

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARD AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF INSPECTION AT (410) 313-1000 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-251-7111 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF UTILITIES AT (410) 313-4900 AT LEAST FIVE WORKING DAYS PRIOR TO STARTING ANY EXCAVATION WORK.
- PROJECT BACKGROUND:**
LOCATION: SEE VICINITY MAP IN THE UPPER RIGHT HAND CORNER OF THIS SHEET
TAX MAP: 37
ELECTION DISTRICT: 1
ZONING: R-A-15 PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING
THIS PLAN IS GRANDFATHERED TO THE 1/28/2006 ZONING REGULATIONS, HOWEVER THE PROJECT IS UTILIZING THE 10/6/2013 ZONING REGULATIONS FOR SETBACKS FROM VIGNAL PROPERTIES
AREA OF BUIDABLE PARCEL FOR THIS SITE DEVELOPMENT PLAN: 1.7811 AC.
FOR OTHER SUBMISSIONS RELATED TO THIS SITE, SEE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING FILE NUMBERS: 5-04-09, NP-04-123, F-06-01, NP-06-045, 2RA-03, F-09-080, F-10-040, F-10-040, SDF-12-45, NP-16-130, F-11-026, F-13-084, F-16-126
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL CURB RADI ARE 5' UNLESS NOTED OTHERWISE. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- EXISTING TOPOGRAPHY HAS BEEN DERIVED FROM THE APPROVED PLANS FOR CONSTRUCTION UNDER F-10-040, AERIAL TOPOGRAPHY BY MCKENZIE SINDLER, INC. ON 3/23/03 AND FIELD RUN TOPOGRAPHY BY GLW IN JUNE, 2016. ALL TOPOGRAPHY IS REPRESENTED BY 2-FOOT CONTOUR INTERVALS.
- COORDINATES AND BEARINGS ARE BASED UPON THE MD STATE PLANE SYSTEM (NAD 83). HORIZONTAL AND VERTICAL DATUM IS BASED ON HOWARD COUNTY CONTROL STATIONS: 316A, 314A
- THIS SUBDIVISION IS SUBJECT TO SECTION 10.1(2)(B) OF THE HOWARD COUNTY CODE. PUBLIC WATER SERVICE HAS BEEN GRANTED UNDER THE TERMS AND PROVISIONS THEREOF EFFECTIVE 3/13/2013 ON WHICH DATE DEVELOPER AGREEMENT #44-4140 WAS FILED AND ACCEPTED. SEWER IS PRIVATE PER THIS SDP. THE PRIVATE SEWER CONNECTS INTO THE EXISTING PUBLIC SEWER ON SITE PER CONTRACT #4-4604-D.
- EXISTING UTILITIES WERE TAKEN FROM AVAILABLE HOWARD COUNTY RECORDS AND PREVIOUS SHIPLEY'S GRANT DEVELOPMENT PLANS.
- STORMWATER MANAGEMENT POND 'D' IS PROVIDED UNDER F-04-088 AND IS A NET EXTENDED DETENTION POND (TYPE P-2). POND 'D' HAS BEEN DESIGNED TO PROVIDE HW, CRY, 1-HR ATTENUATION, AND SAFE PASSAGE OF THE 100-YR STORM. POND 'D' IS A MD-310 HAZARDOUS CLAS A FACILITY. FACILITY 'D' WILL BE A PUBLIC FACILITY ON HOMEOWNERS ASSOCIATION OWNED PROPERTY (OPEN SPACE LOT D-1), JOINTLY MAINTAINED BY HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND THE HOMEOWNERS ASSOCIATION.
STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II. IT WAS DETERMINED THAT THE PROJECT MET THE CRITERIA OUTLINED IN THE MD STORMWATER MANAGEMENT REGULATIONS GUIDELINES FOR IMPLEMENTATION FOR ACCEPTANCE OF THE 2000 DESIGN CRITERIA AND GRANTED A WAIVER. THIS PLAN RECEIVED PRELIMINARY PLAN APPROVAL (P-08-000) ON 4/25/2008 AND FINAL PLAN APPROVAL (F-04-088) ON 10/27/2004. THIS PLAN IS ALSO SUBJECT TO THE EXPIRATION OF THIS WAIVER UNLESS ALL STORMWATER MANAGEMENT IS CONSTRUCTED BY MAY 4, 2011
- THE METLAND DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY BY EXPLORATION RESEARCH, INC. JURISDICTIONAL DETERMINATION AND VERIFICATION OF DELINEATION OF WATERS OF THE U.S. BY U.S. ARMY CORPS OF ENGINEERS ON 3/26/05. THE STUDY WAS APPROVED WITH 5-04-04 ON 2/15/05. THERE ARE NO STREAMS OR WETLANDS WITHIN THE LIMITS OF PARCEL D-224.
- THE HISTORIC SITES MAP DOES NOT SHOW ANY HISTORICAL SITES WITHIN THE PROJECT LIMITS (PARCEL D-224)
- THIS PARCEL DOES NOT APPEAR ON THE COUNTY'S CEMETERY INVENTORY AS HAVING CEMETERIES OR BURIAL GROUNDS. ALSO, THERE IS NO PHYSICAL EVIDENCE OF EITHER CEMETERIES OR BURIAL GROUNDS BEING PRESENT ON THE SITE.
- BOUNDARY INFORMATION IS FROM BOUNDARY SURVEYS BY GUTSCHICK, LITTLE, AND WEBER, P.A., DATED MAY, 2003.
- SOILS DATA WAS TAKEN FROM THE SOIL SURVEY OF HOWARD COUNTY, MARYLAND ISSUED MARCH, 2008.
- THE 100-YEAR FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY GUTSCHICK, LITTLE, & WEBER DATED JUNE 2006, AND WAS APPROVED IN SEPTEMBER 2006 AS PART OF F-06-014. THERE IS NO FLOODPLAIN WITHIN THE LIMITS OF PARCEL D-224.
- NOISE STUDY WAS DONE BY HYLE LABORATORIES, DATED MAY 12, 2005 AND UPDATED JULY 12, 2005 AS PART OF 5-04-01. AN ADDITIONAL NOISE STUDY WAS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED JULY 1, 2015 AS PART OF PHASE B. THE STUDY WAS APPROVED ON 8/24/2015. THE NOISE LINE FROM BOTH OF THESE STUDIES DID NOT IMPACT PARCEL D-224.
- TRAFFIC STUDY AND TRAFFIC SIGNAL WARRANT ANALYSIS BY THE TRAFFIC GROUP, DATED JAN. 26, 2004. A LETTER FROM THE TRAFFIC GROUP DATED 10/6/16 CONFIRMED THAT THIS SITE USE IS WITHIN THE ORIGINAL ASSUMPTIONS.
- A GEO-TECHNICAL REPORT IS NOT REQUIRED FOR THIS PLAN.
- THE SCENIC ROADS MAP DOES NOT INDICATE ANY SCENIC ROADS WITHIN OR ADJACENT TO THE PROJECT LIMITS.
- THE PROJECT IS WITHIN THE METROPOLITAN DISTRICT.
- NO GRADINGS, REMOVAL OF VEGETATIVE COVER OR TREES, OR PLACEMENT OF NEW STRUCTURES IS PERMITTED WITHIN LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, AND 100 YEAR FLOODPLAIN AREAS, UNLESS PERMITTED UNDER AN APPROVED WAIVER PETITION OR DETERMINED TO BE ESSENTIAL OR NECESSARY BY DPZ.
- A FOREST STAND DELINEATION PLAN WAS SUBMITTED AND APPROVED FOR THE AREA COVERED BY THIS PLAN UNDER 5-04-04 FEBRUARY 15, 2005. A FOREST CONSERVATION PLAN WAS SUBMITTED AND APPROVED FOR THE AREA COVERED BY THIS PLAN UNDER F-06-014 & F-16-126.
- FOREST CONSERVATION FOR THIS SITE HAS BEEN PROVIDED UNDER F-06-014 AND SUBSEQUENT PLATS F-08-111, F-04-86, F-10-060 AND F-11-026.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENTS AS NOTED ON SHEET 9. THE SURETY IS IN THE AMOUNT OF \$485,000.00. THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- CONTRACTOR TO FIELD LOCATE ALL EXISTING UTILITY CONNECTIONS. SHOULD SUBSTANTIAL DISCREPANCIES ARISE, THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER BEFORE MAKING ADJUSTMENTS.
- USE TRENCH BEDDING CLASS 'C' FOR STORM DRAINS.
- PAVED AREAS INDICATED ARE PRIVATE EXCEPT AS NOTED.
- ALL PROPOSED RAMPS SHALL BE IN ACCORDANCE WITH CURRENT A.D.A. STANDARDS. ALL HANDICAP ACCESSIBLE SIDEWALKS SHALL HAVE A TWO PERCENT MAXIMUM GROSS SLOPE. PROVIDE A FIVE-FOOT BY FIVE-FOOT LEVEL (2 PERCENT MAX) LANDING AT THE TOP AND BOTTOM OF ALL RAMPS AND BUILDING ENTRANCES AND EXITS. PROVIDE DETECTABLE WARNING SURFACE ON ALL RAMPS IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL R-407
- MAINTAIN 2% GROSS SLOPES ON SIDEWALKS, PER STANDARD DETAILS. WHERE SIDEWALK IS ADJACENT TO BUILDING, SLOPE AWAY FROM BUILDING, AND UTILIZE EXPANSION JOINT MATERIAL AND SEALER IN THE JOINT BETWEEN THE SIDEWALK AND THE BUILDING WALL.
- ALL OUTLINE LIGHTING SHALL COMPLY WITH ZONING REGULATION SECTION 134 WHICH REQUIRES LIGHTS TO BE INSTALLED TO DIRECT/REFLECT LIGHT DOWNWARDS AND INWARDS ON SITE AWAY FROM ALL ADJACENT PUBLIC STREETS AND RESIDENTIAL AREAS. NO OUTDOOR PARKING LOT LIGHTING IS PROPOSED.
- TRASH FOR THIS SITE SHALL BE COLLECTED BY A PRIVATE REFUSE COLLECTION COMPANY.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
A) WIDTH - 12' (6' SERVING MORE THAN ONE RESIDENCE)
B) SURFACE - 6" OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN)
C) GEOMETRY - MAX 15% GRADE, MAX 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS
D) STRUCTURE (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (HDS LOADING)
E) DRAINAGE ELEMENTS - SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
F) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE
- ALL BUILDING FOUNDATIONS MUST BE BRICK POINTED UNLESS NOTED OTHERWISE.
- ANY DAMAGE TO THE ADJACENT COUNTY OWNED RIGHT-OF-WAY AND PROPERTY SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- THE HOMEOWNERS ASSOCIATION FOR PARCEL D-224 IS THE SHIPLEY'S GRANT COMMUNITY ASSOCIATION, INC. THE ARTICLES OF INCORPORATION FOR THE ASSOCIATION WERE FILED WITH THE MARYLAND STATE DEPARTMENT OF ASSESSMENTS AND TAXATION ON MAY 22, 2007 (RECEIPT NO. D1893123). THE DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR THE ASSOCIATION ARE RECORDED IN LIBER 1077R AT FOLIO 81 AND LIBER 1165 AT FOLIO 91. THE ANNEXATION OF PARCEL D INTO THE COMMUNICATION ASSOCIATION IS RECORDED IN LIBER 16163 AT FOLIO 164
- BY WINDOW, WINDOW WELLS, CHIMNEY, HEATING OR AIR CONDITIONING UNITS, BALCONIES, GRILLS, VESTIBULES AND EXTERIOR STAIRWAYS IF NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NO MORE THAN 4 FEET INTO ANY REQUIRED SETBACK AREA IN ACCORDANCE WITH SECTION 128(A) OF THE ZONING REGULATIONS
- PER A LETTER DATED APRIL 8, 2011, FROM HOWARD COUNTY HOUSING TO HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING, A MIHJ AGREEMENT IS NOT REQUIRED BY HOWARD COUNTY HOUSING FOR THIS SITE DEVELOPMENT PLAN. THE 6 PROJECTED APARTMENT MIHJ'S FOR PARCEL E-4 (ALONG WITH OTHER MIHJ TRANSFERS FROM THE SHIPLEY'S GRANT SITE) HAVE BEEN TRANSFERRED TO THE RESIDENCES OF ELLICOTT GARDENS (SDP 01-088) BY A LETTER FROM HOWARD COUNTY HOUSING TO BENDER PROPERTY II, LLC AND BA WATERLOO ON FILE UNDER THIS SITE PLAN.
- THE ONLY REMAINING MIHJ OBLIGATION FOR THE SHIPLEY'S GRANT SITE IS TO PROVIDE 6 MIHJ TOWNHOUSES IN PHASE V AND/OR VI OF THE PROJECT.

- ON MARCH 16, 2010, NP-10-107, APPROVED THE WAIVERS FOR THE FOLLOWING: SECTION 16.116(A)(2)(i) AND (ii) REQUEST TO BE PERMITTED TO GRADE WITHIN THE 50 AND 15 FEET STREAM BUFFERS AS SHOWN ON THE NP-10-107 EXHIBIT PLAN, SUBJECT TO THE FOLLOWING CONDITIONS IN THE APPROVAL LETTER:
1. THE STREAM BUFFER AREAS CLEARED AND GRADED PER THIS WAIVER PETITION APPROVAL:
A. SHALL NOT EXCEED THE LIMITS SHOWN ON THE NP-10-107 EXHIBIT PLAN, AND;
B. SHALL BE REFORESTED IN ACCORDANCE WITH THE F-06-014 FOREST CONSERVATION PLAN.
- THE F-10-040 ROAD PLANS SHALL BE REVISED:
A. PER THE ATTACHED DEED COMMENT # DATED 03/20/10, WHICH STATES "THE AREA BEING GRADED SHALL BE PROTECTED BY VEGETATIVE COVER AND AFFORESTED ONCE THE CONSTRUCTION OF MARLE HILL ROAD AND THE PAD SITE LOCATED ON PARCEL D-224, AS SHOWN IN THE EXHIBIT ACCOMPANYING THIS WAIVER REQUEST, IS COMPLETE. THE STABILIZATION OF THESE AREAS SHALL BE DONE PRIOR TO APPLYING FOR BUILDING PERMITS."
B. TO PROVIDE 55% OR TOP ALONG THE LOD WHERE IT IS LOCATED WITHIN THE STREAM BUFFERS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *William J. Joffe* 7-7-17
 Chief, Division of Land Development *James E. Joffe* 7-7-17
 Chief, Development Engineering Division *Chad Chalmers* 6-14-17

- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (R-1) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1983)". A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.
- 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 CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- BUILDING LENGTH/BUILDINGS EXCEEDING THE 120' LENGTH LIMIT HAVE BEEN APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING TO SIGNIFICANT BUILDING ARTICULATION IN ACCORDANCE WITH SECTION 112.21(a) OF THE ZONING REGULATIONS. SEE EXHIBIT ON FILE UNDER THIS SITE PLAN FOR MORE INFORMATION.
- SEE SHEET 10 FOR ALTERNATIVE COMPLIANCE WITH 18-134 INFORMATION & CONDITIONS OF APPROVAL.

