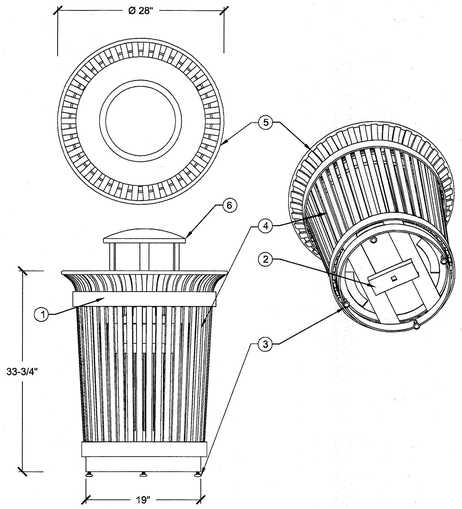
NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp. Date: 10/9/2016
AS-BUILT DATE: 10/13/2016

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

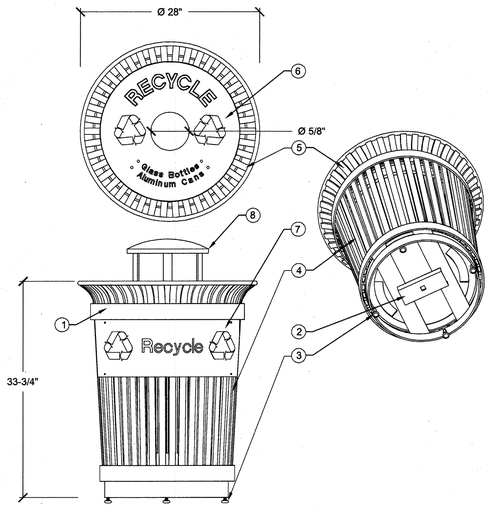
Q:\ACTIVE



1. (2) 1/4" x 2-1/2" HORIZONTAL SOLID STEEL BANDS
2. 3/4" SQUARE CENTER ANCHOR BOLT HOLE
3. (4) LEVELING FEET WITH A 3/8" DIAMETER THREADED STEEL SHAFT
4. (42) 3/8" X 1" VERTICAL SOLID STEEL BARS
5. 5/8" SOLID STEEL TOP RING
6. RAIN BONNET LID

NOTES:
A. MATERIALS
   1. MANUFACTURER: VICTOR STANLEY, INC.
   2. TYPE: STEELSITES RB SERIES RB-36, 36-GALLON
   3. COLOR: BLACK
   4. FINISH: STEEL SHOTBLASTED, ETCHED, PHOSHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C POLYESTER POWDER COATINGS
B. TOP LOAD LIDS ARE SECURED WITH VINYL COATED GALVANIZED STEEL AIRCRAFT CABLE. CABLE IS LOOPED AROUND WELDED IN PLACE ATTACHMENT BRACKETS AND CRIMPED IN PLACE.
C. SIDE DOOR LID IS RIVITED IN PLACE.
D. PRODUCT MUST BE PERMANENTLY AFFIXED TO GROUND WITH ANCHOR BOLTS.
E. PLASTIC INNER LINERS ARE MOLDED ON TOOLING
F. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

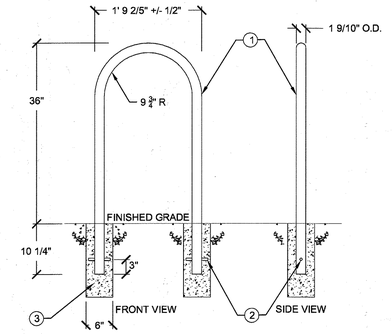
80 TYPICAL TRASH RECEPTACLE
1" = 1'



1. (2) 1/4" x 2-1/2" HORIZONTAL SOLID STEEL BANDS
2. 3/4" SQUARE CENTER ANCHOR BOLT HOLE
3. (4) LEVELING FEET WITH A 3/8" DIAMETER THREADED STEEL SHAFT
4. (42) 3/8" X 1" VERTICAL SOLID STEEL BARS
5. 5/8" SOLID STEEL TOP RING
6. RECYCLING LID WITH 18" STENCIL GAUGE
7. RECYCLING PLAQUE AFFIXED TO OUTSIDE OF SOLID STEEL BANDS
8. RAIN BONNET LID

NOTES:
A. MATERIALS
   1. MANUFACTURER: VICTOR STANLEY, INC.
   2. TYPE: STEELSITES RB SERIES RB-36, 36-GALLON
   3. COLOR: BLUE
   4. FINISH: STEEL SHOTBLASTED, ETCHED, PHOSHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C POLYESTER POWDER COATINGS
B. TOP LOAD LIDS ARE SECURED WITH VINYL COATED GALVANIZED STEEL AIRCRAFT CABLE. CABLE IS LOOPED AROUND WELDED IN PLACE ATTACHMENT BRACKETS AND CRIMPED IN PLACE.
C. SIDE DOOR LID IS RIVITED IN PLACE.
D. PRODUCT MUST BE PERMANENTLY AFFIXED TO GROUND WITH ANCHOR BOLTS.
E. PLASTIC INNER LINERS ARE MOLDED ON TOOLING
F. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

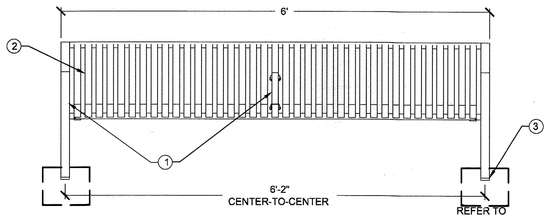
81 TYPICAL RECYCLING RECEPTACLE
1" = 1'



1. 1½" SCH. 40 PIPE (1 ⁹/₁₀ Ø O.D. X 145W)
2. ½" Ø REBAR @ 1 ¼" LG. (4) PLCS TYP.
3. CONCRETE FOOTING 24" MIN. DEPTH

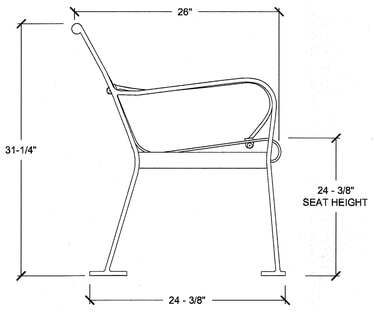
NOTES:
A. MATERIALS
   1. MANUFACTURER: CREATIVE PIPE
   2. TYPE: INVERTED U SERIES SU-15E: 1.5" DIA. STEEL PIPE, EMBEDDED MOUNT REF # 474-022
   3. COLOR: BLACK
   4. FINISH: THERMOPLASTIC POWDER COAT - T
B. PLASTIC INNER LINERS ARE MOLDED ON TOOLING
C. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

82 TYPICAL BICYCLE RACK
NTS

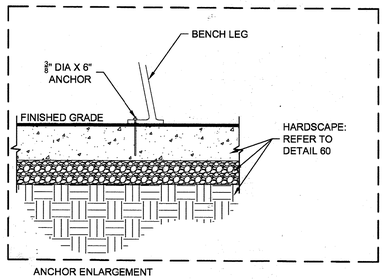


1. 1/2" to 2" SOLID STEEL END AND CENTER ARMRESTS
2. (37) STEEL SLATS ARE FORMED FROM 1/4" X 1-1/2" SOLID STEEL BARS
3. BENCH ANCHOR: ¾" DIA. X 6" NONCORROSIVE SLEEVE ANCHOR WITH ROUND HEAD AT EACH LEG [REFER TO ENLARGEMENT]

NOTES:
A. MATERIALS
   1. MANUFACTURER: VICTOR STANLEY, INC.
   2. TYPE: STEELSITES RB SERIES RB-28, 6' LENGTH BENCH
   3. COLOR: BLACK
   4. FINISH: STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER COATED WITH T.G.I.C. POLYESTER POWDER COATED.
B. IT IS NOT RECOMMENDED TO LOCATE ANCHOR BOLTS UNTIL BENCH IS IN PLACE. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT THE LOCAL CODES FOR REGULATIONS.
C. ANCHOR BOLTS NOT PROVIDED BY MANUFACTURER. PLACE ANCHOR BOLTS THROUGH ⅝" DIA. HOLE DRILL INTO PAVING USING A CARBIDE BIT. FASTEN ANCHOR SNUG AGAINST SITE FURNITURE.
D. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

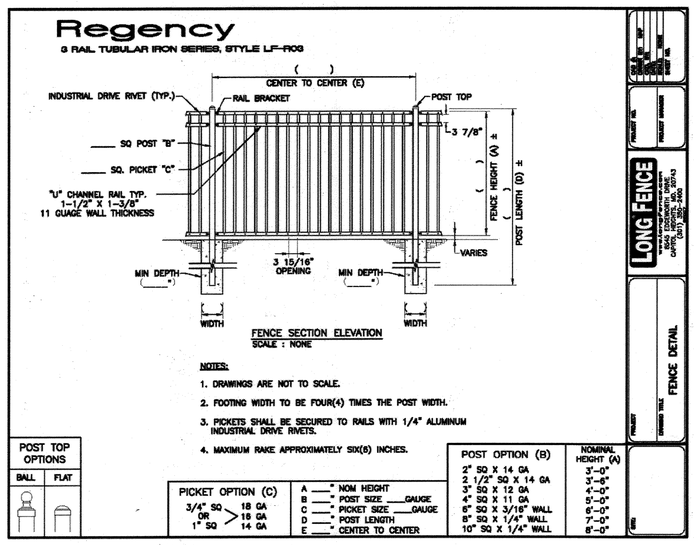


83 TYPICAL BENCH
1" = 1'



ANCHOR ENLARGEMENT

84 NOT USED
NTS



NOTES:
1. DRAWINGS ARE NOT TO SCALE.
2. FOOTING WIDTH TO BE FOUR(4) TIMES THE POST WIDTH.
3. PICKETS SHALL BE SECURED TO RAILS WITH 1/4" ALUMINUM INDUSTRIAL DRIVE RIVETS.
4. MAXIMUM RAKE APPROXIMATELY SIX(6) INCHES.

POST TOP OPTIONS	
BALL	FLAT

PICKET OPTION (C)		
3/4" SQ OR 1" SQ	>	18 GA 18 GA 14 GA

A ___" NOM HEIGHT	
B ___" POST SIZE	___GAUGE
C ___" PICKET SIZE	___GAUGE
D ___" POST LENGTH	
E ___" CENTER TO CENTER	

POST OPTION (B)	NOMINAL HEIGHT (A)
2" SQ X 14 GA	3'-0"
2 1/2" SQ X 14 GA	3'-6"
3" SQ X 12 GA	4'-0"
4" SQ X 11 GA	5'-0"
6" SQ X 3/16" WALL	6'-0"
8" SQ X 1/4" WALL	7'-0"
10" SQ X 1/4" WALL	8'-0"

LONG FENCE
www.LongFence.com
8606 CROSSWIND BLVD.
CHARLOTTE, NC 28273
(800) 352-3648

PROJECT NO.
PROJECT MANAGER
PROJECT
DRAWING TITLE: FENCE DETAIL
SHEET

85 LONG FENCE - IRON FENCE
1" = 1'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 05/11/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 2/26/15
Chief, Division of Land Development	Date 2-25-15
Chief, Development Engineering Division	Date 2.12.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 3/31/2015
AS-BUILT DATE: 10/13/2016

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\5282 GSP-Riverside Trail\Site Development Plan General\CAD\Plans\D2-1 - SiteFurnDtls.dwg | DES. DPB | DRN. AG | CHK. EM

Howard Hughes.
THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15
12/17/14

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)
HOWARD COUNTY
ELECTION DISTRICT 5

SITE FURNITURE C11.19

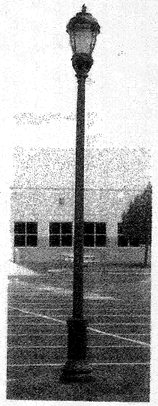
SCALE	ZONING	TDG. FILE No.
N/A	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	160 OF [illegible]

SDP-13-020

G:\ACTIVE PROJECTS\5282 GSP-Riverside Trail\Site Development Plan General\CAD\Plans\D2-X - SiteFurnDtls.dwg, PLOTTED:11/21/2014 11:27 AM, PLOTTED BY: Andrew Gudgeon

GENERAL NOTES

1. THE CONTRACTOR SHALL LOCATE AND MARK UNDERGROUND FACILITIES AND MAINTAIN MARKING DURING CONSTRUCTION.
2. CALL MISS UTILITY PRIOR TO DIGGING. CERTAIN UTILITIES WITHIN THE VICINITY OF THIS PROJECT AREA ARE SHOWN ON THE PLANS. THE UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATELY LOCATED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND LIGHTING SYSTEMS BEFORE PROCEEDING WITH WORK.
3. CONTRACTOR TO PROVIDE SURVEY AND STAKE OUT HAND BOXES & CONDUIT LOCATIONS. COORDINATE WITH BG&E AND HOWARD COUNTY.
4. CONTRACTOR SHALL COORDINATE WITH HOWARD COUNTY AND UTILITIES PLAN ALL BORINGS UNDER EXISTING ROADWAYS.
5. ALL ELECTRICAL WORK SHALL CONFORM TO BG&E LIGHTING GUIDELINES AND HOWARD COUNTY STREET LIGHT POLICIES AND GUIDELINES.
6. FINAL STREET/PATH LIGHT POLE LOCATIONS SHALL BE DETERMINED IN THE FIELD BY HOWARD COUNTY TRAFFIC OR BG&E FOR ALL PUBLIC LIGHT FIXTURES.
7. EXISTING COBRA LIGHT FIXTURES AND POLES TO BE UPGRADED/RELOCATED BY HOWARD COUNTY CAPITAL PROJECT. POLES WILL BE RELOCATED TO 4' FROM BACK OF CURB.
8. ALL ILLUMINANCE VALUES PROVIDED ARE PROPOSED CONDITION.
9. CONTRACTOR SHALL MAINTAIN AS-BUILT RED LINED AND MARKED UP RECORD DRAWINGS AT CONSTRUCTION SITE, AND MAKE RECORD DRAWINGS AVAILABLE FOR OBSERVATION AT TIME OF PAYMENT.
10. GENERAL CONTRACTOR TO PROVIDE ALL NECESSARY BACKFILL AND GRADING FOR PROPER INSTALLATION OF HAND BOXES AND CONDUITS. GENERAL CONTRACTOR TO PROVIDE EXCAVATION FOR HAND BOX INSTALLATION. SEE HAND BOX DETAIL ON PAGE C8.4.
11. AT LOCATIONS WHERE PROPOSED CONDUIT SHALL CROSS NEW OR EXISTING CONDUIT, PIPING OF ANOTHER TRADE, OR STRUCTURE THE CONTRACTOR SHALL HAND-DIG THE TRENCH AND SHALL TAKE ADEQUATE CARE NOT TO DAMAGE THE OTHER CONDUIT, PIPES AND STRUCTURES.
12. THE CONDUITS SHALL BE MINIMUM 24" DEEP AND NO MORE THAN 36-INCHES BEHIND THE CURB OR WITHIN 48" OF ASPHALT TRAIL. SLOPE UNDERGROUND CONDUITS TO DRAIN TO HAND BOXES OR MAN-HOLES.
13. BG&E WILL FURNISH THRU THE COUNTY ALL HAND BOXES REQUIRED AND THE CONTRACTOR WILL INSTALL AT CORRECT ELEVATION AND AT EACH LOCATION IDENTIFIED.
14. CONTRACTOR TO FURNISH AND INSTALL 3" SCHEDULE 40 PVC OR HDPE SCHEDULE 40 CONDUIT SLEEVE 400# PULL STRING CROSSING UNDER BIKE/PEDESTRIAN PATH PER BG&E STANDARDS AND INSTALLATION DETAIL ON SHEET C8.4.
15. ALL PEDESTRIAN LIGHT FIXTURES ARE TO BE FURNISHED AND INSTALLED BY BG&E.
16. PROVIDE MINIMUM OF 6" OF SEPARATION OF LIGHTING CONDUIT FROM TRAFFIC AND COMMUNICATION CONDUITS WHEN IN CLOSE PROXIMITY.
17. CONDUITS SHALL BE INSTALLED WITH LARGE RADIUS OFFSETS (5'-0" MINIMUM RADIUS) TO BYPASS DRAINAGE INLETS, MANHOLES, AND OTHER OBSTRUCTIONS.
18. CONTRACTOR TO COORDINATE WITH BG&E WHEN PATHWAYS ARE READY FOR INSTALLATION OF DIRECT BURIAL CABLE. (BY BG&E)
19. CONTRACTOR TO COORDINATE WITH BG&E WORK CREWS FOR TRENCHING AND CABLE INSTALLATION BETWEEN HAND BOXES AT MOST OPPORTUNE TIMES DURING COURSE OF WORK.
20. ALL LIGHTING CIRCUITRY ARE TO BE DESIGNED, FURNISHED AND INSTALLED BY BG&E.