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTINSVILLE OFFICE PARK
 BURTINSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 MD/PA: 301-989-2524 FAX: 301-421-4186

1/22/19	Sheet 10 added to show 6' Pathway in Open Space Lot C-64	JH	DPZ
DATE	REVISION	BY	APPR

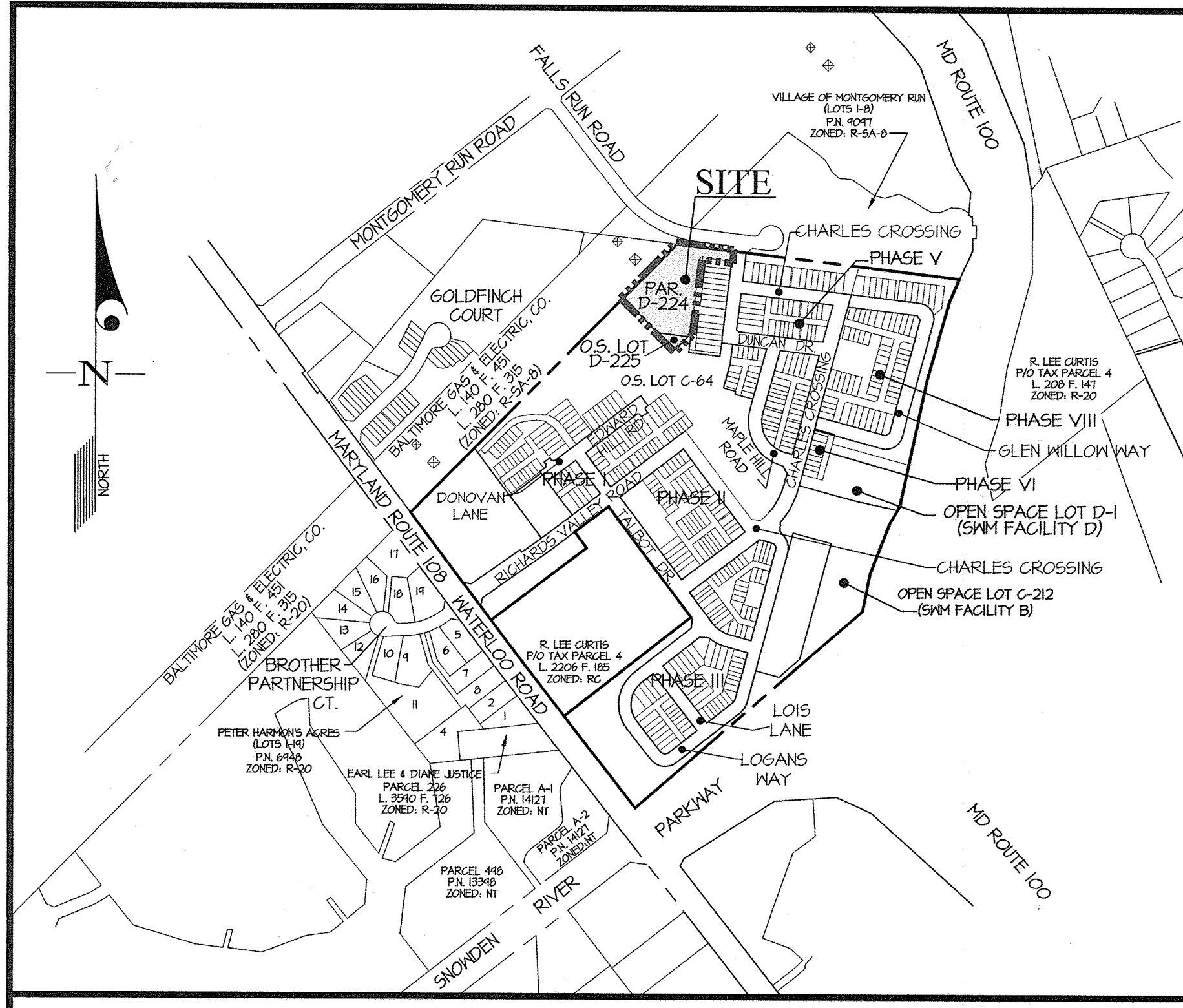
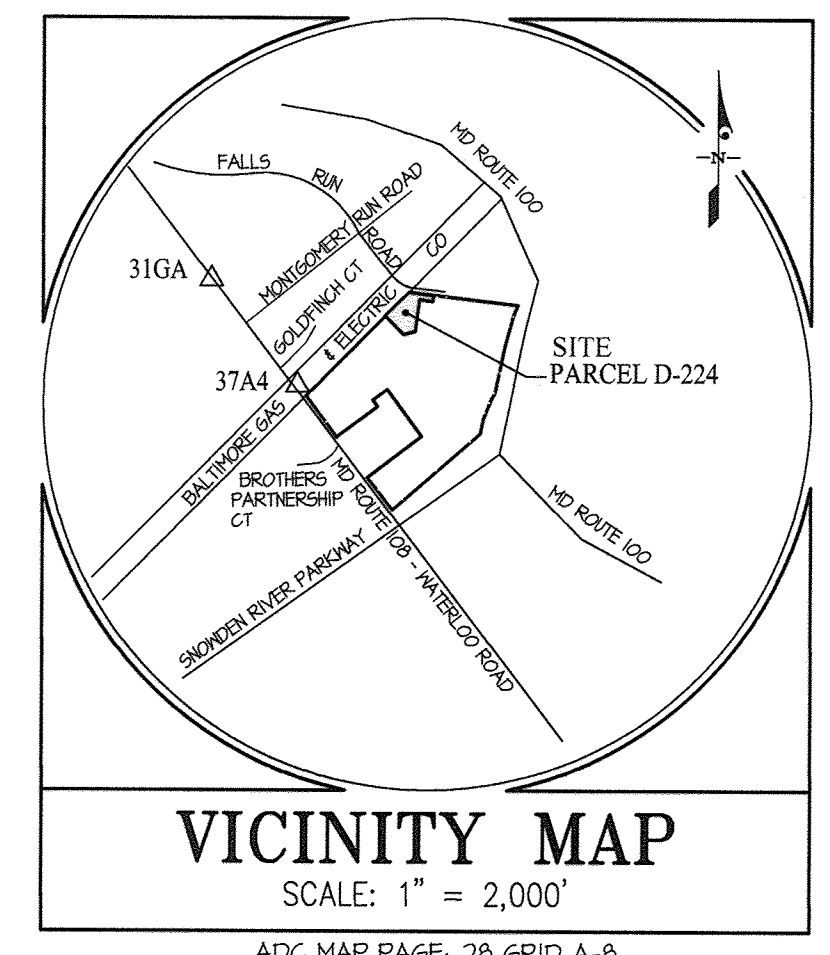
SITE DEVELOPMENT PLAN

SHIPLEY'S GRANT

PHASE VI, BUIDABLE PARCEL D-224 and OPEN SPACE LOT D-225

20 TOWNHOUSE CONDOMINIUM DWELLING UNITS

Howard County Control Stations
 316A ELEV. = 511.65
 STANDARD DISC ON CONCRETE MONUMENT
 N 564,925.75, E 1367,067.65
 374A ELEV. = 437.28
 STANDARD DISC ON CONCRETE MONUMENT
 N 563,835.91, E 1367,171.65



PHASE No.	MAXIMUM UNITS PERMITTED		TOTAL UNITS ON-SITE	REQUIRED MIHJ'S @ 10%	PROPOSED R-A-15 UNITS			PROPOSED UNIT DENSITY
	NET	(15 Units / Net Ac.)			ON-SITE	OFF-SITE	CONDOMINIUM/ APARTMENT UNITS	
PHASE I	12.27 AC.	184	62	6	54	8	0	5.1 UNITS/NET AC.
PHASE II	5.81 AC.	87	66 ²	6	66 ²	0	8	10.7 (11.4) UNITS/NET AC.
PHASE III	12.44 AC.	186	69 ²	7	69 ²	0	6	5.2 (5.5) UNITS/NET AC.
PHASE IV	5.77 AC.	86	57 ²	7	17	0	6	11.3 (9.9) UNITS/NET AC.
PHASE V	5.50 AC.	82	59	6	55	4	4	10.5 UNITS/NET AC.
PHASE VI	4.20 AC.	63	71 ⁸	7	49	2	2	19.3 UNITS/NET AC.
PHASE VII	0.75 AC.	11	13	1	12	1	0	10.5 UNITS/NET AC.
PHASE VIII	6.60 AC.	98	67 ⁷	7	61	6	0	10.2 UNITS/NET AC.
SITE TOTAL	53.34 AC.	797	464	47	383	21	26	8.7 UNITS/NET AC.

- NOTES:
 1. OF THE 40 MIHJ'S THAT ARE REQUIRED, 22 ARE PROVIDED ON-SITE (ON Lots B-5, C-3, C-4, C-11, C-12, C-14, C-20, C-32, C-33, D-43, D-44, D-48, D-49, D-127, D-128, D-162, D-168, D-171, D-181, D-183 & D-184) AND 26 ARE TO BE PROVIDED OFF-SITE.
 2. AFTER THE TRANSFER OF & ALLOCATION UNITS FROM THE PHASE IV APARTMENTS TO 8 SFA UNITS IN PHASES II AND III (each with 4 additional SFA UNITS), THE 8 ADDITIONAL SFA UNITS IN PHASE II AND III ARE CREATED BY PLAT Nos. 21038-41.
 3. THE PHASE IV APARTMENTS ARE ON SDP-10-087.
 4. PHASE VI LOTS D-124 THRU D-131 WILL BE PART OF A FUTURE SDP (INCLUDED IN UNIT TABULATION).
 5. PHASE V LOT C-337 HAS BEEN INCLUDED IN SDP-10-082
 6. THE PHASE VI APARTMENTS ARE ON SDP 12-045
 7. 2 UNITS WERE TRANSFERRED FROM PHASE 6 (CONDO UNITS) TO PHASE 8 WITH THE SUBMISSION OF THE PHASE 8 FINAL PLANS ON 5/16/2016
 8. 10 UNITS WERE FORFEITED WITH THE APPROVAL OF SDP-16-078 WHEN THE MULTIFAMILY CONDO UNITS IN PHASE 6 WERE REVISED TO SINGLE FAMILY ATTACHED CONDO UNITS. AS A RESULT OF FORFEITING 10 UNITS, THE TOTAL NUMBER OF MIHJ'S REQUIRED HAS BEEN REDUCED BY 1

LOT DEVELOPMENT DATA
 I. GENERAL SITE ANALYSIS DATA

A. PRESENT ZONING: R-A-15	B. PROPOSED USE OF SITE: 20 TOWNHOUSE (SFA) CONDOMINIUM UNITS
C. PUBLIC WATER AND PRIVATE SEWER TO BE UTILIZED (CONTR. NO. 44-4140-D).	D. PARKINGS REQUIRED PER ZONING AND DMV 11 (table 2.11): (2 spaces/unit + 0.3 spaces/unit x 20 units = 40 + 6 = 46 SPACES)
PARKING PROVIDED: 40 GARAGE SPACES (2 in each unit) + 40 DRIVEWAY SPACES (2 on each driveway that are at least 18' deep from back of sidewalk or curb flow line) + 7 COMMON SURFACE SPACES (4x10' ea) = 87 SPACES TOTAL	
E. OPEN SPACE: SEE DEVELOPMENT TRACKING CHART	
2. AREA TABULATION A. AREA OF THIS PARCEL: 1.7811 AC. (PLAT No. 21822) B. AREA OF THIS PLAN SUBMISSION: 1.7811 ACRES C. AREA OF DISTURBANCE BY THIS SDP: 2.0 ACRES	
3. LOT DESIGNATION:	

DEVELOPMENT TYPE	MAX. BUILDING HT.	MINIMUM LOT SIZE	MIN. LOT WIDTH AT FROM BBL
PRINCIPAL STRUCTURES	55'	N/A	N/A
ACCESSORY STRUCTURES	15'		

PHASE	PARCEL NUMBER OR HOWARD COUNTY FILE No.	PLAN STATUS	DEVELOPMENT TRACKING CHART AND SITE ANALYSIS FOR R-A-15 ZONE AREAS									
			GROSS	100 YR. FLOODPLAIN	NET	MIN.	O/S ¹ REQ'D	O/S PROV. ²	MIN. REC. O/S REQ'D	REC O/S PROVIDED	MIN. REQ'D. TND O/S ⁴	TND O/S PROVIDED
1	F 07-043/SDP-07-047	APPROVED	13.63 AC.	1.36 AC.	12.27 AC.	3.41 AC.	8.26 AC. (60%)	24,800 S.F. ³	57,503 S.F.	0.68 AC./29,886 S.F.	0.99 AC./43,157 S.F. ⁹	
2	F 07-059/SDP-07-048	APPROVED	5.81 AC.	0.00 AC.	5.81 AC.	1.45 AC.	0.65 AC. (11%)	24,800 S.F. ³	28,248 S.F.	0.29 AC./12,654 S.F.	0.85 AC./37,124 S.F.	
3	F 08-006/SDP-10-082	APPROVED	12.94 AC.	0.50 AC.	12.44 AC.	3.24 AC.	6.19 AC. (48%)	26,000 S.F. ³	27,840 S.F.	0.65 AC./28,183 S.F.	0.37 AC./16,126 S.F. ¹⁰	
4	F 09-088/SDP-10-082, SDP-10-87	APPROVED	5.77 AC.	0.00 AC.	5.77 AC.	1.44 AC.	1.68 AC. (30%)	26,000 S.F. ³	6,591 S.F.	0.29 AC./12,567 S.F.	0.15 AC./6,591 S.F.	
5	F 10-048/SDP-12-061	APPROVED	5.50 AC.	0.00 AC.	5.50 AC.	1.38 AC.	0.44 AC. (8%)	23,600 S.F. ³	0 S.F.	0.28 AC./11,979 S.F.	0 AC./0 S.F.	
6	F 11-026/SDP-12-061, SDP-12-045, SDP-16-079	APPROVED	4.20 AC.	0.00 AC.	4.20 AC.	1.05 AC.	0.09 AC. (2%)	28,400 S.F. ³	21,146 S.F.	0.21 AC./9,148 S.F.	0 AC./0 S.F.	
7	F 14-123/SDP-14-063 ³	APPROVED	0.75 AC.	0.00 AC.	0.75 AC.	0.19 AC.	0.0 AC.	9,100 S.F. ³	0 S.F.	0.04 AC./1,633 S.F.	0 AC./0 S.F.	
8	PARCEL D-2/5-14-003/P-15-002/F-16-116	PLANS SUBMITTED	6.60 AC.	0.00 AC.	6.60 AC.	1.65 AC.	1.77 AC. (27%)	46,300 S.F. ⁶	24,680 S.F.	0.33 AC./14,376 S.F.	0.57 AC./24,680 S.F.	
--	AMENITY CREDITS 7 ⁸								45,875 S.F.			
CUMULATIVE TOTAL			55.20 AC.	1.86 AC.	53.34 AC.	13.80 AC.	19.08 AC. (35%)	209,000 S.F.	211,833 S.F.	2.76 AC./120,224 S.F.	2.93 AC./127,678 S.F.	

- DEVELOPMENT TRACKING CHART AND SITE ANALYSIS NOTES:**
- MINIMUM REQUIRED OPEN SPACE (O/S) IS CALCULATED AS 25% OF THE GROSS AREA.
 - PERCENT OPEN SPACE PROVIDED IS OF THE GROSS AREA.
 - MINIMUM REQUIRED RECREATION OPEN SPACE (ROS) FOR PHASE I-VI IS CALCULATED AS 400 SF PER UNIT.
 - MINIMUM REQUIRED TRADITIONAL NEIGHBORHOOD O/S IS CALCULATED AS 20% OF THE REQUIRED OPEN SPACE.
 - MINIMUM REQUIRED RECREATION OPEN SPACE FOR PHASE VII (PER THE 2013 COMPREHENSIVE ZONING PLAN WHICH REQUIRES AN ADDITIONAL 300 SF ROS PER LOT FOR LOTS WITHOUT A 15 FT USABLE YARD) - 13 LOTS x 700 SF = 9,100 SF.
 - MINIMUM REQUIRED RECREATION OPEN SPACE FOR PHASE VIII (PER THE 2013 COMPREHENSIVE ZONING REGULATIONS EFFECTIVE 10/06/13 WHICH REQUIRES AN ADDITIONAL 300 SF ROS PER LOTS WHICH DO NOT HAVE A 15 FT USABLE YARD) - 65 LOTS x 700 SF = 45,500 SF + 2 LOTS x 400 SF = 800 SF FOR A TOTAL OF 46,300 SF. SEE REQUIRED RECREATION OPEN SPACE CALCULATIONS IN SITE ANALYSIS ABOVE. LOTS WITHOUT A 15' USABLE YARD ARE SHOWN ON SHEET 2 WITH A (*) NEXT TO THE LOT NUMBER.
 - 13,520 SF OF RECREATION OPEN SPACE HAS BEEN INCLUDED USING AMENITY FEATURE AREA CREDITS APPROVED BY DPZ (PER THE 6/15/2012 POLICY MEMO), INCLUDING 3,960 SF FOR A COMMUNITY POOL, 2,000 SF FOR A GAZEBO, 2000SF FOR A TOT LOT, AND 1,600 SF FOR BENCHES AS OUTLINED IN A LETTER TO DPZ DATED 11/7/2013. CREDITS FOR THE COMMUNITY CENTER AND POOL MAY BE INCREASED IF A REGULATION OR A DPZ POLICY INCREASES THE VALUE FOR THESE MAJOR RECREATIONAL FACILITIES. IF A CREDIT VALUE IS INCREASED, A REDLINE TO THIS PLAN WILL BE REQUIRED TO UPDATE THE CHART AND THE CREDIT VALUES.
 - 32,355 SF OF RECREATION OPEN SPACE HAS BEEN INCLUDED USING AMENITY FEATURE AREA CREDITS APPROVED BY DPZ (PER THE 6/15/2012 POLICY MEMO), INCLUDING 5,520 SF FOR A COMMUNITY CENTER, 5,520 SF FOR A COMMUNITY POOL (4,740 SF EACH FOR THE POOL AND COMMUNITY CENTER IN PHASE 8 AND 780 SF EACH WAS ADDED FOR THE COMMUNITY CENTER AND POOL ON LOT C-135 FOR THE 78 LOTS IN PHASES 7 & 8 THAT WERE NOT INCLUDED IN THE ORIGINAL CREDIT), AND 21,315 SF FOR ASPHALT PATHWAYS AS OUTLINED IN A LETTER TO DPZ DATED 10/1/2014. CREDITS FOR THE COMMUNITY CENTER AND POOL MAY BE INCREASED IF A REGULATION OR A DPZ POLICY INCREASES THE VALUE FOR THESE MAJOR RECREATIONAL FACILITIES. IF A CREDIT VALUE IS INCREASED, A REDLINE TO THIS PLAN WILL BE REQUIRED TO UPDATE THE CHART AND THE CREDIT VALUES.
 - INCLUDES ADDITIONAL TND OS ADDED BY REDLINE TO SDP-07-047 IN JANUARY 2013
 - INCLUDES ADDITIONAL TND OS ADDED BY REDLINE TO SDP-10-082 IN JANUARY 2013

RECREATION OPEN SPACE TABULATION	
LOCATION	AREA (Sq. Ft.)
PARCEL D-224	1,150

SHEET INDEX

- COVER SHEET
- SITE DEVELOPMENT PLAN
- CURB and PAVING DELINEATION PLAN / SITE DETAILS
- SEDIMENT CONTROL PLAN
- SEDIMENT CONTROL NOTES and DETAILS
- STORM DRAIN DRAINAGE AREA MAPS
- STORM DRAIN & SEWER PROFILES
- LANDSCAPE PLAN
- LANDSCAPE NOTES and DETAILS
- PATHWAY PLAN
- STRUCTURE SETBACKS PER 112.0.4 (R-A-15) AND 128.6.4 (TRADITIONAL RESIDENTIAL NEIGHBORHOODS)

SETBACK TYPE	SETBACK (SINGLE FAMILY ATTACHED)
FROM EXTERNAL ARTERIAL OR MAJOR COLLECTOR PUBLIC STREET RIGHT OF WAY	
(1) STRUCTURES (a) FRONT OR SIDE (b) REAR	30' 50' 30'
FROM OTHER EXTERNAL PUBLIC STREET RIGHT OF WAY	
(1) STRUCTURES (a) SFA FRONT OR SIDE (b) REAR (2) USES	20' 40' 20'
FROM INTERNAL PUBLIC STREET RIGHT OF WAY FRONT OR SIDE	0'
FROM INTERNAL ALLEY RIGHT OF WAY SIDE OR REAR	0'
FROM VICINAL PROPERTIES - FOR ALL STRUCTURES AND USES IN A SFA DEVELOPMENT PROJECTS: 1. FROM RR, RR R-30, R-12, R-12, R-12, R-12, R-12 OR A SINGLE FAMILY AREA OF A PCC, NT OR MDX DISTRICT (a) SFA (b) OTHER STRUCTURE OR USES	75' 50'
2. FROM R-A-15 AND OTHER ZONING DISTRICTS (a) SFA (b) OTHER STRUCTURE OR USES	25' 20'
BUILDING TO BUILDING FACE TO FACE	30'
FACE TO SIDE/ REAR TO SIDE	30'
SIDE TO SIDE	15'
REAR TO REAR	60'
REAR TO REAR ACROSS AN ALLEY	30'
REAR TO FACE	100'

*THE PLANNING DIRECTOR IS ALLOWING THIS PHASE IS UTILIZING THE 10/6/2013 SETBACK FOR VICINAL PROPERTIES WHILE THE REMAINING SETBACKS ADHERE TO THE 1/28/2006 GRANDFATHERED SETBACKS.

ADDRESS CHART

UNIT NO.	STREET ADDRESS	UNIT NO.	STREET ADDRESS
1	6011 HIDDEN MEADOW	11	6010 HIDDEN MEADOW
2	6013 HIDDEN MEADOW	12	6012 HIDDEN MEADOW
3	6015 HIDDEN MEADOW	13	6014 HIDDEN MEADOW
4	6017 HIDDEN MEADOW	14	6016 HIDDEN MEADOW
5	6019 HIDDEN MEADOW	15	6018 HIDDEN MEADOW
		16	6020 HIDDEN MEADOW
6	6023 HIDDEN MEADOW	17	6022 HIDDEN MEADOW
7	6025 HIDDEN MEADOW	18	6024 HIDDEN MEADOW
8	6027 HIDDEN MEADOW		
9	6029 HIDDEN MEADOW	19	6030 HIDDEN MEADOW
10	6031 HIDDEN MEADOW	20	6032 HIDDEN MEADOW

PERMIT INFORMATION CHART

SUBDIVISION NAME: SHIPLEY'S GRANT				SECTION/AREA: PHASE VI		PARCEL: PARCEL D-224 & O.S. LOT D-225	
PLAT No. 24249/50	ZONE R-A-15	TAX MAP 37	BLOCK 142	ELEC. DIST. 1	CENSUS TRACT 601102		
WATER CODE: D07				SEWER CODE: 2180000			
SCALE AS SHOWN	ZON						

SITE DEVELOPMENT LEGEND

- 366 --- EXISTING CONTOUR
- 300 --- PROPOSED CONTOUR
- + 69.41 PROPOSED SPOT ELEVATION
- MEX. MATCH EXISTING
- LIMIT OF DISTURBANCE PER THIS SDP
- LIMIT OF DISTURBANCE PER NP-10-107
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- M - MANHOLE
- I - INLET
- S - STUB
- EX. 8" S.S. EXISTING SANITARY SEWER
- 8" (GRV) PROPOSED SANITARY SEWER (PRIVATE)
- 4" S4C (PRIVATE)
- PUBLIC WATER EASEMENT
- WATERLINE (PUBLIC)
- MHC (PUBLIC)
- METER VAULT (PUBLIC)
- 1/2" MHC (PRIVATE)
- FIRE HYDRANT (PUBLIC)
- EXISTING CURB & GUTTER
- EXISTING CURB & GUTTER TO BE REMOVED
- 6" CONCRETE CURB & GUTTER (DET. V/S)
- FACE OF CURB
- P/T/C
- BACK OF CURB
- DEPRESSIONED CURB & GUTTER
- CONCRETE BARRIER CURB (DET. 2/S)
- CONCRETE SIDEWALK, UNLESS NOTED OTHERWISE SIDEWALK IS 5 FEET WIDE (PER HO. CO. DET. R-3.05)
- PRIVATE DRIVEWAY (DET. 4/S)
- EASEMENT AREA (SHADED)
- FOREST CONSERVATION EASEMENT AREA
- NUMBER OF PARKING SPACES
- EXISTING LIGHT FIXTURE & POLE
- PROPOSED LIGHT FIXTURES & POLE
- ELECTRICAL TRANSFORMER
- PROPOSED BUILDING SLAB - SLAB ELEVATION
- GAR = GARAGE (B=Back; F=Front)
- S/MR-SUBWALL REQUIRED
- 50' STREAM BUFFER
- 25' WETLAND BUFFER
- FLOODPLAIN
- TO BE REMOVED
- RECREATIONAL OPEN SPACE
- EXISTING TREE LINE
- PROPOSED TREE LINE

- NOTES:**
1. FOR EACH UNIT, OPTIONAL BUILDING FEATURES (SUCH AS DECKS, EXTENSIONS, ETC.) ARE ONLY AVAILABLE IF THEY ARE SHOWN ON THESE SITE DEVELOPMENT PLANS.
 2. ALL PLAN DIMENSIONS ARE TO THE FACE OF STRUCTURE (BLDG, CURB, ETC.) AND ARE MEASURED PERPENDICULAR OR RADIAL BETWEEN ITEMS UNLESS NOTED OTHERWISE.
 3. PROPOSED SPOT ELEVATIONS ALONG THE CONCRETE CURB & GUTTER ARE TO THE FLOW LINE (BOTTOM OF CURB) AT THE P/S/V/S OR CORNERS (OF PARKING BAYS).
 4. ALL GARAGE DRIVEWAY LENGTHS ARE A MINIMUM OF 10'. (VALUE SHOWN IN PARENTHESES INDICATE THE LENGTH OF EACH DRIVEWAY'S SHORT SIDE. FOR UNITS 11-18 LENGTH IS FROM 10 FOOT HOUSE EXTENSION).
 5. ALL CURB RADII ARE 5' (FACE OF CURB @ FLOW LINE) UNLESS NOTED OTHERWISE. FOR CURB TYPE, PAVING DELINEATION & CENTER LINE GEOMETRY INFORMATION SEE SHEET 3.
 6. ALL ON-SITE PAVING AND ROADWAYS WITHIN PARCEL D-224 ARE PRIVATELY OWNED AND MAINTAINED BY THE CONDOMINIUM AND/OR HOMEOWNERS' ASSOCIATION.
 7. ALL ON-SITE STORM SYSTEMS ARE PRIVATELY MAINTAINED. THE ON-SITE WATER THAT IS PRIVATELY MAINTAINED IS THE PORTION OF THE 1/2" MHC THAT ARE OUTSIDE OF THE "PUBLIC WATER & UTILITY EASEMENT".
 8. FOR INFORMATION OF THE PUBLIC PORTION OF THE ON-SITE WATER LINE, SEE DPH CONTRACT Nos. 44-4140-D. THE PRIVATE PORTION OF ALL MHC ARE 1/2". ALL WATER METERS ARE LOCATED OUTSIDE THE BUILDINGS.
 9. BRICK POINT ALL BUILDING CONSTRUCTION UNLESS NOTED OTHERWISE.
 10. ALL UNITS ARE SLAB, THEREFORE MINIMUM CELLAR ELEVATIONS (M.C.E.) ARE NOT APPLICABLE.
 11. SEE SHEET 10 FOR WP. 18-139 FOR PATHWAY STREAM BUFFER DISTURBANCE ALTERNATIVE COMPLIANCE.

LIGHTING FIXTURE SCHEDULE		
SYMBOL	DESCRIPTION	MOUNTING
●	250 WATT HPS, VAPOR CHLORIDE FIXTURE ON A BRONZE FIBERGLASS POLE USING A 1" ARM OR EQUIV. LED	30' POLE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Walter J. J. J. 7-7-17
Director Date

Walter J. J. J. 7-7-17
Chief, Division of Land Development Date

Walter J. J. J. 6-14-17
Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-889-1820 DC/VA: 301-889-2524 FAX: 301-421-4186



NO.	DATE	REVISION	BY	APPR.
1	6-21-19	Update units 1-10 to show as-built house extension	JD	DD
2	1/22/19	Pathway to Lot C-64 added	JD	DD

PREPARED FOR:

OWNER/DEVELOPER (Seller):
BA Waterloo Townhomes, LLC
c/o Bozzuto Homes, Inc.
6406 Ivy Lane, Suite 700
Greenbelt, MD 20770
301-220-0100
Attn: Chris Block

BUILDER (Buyer):
NVR INC.
9720 Patuxent Woods Dr.
Columbia, MD 21046
Phone: 410-379-5956
301-220-0100
Attn: TIM NAUGHTON

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. 12875, EXPIRATION DATE: MAY 28, 2018