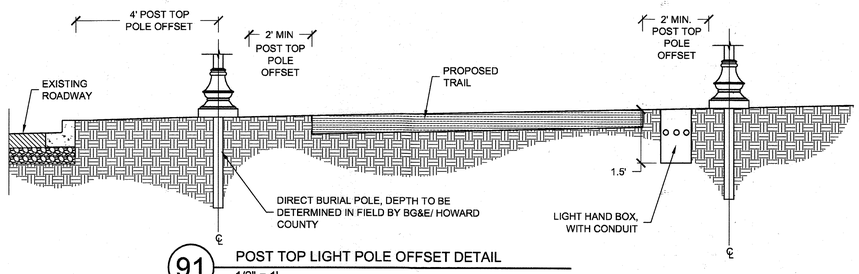
12' Smooth with Decorative Shroud

Maple Lawn

71-watt LED-100 "Acorn-Maple Lawn" post top fixture mounted on a 12-foot black fiberglass pole (with a shroud)

LUMINAIRE SCHEDULE

TYPE	LUMINARIE DESCRIPTION
CH COBRA HEAD (EXISTING FIXTURE)	COBRAHEAD LUMINAIRE DISTRIBUTION TYPE: III FULL CUTOFF LAMP: 250W OR 400W, HPS MOUNTING HEIGHT: 30-FT FIBERGLASS POLES
PT POST TOP (PROPOSED FIXTURE)	HADCO-MAPLELAWN DISTRIBUTION TYPE: V FULL TOP REFLECTOR, 71W LED 100 POST TOP LUMINAIRE, MOUNTING HEIGHT: 12-FT BLACK FIBERGLASS POLE



91 POST TOP LIGHT POLE OFFSET DETAIL
1/2" = 1'

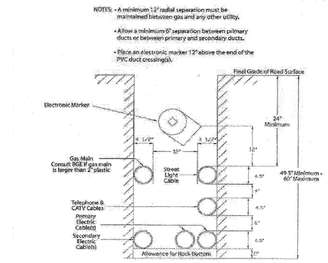
90 LIGHTING DETAIL
1/2" = 1'

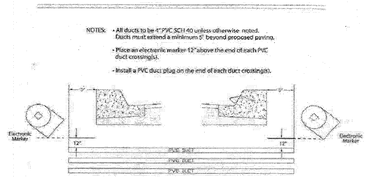
LIGHTING SPECIFICATIONS AND ILLUSTRATIONS 3

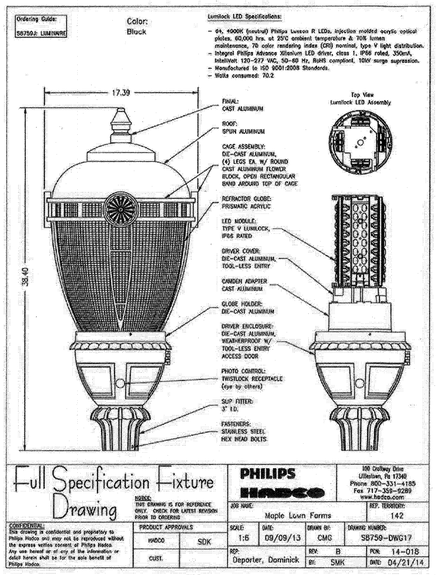
CUSTOMER INSTALLATION OF CONDUITS (CONT'D)

Road Crossing Specifications

NOTE: For street lights, 3" conduit may be used in place of 4½" conduit







Full Specification Fixture Drawing

PHILIPS HADCO

100 Craftway Drive Littlestown, Pa 17340 Phone: 800-331-4185 Fax: 717-359-9289 www.hadco.com

JOB NAME: Maple Lawn Farms				REF. NUMBER: 142	
PRODUCT APPROVALS		SCALE: 1:5	DATE: 09/09/13	DRAWN BY: CMC	DRAWING NUMBER: SB750-DWG17
HADCO	SDK				
CUST.		REP: Deporter, Dominick	REV: B BY: SMK	PCN: 14-018 DATE: 04/21/14	

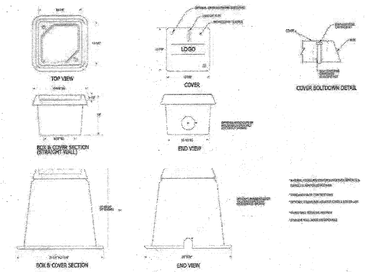
CONFIDENTIAL: This drawing is confidential and proprietary to Philips Hadco and may not be reproduced without the express written consent of Philips Hadco. Any use hereof or of any of the information or data herein shall be for the sole benefit of Philips Hadco.

ISSUE: THIS DRAWING IS FOR REFERENCE ONLY. CHECK FOR LATEST REVISION PRIOR TO ORDERING

LIGHTING SPECIFICATIONS AND ILLUSTRATIONS 3

CUSTOMER INSTALLATION OF CONDUITS (CONT'D)

Hand Box - Sidewalk Application



Installation Guidelines

1. Prepare the excavation.
   a. Excavate approximately 10 inches greater around the actual outside dimension of the enclosure to be installed and 6 inches deeper than to depth will be required for installation.
   b. Add 6 inches of gravel or crushed rock for drainage.
2. Place enclosure in hole – top of enclosure should be at grade level.
3. Fill and compact soil – fill to grade level with cover in enclosure.

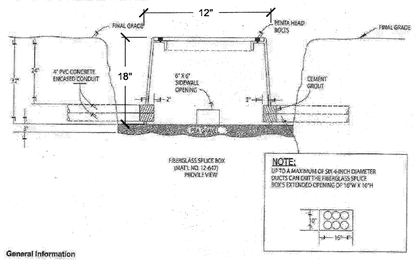
Preferred Method for Cutting Holes in CDR Enclosures

1. Drill a 7/8" pilot hole with a carbide tipped drill.
2. Drill hole using a hole saw. A diamond tipped hole saw will be able to cut more holes than a regular hole saw.
3. Holes cut in the enclosure should not exceed more than 25% of the area of each sidewall and should not be cut into a structural reinforcing rib, corner, or box lip.

LIGHTING SPECIFICATIONS AND ILLUSTRATIONS 3

CUSTOMER INSTALLATION OF CONDUITS (CONT'D)

Hand Box - Grass/Dirt Application



General Information

1. This fiberglass splice box must be installed only in pedestrian (grassy) areas on level ground. It must not be installed on a hill or slope.
2. Excavate an area 6'W x 6'L x 35" deep (minimum) for the splice box.
3. Stabilize the bottom of the excavation with 3" of pea gravel. The bottom flange of the splice box must be on a firm level foundation.
4. Position the enclosure in the excavation so that the cover will be flush with final grade.
5. Ducts can only enter and exit the splice box at opposite ends from each other. When necessary, the existing 9" x 6" openings in the end walls can be enlarged to accommodate multiple ducts (maximum opening 16"W x 10"H). This enlarged opening will allow up to six 4" diameter ducts (3W x 2H configuration) to enter or exit this box. However, only a maximum of eight ducts can be joined to this splice box at any time, one for the secondary main and up to seven for the service cables.
6. Install the ducts no more than 2" into the splice box. Place cement grout around the ducts on the outside of the splice box to seal openings.
7. Place a block of wood over side wall openings without ducts, on the outside, to prevent backfill from entering the confines of the splice box.
8. Backfill evenly around the splice box with clean, dry earth. Mechanically tamp in 12" layers.
9. Install fiberglass cover and secure its position with pentahead bolts.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/24/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/30/16
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — LAND SURVEYOR

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/0 /14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022 EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — MICHAEL FLANNIGAN BRITT — No. 35022 — REGISTERED PROFESSIONAL ENGINEER — 12/17/14

ELECTION DISTRICT 5 — HOWARD COUNTY

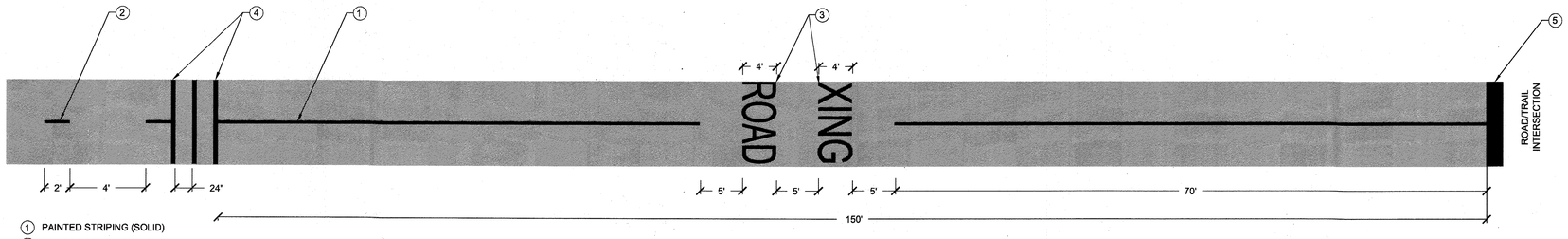
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

LIGHTING DETAILS & SPECS C11.20

SCALE	ZONING	TDG. FILE No.
N/A	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	161 OF 171

SDP-13-020

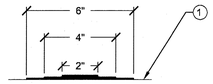
Q:\ACTIVE PROJECTS\5282 CDP-Howard TechSite Development Plan Cancel\CAD\Plans\C8-1 - LightDtls.dwg PLOTTED 11/24/2014 - 2:36 PM, LAST SAVED: 11/4/2014 4:56 PM, PLOTTED BY: Andrew Goldstein



1. PAINTED STRIPING (SOLID)
2. PAINTED STRIPING (DASHED)
3. PAINTED "ROAD XING" PAVEMENT MARKING
4. (3) RUMBLE STRIPS 30" ON CENTER
5. 12' STOP BAR (INC. "STOP" MARKING DEPENDING ON TRAFFIC CONTROL)

96 TRAIL PAVEMENT MARKING SYMBOL PLACEMENT

NTS



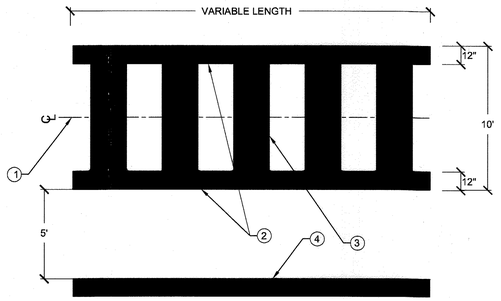
1. WHITE THERMOPLASTIC PAVEMENT MARKING (EACH MARKING LAYER SHALL BE 80 TO 95 MILS EACH IN ORDER TO ACHIEVE AN OVERALL RUMBLE STRIP THICKNESS OF APPROXIMATELY ¼". RERER TO PLAN FOR SPACING LAYOUT AND LOCATION.

97 RUMBLE STRIP DETAIL

1"=1'

SIGN NOTES

1. TRAFFIC CONTROL SIGNS SHOULD BE INSTALLED AT A MINIMUM 7' HEIGHT WHEN ADJACENT TO TRAIL.
2. SIGN POSTS: 2-PUNCH SQUARE TUBULAR POSTS.



98 CROSSWALK DETAIL

1/2"=1'

1. CENTERLINE OF CROSSWALK TO BE AT CENTERLINE OF PEDESTRIAN RAMPS UNLESS OTHERWISE NOTED
2. 12" SOLID WHITE THERMOPLASTIC MARKING
3. 24" SOLID WHITE THERMOPLASTIC MARKING
4. 24" SOLID WHITE THERMOPLASTIC STOP BAR [MOTOR VEHICLE]

NOTES:

1. PEDESTRIAN CROSSWALK - TEN FEET WIDE, UNLESS OTHERWISE NOTED.
   A. MAKE STRIPES PARALLEL TO CURB LINE OF STREET.
   B. ALL HANDICAP RAMPS MUST BE LOCATED WITHIN A CROSSWALK, INCLUDING SIDE FLARES OF RAMPS. ONE SIDE FLARE MUST ALIGN WITH BACK EDGE OF CROSSWALK IF CROSSWALK WIDTH IS GREATER THAN FIFTEEN FEET.
   C. CROSSWALK MARKINGS SHALL BE INSTALLED WITH PREFORMED HEAT APPLIED THERMOPLASTIC OR LIQUID THERMOPLASTIC.

PAVEMENT MARKINGS SPECIFICATIONS

MATERIALS: ALL THERMOPLASTIC MARKING MATERIALS SHALL CONFORM TO THE SHA MANUAL OF TECHNICAL DESIGN STANDARDS

APPLICATION METHOD: ALL PAVEMENT MARKING APPLICATION METHODS SHALL BE APPROVED BY PROJECT DESIGNER PRIOR TO START OF WORK.

1. PAINTED STRIPING FOR PATH

MATERIAL SPECIFICATIONS:	SPRAYABLE NON TOXIC LEAD FREE WATER BOURNE PAVEMENT MARKING PER MDSHA SECTION 550 AT THICKNESS OF 18 ±1 MILS.
STRIPE WIDTH / COLOR:	4" / TRAFFIC YELLOW
STRIPE POSITION:	CENTER OF PATHWAY
STRIPE CHARACTER:	SMOOTH EDGE WITH CONSTANT ARC IN CURVES (NO WAVERING OR SERPENTINE APPEARANCE WILL BE ACCEPTED)
SOLID LINE:	BEGINNING 150 FEET (OR PER MARKING PLANS) ON EACH SIDE OF A BRIDGE OR INTERSECTION THERE SHALL BE A SOLID LINE PATTERN IMPLEMENTED IN PLACE OF THE DASHED PATTERN.
DASHED:	3' STRIPE / 9' BREAK. DASHED LINE SHALL END ONE FOOT BEFORE RUMBLE STRIPS, CROSSWALKS OR OTHER PAVEMENT MARKINGS.

2. THERMOPLASTIC RUMBLE STRIPS:

MATERIAL SPECIFICATIONS:	90 MILS BEADED
STRIPE WIDTH / COLOR:	2", 4", AND 8" WIDE / WHITE
PATTERN:	THREE SEPARATE LINES BEGINNING AT 150' FROM THE CROSSING FOR THE FIRST LINE, THE NEXT TWO LINES SHALL BE PLACED 30" ON CENTER HEADING TOWARD THE INTERSECTION. EACH STRIP SHALL EXTEND THE ENTIRE WIDTH OF THE TRAIL.