Walter J. J. J. 5/28/17

SITE DEVELOPMENT PLAN

SHIPLEY'S GRANT

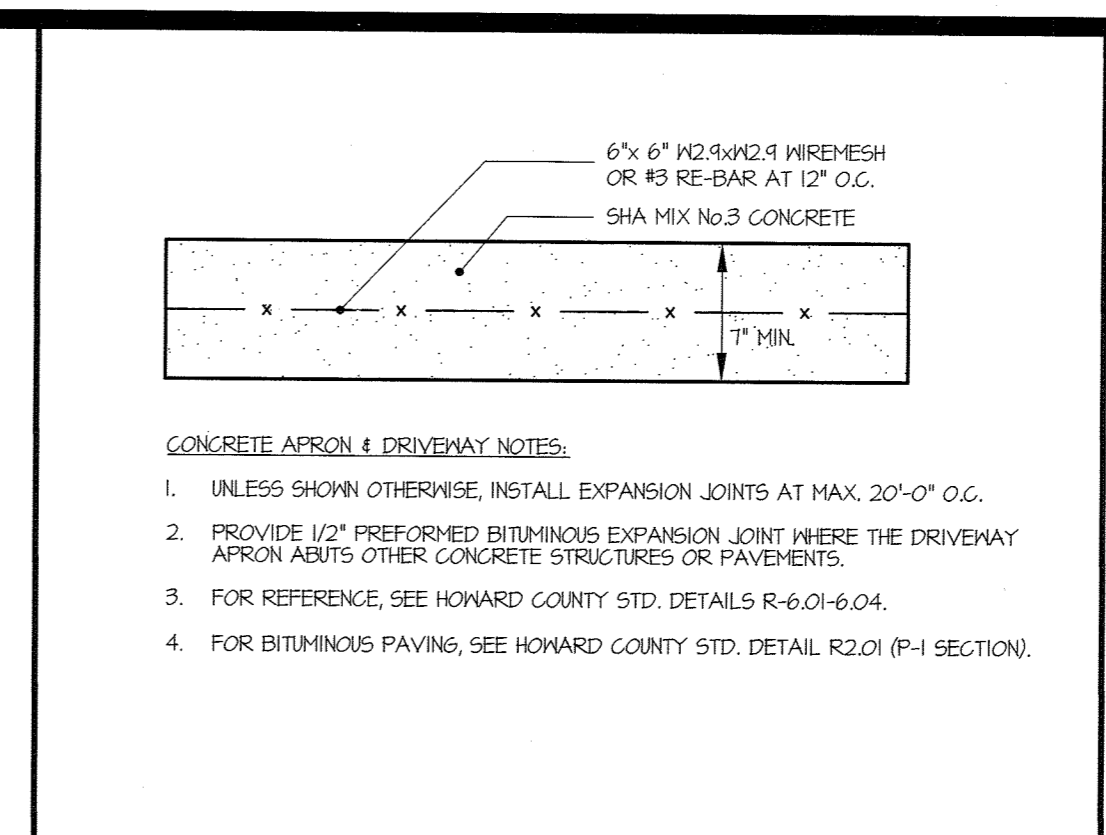
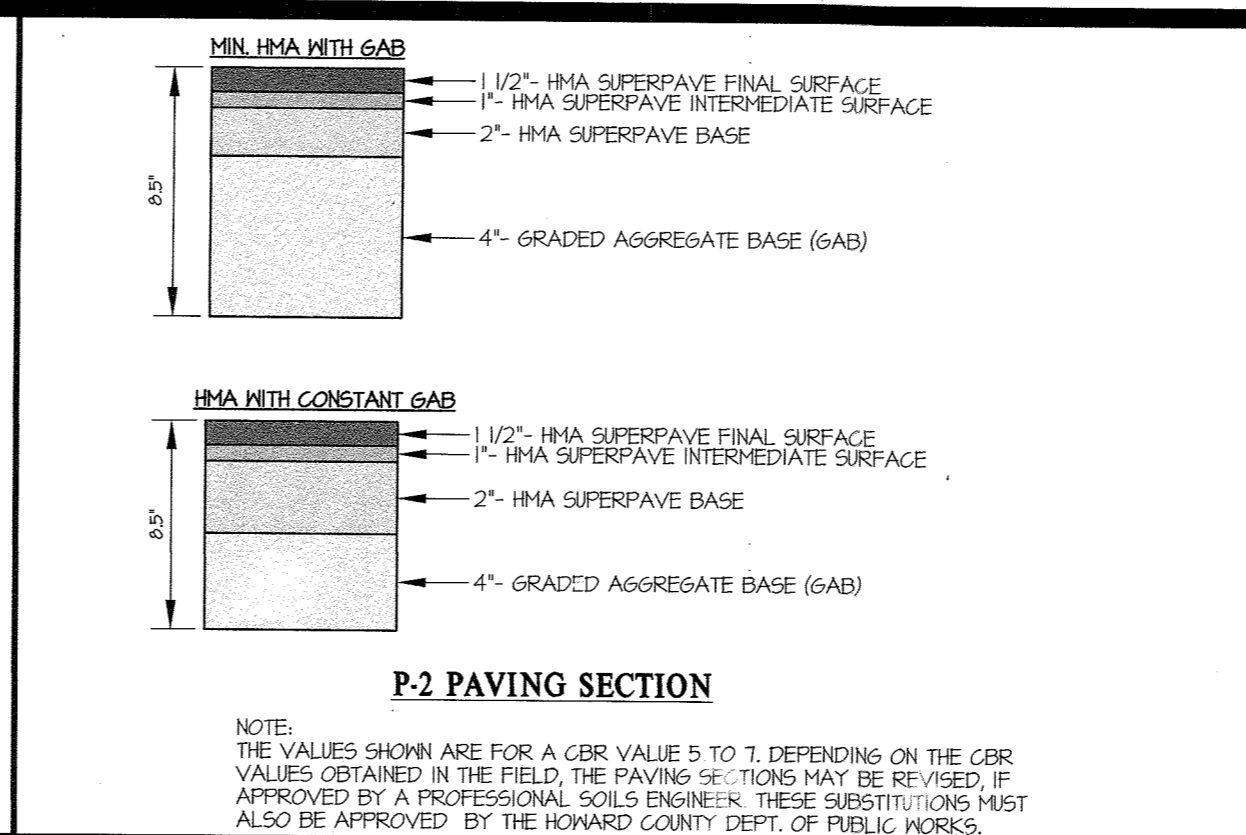
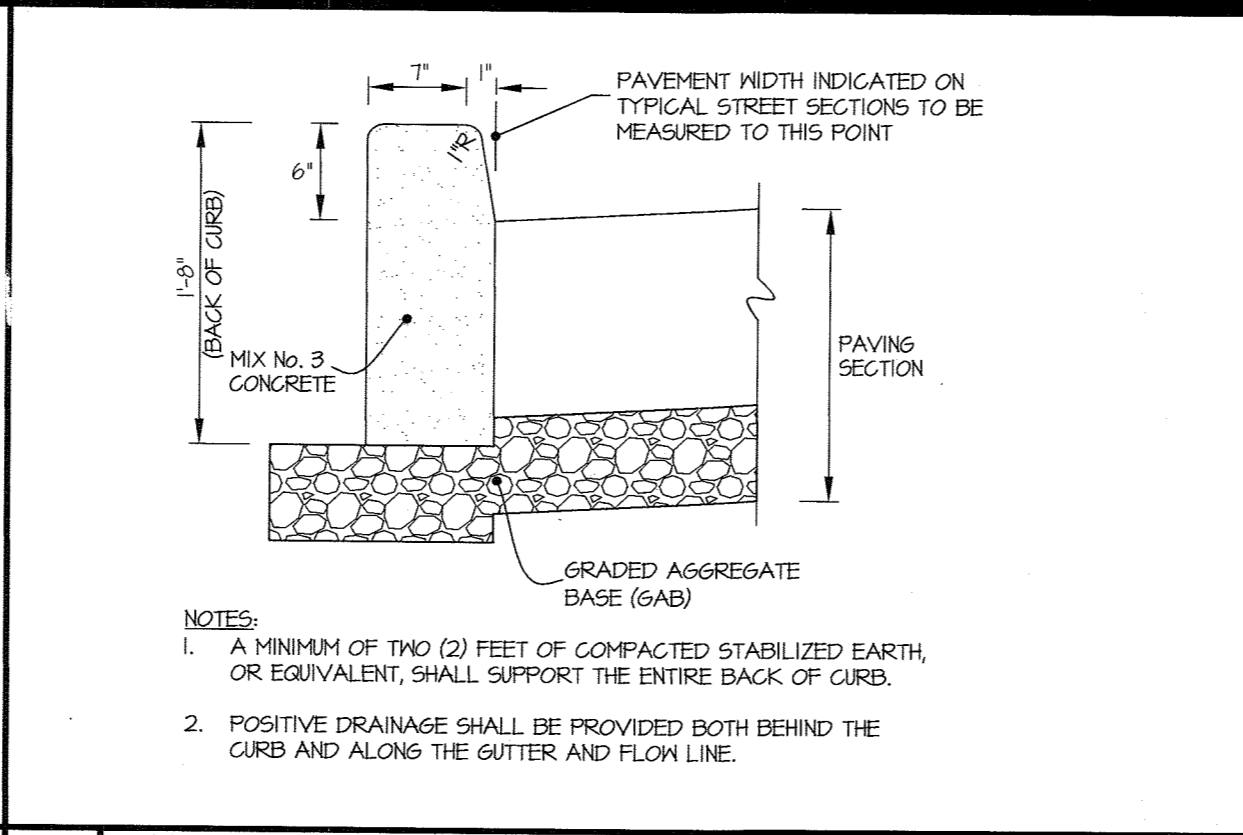
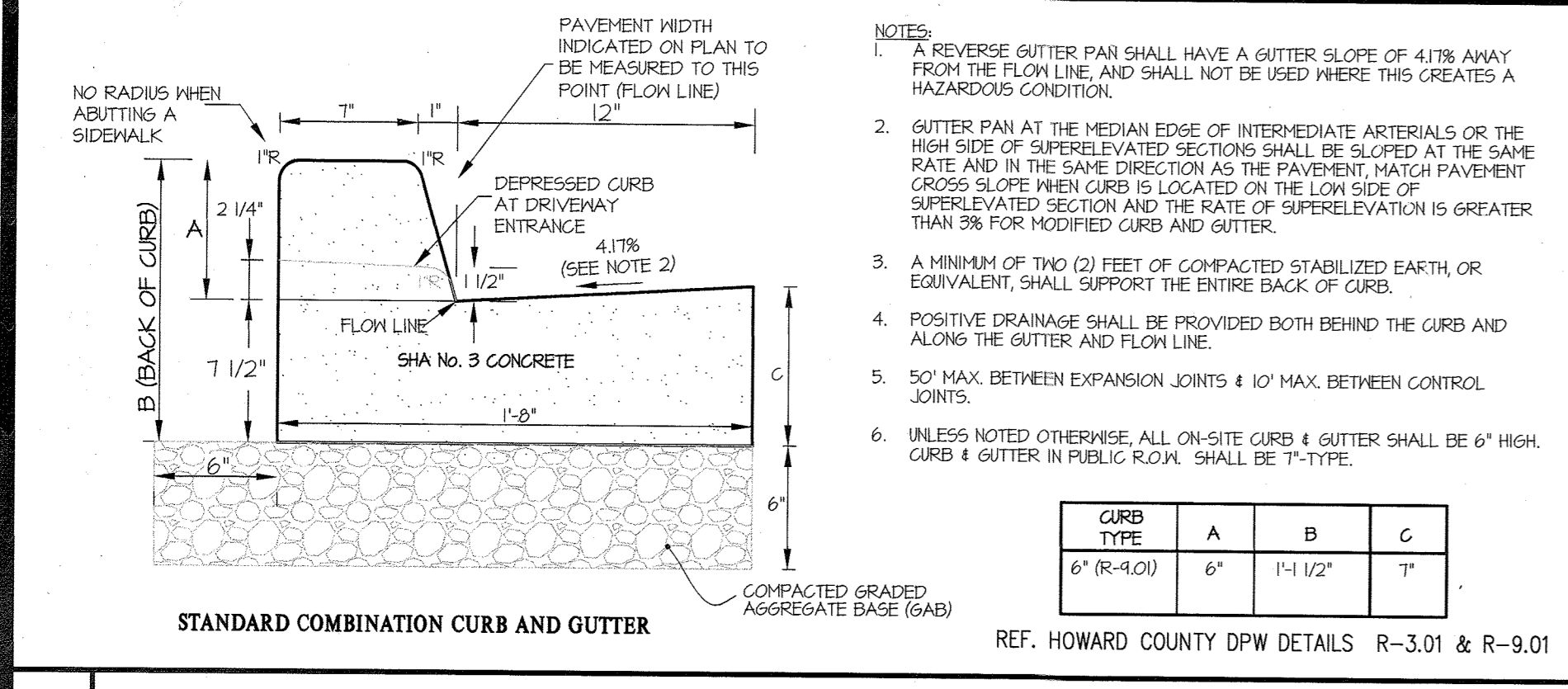
PHASE VI, BUILDABLE PARCEL D-224 and OPEN SPACE LOT D-225