3. PAINTED ADVANCE MARKINGS FOR PATH

MATERIAL SPECIFICATIONS:	SPRAYABLE NON TOXIC LEAD FREE WATER BOURNE PAVEMENT MARKING PER MDSHA SECTION 550 AT THICKNESS OF 18 ±1 MILS.
SIZE / COLOR:	4' HEIGHT / WHITE
LETTER WIDTH / SPACING:	2' / 5' SPACING
LOCATION:	MINIMUM 70' FROM CONCRETE THRESHOLD OR STOP SIGN
EXAMPLE:	ROAD X-ING

4. PAINTED STOP BAR FOR PATH

MATERIAL SPECIFICATIONS:	SPRAYABLE NON TOXIC LEAD FREE WATER BOURNE PAVEMENT MARKING PER MDSHA SECTION 550 AT THICKNESS OF 18 ±1 MILS.
LENGTH / COLOR:	WIDTH OF PATHWAY / WHITE
LOCATION:	EVEN WITH THE STOP SIGN, NO MORE THAN 5' FROM THE ROAD THRESHOLD. AT INTERSECTIONS WITH PEDESTRIAN SIGNALS, A THERMOPLASTIC STOP BAR SHALL BE PLACED AT THE EDGE OF THE PAVEMENT WITHOUT THE WORD "STOP"

5. PAINTED STOP LETTERING FOR PATH

MATERIAL SPECIFICATIONS:	SPRAYABLE NON TOXIC LEAD FREE WATER BOURNE PAVEMENT MARKING PER MDSHA SECTION 550 AT THICKNESS OF 18 ±1 MILS.
SIZE / COLOR:	4' / WHITE
LETTER WIDTH:	2"
LOCATION:	PATH SIDE OF STOP BAR (SEE INTERSECTION LAYOUT FOR PLACEMENT)

6. THERMOPLASTIC CROSSWALK

MATERIAL SPECIFICATIONS:	90 MILS BEADED THERMOPLASTIC, HEAT APPLIED.
SIZE / COLOR:	12" WHITE EDGE/ 24" WHITE CROSS BARS
STRIPE CHARACTER:	SMOOTH EDGE WITH CONSTANT ARC IN CURVES (NO WAVING, OR SERPENTINE APPEARANCE WILL BE ACCEPTED)
LOCATION:	CENTERLINE OF CROSSWALK TO BE AT CENTERLINE OF PEDESTRIAN RAMPS UNLESS OTHERWISE NOTED

SIGN NOTES

1. APPLICABLE SPECIFICATIONS AND STANDARDS: MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL (MDMUTCD), AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
2. PREPARATION:
   A. IF SITE CONDITIONS VARY FROM PLAN, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION
   B. DIMENSIONS FOR LEGEND SIZE AND ALL RELATED DIMENSIONS FOR SIGN LAYOUT, PANEL SIZES, POST SIZES, MOUNTING DIMENSIONS ARE AS SPECIFIED IN THE PLANS.
   C. ALL GRAPHIC FORMATS, USE OF TYPOGRAPHY, COLOR, DIRECTIONAL ARROW GRAPHICS, AND PICTOGRAMS ARE AS SPECIFIED IN THE PLANS. SHOP DRAWINGS OF PROPOSED SIGN LAYOUTS SHALL BE SUBMITTED AND APPROVED PRIOR TO SIGN PANEL FABRICATION.
   D. ALL STRUCTURES SHALL BE ENGINEERED TO MEET A VARIETY OF SITE CONDITIONS. SIGNS SHALL BE ENGINEERED FOR WIND LOADS, SOIL CONDITIONS, FROST DEPTH, AND STRUCTURAL INTEGRITY. SPECIAL CONDITIONS THAT ARE OUTSIDE THESE PARAMETERS ARE TO BE ENGINEERED ON A SITE-SPECIFIC BASIS. THE DESIGN OF THE STRUCTURAL REQUIREMENTS OF SPECIAL ONE-OF-A-KIND SIGNS SHALL CONFORM TO THE BASIC ASSEMBLY SPECIFICATIONS FOR SIMILAR SIGN TYPES. THE MODIFIED ASSEMBLY SHALL FULFILL THE REQUIREMENTS OF LOCAL CRITERIA FOR WIND PRESSURE, SOIL, AND FROST DEPTH. ALL SIGN ENGINEERING AND STRUCTURAL INTEGRITY WILL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE NOTED.
   E. ALL FINISHED SIGN PANELS SHALL BE PROVIDED WITH A 1-1/4" X 2-1/2" WEATHER RESISTANT IDENTIFICATION PLACED ON THE BACK OF THE SIGN INDICATING SIGN PLAN ID NUMBER, MANUFACTURER, DATE OF FABRICATION, AND INSTALLATION DATE.
3. FABRICATION:
   A. PROVIDE SHOP AND FABRICATION DRAWINGS FOR REVIEW AND APPROVAL DETAILING THE PROPOSED FABRICATION OF ALL SIGNS AND STRUCTURES INDICATED IN PLAN DOCUMENTS.
   B. THE CONTRACTOR SHALL PREPARE, FOR REVIEW BY THE OWNER'S REPRESENTATION'S FABRICATION SHOP DRAWINGS. UPON REVIEW OF THE SHOP DRAWINGS THE CONTRACTOR SHALL MAKE ALL CORRECTIONS AND ADJUSTMENTS. AS INDICATED AND RESUBMIT FOR REVIEW AND APPROVAL, REVISIONS TO SHOP DRAWINGS SHALL INCLUDE A REVISION DATE. FABRICATION SHOP DRAWINGS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   C. ALUMINUM PANEL, TUBULAR STEEL POSTS, MOUNTING HARDWARE AND MATERIAL FINISHES SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS HEREIN OR BY REFERENCE. ALL MATERIALS SHALL COMPLY WITH THIS SPECIFICATION OR APPROVED EQUAL.
   D. ALL SIGN USED FOR TRAFFIC CONTROL SIGNS SHALL BE MOUNTED ON 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POSTS (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL SQUARE TUBE SLEEVE (3' LONG). THE ANCHOR SHALL NOT EXTEND MORE THAN TWO QUICK PUNCH HOLES ABOVE GROUND LEVEL.
4. INSTALLATION:
   A. ALL TRAFFIC CONTROL SIGNS LOCATED WITHIN COUNTY RIGHTS-OF-WAY ARE TO BE ARE TO BE STAKED AND BE FIELD APPROVED PRIOR TO INSTALATION BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430).
   B. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE 'MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES' (MDMUTCD)
   C. SIGN LOCATIONS SHALL BE MARKED WITH A STAKE AND SHALL HAVE THE SIGN TYPE CODE, AND LOCATION CODE, AND CORRESPOND TO THE SIGN LOCATION IN THE PLAN DRAWINGS.
   D. UNFORESEEN OBSTRUCTIONS MAY LIMIT THE DEPTH OF A STANDARD FOOTING OR REQUIRE SPECIAL MITIGATION TO PREVENT DAMAGE TO EXISTING TREE ROOTS. WHERE POSSIBLE, MOVE THE SIGN AS NEEDED TO ALLOW UNCONSTRAINED SUBSURFACE INSTALLATION. ADJUST SIGN INSTALLATIO LOCATIONS TO KEEP THEM BEYOND THE DRIP LINE OF TREES WHEREVER POSSIBLE. NOTIFY THE PROJECT DESIGNER OF ANY PROPOSED SIGN LOCATIONS WITHIN THE DRIP LINE OF THE TREES. THE DRIP LINE SHALL BE DEFINED AS THE AREA BELOW THE FARTHEST-SPREADING BRANCHES OF A TREE. IF A SIGN PLACEMENT LOCATION MUST BE MOVED, THE CONTRACTOR SHALL GET APPROVAL OF THE PROJECT DESIGNER AND/OR COUNTY REPRESENTATIVE. IF THE SIGN CAN BE LOGICALLY MOVED, VERIFY SIGHT-LINES OF ADJUSTED LOCATIONS TO AFFIRM THAT SIGN IS STILL VISIBLE FROM THE DESIGNATED APPROACH.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15

Chief, Division of Land Development — Date 2-25-15

Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 09/30/2016
AS-BUILT DATE: 10/13/2016

NOTE: MAINTENANCE AND EMERGENCY LOCATION MARKERS FOR SDP-13-020 TO BE INSTALLED WITH FUTURE PHASES AS APPROVED BY THE COUNTY.

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION

THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 39022
EXPIRATION DATE: 12/28/15

12/11/14

SIGNING/MARKING DETAILS C11.21

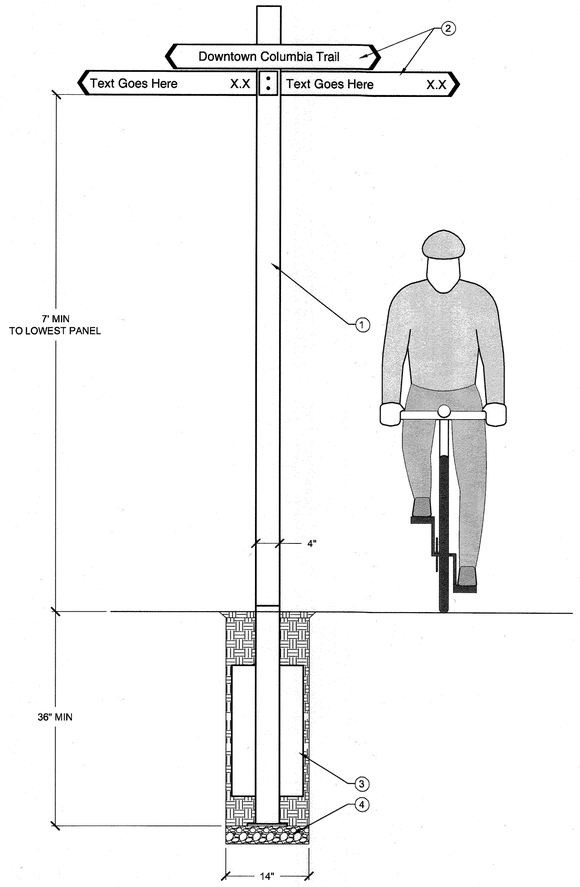
DOWNTOWN COLUMBIA MULTI-USE PATH (CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
N/A	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	162 OF 171

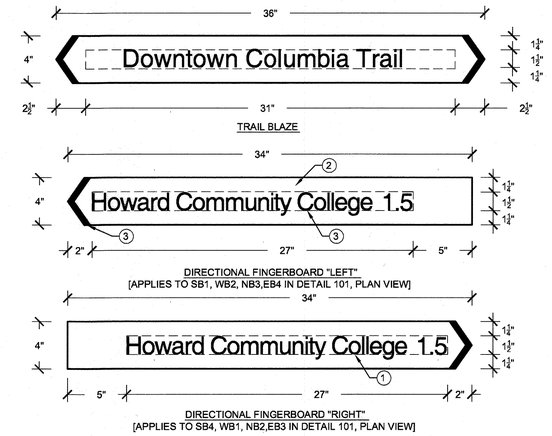
SDP-13-020

G:\ACTIVE PROJECTS\5282 DDP-Downtown Trail\Site Development Plan General\CAD\Plans\C21-1 - SignMarkDtls.dwg, PLOTTED: 12/11/2014 2:37 PM, LAST SAVED: 11/14/2014 4:56 PM, PLOTTED BY: Andrew Gunderson



1. 4" x 4" PRESSURE TREATED WOOD POST
2. ALUMINUM FINGERBOARD, 0.125" THICK REFER TO FINGERBOARD DETAIL
3. POST FOOTING DIRECT BURIAL 36"MIN, 14" DIA POST HOLE WITH 12" STEEL STABILIZER FIN BOLTED TO POST WITH POST SAVER OR EQUIVALENT UP TO 2" ABOVE GRADE
4. 3" GRAVEL LAYER

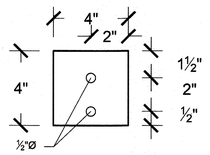
99 TRAIL WAYFINDING SIGN ASSEMBLY ELEVATION
1"=1'



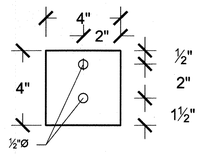
1. TEXT: HELVETICA FONT (1.5" HEIGHT)
2. FINGERBOARD SIGN PANEL COLOR: NPS-BROWN (PMS1615)
3. FINGERBOARD SIGN PANEL TEXT COLOR: WHITE

-TEXT STYLE: UPPER/LOWER CASE
-LETTER TRACKING: 1.00
-LETTER WIDTH FACTOR: 1.00

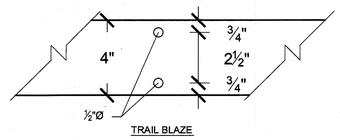
100 TYPICAL FINGERBOARD PANEL ENLARGEMENT
1/2"=1'



FINGERBOARD "A" & "C"
SEE DETAIL 101 FOR DESIGNATION



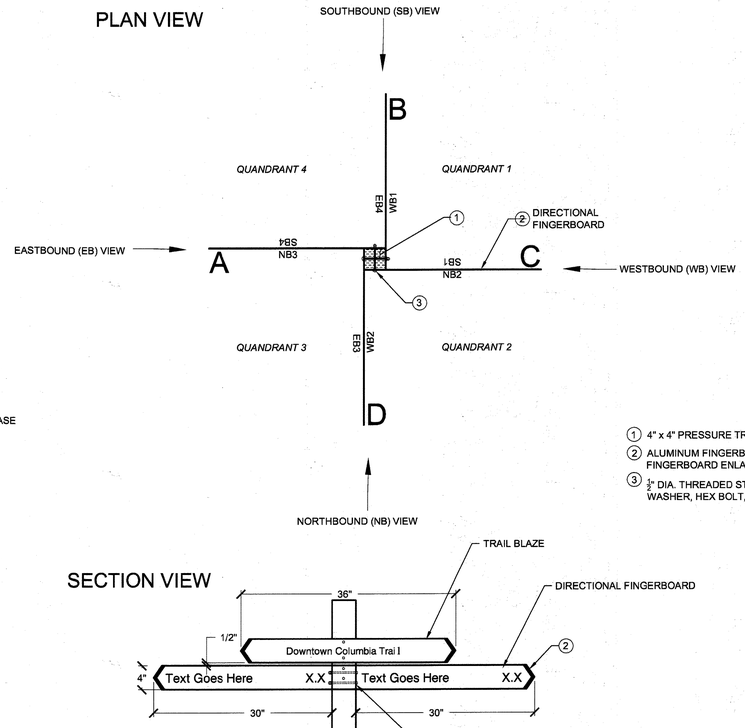
FINGERBOARD "B" & "D"
SEE DETAIL 101 FOR DESIGNATION



TRAIL BLAZE

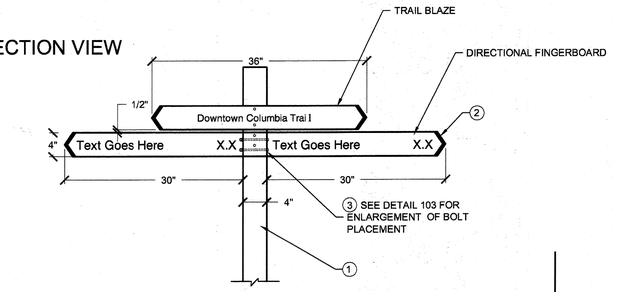
102 TYPICAL BOLT INSTALLATION ENLARGEMENT-1
NTS

PLAN VIEW

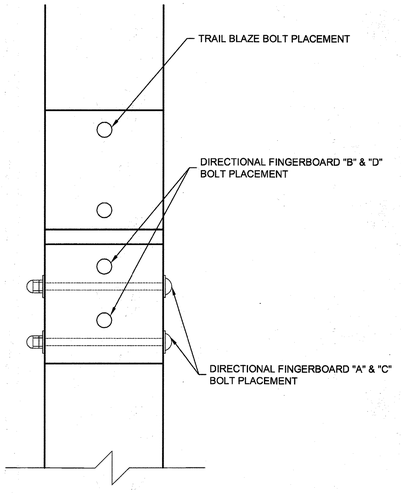


1. 4" x 4" PRESSURE TREATED WOOD POST
2. ALUMINUM FINGERBOARD, 0.125" THICK REFER TO FINGERBOARD ENLARGEMENT FOR TEXT LAYOUT
3. ¾" DIA. THREADED STAINLESS STEEL WOOD BOLT WITH WASHER, HEX BOLT, AND ACORN NUT TO MATCH

SECTION VIEW



101 POST AND FINGERBOARDS AND SECTION ORIENTATION
1"=1'



103 TYPICAL BOLT INSTALLATION ENLARGEMENT-2
NTS

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2015, 11/30/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 2/26/15
Chief, Division of Land Development	Date 2-25-15
Chief, Development Engineering Division	Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 3/31/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — REGISTERED PROFESSIONAL LAND SURVEYOR

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 25333, EXPIRATION DATE: 07/09/16/15.