20 TOWNHOUSE CONDOMINIUM DWELLING UNITS

PLAT No. 24249-24250

ELECTION DISTRICT No. 1

SCALE	ZONING	G. L. W. FILE No.
1"=20'	R-A-15	16022
DATE	TAX MAP - GRID	SHEET
MAY, 2017	37 - 1&2	2 of 10

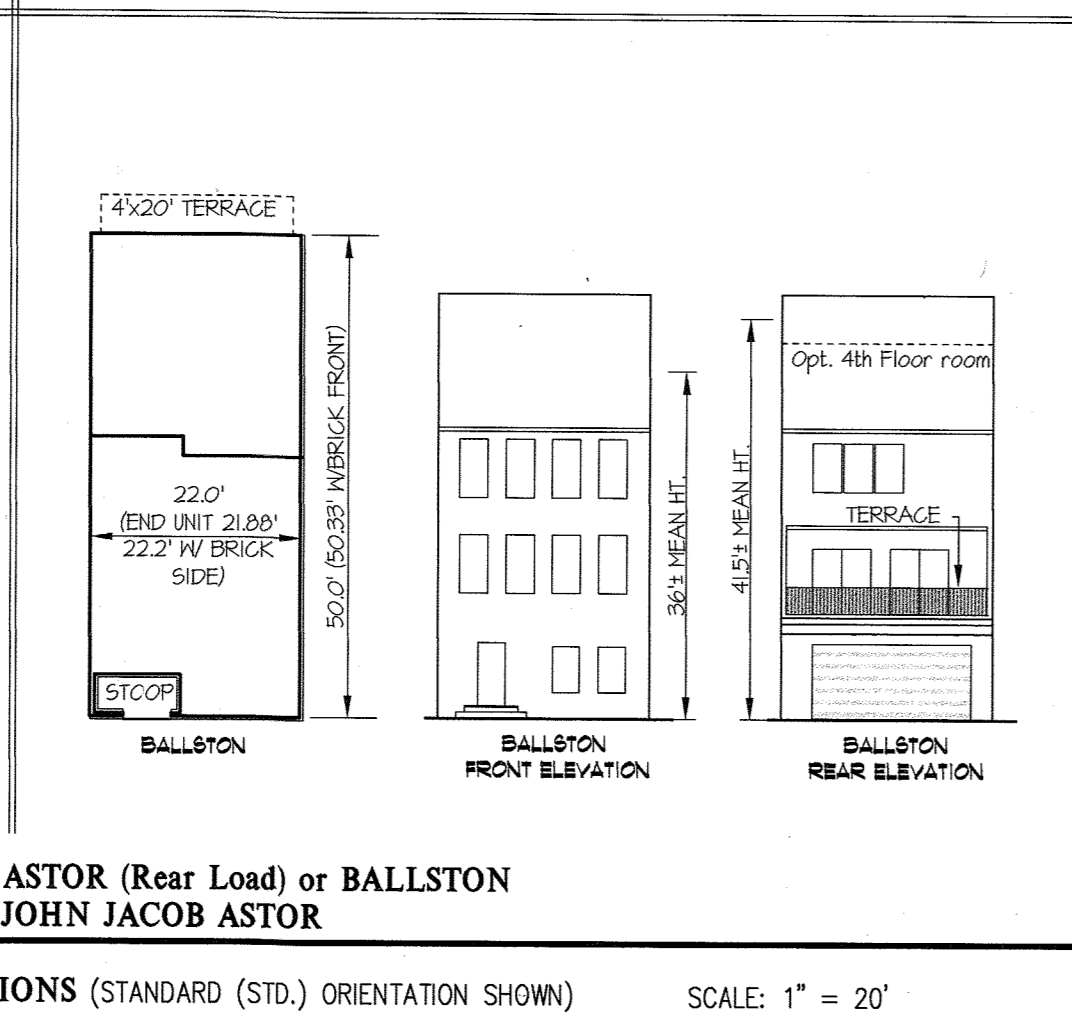
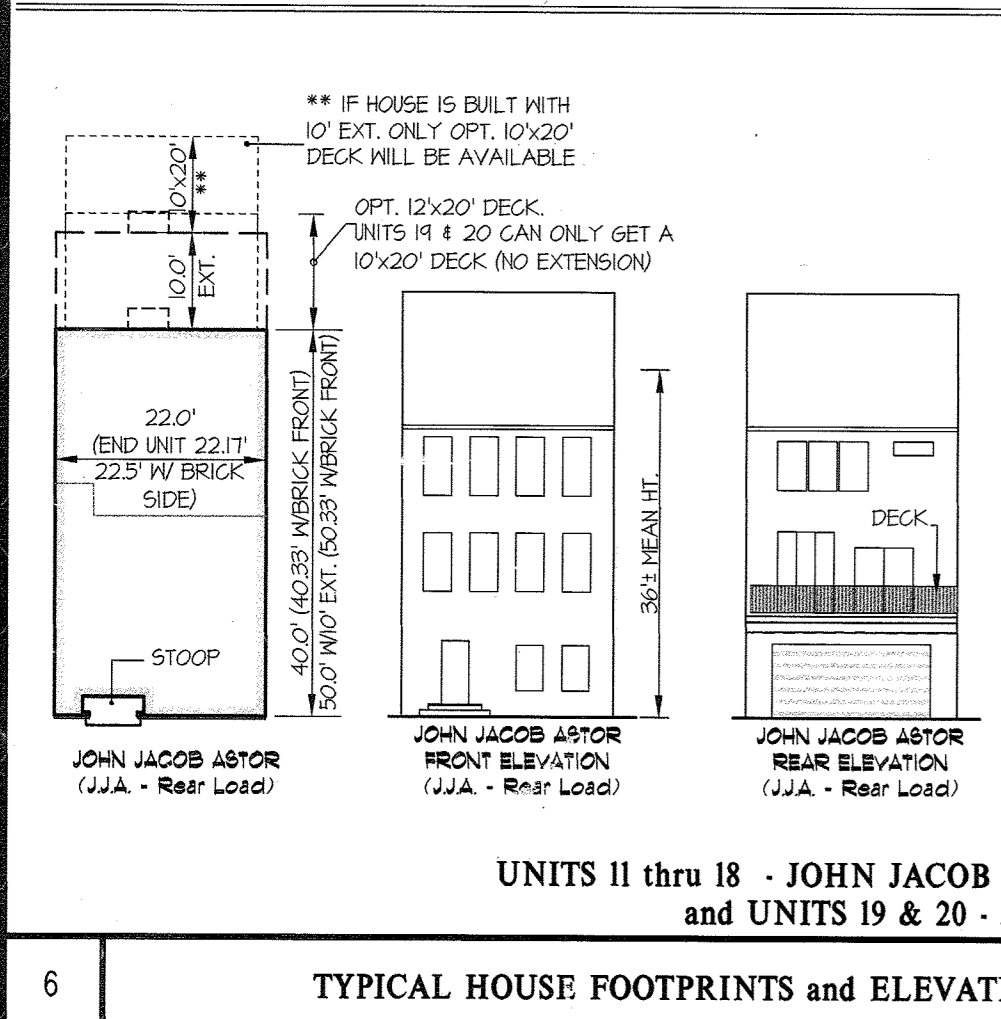
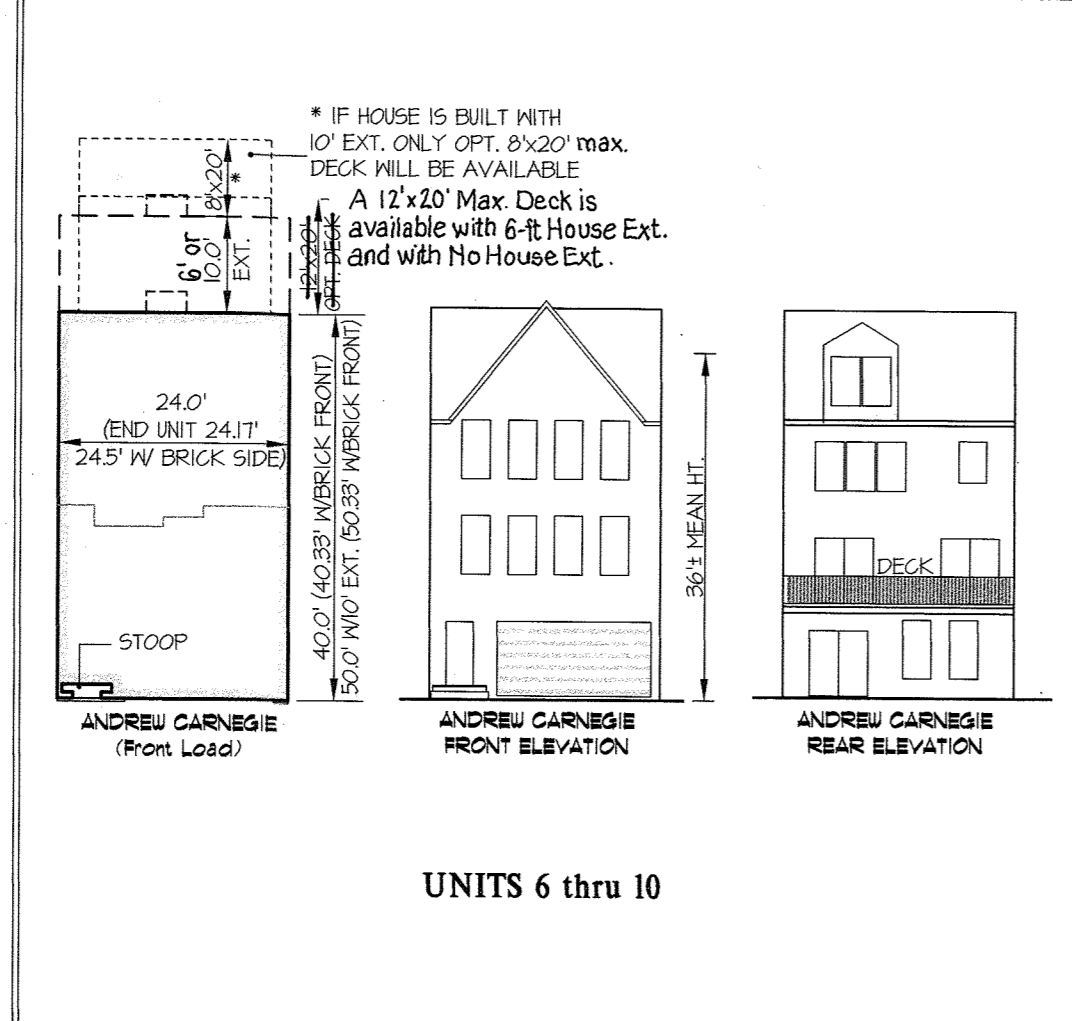
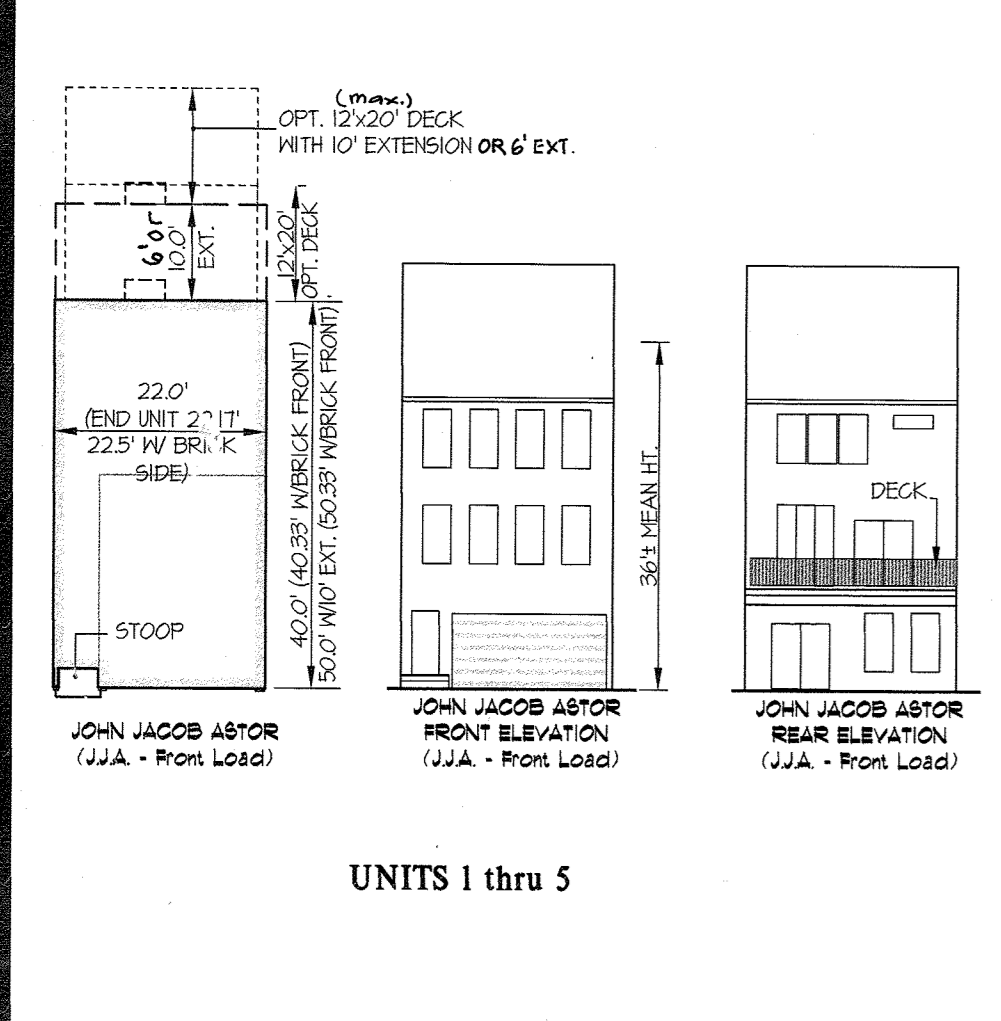


1 TYPE-A CONCRETE CURB AND GUTTER NO SCALE

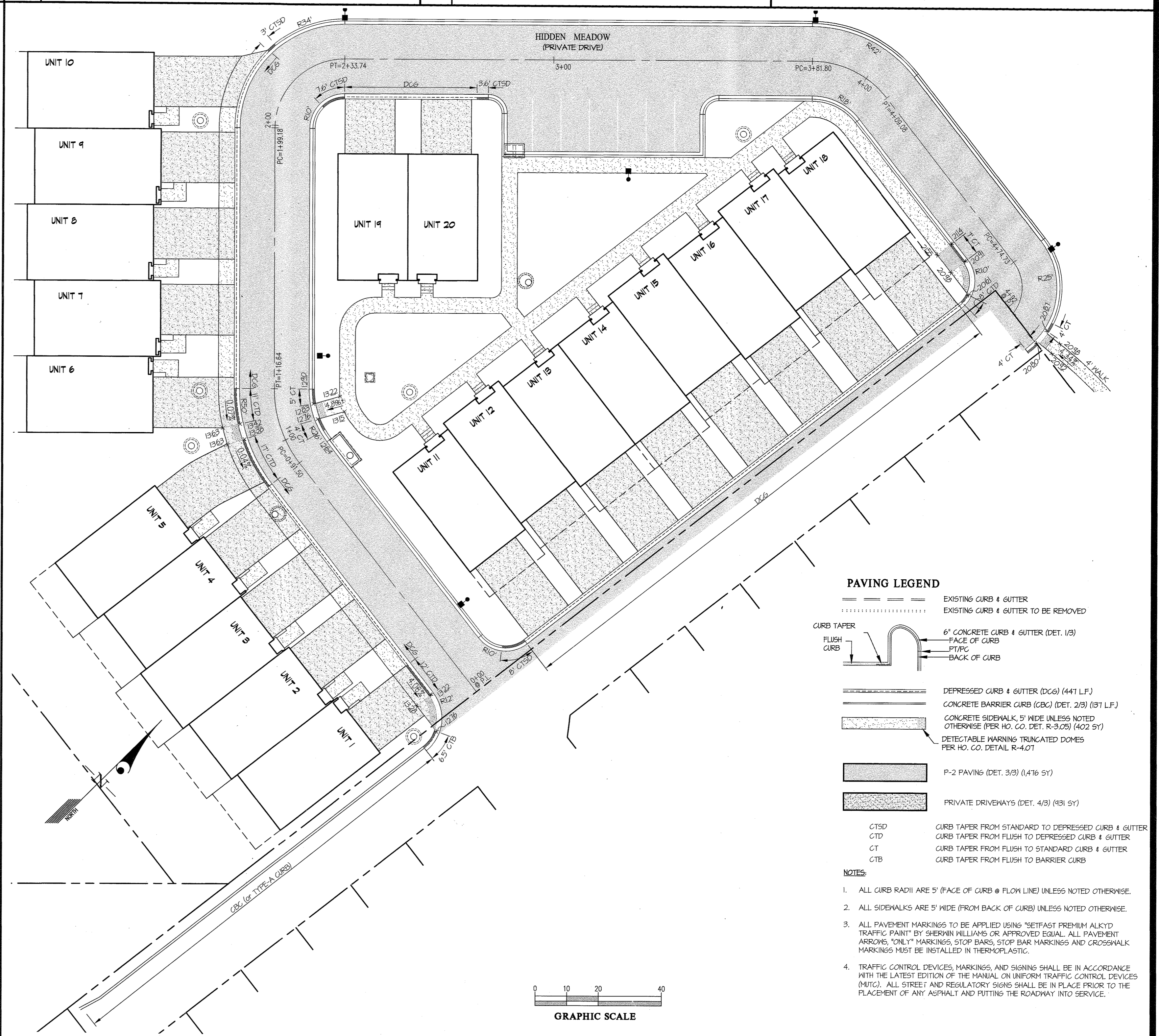
2 CONCRETE BARRIER CURB NO SCALE

3 BITUMINOUS PAVING SECTIONS NO SCALE

4 PRIVATE DRIVEWAY DETAIL NO SCALE



6 TYPICAL HOUSE FOOTPRINTS and ELEVATIONS (STANDARD (STD.) ORIENTATION SHOWN) SCALE: 1" = 20'



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *Walter J. Williams* 7-7-17
 Chief, Division of Land Development: *Kent S. Lewis* 7-7-17
 Chief, Development Engineering Division: *Chris Block* 6-14-17

GLWGUTSCHICK LITTLE & WEBER, PA.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
6-21-19	Update Footprints for units 1-5 to show 6-ft house ext. option	gt	
6-14-2019	UPDATE HOUSE FOOTPRINT FOR UNITS 6-10 TO SHOW THE 6-FT HOUSE EXTENSION OPTION & AVAILABLE DECK W/ 6-FT EXT.	gt	kjp
	REVISION	gt	APP'R.