STATE OF MARYLAND — ROBERT JENKINS — No. 25333 — REGISTERED PROFESSIONAL ENGINEER — 12/17/14

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)
ELECTION DISTRICT 5 — HOWARD COUNTY

WAYFINDING SIGN DETAILS C11.22

SCALE	ZONING	TDG. FILE No.
N/A	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	163 OF 171

SDP-13-020

O:\ACTIVE PROJECTS\5282 GDP-Blandair Trail\Site Development Plan General\CAD\Plans\C2-3 - SignMonDtls.dwg
PLOTTED: 11/26/2014 2:39 PM, LAST SAVED: 11/4/2014 4:59 PM, PLOTTED BY: Andrew Gustgeon

WAYFINDING SIGN SPECIFICATIONS

1. QUALITY ASSURANCE:
   A. JOB REFERENCES FROM PROJECTS OF A SIMILAR SIZE AND COMPLEXITY. PROVIDE OWNER/CLIENT/GENERAL CONTRACTOR NAMES, POSTAL ADDRESS, PHONE, FAX, AND EMAIL ADDRESS.
   B. APPLICABLE SPECIFICATIONS AND STANDARDS: AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
   C. IF SITE CONDITIONS VARY FROM PLAN, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION
2. PREPARATION:
   GENERAL CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, LOADING/UNLOADING AND TRANSPORTATION SERVICES REQUIRED TO PERFORM AND COMPLETE THE WORK ACCORDING TO THE SPECIFICATIONS AND CONTRACT DOCUMENTS. ALL WORK SHALL BE DONE WITH NO DAMAGE TO MOUNTING SITE OR SIGN.
   A. DIMENSIONS FOR LEGEND SIZE AND ALL RELATED DIMENSIONS FOR SIGN LAYOUT, PANEL SIZES, POST SIZES, MOUNTING DIMENSIONS ARE AS SPECIFIED IN THE PLANS.
   B. ALL GRAPHIC FORMATS, USE OF TYPOGRAPHY, COLOR, DIRECTIONAL ARROW GRAPHICS, AND PICTOGRAMS ARE AS SPECIFIED IN THE PLANS. SHOP DRAWINGS OF PROPOSED SIGN LAYOUTS SHALL BE SUBMITTED AND APPROVED PRIOR TO SIGN PANEL FABRICATION.
   C. ALL STRUCTURES SHALL BE ENGINEERED TO MEET A VARIETY OF SITE CONDITIONS. SIGNS SHALL BE ENGINEERED FOR WIND LOADS, SOIL CONDITIONS, FROST DEPTH, AND STRUCTURAL INTEGRITY. SPECIAL CONDITIONS THAT ARE OUTSIDE THESE PARAMETERS ARE TO BE ENGINEERED ON A SITE-SPECIFIC BASIS. THE DESIGN OF THE STRUCTURAL REQUIREMENTS OF SPECIAL ONE-OF-A-KIND SIGNS SHALL CONFORM TO THE BASIC ASSEMBLY SPECIFICATIONS FOR SIMILAR SIGN TYPES. THE MODIFIED ASSEMBLY SHALL FULFILL THE REQUIREMENTS OF LOCAL CRITERIA FOR WIND PRESSURE, SOIL, AND FROST DEPTH. ALL SIGN ENGINEERING AND STRUCTURAL INTEGRITY WILL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE NOTED.
   D. ALL FINISHED SIGN PANELS SHALL BE PROVIDED WITH A 1-1/4" X 2-1/2" WEATHER RESISTANT IDENTIFICATION PLACED ON THE BACK OF THE SIGN INDICATING SIGN PLAN ID NUMBER, MANUFACTURER, DATE OF FABRICATION, AND INSTALLATION DATE.
3. FABRICATION:
   A. PROVIDE SHOP AND FABRICATION DRAWINGS FOR REVIEW AND APPROVAL DETAILING THE PROPOSED FABRICATION OF ALL SIGNS AND STRUCTURES INDICATED IN PLAN DOCUMENTS.
   B. THE CONTRACTOR SHALL PREPARE, FOR REVIEW BY THE OWNER'S REPRESENTATION'S FABRICATION SHOP DRAWINGS. UPON REVIEW OF THE SHOP DRAWINGS THE CONTRACTOR SHALL MAKE ALL CORRECTIONS AND ADJUSTMENTS. AS INDICATED AND RESUBMIT FOR REVIEW AND APPROVAL, REVISIONS TO SHOP DRAWINGS SHALL INCLUDE A REVISION DATE. FABRICATION SHOP DRAWINGS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   C. PLAN, ELEVATIONS, AND SECTION VIEW DRAWINGS-THE CONTRACTOR SHALL PREPARE ALL SHOP DRAWINGS INDICATING FINAL DIMENSIONS AND LAYOUTS, TYPOGRAPHY, SYMBOLS, VINYL AND PAINT COLOR FINISHED, FABRICATION MATERIALS, HARDWARE, PANEL SPLICE LINES, THRU-BOLT LOCATIONS, AND MOUNTING DETAILS.
   D. MATERIALS, FINISHED, COLORS, AND HARDWARE-THE CONTRACTOR SHALL INCLUDE MANUFACTURER'S NAME AND ASSOCIATED COLOR, FINISH, OR PRODUCT IDENTIFICATION NUMBER FOR ALL STANDARD MATERIALS INCLUDING RETRO-REFLECTIVE VINYL, PAINT, STEEL AND ALUMINUM STRUCTURAL COMPONENTS, AND MOUNTING HARDWARE.
   E. SIGNAGE ELEMENTS IN DRAWINGS IDENTIFIED AND NUMBERED - FABRICATION SHOP DRAWINGS SHALL USE THE PLAN SIGN REFERENCE NUMBERING SYSTEM.
   F. FONTS INCLUDING HELVETICA SHALL BE USED TO VIEW, EDIT, PRODUCE, AND PRINT ALL GRAPHIC SIGN LAYOUTS PRODUCED. WHEN NO OTHER FONT SPECIFICATION IS PROVIDED, OPENTYPE FONTS ARE THE PREFERRED FORMAT. TYPE 1 FONTS ARE ACCEPTABLE. THE USE OF TRUETYPE FONTS OR ANY OTHER FONT TECHNOLOGY IS NOT ACCEPTABLE UNLESS APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL SOFTWARE LICENSING REQUIREMENTS OF THE FONT COPYRIGHT OWNER.
   G. ALUMINUM PANEL, CEDAR WOOD POSTS, TUBULAR STEEL POSTS, MOUNTING HARDWARE AND MATERIAL FINISHES SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS HEREIN OR BY REFERENCE. ALL MATERIALS SHALL COMPLY WITH THIS SPECIFICATION OR APPROVED EQUAL.
4. INSTALLATION:
   A. ALL SIGNS ARE TO BE MOUNTED AT LOCATIONS AS IDENTIFIED IN THE SIGN PLAN AND APPROVED BY THE PROJECT DESIGNER AND/OR COUNTY REPRESENTATIVE. ALL PROPOSED SIGNS WITHIN COUNTY RIGHTS-OF-WAY ARE MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION(410-313-2430) PRIOR TO THE INSTALLATION.
   B. SIGN LOCATIONS WILL BE MARKED WITH A STAKE AND SHALL HAVE THE SIGN TYPE CODE, AND LOCATION CODE, AND CORRESPOND TO THE SIGN LOCATION IN THE PLAN DRAWINGS. DOUBLE POST SIGNS WILL BE STAKED AT THE LOCATION OF THE LEFT LEG WHEN FACING THE SIGN. DOUBLE-FACED SIGNS AND ANGLED INSTALLATIONS WILL BE STAKED WITH BOTH LEG LOCATIONS NOTED. THE STAKES SHALL BE INSPECTED PRIOR TO POST AND SIGN INSTALLATION. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE PRIOR TO INSTALLATION. DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PROJECT DESIGNER FOR RESOLUTION. THE CONTRACTOR SHALL INSTALL ALL SIGNS LEVEL AND PLUMB AT THE SPECIFIED HEIGHTS AND ALIGNMENTS WITH ALL SPECIFIED FOOTINGS, BACKFILL, OR ATTACHMENT HARDWARE. THE CONTRACTOR SHALL REMOVE ALL PACKING, SIGN BOXES, AND CONSTRUCTION MATERIALS FROM THE PROJECT AREA UPON COMPLETION OF INSTALLATION.
   C. UNFORESEEN OBSTRUCTIONS MAY LIMIT THE DEPTH OF A STANDARD FOOTING OR REQUIRE SPECIAL MITIGATION TO PREVENT DAMAGE TO EXISTING TREE ROOTS. WHERE POSSIBLE, MOVE THE SIGN AS NEEDED TO ALLOW UNCONSTRAINED SUBSURFACE INSTALLATION. ADJUST SIGN INSTALLATION LOCATIONS TO KEEP THEM BEYOND THE DRIP LINE OF TREES WHEREVER POSSIBLE. NOTIFY THE PROJECT DESIGNER OF ANY PROPOSED SIGN LOCATIONS WITHIN THE DRIP LINE OF THE TREES. THE DRIP LINE SHALL BE DEFINED AS THE AREA BELOW THE FARTHEST-SPREADING BRANCHES OF A TREE. IF A SIGN PLACEMENT LOCATION MUST BE MOVED, THE CONTRACTOR SHALL GET APPROVAL OF THE PROJECT DESIGNER. IF THE SIGN CAN BE LOGICALLY MOVED, VERIFY SIGHT-LINES OF ADJUSTED LOCATIONS TO AFFIRM THAT SIGN IS STILL VISIBLE FROM THE DESIGNATED APPROACH. THE CONTRACTOR IS ALSO CAUTIONED TO EXCAVATE CAREFULLY WHERE TREE ROOTS MIGHT BE ENCOUNTERED. PRIOR TO BEGINNING EXCAVATION, THE CONTRACTOR SHALL NOTIFY THE PROJECT DESIGNER AND UTILITY COMPANIES OF PROPOSED SIGN LOCATIONS AND TIMES FOR EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PREVENTING DAMAGE TO KNOWN UTILITIES. IF DAMAGE OCCURS, THE CONTRACTOR SHALL REPAIR THE UTILITY AT NO ADDITIONAL EXPENSE.
   D. THE CONTRACTOR SHALL PROTECT ALL ADJACENT STRUCTURES, UTILITIES, SURFACES, VEGETATION AND PLANT MATERIALS FROM DAMAGE DURING INSTALLATION. THE CONTRACTOR WILL NOTIFY THE PROJECT DESIGNER IMMEDIATELY OF ANY OCCURRENCE OF DAMAGE. ANY DAMAGE TO THE ITEMS DESCRIBED ABOVE MUST BE RESTORED TO ORIGINAL CONDITION AND APPEARANCE, OR REPLACED.

GENERAL NOTES:
FONT: HELVETICA FONT (1.5" HEIGHT)
-TEXT STYLE: UPPER/LOWER CASE
-LETTER TRACKING: 1.00
-LETTER WIDTH FACTOR: 1.00
* FONT: HELVETICA FONT (1.5" HEIGHT)
-TEXT STYLE: UPPER/LOWER CASE
-LETTER TRACKING: 0.90
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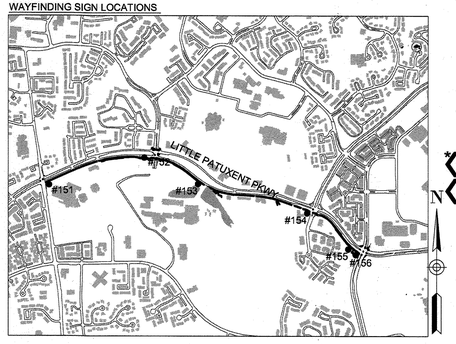
WAYFINDING SIGN LOCATIONS



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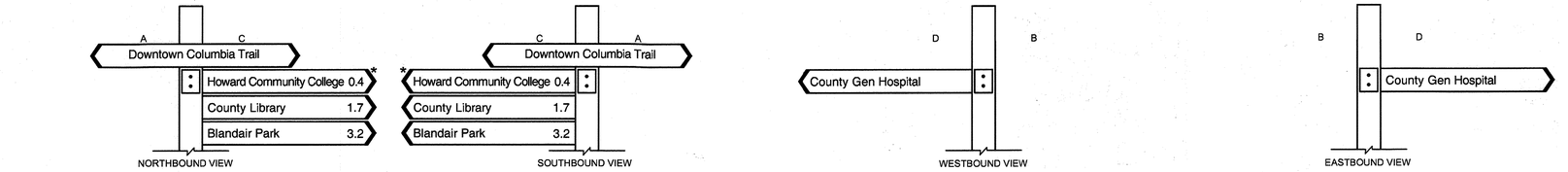

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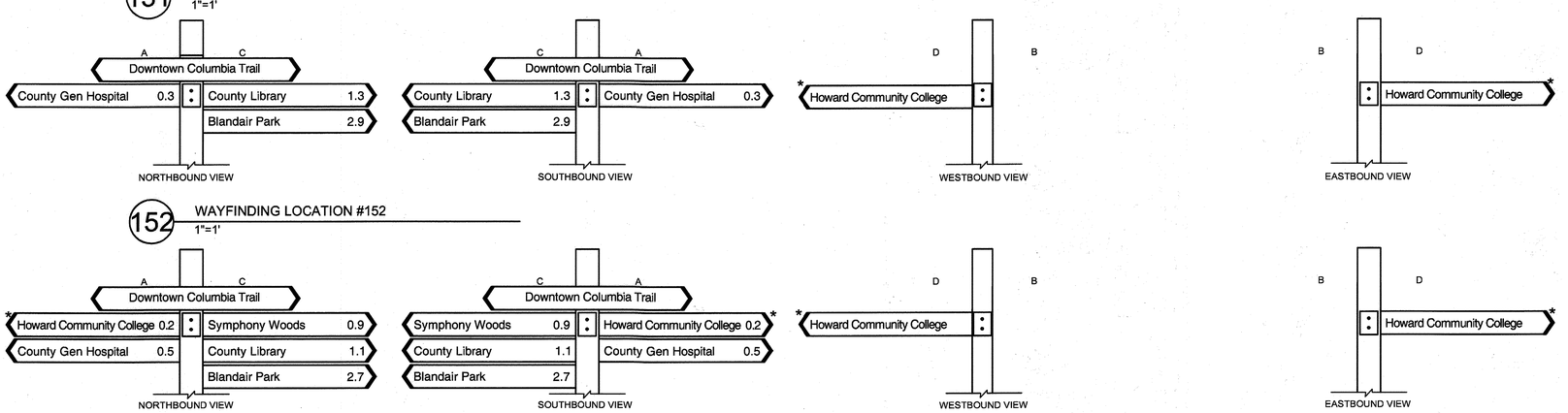

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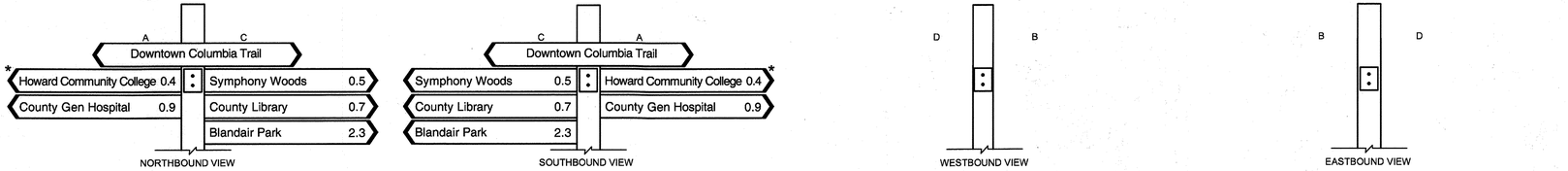

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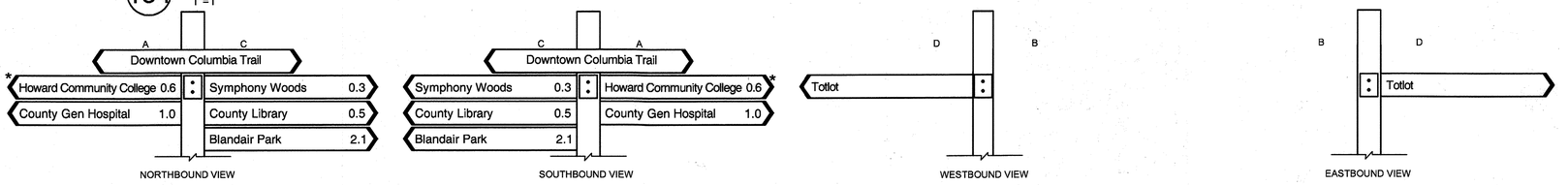

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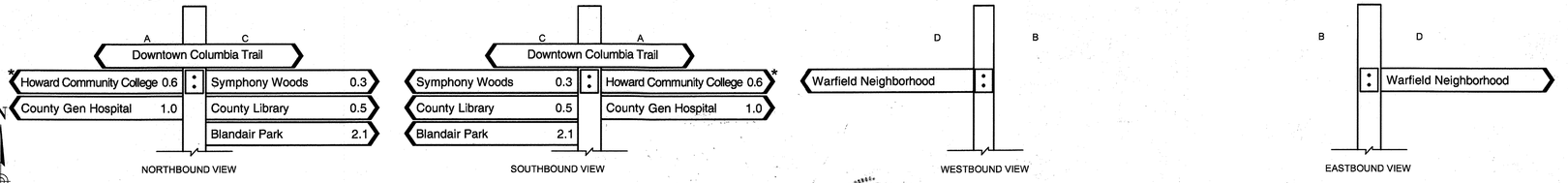

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NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp. Date: 3/31/2016
AS-BUILT DATE: 10/13/2016

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/26/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2-12-15

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PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

G:\ACTIVE PROJECTS\5282 DSP--Blandair Trail\Site Development Plan 2\CAD\Plans\C23-4 -- SignNotes\Data.dwg, PLOTTED: 11/21/2014 1:48 PM, LAST SAVED: 11/5/2014 7:34 AM, PLOTTED BY: Andrew Gudynas

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

Howard Hughes
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Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

12/1/14

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
AS SHOWN	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	164 OF 171

WAYFINDING SIGN SPECIFICATIONS C11.23

SDP-13-020

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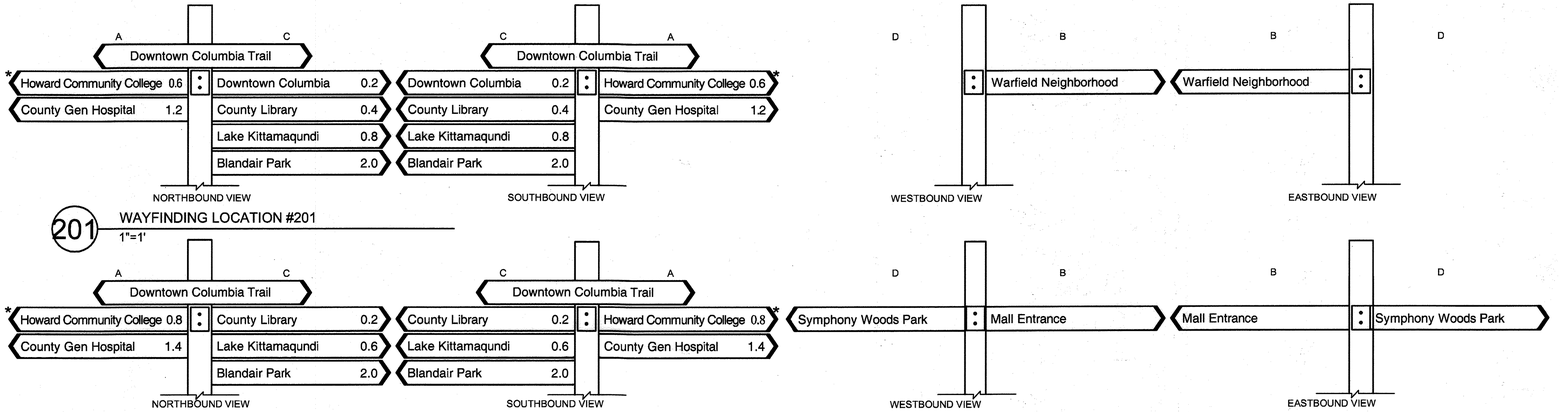

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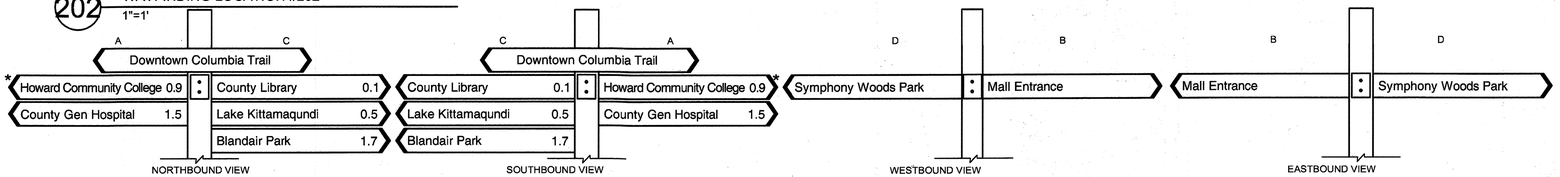

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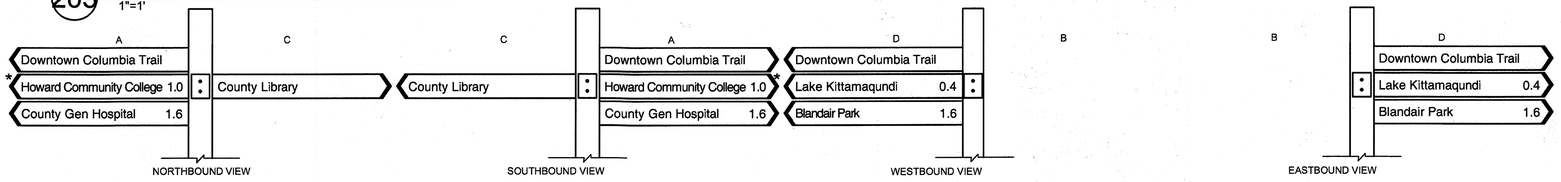

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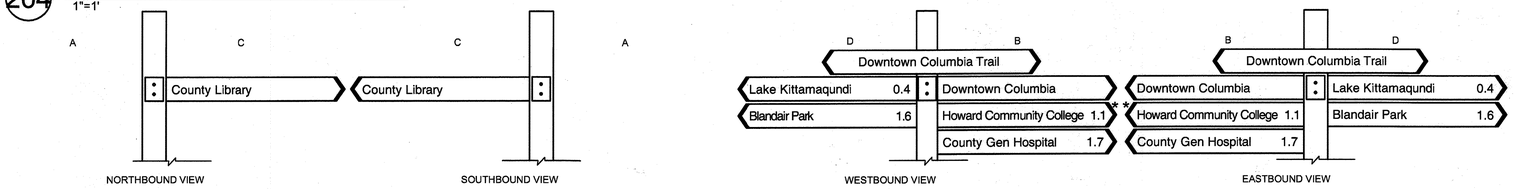

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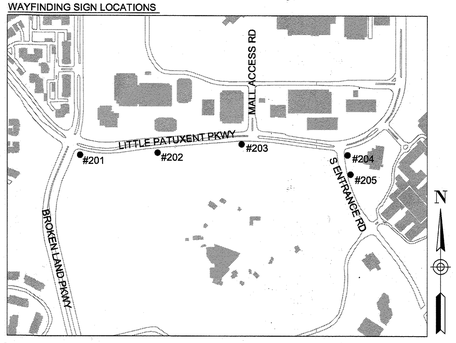
WAYFINDING SIGN LOCATIONS



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-TEXT STYLE: UPPER/LOWER CASE
-LETTER TRACKING: 0.90
-LETTER WIDTH FACTOR: 1.00

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/25/15
Chief, Division of Land Development — Date 2-25-15
Chief, Development Engineering Division — Date 2-12-15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/2016
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

WAYFINDING SIGN SPECIFICATIONS C11.24

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
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PLANNING I ENGINEERING I LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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Robert Jenkins, VP, Engineering & Construction
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PROFESSIONAL CERTIFICATION
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EXPIRATION DATE: 12/28/15
12/11/14

PHASE 1

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
N/A	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/05/14	36	165 OF 171

SDP-13-020

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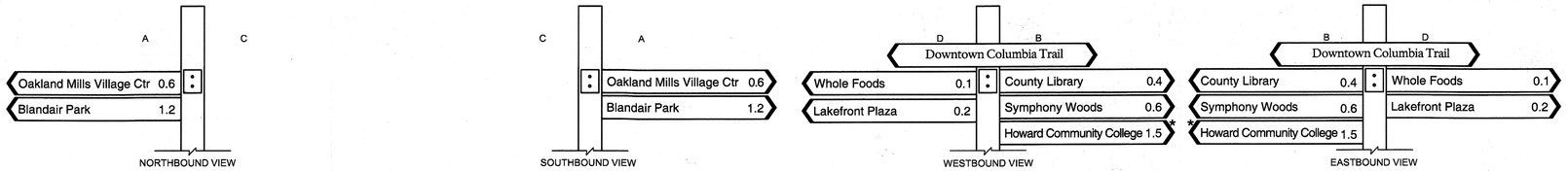

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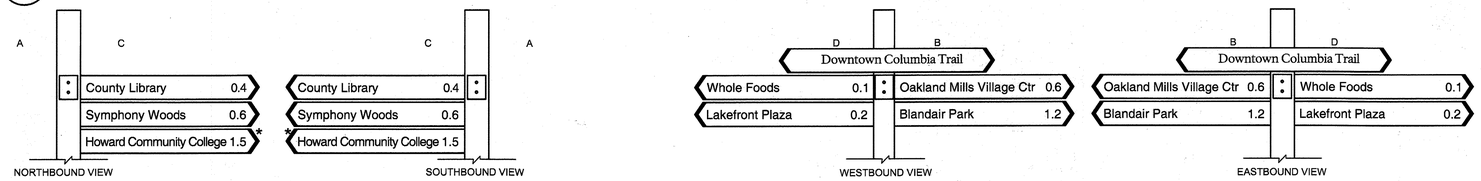

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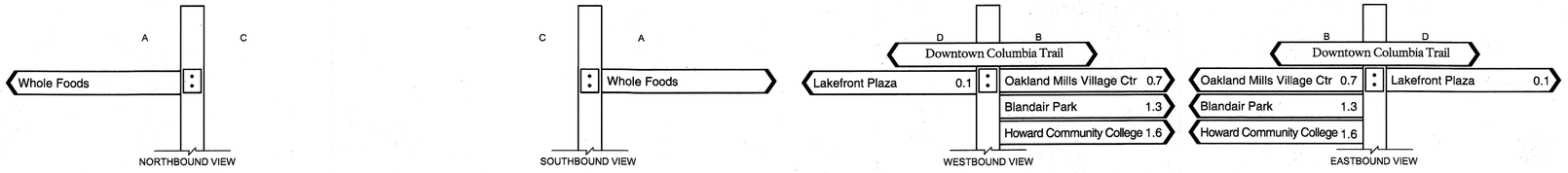

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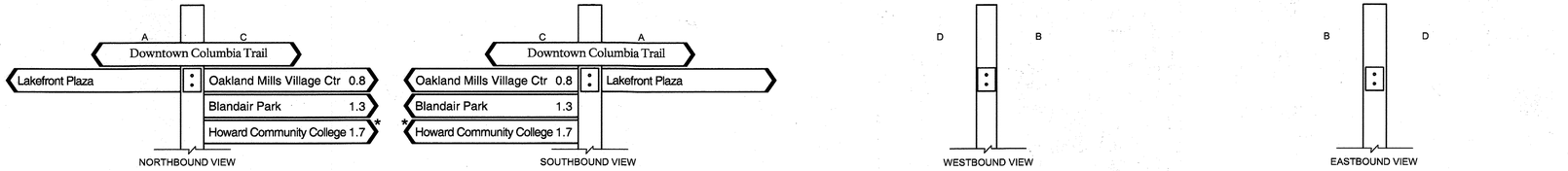

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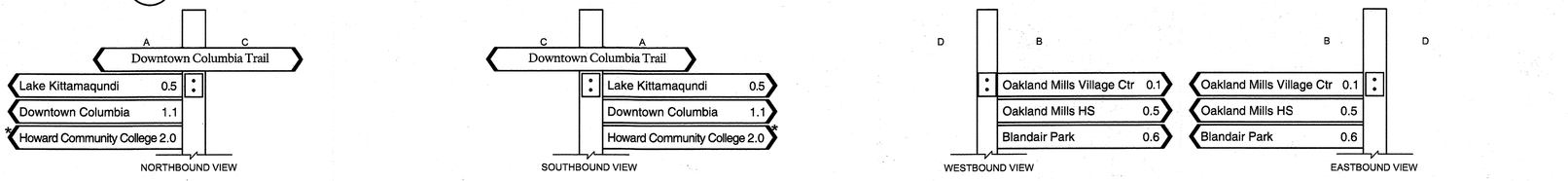

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GENERAL NOTES:
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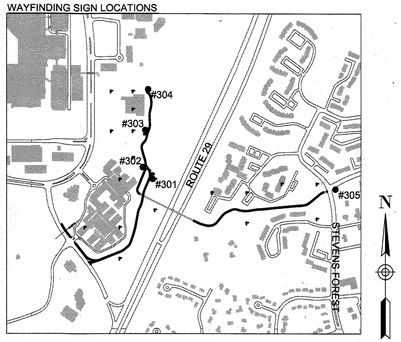
-LETTER TRACKING: 1.00
-LETTER WIDTH FACTOR: 1.00

* FONT: HELVETICA FONT (1.5" HEIGHT)
-TEXT STYLE: UPPER/LOWER CASE
-LETTER TRACKING: 0.90
-LETTER WIDTH FACTOR: 1.00

WAYFINDING SIGN LOCATIONS



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/07/2015, 11/20/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15

Chief, Division of Land Development — Date 7-16-15

Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date 4/30/2017
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

WAYFINDING SIGN SPECIFICATIONS C11.25

Toole Design Group
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PHONE: (301) 927-1900 FAX: (301) 927-2800
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PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

G:\ACTIVE PROJECTS\5282 CEP-Howard Hughes\Site Development Plan 2\Cad\Plans\C11 - Signage\C11 - Signage.dwg

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

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Robert Jenkins, VP, Engineering & Construction
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PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — No. 35022 — PROFESSIONAL ENGINEER — 6/1/15

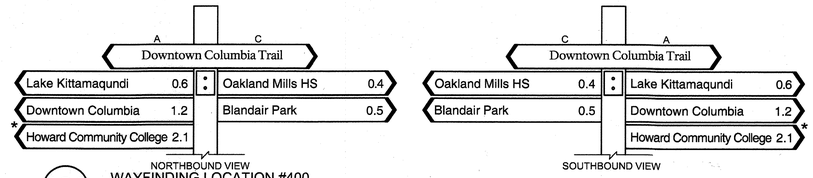
PHASE 3

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
AS SHOWN	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	166 OF 171