PREPARED FOR:
 OWNER/DEVELOPER (Seller): BA Waterloo Townhomes, LLC
 5720 Palmetto Woods Dr. Columbia, MD 21046
 BUILDER (Buyer): NVR INC.
 301-220-0100
 Attn: Chris Block

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 28, 2018
 5/25/17 *Chris Block*

CURB and PAVING DELINEATION PLAN / SITE DETAILS
SHIPLEY'S GRANT
PHASE VI, BUILDABLE PARCEL D-224 and OPEN SPACE LOT D-225
20 TOWNHOUSE CONDOMINIUM DWELLING UNITS
PLAT No. 24249-24250
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=20'	R-A-15	16022
DATE	TAX MAP - GRID	SHEET
MAY, 2017	37 - 1&2	3 of 10

LEGEND

- ● ● LIMIT OF DISTURBANCE
- SOIL BOUNDARY
- SOIL TYPE
- SCE** STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY DRAINAGE DIVIDE
- SSF PROPOSED SUPER SILT FENCE
- EARTH DIKE
- TEMPORARY STOCKPILE AREA** PROPOSED TEMPORARY STOCKPILE AREA
- EXISTING TREELINE
- INLET PROTECTION. SEE PLAN FOR TYPE
- GP** GABION INFLOW PROTECTION
- HIGHLY ERODIBLE SOIL
(PER HSCD, SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.)

- #### SEQUENCE OF CONSTRUCTION:
- OBTAIN A GRADING PERMIT AND ARRANGE A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR (SCO) (1 DAY)
 - VERIFY THAT SEDIMENT THAT THE EXISTING SEDIMENT CONTROLS FROM F-10-048 IN THIS AREA (SSF, TRAP H, EARTH DIKE) ARE STILL INSTALLED. IF THEY HAVE BEEN REMOVED, THIS PLAN MUST BE REVISED TO SHOW THESE ITEMS AS PROPOSED PER THIS PLAN. (1 DAY)
 - INSTALL THE STABILIZED CONSTRUCTION ENTRANCE (SCE), AND SUPER SILT FENCE (1 DAY)
 - BRING SITE TO SUB GRADE, INSTALL ALL UTILITIES, CURB, BASE PAVE AND BEGIN HOUSE CONSTRUCTION. INSTALL INLET PROTECTION AS STORM DRAIN IS INSTALLED. DELAY CONSTRUCTION OF B* HOPE FROM M-206 TO EX I-92 UNTIL THE TRAP HAS BEEN REMOVED. UNITS 1-5 MAY NOT BE CONSTRUCTED UNTIL AFTER THE TRAP IS REMOVED. (NO DAYS)
 - ONCE THE SITE IS ON SUB GRADE, STABILIZE ALL DISTURBED AREA THAT IS OUTSIDE OF WHAT IS NEEDED FOR HOUSE CONSTRUCTION. ONCE THE REMAINING AREA DRAINING TO THE TRAP HAS BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE TRAP H. (14 DAYS)
 - BEGIN CONSTRUCTION ON UNITS 1 - 5 AND INSTALL ALL REMAINING UTILITIES. (90 DAYS)
 - ONCE ALL OF THE HOUSE CONSTRUCTION IS COMPLETE STABILIZE ANY REMAINING AREA AND REMOVE ANY REMAINING SEDIMENT CONTROLS. (3 DAYS)

SEE SHEET 10 FOR PATHWAY AND BRIDGE SOILS (on site)

Map Unit	Map Unit Name	Type	K Factor
Fa	Fallsington sandy loam, 0 to 2 percent slopes	D	0.02
RuC	Russell and Beltsville soils, 5 to 10 percent slopes	C	0.24
SaB	Sassafras loam, 2 to 5 percent slopes	B	0.31

HOWARD COUNTY SOIL MAP NUMBER: 14 - SAVAGE NE

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

Chris Block 5.12.17
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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."

John F. Johnson 5/25/17
ENGINEER'S SIGNATURE DATE

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

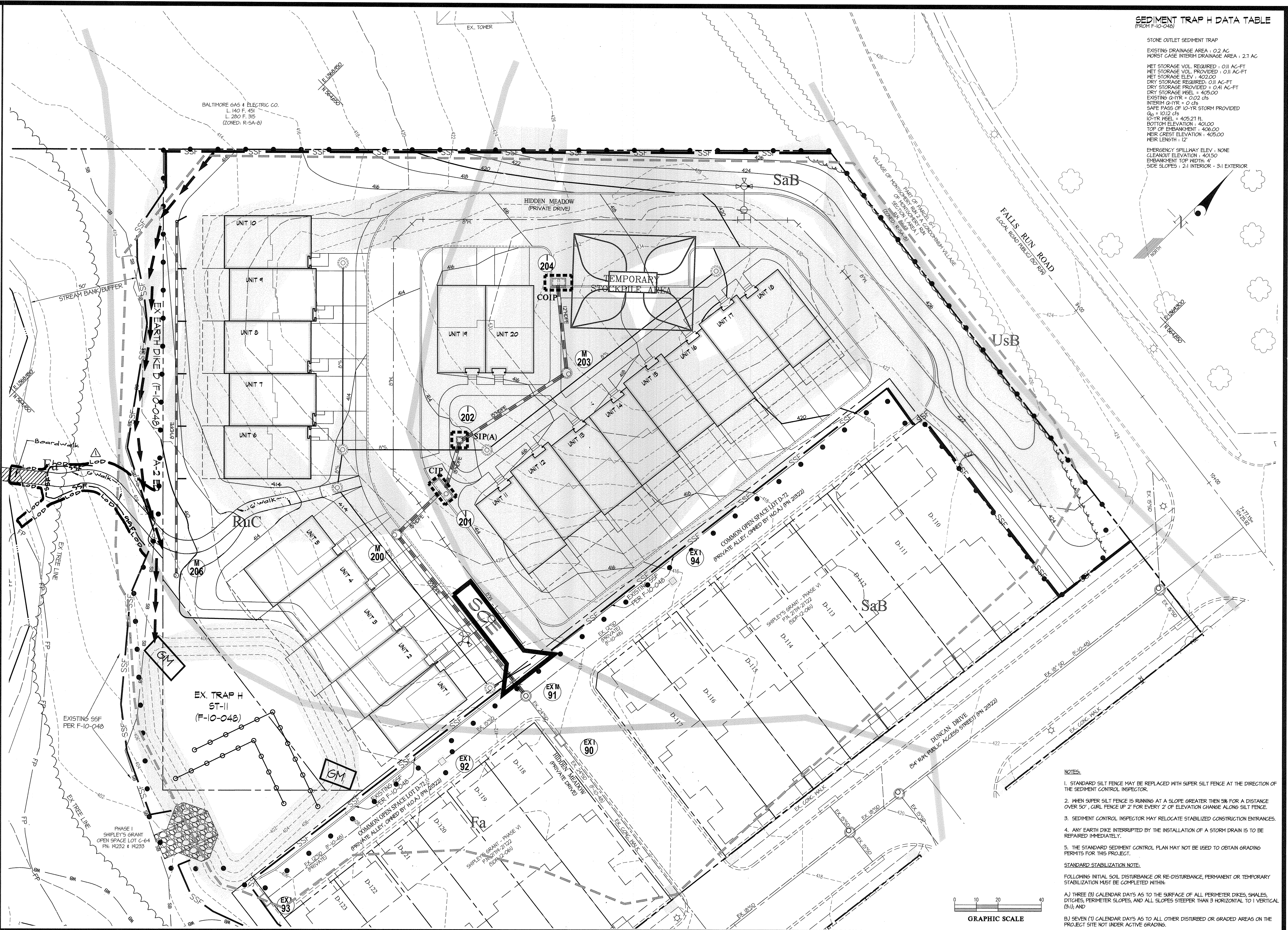
John F. Johnson 6/6/17
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Nathan J. J. J. 7-7-17
Director Date

Keith Shalanda 7-7-17
Chief, Division of Land Development QmxF Date

John F. Johnson 6.14.17
Chief, Development Engineering Division Date



SEDIMENT TRAP H DATA TABLE (FROM F-10-048)

STONE OUTLET SEDIMENT TRAP
EXISTING DRAINAGE AREA - 0.2 AC
WORST CASE INTERIM DRAINAGE AREA - 2.1 AC

NET STORAGE VOL. REQUIRED - 0.11 AC-FT
NET STORAGE VOL. PROVIDED - 0.11 AC-FT
NET STORAGE ELEV. - 402.00
DRY STORAGE REQUIRED - 0.11 AC-FT
DRY STORAGE PROVIDED - 0.41 AC-FT
DRY STORAGE ELEV. - 405.00
EXISTING Q-1YR - 0.22 cfs
INTERIM Q-1YR - 0 cfs
SAFE PASS OF 10-YR STORM PROVIDED
Q₁₀ = 10.12 cfs
10-YR PEEL = 405.21 ft
BOTTOM ELEVATION - 401.00
TOP OF EMBANKMENT - 406.00
NEAR CREST ELEVATION - 405.00
NEAR LENGTH - 12'

EMERGENCY SILLWAY ELEV. NONE
CLEANOUT ELEVATION - 401.50
EMBANKMENT TOP WIDTH - 4'
SIDE SLOPES - 2:1 INTERIOR - 3:1 EXTERIOR

- #### NOTES:
- STANDARD SILT FENCE MAY BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
 - WHEN SUPER SILT FENCE IS RUNNING AT A SLOPE GREATER THAN 5% FOR A DISTANCE OVER 50', CURB FENCE UP 2" FOR EVERY 2' OF ELEVATION CHANGE ALONG SILT FENCE.
 - SEDIMENT CONTROL INSPECTOR MAY RELOCATE STABILIZED CONSTRUCTION ENTRANCES.
 - ANY EARTH DIKE INTERRUPTED BY THE INSTALLATION OF A STORM DRAIN IS TO BE REPAIRED IMMEDIATELY.
 - THE STANDARD SEDIMENT CONTROL PLAN MAY NOT BE USED TO OBTAIN GRADING PERMITS FOR THIS PROJECT.
- STANDARD STABILIZATION NOTE:**
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
- A) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SNALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
- B) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 410-880-1820 DC/MK: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
1/29/19	Pathway to Lot c-64 added	JD	DD

PREPARED FOR:

OWNER/DEVELOPER (Seller):
BA Waterloo Townhomes, LLC
c/o Bozzuto Homes, Inc.
6406 Ivy Lane, Suite 700
Greenbelt, MD 20770
301-220-0100
Attn: Chris Block

BUILDER (Buyer):
NVR INC.
9720 Patuxent Woods Dr.
Columbia, MD 21046
Phone: 410-379-5956
Attn: TIM NAUGHTON

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. 12279. EXPIRATION DATE: MAY 26, 2018.

Chris Block 5/25/17
STATE OF MARYLAND PROFESSIONAL ENGINEER

SEDIMENT CONTROL PLAN

SHIPLEY'S GRANT
PHASE VI, BUILDABLE PARCEL D-224 and OPEN SPACE LOT D-225
20 TOWNHOUSE CONDOMINIUM DWELLING UNITS
PLAT No. 242.49-242.50

ELECTION DISTRICT No. 1

SCALE	ZONING	G. L. W. FILE No.
1"=20'	R-A-15	16022
DATE	TAX MAP - GRID	SHEET
MAY, 2017	37 - 1&2	4 of 10

HOWARD COUNTY, MARYLAND

B-4-2 STANDARD AND SPECIFICATIONS FOR 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.

CONDITIONS WHERE PRACTICE APPLIES
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION
 - a. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF MEANS OF MOUNTED AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHisel PLOWS OR RIPPER MOUNTED ON CONSTRUCTION EQUIPMENT AFTER THE SOIL IS LOOSEND, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH, BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 1:3 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF 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 GRANDED MATERIAL (GREATER THAN 20 PERCENT SILT PLUS CLAY) TO PROVIDE A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF FLOVEGRASS 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 AMENDMENTS 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 SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE. SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDING PREPARATION. TRACK SLOPES 1:3 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE TOP 1 TO 3 INCHES OF 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 GRADED. SEEDING LOOSENING MAY BE UNNECESSARY 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. TYPES OF SOILS THAT ARE SALVAGED FOR USE IN THIS MANNER MAY BE IDENTIFIED 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 SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FUNGUS 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 A LOAM, SANDY LOAM, CLAY LOAM, SILTY LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY 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 1.5 INCHES IN DIAMETER.
 - b. TOPSOIL MUST BE FREE OF NOxious PLANTS or PLANT PARTS SUCH AS BERBERIS GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON Ivy, THISLE, OR OTHERS AS SPECIFIED.
 - c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
 - d. SOIL APPLICATION
 - e. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
 - f. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SOONER OR LATER SEEDING CAN BE ACCOMPLISHED 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.
 - g. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY MOIST OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDING PREPARATION.
6. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
 1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS AND ANALYSIS BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSIS.
 2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FINE FLOWING, AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH SITE APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE PROJECT FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BE IN THE ORIGINAL CONTAINER OR IN A BAG WITH A NAME, TRADE NAME, AND WARRANTY OF THE PRODUCER.
 3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING WHICH CONTAINS CALCIUM PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 90 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. WHERE THE SUBSOIL IS EITHER HEAVILY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY

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

John Robertson 6/6/17
HOWARD COUNTY CONSERVATION DISTRICT

Nathan Wolf 7-7-17
Director

Keith Lee 7-7-17
Chief, Division of Land Development

John Lee 6-14-17
Chief, Development Engineering Division

DEVELOPER/BUILDER'S CERTIFICATE
"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT A COMPETENT PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HCCD."

Chris P... 5-12-17
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND FEASIBLE DESIGN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT I HAVE PREPARED THIS PLAN IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY CONSERVATION DISTRICT."

CKH 5/25/17
SIGNATURE OF REGISTERED ENGINEER DATE

GLWGutschick Little & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATURAL DRIVE - SUITE 250 - BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 301-421-4186

DESIGNER: *CKH* DATE: 5/25/17
BY: *DP* DATE: 5/25/17

DATE: 1/24/19

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE
TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES
TO THE SURFACE OF ALL PERMEABLE SOILS, 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 SUBMITTED TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 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 BE APPLIED BETWEEN THE FALL AND SPRING SEEDING ZONES ON CONTAINERS OR VESSELS. MULCH MUST BE PLACED ON 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 INOCULANTS AS COOL AS POSSIBLE UNTIL USE. TEMPERATURES ABOVE 75 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
 - c. MULCH 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 B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
 - ii. FERTILIZERS AND LIME MUST BE APPLIED TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDING AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SOIL TO SEED CONTACT.
 - b. DRILL OR COUNTERPART SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 - i. DRILLING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDING MUST BE FIRM TO THE UNDERLYING SOIL SURFACE.
 - ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
 - c. HYDROSEEDING: APPLY SEED UNIFORMITY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
 - i. HYDROSEEDING IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE. TOTAL SOLUBLE NITROGEN: P205 (PHOSPHORUS), 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 PERMITTED TO BE SALVAGED AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
 - iii. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
 - 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 RECOGNIZED IN THE MARYLAND STATE SEED ACT. MUST BE MOIST, MILDLY CURED, DECAYED, OR ARGENTIALLY DUSKY. STRAW IS TO BE ONLY STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
 - b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CHIPS OR PROFILES THAT 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 1.5 INCHES IN DIAMETER.
 - c. WCFM INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
 - d. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER APPLICATION AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B.4-2). PERMANENT SEEDING (SEC. B.4-3), TEMPORARY SEEDING (SEC. B.4-4) AND MULCHING (SEC. B.4-5). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL, AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B.4-6) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH 1:5 OF CUT AND/OR FILL. STOCKPILE AREAS SHALL BE ENFORCED WITH STABLE CUTLIEF. ALL CONCENTRATED FLOW STEEP SLOPES AND HEAVILY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B.4-6).
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 FERTILIZED AREAS IN 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 TO 2.5 TONS PER ACRE TO A UNIFORM DEPTH OF 1 TO 2 INCHES.
 - c. WOOD CELLULOSE FIBER MULCH 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.
 - d. WOOD CELLULOSE FIBER MULCH MAY BE USED TO ANCHOR STRIPS ON SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
 - e. WOOD CELLULOSE FIBER MULCH IS TO BE APPLIED 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.
 - f. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PELOSET, TERIA TET, TORRA 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 CEMENTS IS STRICTLY PROHIBITED.
 - g. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 500 TO 3,000 FEET LONG.