SDP-13-020



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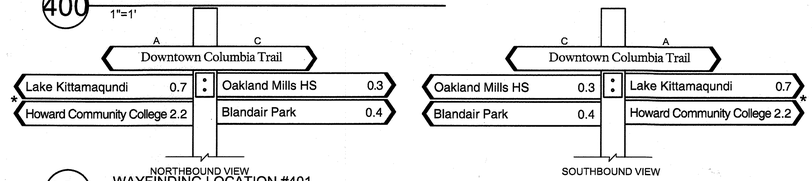

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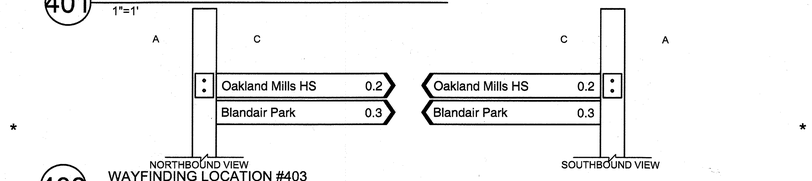

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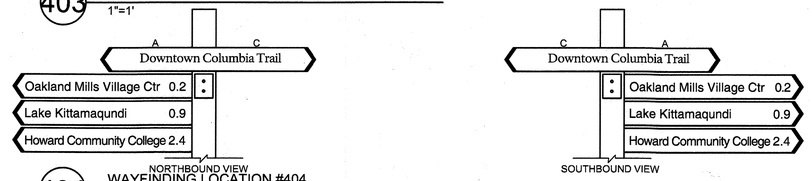

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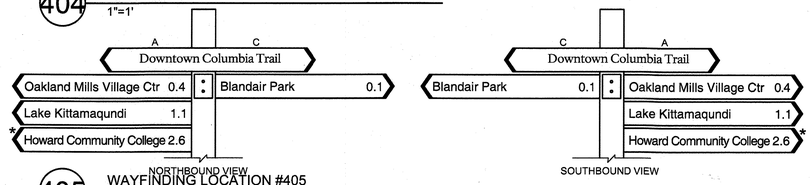

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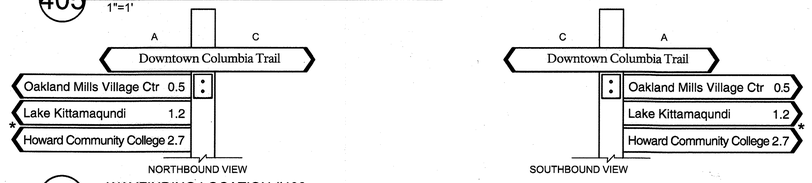

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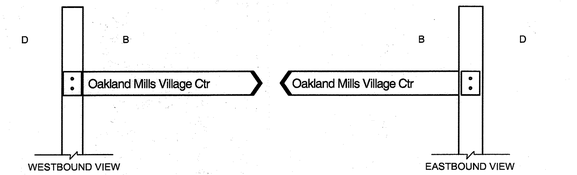
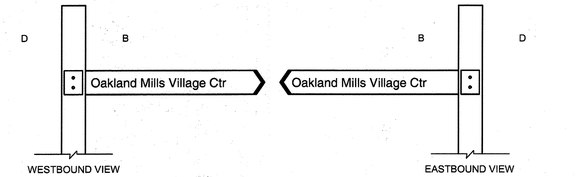
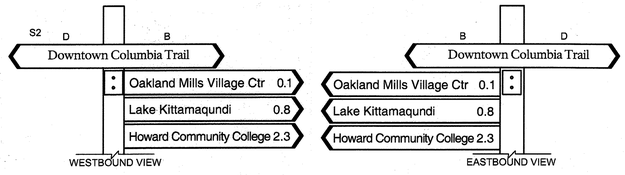
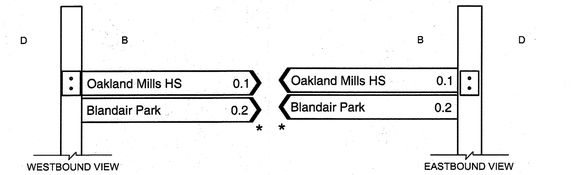
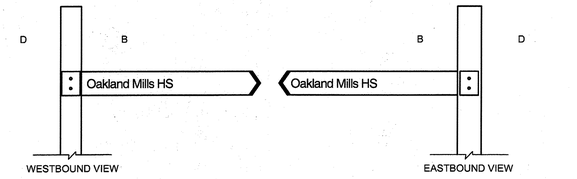




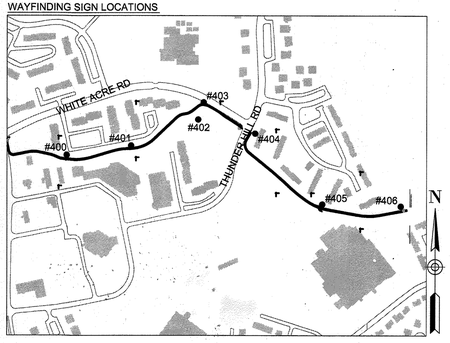






GENERAL NOTES:
FONT: HELVETICA FONT (1.5" HEIGHT)
-TEXT STYLE: UPPER/LOWER CASE
-LETTER TRACKING: 1.00
-LETTER WIDTH FACTOR: 1.00
* FONT: HELVETICA FONT (1.5" HEIGHT)
-TEXT STYLE: UPPER/LOWER CASE
-LETTER TRACKING: 0.90
-LETTER WIDTH FACTOR: 1.00

WAYFINDING SIGN LOCATIONS



APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 07/11/2013, 11/06/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7-21-15
Chief, Division of Land Development — Date 7-16-15
Chief, Development Engineering Division — Date 7.13.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET
G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10840 Exp. Date 9/30/2016
AS-BUILT DATE: 10/13/2016

	WAYFINDING SIGN SPECIFICATIONS	C11.26

TooleDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	

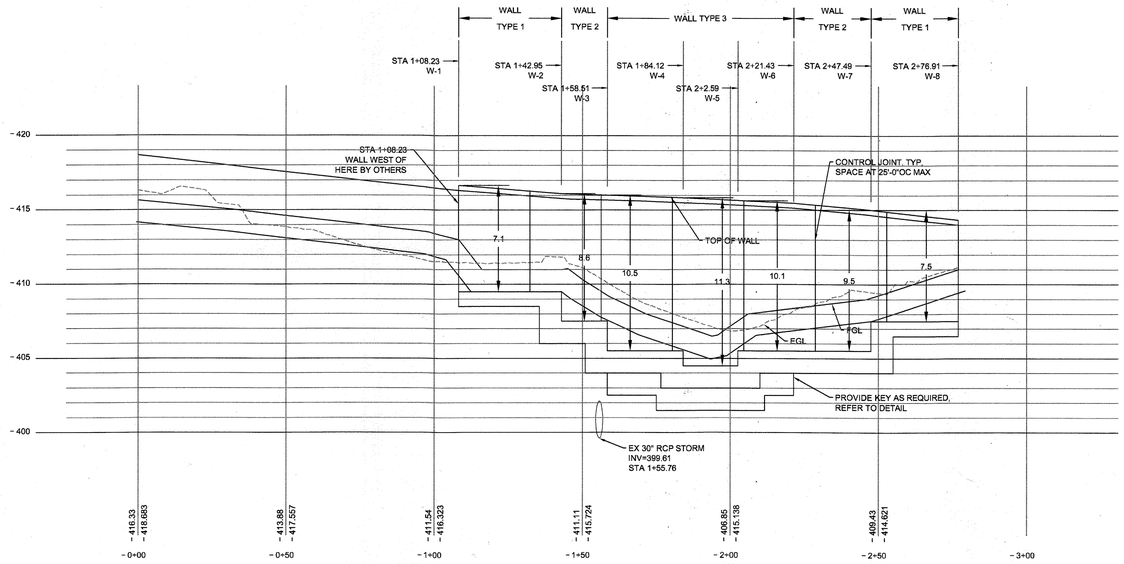
Howard Hughes. THE HOWARD HUGHES CORPORATION
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

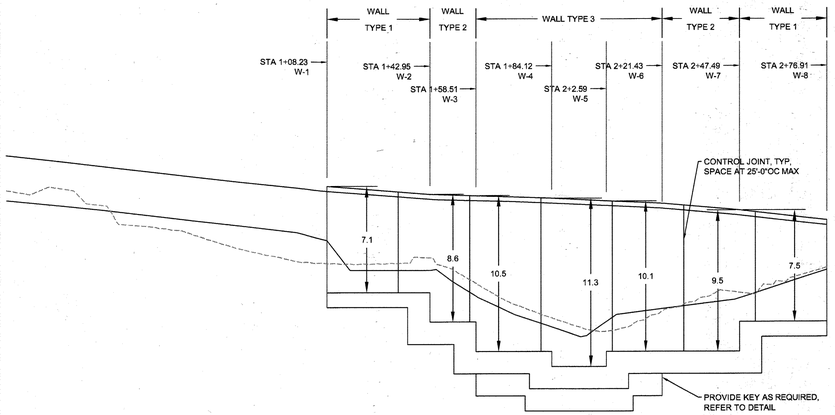
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 35022
EXPIRATION DATE: 12/28/15
6/1/15

PHASE 4
DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)
ELECTION DISTRICT 5 — HOWARD COUNTY

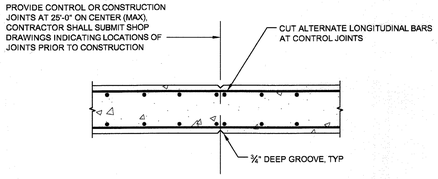
SCALE	ZONING	TDG. FILE No.
AS SHOWN	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
04/20/15	36	167 OF 171

SDP-13-020

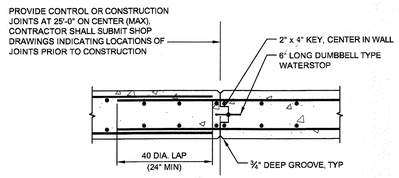




MARK	DESCRIPTION	STATION	TOP CONCRETE WALL	TOP OF FOOTING
W-1	WALL END	1+0.823	416.65'	409.50'
W-2	FOOTING STEP, TOP WALL SLOPE TRANSITION	1+42.95	416.11'	407.50'
W-3	WALL END	1+58.51	--	405.50'
W-4	FOOTING STEP, TOP WALL SLOPE TRANSITION	1+84.12	415.84'	404.50'
W-5	FOOTING STEP, TOP WALL SLOPE TRANSITION	1+84.12	415.66'	405.50'
W-6	FOOTING STEP, TOP WALL SLOPE TRANSITION	2+2.59	415.48'	405.50'
W-7	FOOTING STEP, TOP WALL SLOPE TRANSITION	2+21.43	415.01'	407.50'
W-8	WALL END	2+76.91	414.33'	407.50'

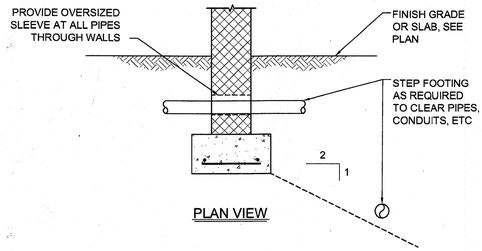


CONTROL JOINT

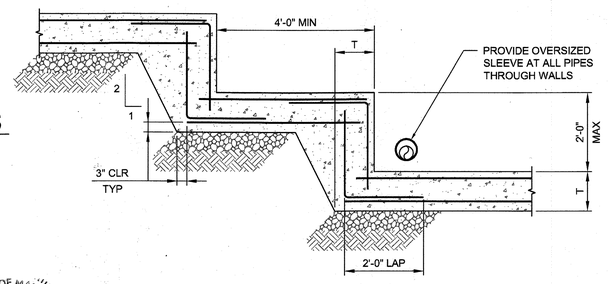


CONSTRUCTION JOINT

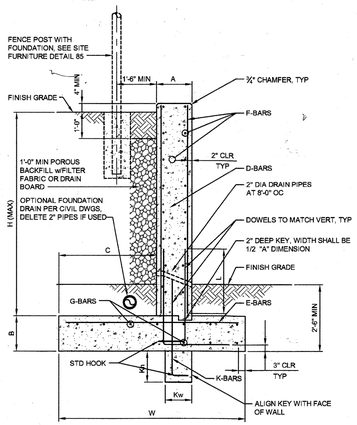
A TYPICAL CONCRETE WALL JOINTS w/WATERSTOPS



PLAN VIEW



A TYPICAL STEPPED WALL FOOTING



BASIS OF DESIGN:	
1. CONCRETE STRENGTH -	f'c = 3000 psi
2. STEEL REINFORCING -	fy = 60000 psi
3. ALLOWABLE SOIL BEARING CAPACITY	2000 psf
4. SOIL DENSITY (SAT)	125 psf
5. SOIL FRICTION ANGLE	28 DEG
6. COHESION	C = 0
7. SLIDING FACTOR OF SAFETY	1.5
8. OVERTURNING FACTOR OF SAFETY	2.0

GEOMETRY								REINFORCING					
WALL	H (MAX)	W	A	B	C	Kh	Kw	D-BARS	E-BARS	F-BARS	G-BARS	L	K-BARS
TYPE 1	7'-6"	8'-0"	1'-4"	1'-6"	3'-10"	N/A	N/A	#6@10" OC	#6@10" OC	#5@10" OC	#6@12" OC	2'-6"	N/A
TYPE 2	9'-6"	9'-8"	1'-4"	1'-6"	5'-6"	N/A	N/A	#6@10" OC	#6@10" OC	#5@10" OC	#6@12" OC	2'-6"	N/A
TYPE 3	11'-3"	9'-8"	1'-4"	1'-6"	5'-6"	1'-6"	1'-0"	#6@10" OC	#6@10" OC	#5@10" OC	#6@12" OC	2'-6"	#5@10" OC x 2'-0" LONG

A TYPICAL CONCRETE RETAINING WALL

GENERAL NOTES:

A. REFER TO PROJECT GEOTECHNICAL REPORT BY FROEHLING & ROBERTSON, INC. AND DATED 05/2015 FOR SITE PREPARATION AND RECOMMENDATIONS.

B. ALL RETAINING WALLS ARE DESIGNED USING THE FOLLOWING FACTORS OF SAFETY:
1. SLIDING = 1.5
2. OVERTURNING = 2.0

C. THE ALLOWABLE SOIL BEARING PRESSURE SHALL BE FIELD VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER AND APPROVED PRIOR TO PLACING FOUNDATIONS. SHOULD THE ACTUAL SOIL BEARING PRESSURE BE LESS THAN 3000 PSF, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

D. REINFORCING MATERIALS:
1. STEEL REINFORCEMENT: ASTM A 615, GRADE 60, DEFORMED

E. CONCRETE MATERIALS:
1. PORTLAND CEMENT: ASTM C 150, TYPE I/II
3. GROUND GRANULATED BLAST FURNACE SLAG: ASTM C 989, GRADE 120
4. NORMAL WEIGHT AGGREGATES: ASTM C 33
   a. MAXIMUM COARSE AGGREGATE SIZE: 1 INCH NOMINAL
   b. FINE AGGREGATE SHALL BE FREE OF MATERIAL WITH DELETERIOUS REACTIVITY TO ALKALI IN CEMENT.
6. WATER: ASTM C 94

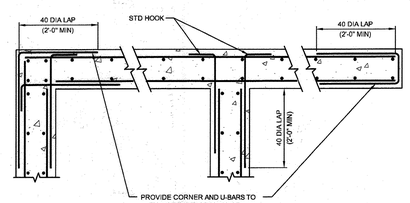
F. ADMIXTURES:
1. AIR ENTRAINMENT: ASTM C 260
2. WATER-REDUCER: ASTM C 494
3. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED.

G. CONCRETE MIXTURES:
1. POZZOLAN, OR GROUND GRANULATED BLAST FURNACE SLAG MAY BE USED AS NEEDED TO REDUCE THE TOTAL AMOUNT OF PORTLAND CEMENT WHICH WOULD OTHERWISE BE USED BY NOT MORE THAN 40 PERCENT.

H. PROPORTION NORMAL WEIGHT CONCRETE MIX FOR MINIMUM 28-DAY STRENGTH INDICATED, 4" MAXIMUM SLUMP, WATER-CEMENTITOUS RATIO NO GREATER THAN 0.50, AND AIR ENTRAINMENT OF 6.0%±1.5%.

I. ALL CONCRETE MIX DESIGNS, INCLUDING CEMENT CONTENT, WATER CEMENT RATIO, FINE AND COARSE AGGREGATE CONTENT AND ALL ADMIXTURES, SHALL BE REVIEWED BY ENGINEER PRIOR TO PLACING FIRST CONCRETE.

H. ALL CONCRETE SHALL BE SAMPLED AND TESTED BY THE TESTING AGENCY IN ACCORDANCE WITH ACI 301. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE PLACING OF ANY CONCRETE.



A TYPICAL CONCRETE WALL CORNER & END REINFORCING

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 7/11/13, 11/6/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 9-15-15

Chief, Division of Land Development — Date 9-15-15

Chief, Development Engineering Division — Date 9.11.15

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER
SHANABERGER & LANE
Professional L.S. #10849 Exp.Date
AS-BUILT DATE: 10/13/2016

STATE OF MARYLAND — G. SCOTT SHANABERGER — No. 10849 — PROFESSIONAL LAND SURVEYOR

NTS

WALL PROFILE AND DETAILS C11.27

ToolеDesignGroup
8484 GEORGIA AVENUE, SUITE 800 SILVER SPRING, MD 20910
PHONE: (301) 927-1900 FAX: (301) 927-2800
www.tooledesign.com
PLANNING | ENGINEERING | LANDSCAPE ARCHITECTURE

DES. DPB	DRN. AG	CHK. EM

DATE	REVISION	BY	APP'R.
05/02/14	PHASES 2, 3, AND 4 HAVE BEEN ADDED TO THE SUBMISSION	MAB	
06/25/15	TRAIL REALIGNMENT FOR NEW RIGHT TURN LANE ALONG LPP	MAB	
08/25/15	REVISED SITE DEVELOPMENT PLAN FOR NEW RIGHT TURN LANE AT HCC	MAB	

Howard Hughes
THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MD 21044
Robert Jenkins, VP, Engineering & Construction
410.964.5443 - Robert.Jenkins@howardhughes.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 35022
EXPIRATION DATE: 12/28/15

STATE OF MARYLAND — TODD A. BRICE — No. 35022 — PROFESSIONAL ENGINEER

9/1/15

PHASE 2

DOWNTOWN COLUMBIA MULTI-USE PATH
(CEDAR LANE TO BLANDAIR PARK)

ELECTION DISTRICT 5 — HOWARD COUNTY

SCALE	ZONING	TDG. FILE No.
NTS	NT/POR /R-12	5282
DATE	TAX MAP – GRID	SHEET
08/25/15	36	16 OF 17

SDP-13-020

G:\ACTIVE PROJECTS\4000 DCP--Blandair Trail\Site Development Plan (SDP)\Design Entrance Concept\Plans\C2X-X -- Wall Details.dwg, PLOTTED:8/31/2015 2:18 PM, LAST SAVED:8/26/2015 11:41 AM, PLOTTED BY: Chris Dolores

C:\ACTIVE PROJECTS\4000 DCP--Blandair Trail\Site Development Plan (SDP)\Design Entrance Concept\Plans\C2X-X -- Wall Details.dwg

PATUXENT PKWY IS ASSUMED TO RUN
IN AN EAST - WEST DIRECTION.

PAVEMENT MARKINGS NOTES

1. ALL LONG LINES MARKINGS TO BE APPLIED USING THERMOPLACTIC MATERIAL.
2. ARROWS TO BE INSTALLED USING PREFORMED HEAT APPLIED TAPE OR THERMOPLASTIC.
3. ALL PAVEMENT MARKINGS WITHIN THE PUBLIC RIGHT OF WAY ARE TO BE LOCATED OR APPROVED BY THE TRAFFIC DIVISION PRIOR TO THE PLACEMENT OF ANY MARKINGS.
4. ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS IN THE PUBLIC RIGHT OF WAY ARE TO BE REMOVED BY GRINDING ONLY. HOWARD COUNTY TRAFFIC (410-313-5752) WILL DETERMINE WHICH EXISTING MARKINGS SHALL BE REMOVED.
5. THE DOUBLE LEFT LANE CONFIGURATION AND STRIPING SHOWN IS AN INTERIM CONDITION THAT HAS BEEN DETERMINED TO BE ADEQUATE FOR THE SOUTHLAKE MOB(SDP-22-019) AND LAKEFRONT NORTH FDP BUILDOUT (FDP-DC-L2A). ANY FUTURE DEVELOPMENT IN THE LAKEFRONT CORE (FDP-DC-L1) WILL REQUIRE THIS INTERSECTION AND, DUE TO ITS CLOSE PROXIMITY, SYMPHONY WOODS RAOD AND SOUTH ENTRANCE (INTERSECTION 33) TO BE REEVALUATED.

EQUIPMENT LIST

FURNISHED AND INSTALLED BY THE CONTRACTOR

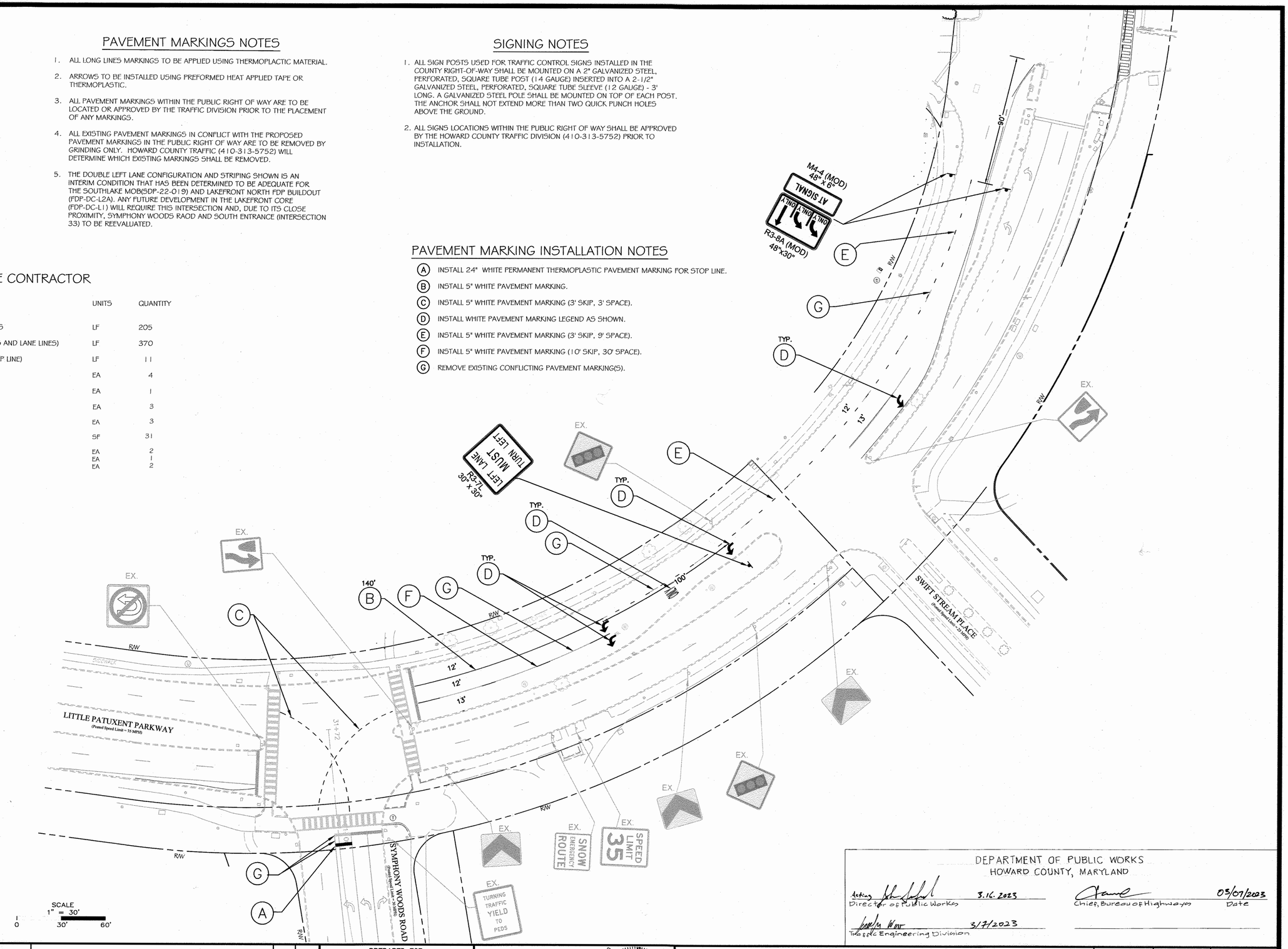
DESCRIPTION	UNITS	QUANTITY
REMOVAL OF EXISTING PERMANENT PAVEMENT MARKING LINES	LF	205
5 IN WHITE THERMOPLASTIC PAVEMENT MARKING LINES (SKIPS AND LANE LINES)	LF	370
24 IN WHITE THERMOPLASTIC PAVEMENT MARKING LINES (STOP LINE)	LF	11
8 FT WHITE PREFORMED THERMOPLASTIC ARROW	EA	4
8 FT WHITE PREFORMED THERMOPLASTIC "ONLY"	EA	1
GROUND-MOUNTED PERFORATED TUBULAR STEEL POST	EA	3
ANCHOR BASE FOR SIGNS	EA	3
SHEET ALUMINUM SIGNS	SF	31
R3-8A (MOD) (48"X30") LEFT LEFT THRU	EA	2
R3-7L (30"X30") LEFT LANE MUST TURN LEFT	EA	1
M4-4 (MOD) (48"X6") AT SIGNAL	EA	2

SIGNING NOTES

1. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE SHALL BE MOUNTED ON TOP OF EACH POST. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO QUICK PUNCH HOLES ABOVE THE GROUND.
2. ALL SIGNS LOCATIONS WITHIN THE PUBLIC RIGHT OF WAY SHALL BE APPROVED BY THE HOWARD COUNTY TRAFFIC DIVISION (410-313-5752) PRIOR TO INSTALLATION.

PAVEMENT MARKING INSTALLATION NOTES

- (A) INSTALL 24" WHITE PERMANENT THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
- (B) INSTALL 5" WHITE PAVEMENT MARKING.
- (C) INSTALL 5" WHITE PAVEMENT MARKING (3' SKIP, 3' SPACE).
- (D) INSTALL WHITE PAVEMENT MARKING LEGEND AS SHOWN.
- (E) INSTALL 5" WHITE PAVEMENT MARKING (3' SKIP, 9' SPACE).
- (F) INSTALL 5" WHITE PAVEMENT MARKING (10' SKIP, 30' SPACE).
- (G) REMOVE EXISTING CONFLICTING PAVEMENT MARKING(S).



APPROVED
PLANNING BOARD OF HOWARD COUNTY

Date: 7/11/13 & 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/28/23

Chief, Division of Land Development — Date 3/27/23

Chief, Development Engineering Division — Date 3.22.23

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Acting Director of Public Works — 3.16.2023

Chief, Bureau of Highways — Date 03/07/2023

Traffic Engineering Division — 3/7/2023

WELLS + ASSOCIATES, INC
1420 Spring Hill Road, Suite 610, Tysons, Virginia 22102
Phone: 703/917-6620 Facsimile: 703/917-0739

DESIGNED BY:	DRAWN BY:	CHECKED BY:
LES	HMP	LES

DATE	REVISION	BY	APP'R.

PREPARED FOR:

DEVELOPER:
THE HOWARD HUGHES CORP.
10980 GRANTCHESTER WAY, SUITE 110
COLUMBIA, MD 21044
ATTN: GABRIEL CHUNG
410-964-4800

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 42720
EXPIRATION DATE: 11/14/2024

STATE OF MARYLAND — JOHN F. CAVALIER — No. 42720 — PROFESSIONAL ENGINEER — 3/1/2023

SIGNING AND STRIPING PLAN
TRAFFIC SIGNAL PLAN
LITTLE PATUXENT PARKWAY AND SYMPHONY WOODS ROAD

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	FILE No.
1"=30'	NT/POR/R12	6489Z
DATE	TAX MAP - GRID	SHEET
JANUARY, 2023	36	169 OF 171

SDP-13-020

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O:\Projects\6001-8500\6489Z Lit Patux Pkwy Symphony Woods (South Entrance) TSN\Drawings\S+S\LPP & SWR - S+S.dwg, PLOTTED: 7/7/2023 1:43 PM, LAST SAVED: 7/7/2023 1:42 PM, PLOTTED BY: Nisha M. Pagadau

EXISTING SIGNS

17

D3-1(x1)
(VAR. x 16")

18

R10-15
30" x 30"

19

R10-12(x1)
38" X 42"
(TO BE REMOVED)

21, 22

R10-3 (1)
9"X15"

23

R10-3 (1)
9"X15"

24

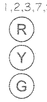
R10-3 (1)
9"X15"

25

R10-3 (1)
9"X15"

EXISTING SIGNALS

1,2,3,7,9



12"

4

12"
(TO BE REMOVED)

6

12"
(TO BE REMOVED)

11-16

16" LED
COUNTDOWN
PEDESTRIAN
SIGNAL

a-b

EXISTING
VIDEO
DETECTION

PROPOSED SIGNS

20

R3-5L
36"X36"

26

W23-2
36"X36"

PROPOSED SIGNALS

4,5,6

12"

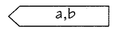
8

12"

10

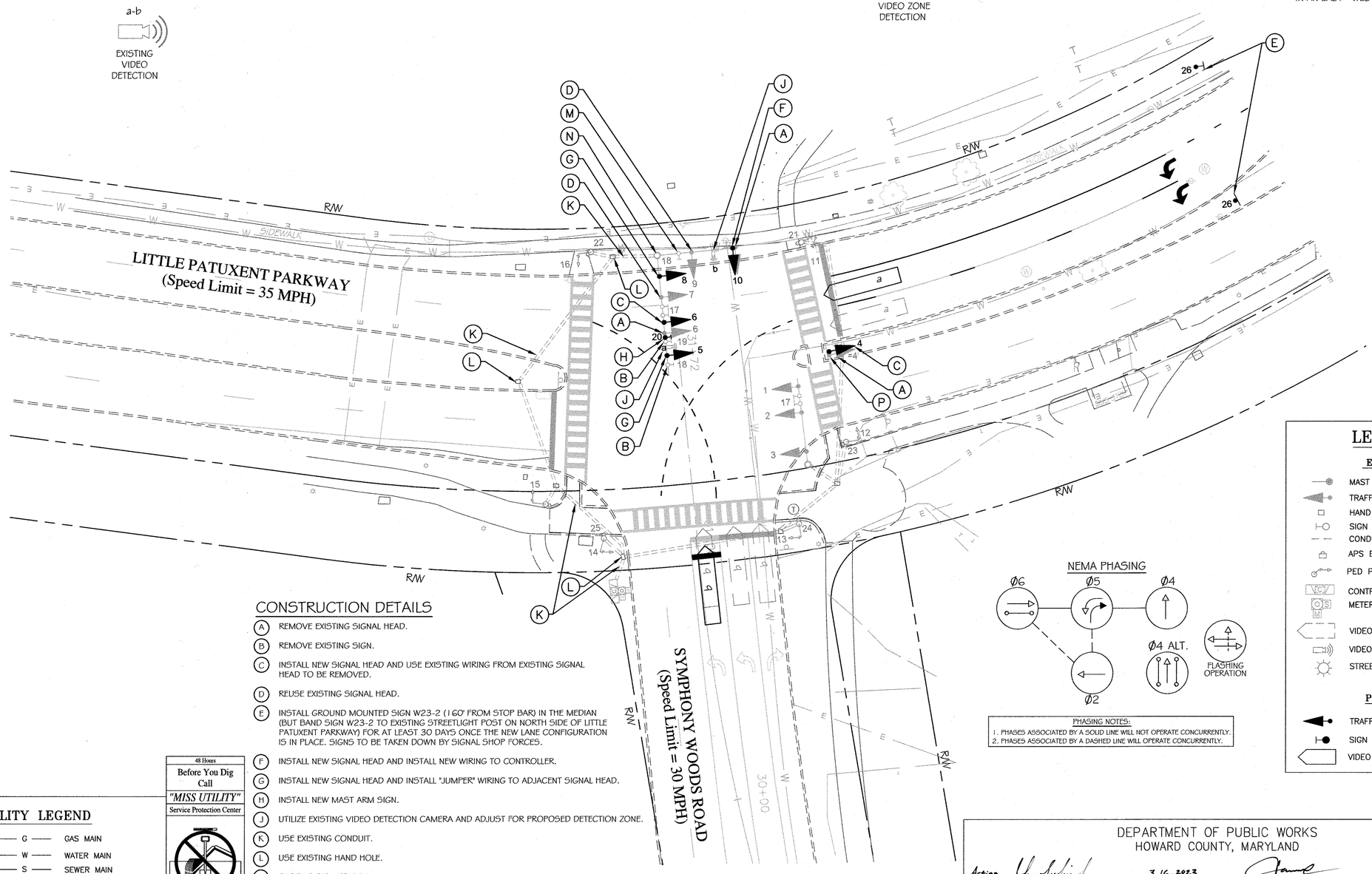
12"

a,b



VIDEO ZONE
DETECTION

PATUXENT PKWY IS ASSUMED TO RUN
IN AN EAST - WEST DIRECTION.