B-4-4 STANDARDS AND SPECIFICATIONS FOR 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. CONDITIONS WHERE 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.

CONDITIONS WHERE 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 SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
 - b. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
 - c. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-4.3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

ANNUAL REVEGETATION	SPECIES	APPLICATION RATE (lb./ac)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-10-10)	LIME RATE
1	RYEGRASS	40 lb./ac	Mar. 1 to May 15, Aug. 1 to Oct. 15	0.5 INCHES	436 lb./500 (1000 sf)	2 tons/400 (90 lb./1000 sf)
2	PEARL MILLET	20 lb./ac	May 16 to July 31	0.5 INCHES		

HOWARD COUNTY CONSERVATION DISTRICT (HCCD) STANDARD SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-319-1895 AFTER THE FUTURE LOG AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING ADDRESSES:
 - a. PRIOR TO THE START OF EARTH DISTURBANCE.
 - b. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
 - c. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT.
 - d. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDINGS TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 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 IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SHALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:H). AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT-SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
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 TOPSOIL (SEC. B.4-2), PERMANENT SEEDING (SEC. B.4-3), TEMPORARY SEEDING (SEC. B.4-4) AND MULCHING (SEC. B.4-5). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL, AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B.4-6) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH 1:5 OF CUT AND/OR FILL. STOCKPILE AREAS SHALL BE ENFORCED WITH STABLE CUTLIEF. ALL CONCENTRATED FLOW STEEP SLOPES AND HEAVILY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B.4-6).
5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSSION FOR THEIR REMOVAL. HAS BEEN OBTAINED FROM THE CID.

B. SITE ANALYSIS:

TOTAL AREA OF SITE	1.791 AC.
AREA DISTURBED	2.05 AC.
AREA TO BE ROOFED OR PAVED	1.09 AC.
AREA TO BE VEGETATIVELY STABILIZED	1.02 AC.
TOTAL CUT	16,100 CY*
TOTAL FILL	4,100 CY*
OFF-SITE WASTE/EXCAVATION AREA LOCATION	ANY SITE WITH ACTIVE GRADING PERMIT

* FOR ESTIMATING FILLING VOLUMES ONLY. CONTRACTOR TO VERIFY ACTUAL VALUES.

PERMANENT SEEDING SUMMARY

HARDNESS ZONE:	SEED MIXTURE:	APPLICATION RATE	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
6b	Tall Fescue/ Kentucky Bluegrass	6-8 lb/1000 sf	Mar. 1 to Oct 15, Aug. 15 to Oct 15	1/4 - 1/2 IN	1.0 lb/1000 sf, (45 lb./acre)	90 lb/1000 sf

* Other cultivars listed as "proven" in the most current LMD T-7 may also be used

B.50D: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

1. GENERAL SPECIFICATIONS
 - a. CLASS OF TURFGRASS/SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
 - b. SOD MUST BE MACHINE CUT AT A UNIFORM THICKNESS OF 3/4 INCH PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GRASS AND THATCH. BROKEN PICES AND TORN OR UNWEED EDGES WILL NOT BE ACCEPTABLE.
 - c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN STANDING VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
 - d. SOD MUST NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
 - e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
2. SOD INSTALLATION
 - a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
 - b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND THIGHTLY MATED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. EXCEPT THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TOGETHER IN ORDER TO PREVENT VOID WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
 - c. WATER THE SUBSOIL, LAY SOD, AND LIME, PEP OR OTHERWISE SECURE THE SOD TO PREVENT SPREADING ON SLOPES. ENSURE SOIL CONTACT EXISTS BETWEEN SOIL ROOTS AND THE UNDERLIEING SUBSOIL SURFACE.
 - d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.
 - e. SOD MAINTENANCE
 - i. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.
 - ii. WATER FOR 20 TO 30 MINUTES IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
 - iii. DO NOT MOW UNTIL THE SOIL IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL MOWING. IN PROGRESSIVE CUTTINGS, MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

SEDIMENT CONTROL NOTES AND DETAILS

1. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. 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 BEEN STABILIZED BY THE CID, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HCCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
2. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED MASHOUT STRUCTURE.
3. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
4. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON THE CONTOUR, AND BE IMBERICATED AT 25 MINIMUM INTERVALS, WITH LOWER EDGES CURLED UPHILL BY 2 IN ELEVATION.
5. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUDESIVE):
 - * USE I AND III FROM MARCH 1 - JUNE 15
 - * USE II AND III FROM OCTOBER 1 - APRIL 30
 - * USE IV FROM MARCH 1 - MAY 31
6. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

B-4-5 STANDARDS AND SPECIFICATIONS FOR 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.

CONDITIONS WHERE 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 SEED MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS, APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR LINES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANNING.
 - c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR PERMANENT SEEDING.
 - d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
2. TURFGRASS MIXTURES
 - a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

PERMANENT SEEDING SUMMARY

HARDNESS ZONE:	SEED MIXTURE:	APPLICATION RATE	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
6b	Tall Fescue/ Kentucky Bluegrass	6-8 lb/1000 sf	Mar. 1 to Oct 15, Aug. 15 to Oct 15	1/4 - 1/2 IN	1.0 lb/1000 sf, (45 lb./acre)	90 lb/1000 sf

SEDIMENT CONTROL NOTES AND DETAILS

1. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MAINTENANCE. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS: SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - a. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NEEDED AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MAINTENANCE. CERTIFIED PERENNIAL RYEGRASS CULTIVARS: CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - b. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND FOR AREAS RECEIVING LOW TO MEDIUM MAINTENANCE. FULL SUN TO MEDIUM SHADE.
 - c. INTERMEDIATE MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
 - d. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREAS. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.
2. PREPARE SURFACE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS. REMOVE EXCESSIVE (TO 30 INCHES IN SIZE) OR EQUIVALENT FINESTANDS (WITHOUT BEING AROUND) DEBRIS FROM THE SURFACE AND WITHIN THE SOIL.
3. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT AND STOCK OF MAKE SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT THAT MAY PRODUCE THE DESIRED EFFECT. DISPERSED EQUIPMENT, PARTICULARLY FRONT ENDERS, BURLAR PLEGES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. OTHER TREATMENT: USE OF CHEMICAL TREATMENT REQUIRES APPROVAL BY THE APPROPRIATE PLAN DEVELOPER/ENGINEER.

PERMANENT SEEDING SUMMARY

PERMANENT SEEDING SUMMARY

HARDNESS ZONE:	SEED MIXTURE:	APPLICATION RATE	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
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SEDIMENT CONTROL NOTES AND DETAILS

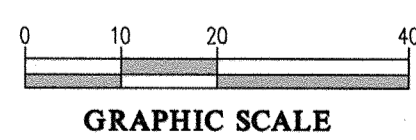
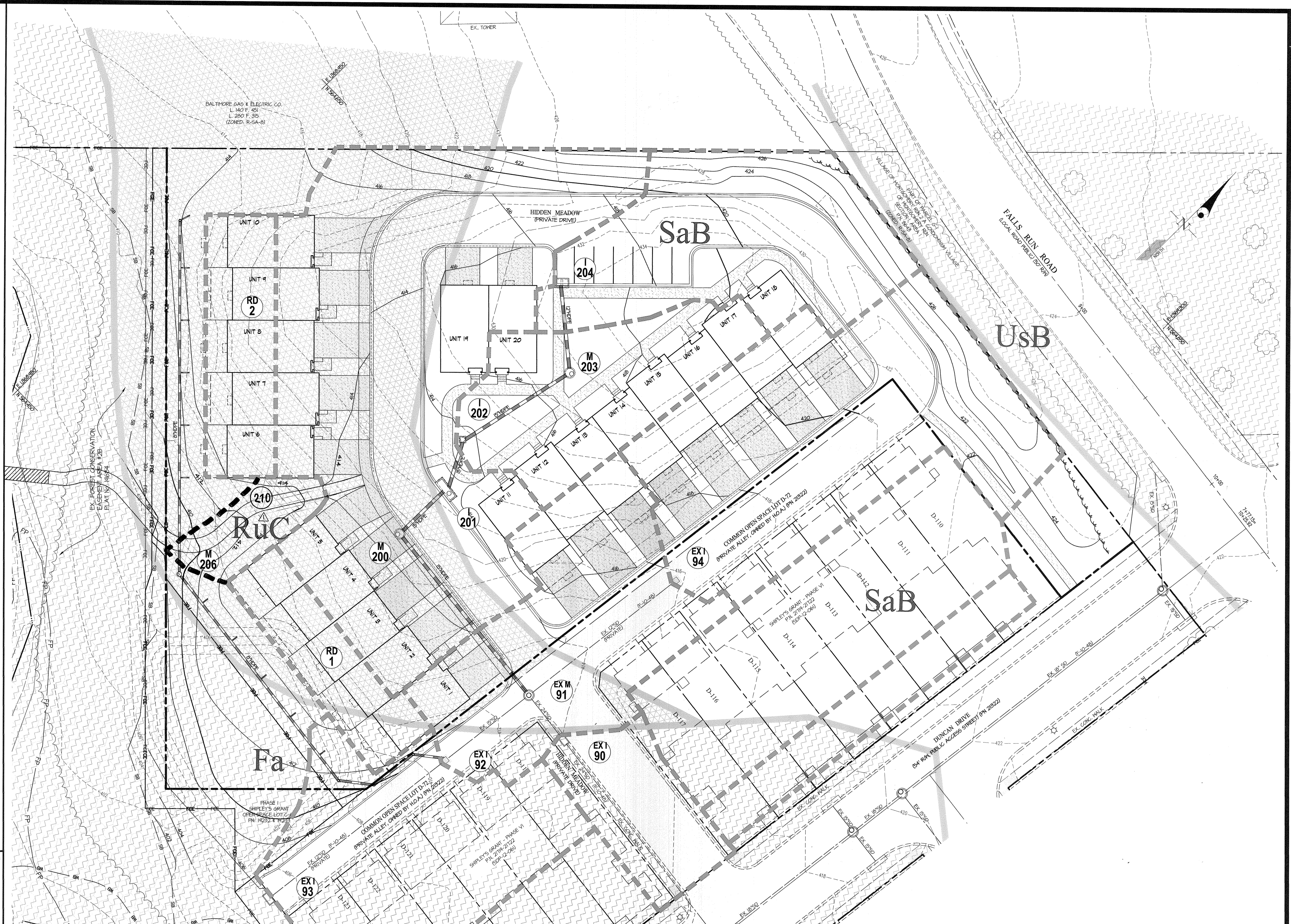
1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL. THE STOCKPILE SHOULD

LEGEND

	SOIL BOUNDARY
	SOIL TYPE
	STORM DRAIN
	DRAINAGE DIVIDE
	'B' TYPE SOILS
	'C' TYPE SOILS
	'D' TYPE SOILS

'C' FACTOR COMPUTATIONS

STRUCTURE	AREA (AC.)	C	IMPERVIOUS
I-201	0.59	0.76	85%
I-202	0.16	0.76	85%
I-204	0.24	0.76	85%
Δ I-210	0.04	0.40	25%
EX I-90	0.09	0.76	85%
EX I-92	0.24	0.76	85%
EX I-93	0.25	0.76	85%
EX I-94	0.36	0.76	85%
RD-1	0.07	0.85	100%
RD-2	0.09	0.85	100%



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

N. J. J. J. 7-7-17
Director Date

K. J. J. J. 7-7-17
Chief, Division of Land Development Date

A. J. J. J. 6-14-17
Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
1/24/19	DA I-210 added	g+	DP

PREPARED FOR:

OWNER/DEVELOPER (Seller):
BA Waterloo Townhomes, LLC
c/o Bozzuto Homes, Inc.
6406 Ivy Lane, Suite 700
Greenbelt, MD 20770
301-220-0100
Attn: Chris Block

BUILDER (Buyer):
NVR INC.
9720 Patuxent Woods Dr.
Columbia, MD 21046
Phone: 410-379-5956
Attn: TIM NAUGHTON