SCALE
0 20' 40'
Scale: 1" = 20'

NEMA PHASING

PHASING NOTES:
1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

LEGEND

EXISTING

- MAST ARM
- TRAFFIC SIGNAL HEAD
- HAND BOX
- SIGN
- CONDUIT
- APS BUTTON
- PED POLE/PED HEAD
- CONTROLLER WITH PAD
- METER AND SWITCH
- VIDEO DETECTION ZONE
- VIDEO DETECTION
- STREETLIGHT

PROPOSED

- TRAFFIC SIGNAL HEAD
- SIGN
- VIDEO DETECTION ZONE

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES BEFORE STARTING CONSTRUCTION AND HAND EXCAVATE OR TEST PILL ALL UTILITIES CROSSINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES ARE MARKED. IF THERE ARE ANY PERCEIVED CONFLICT BETWEEN UTILITIES AND PROPOSED TRAFFIC SIGNAL EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PROJECT ENGINEER IMMEDIATELY.
2. CONTRACTOR MUST VERIFY ALL PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS WITH HOWARD COUNTY'S TRAFFIC SIGNAL ENGINEER PRIOR INSTALLATION. CONTRACTOR SHALL CONTACT SUBIN GEORGE AT (410) 313-5753 TO SET UP A PRE-CONSTRUCTION MEETING IN THE FIELD.
3. ALL ABANDONED CONDUIT/CABLE SHALL BE PROPERLY TERMINATED AND REMOVED BY CONTRACTOR.
4. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL TRAFFIC ENFORCEMENT TO MAKE PRIOR ARRANGEMENTS WITH HOWARD COUNTY POLICE DEPARTMENT TO DIRECT TRAFFIC ON THE DAY OF THE TRAFFIC SIGNAL TURN-ON WHEN THE EXISTING TRAFFIC SIGNAL WILL BE DARK.
5. CONTRACTOR SHALL CONTACT HOWARD COUNTY'S UNDERGROUND UTILITY PERMIT DIVISION AT (410) 313-4207 AT LEAST 5 BUSINESS DAYS PRIOR TO STARTING WORK WITHIN THE PUBLIC RIGHT OF WAY.
6. SEE SIGNING AND STRIPING PLANS PREPARED BY WELLS + ASSOCIATES TO BE USED IN CONJUNCTION WITH THIS PLAN.
7. VIDEO CAMERA LOCATION/ALIGNMENT SHALL BE COORDINATED WITH HOWARD COUNTY'S TRAFFIC SIGNAL ENGINEER.
8. THE DOUBLE LEFT LANE CONFIGURATION AND STRIPING SHOWN IS AN INTERIM CONDITION THAT HAS BEEN DETERMINED TO BE ADEQUATE FOR THE SOUTHLAKE MOB(SDP-22-019) AND LAKEFRONT NORTH FDP BUILDOUT (FDP-DC-L2A). ANY FUTURE DEVELOPMENT IN THE LAKEFRONT CORE (FDP-DC-L1) WILL REQUIRE THIS INTERSECTION AND, DUE TO ITS CLOSE PROXIMITY, SYMPHONY WOODS RAOD AND SOUTH ENTRANCE (INTERSECTION 33) TO BE REEVALUATED.

CONSTRUCTION DETAILS

- (A) REMOVE EXISTING SIGNAL HEAD.
- (B) REMOVE EXISTING SIGN.
- (C) INSTALL NEW SIGNAL HEAD AND USE EXISTING WIRING FROM EXISTING SIGNAL HEAD TO BE REMOVED.
- (D) REUSE EXISTING SIGNAL HEAD.
- (E) INSTALL GROUND MOUNTED SIGN W23-2 (160' FROM STOP BAR) IN THE MEDIAN (BUT BAND SIGN W23-2 TO EXISTING STREETLIGHT POST ON NORTH SIDE OF LITTLE PATUXENT PARKWAY) FOR AT LEAST 30 DAYS ONCE THE NEW LANE CONFIGURATION IS IN PLACE. SIGNS TO BE TAKEN DOWN BY SIGNAL SHOP FORCES.
- (F) INSTALL NEW SIGNAL HEAD AND INSTALL NEW WIRING TO CONTROLLER.
- (G) INSTALL NEW SIGNAL HEAD AND INSTALL "JUMPER" WIRING TO ADJACENT SIGNAL HEAD.
- (H) INSTALL NEW MAST ARM SIGN.
- (J) UTILIZE EXISTING VIDEO DETECTION CAMERA AND ADJUST FOR PROPOSED DETECTION ZONE.
- (K) USE EXISTING CONDUIT.
- (L) USE EXISTING HAND HOLE.
- (M) EXISTING SIGN TO REMAIN.
- (N) USE EXISTING SIGNAL POLE AND MAST ARMS.
- (P) USE EXISTING SIGNAL POLE.

CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDER GROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF THE HOWARD COUNTY CODE.

48 Hours
Before You Dig
Call
"MISS UTILITY"
Service Protection Center

CALL TOLL FREE
1 - 800 - 257 - 7777

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: 7/11/13 & 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/28/23
Chief, Division of Land Development — Date 3/27/23
Chief, Development Engineering Division — Date 3.22.23

UTILITY LEGEND

G G	GAS MAIN
W W	WATER MAIN
S S	SEWER MAIN
D D	STORM DRAIN
E E	ELECTRIC CABLE
FO FO	FIBER-OPTIC CABLE
T T	COMMUNICATION CABLE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Acting — 3.16.2023
DIRECTOR OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — 03/07/2023 DATE

TRAFFIC ENGINEERING DIVISION — 3/7/2023

WELLS + ASSOCIATES, INC
1420 Spring Hill Road, Suite 610, Tysons, Virginia 22102
Phone: 703/917-6620 Facsimile: 703/917-0739

DESIGNED BY:	DRAWN BY:	CHECKED BY:
LES	HMP	LES

DATE	REVISION	BY	APP'R.

PREPARED FOR:
DEVELOPER:
THE HOWARD RESEARCH AND DEVELOPMENT CORP.
10960 GRANTCHESTER WAY, SUITE 110
COLUMBIA, MD 21044
ATTN: GABRIEL CHUNG
410-964-4800

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 42720 EXPIRATION DATE: 11/14/2024

STATE OF MARYLAND — JOHN F. CAVANAUGH — NO. 42720 — PROFESSIONAL ENGINEER

TRAFFIC SIGNAL MODIFICATION PLAN
TRAFFIC SIGNAL PLAN
LITTLE PATUXENT PARKWAY AND SYMPHONY WOODS ROAD
ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	FILE No.
1"=20'	NT/POR/R12	6489Z
DATE	TAX MAP - GRID	SHEET
JANUARY, 2023	36	170 OF 171

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SDP-13-020

G:\Projects\6001-6500\6489Z Lit Patux Pkwy Symphony Woods (South Entrance) TSM\Drawings\TSM\LPP & SWR - TSM.dwg
PLOTTED: 1/17/2023 1:47 PM, LAST SAVED: 1/17/2023 1:46 PM, PLOTTED BY: Hanna M. Popescu

PROJECT DESCRIPTION

I. GENERAL
THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING SIGNAL TO PROVIDE TWO EXCLUSIVE LEFT-TURN LANES FOR WESTBOUND LITTLE PATUXENT PARKWAY AT SYMPHONY WOODS ROAD IN HOWARD COUNTY, MARYLAND.

II. INTERSECTION OPERATION
THE INTERSECTION OPERATION REMAINS THE SAME EXCEPT THAT AN EXCLUSIVE LEFT-TURN PHASE WILL BE PROVIDED FOR WESTBOUND LITTLE PATUXENT PARKWAY APPROACH. A RIGHT TURN OVERLAP PHASE WILL BE PROVIDED ON THE NORTHBOUND SYMPHONY WOODS ROAD APPROACH.

III. EXISTING CONTROLLER REQUIREMENTS
THE EXISTING EIGHT PHASE, FULLY TRAFFIC ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH INTERSECTION MONITOR HARNESS, BATTERY BACK-UP, VIDEO DETECTION EQUIPMENT AND ACCESSIBLE PEDESTRIAN PUSHBUTTON EQUIPMENT IN A BASE MOUNTED CABINET ARE TO BE UTILIZED AT THIS LOCATION.

IV. SPECIAL NOTES
THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.

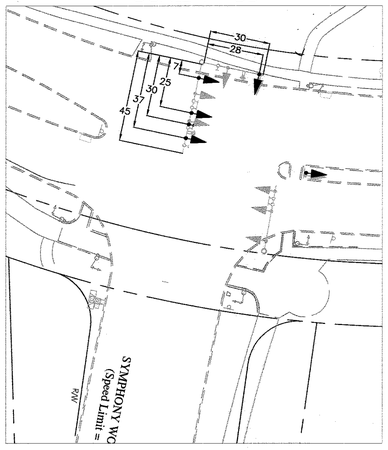
1. CONTACT SUBIN GEORGE AT (410) 313-5753 TO SET UP A PRE-CONSTRUCTION MEETING IN THE FIELD.

2. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY (1-800-257-7777) PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.

PHASE AND SEQUENCE DIAGRAM		SIGNAL HEADS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PHASE 2+6	G	G	G	R	R	R	G	G	R	R						
	2+6 PED CLEARANCE	G	G	G	R	R	R	G	G	R	R						
	2+6 CHANGE	Y	Y	Y	R	R	R	G	G	R	R						
	PHASE 2+5	R	R	R	G	G	G	G	G	R	R/G						
	2+5 CHANGE	R	R	R	Y	Y	Y	Y	Y	R	R/Y						
	PHASE 4	R	R	R	R	R	R	R	R	G	G/G						
	4 CHANGE	R	R	R	R	R	R	R	R	Y	Y/Y						
	PHASE 4 ALT	R	R	R	R	R	R	R	R	G	G						
	4 ALT PED CLEARANCE	R	R	R	R	R	R	R	R	G	G						
	4 CHANGE	R	R	R	R	R	R	R	R	Y	Y						
	FLASHING OPERATION	FL Y	FL Y	FL Y	FL R	FL R	FL R	FL Y	FL Y	FL R	FL R						

PATUXENT PKWY IS ASSUMED TO RUN IN AN EAST - WEST DIRECTION.

SIGNAL AND SIGN DIMENSIONS
SCALE 1"=35'



EQUIPMENT LIST A

EQUIPMENT TO BE PROVIDED BY THE COUNTY AND INSTALLED BY THE CONTRACTOR

DESCRIPTION	UNITS	QUANTITY
12 IN. ONE-WAY, THREE SECTION LED (RA,YA,GA) ADJUSTABLE YELLOW FACED TRAFFIC SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE AND TUNNEL VISORS	EA	9
12 IN. ONE-WAY, STANDARD FIVE SECTION LED (R,YA,Y,GA,G) ADJUSTABLE YELLOW FACED TRAFFIC SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE AND TUNNEL VISORS	EA	5

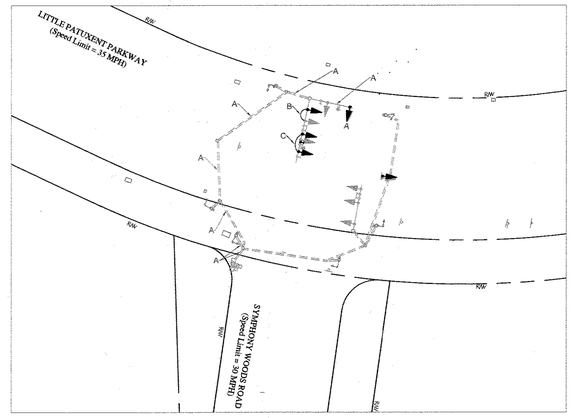
EQUIPMENT LIST B

FURNISHED AND INSTALLED BY THE CONTRACTOR

DESCRIPTION	UNITS	QUANTITY
MAINTENANCE OF TRAFFIC	LS	1
SHEET ALUMINUM SIGN	SF	27
R3-5L (36"X36") DUAL LEFT (OVERHEAD)	EA	1
W23-2 (36"X36") NEW TRAFFIC PATTERN AHEAD (GROUND-MOUNTED)	EA	2
ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	250
ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	40
REMOVAL OF SIGNAL HEAD	EA	3
REMOVAL OF SIGN	EA	2
TEMPORARY 4"X4" WOOD POST	EA	1
BAND SIGN TO EXISTING STREETLIGHT POST	EA	1

NOTE: EQUIPMENT FOR STRIPING TO BE INCLUDED ON THE APPROVED SIGNING AND STRIPING PLAN.

WIRING DIAGRAM
SCALE 1"=50'



WIRING KEY

A 7- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

B C 5- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

APPROVED
PLANNING BOARD OF HOWARD COUNTY

Date: 7/11/13 & 11/12/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/28/23

Chief, Division of Land Development — Date 3/27/23

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DESIGNED BY:	DRAWN BY:	CHECKED BY:
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DATE	REVISION	BY	APP'R.

PREPARED FOR:
DEVELOPER:
THE HOWARD RESEARCH AND DEVELOPMENT CORP.
10960 GRANTCHESTER WAY, SUITE 110
COLUMBIA, MD 21044
ATTN: GABRIEL CHUNG
410-964-4800

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EXPIRATION DATE: 11/14/2024

STATE OF MARYLAND — JOHN F. CHAVIANO IV — No. 42720 — PROFESSIONAL ENGINEER

1-9-2023

TRAFFIC SIGNAL MODIFICATION PLAN – GENERAL SIGNAL INFORMATION

TRAFFIC SIGNAL PLAN
LITTLE PATUXENT PARKWAY AND SYMPHONY WOODS ROAD

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	FILE No.
AS SHOWN	NT/POR/R12	6489Z
DATE	TAX MAP – GRID	SHEET
JANUARY, 2023	36	171 OF 171

SDP-13-020

G:\Projects\6501-6550\6496Z Lit Patux Pkwy Symphony Woods (South Entrance) TSM\Drawings\TSM\LPP & SWR - TSM.dwg, PLOTTED:1/17/2023 1:47 PM, LAST SAVED:1/17/2023 1:46 PM, PLOTTED BY: Henry M. Popenoe

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