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 26, 2018

[Signature] 5/25/17

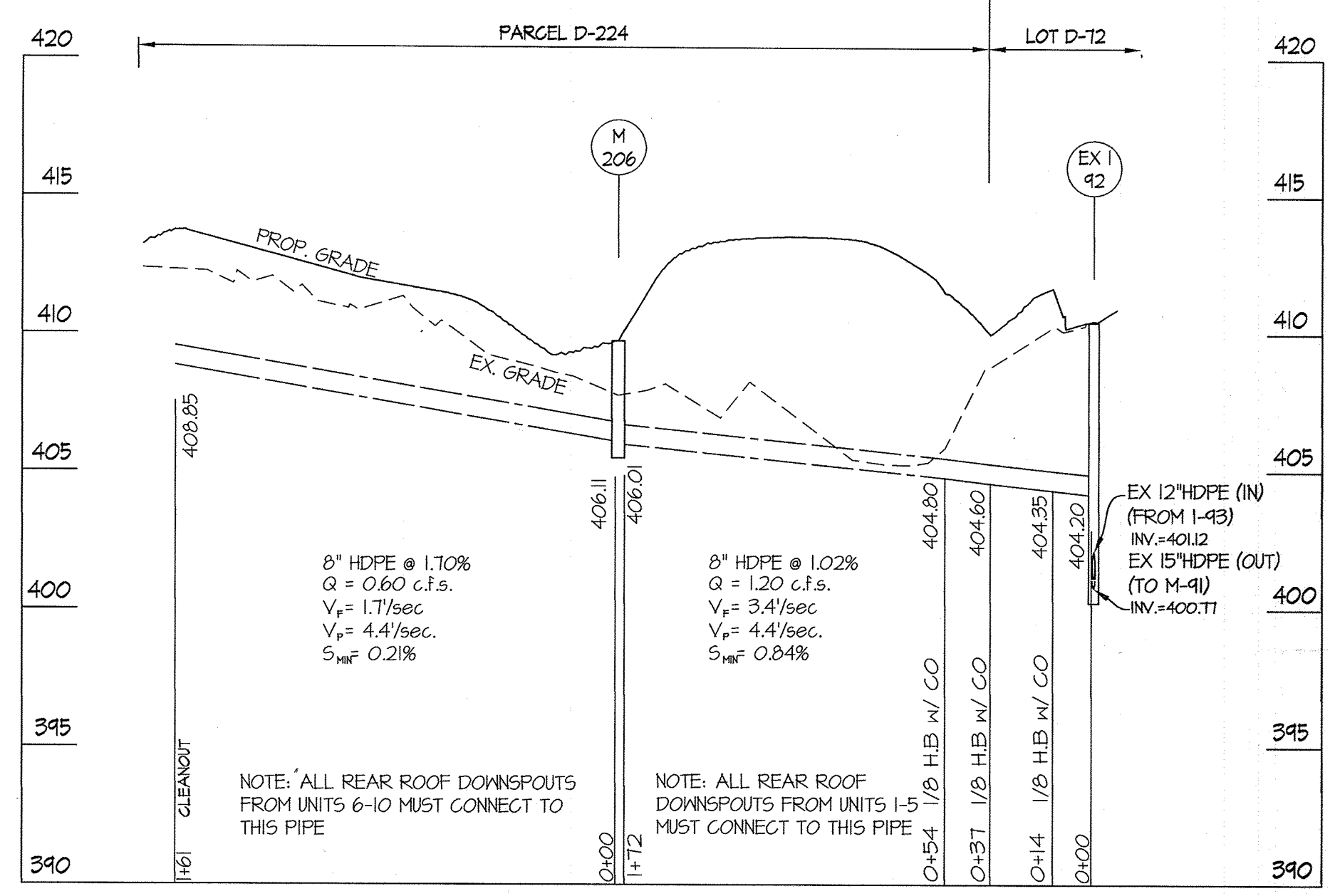
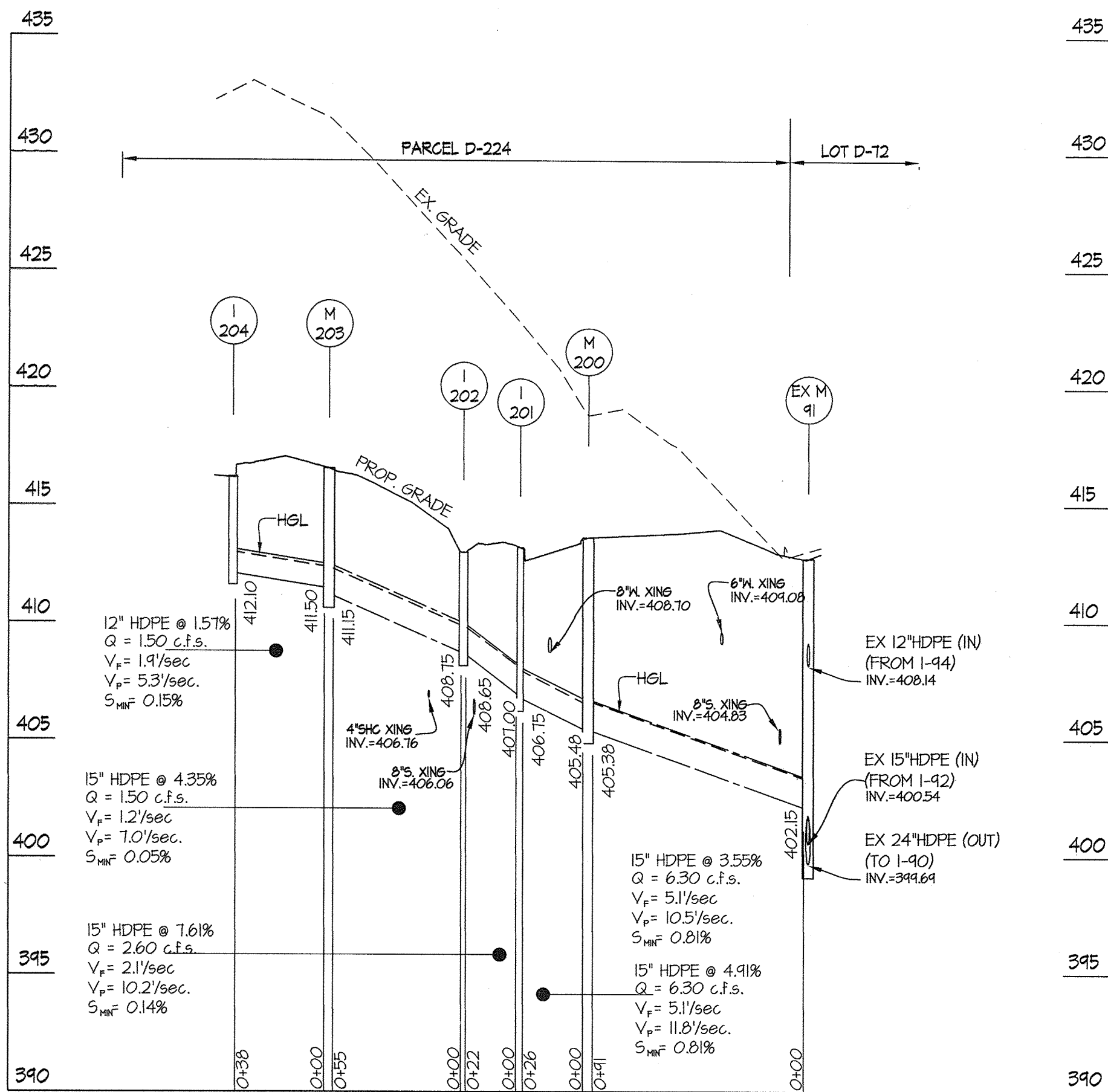
STORMDRAIN DRAINAGE AREA MAP

SHIPLEY'S GRANT
PHASE VI, BUILDABLE PARCEL D-224 and OPEN SPACE LOT D-225
20 TOWNHOUSE CONDOMINIUM DWELLING UNITS
PLAT No. 24249-24250

ELECTION DISTRICT No. 1

SCALE	ZONING	G. L. W. FILE No.
1"=20'	R-A-15	16022
DATE	TAX MAP - GRID	SHEET
MAY, 2017	37 - 1&2	6 of 10

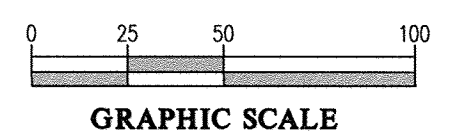
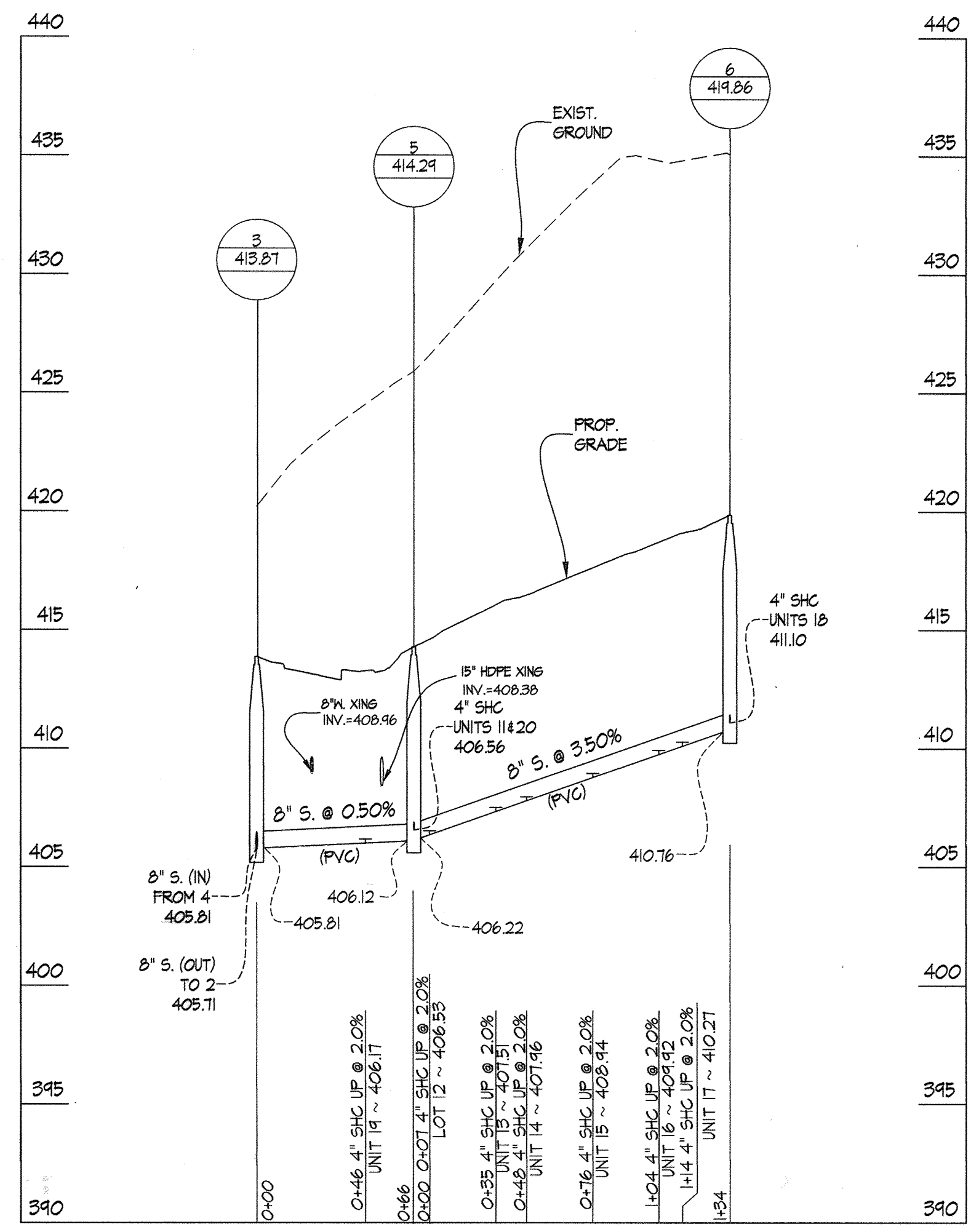
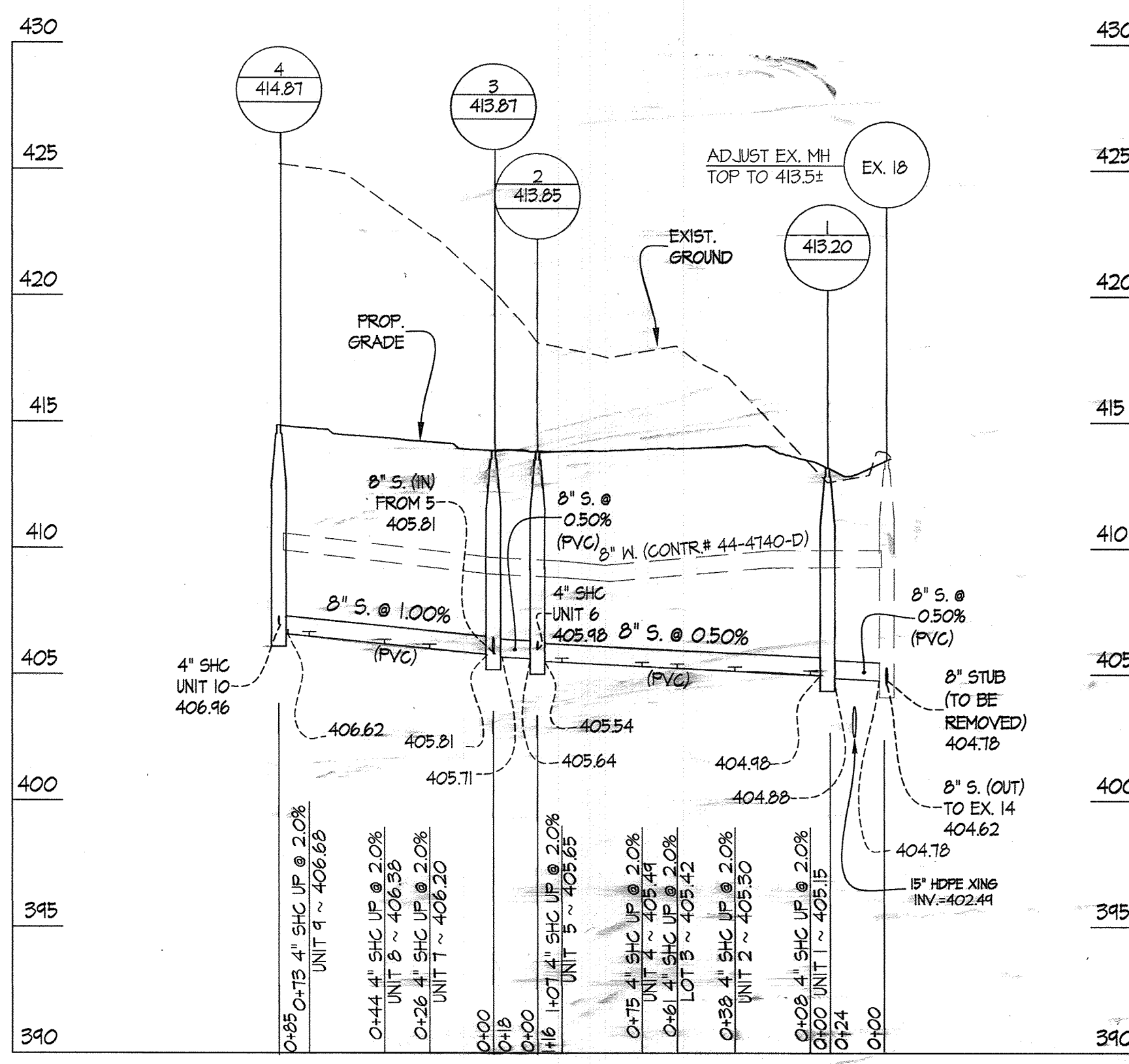
HOWARD COUNTY, MARYLAND



NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION				INVERT				STD. DETAIL	REMARKS	LOCATIONS
			PROPOSED		AS-BUILT		PROPOSED		AS-BUILT				
			UPPER	LOWER	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER			
M-200	MANHOLE	4'	413.62	-----			405.48	405.38			HO. CO. 6 5.12	PRIVATE	
I-201	A-10	2'-6"	413.22	413.22			407.00	406.65			HO. CO. D 4.03	PRIVATE	
I-202	5'	2'-11.5"	413.00	-----			408.75	408.65			HO. CO. D 4.22	PRIVATE	
M-203	MANHOLE	4'	416.58	-----			411.50	411.15			HO. CO. 6 5.12	PRIVATE	
I-204	DOUBLE WR COMBO	5'-6"	416.84	416.58			412.10	-----			HO. CO. D 4.35	PRIVATE TOP ELEV. LISTED IS TOP OF CURB	
M-206	MANHOLE	2'	404.80	-----			406.11	406.01			NYLOPLAST DRAIN BASIN W/ SOLID MANHOLE GRATE OR EQUIV.	PRIVATE	

PRIVATE PIPE SCHEDULE			
SIZE	TYPE	QUANTITY (L.F.)	REMARKS
8"	HDPE	333	PRIVATE
12"	HDPE	38	PRIVATE
15"	HDPE	194	PRIVATE

HDPE indicates High Density Polyethylene pipe, such as N-12 by ADS, or H-Q by Hancon or an approved equal.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Walter J. J. J. 7-7-17
Director Date

Walter J. J. J. 7-7-17
Chief, Division of Land Development Date

Walter J. J. J. 6-14-17
Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-860-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

PREPARED FOR:

OWNER/DEVELOPER (Seller):
BA Waterloo Townhomes, LLC
c/o Bozuto Homes, Inc.
6406 Ivy Lane, Suite 700
Greenbelt, MD 20770
301-220-0100
Attn: Chris Block

BUILDER (Buyer):
NVR INC.
9720 Patuxent Woods Dr.
Columbia, MD 21046
Phone: 410-379-5956
Attn: TIM NAUGHTON

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 28, 2018

Walter J. J. J.

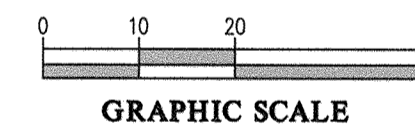
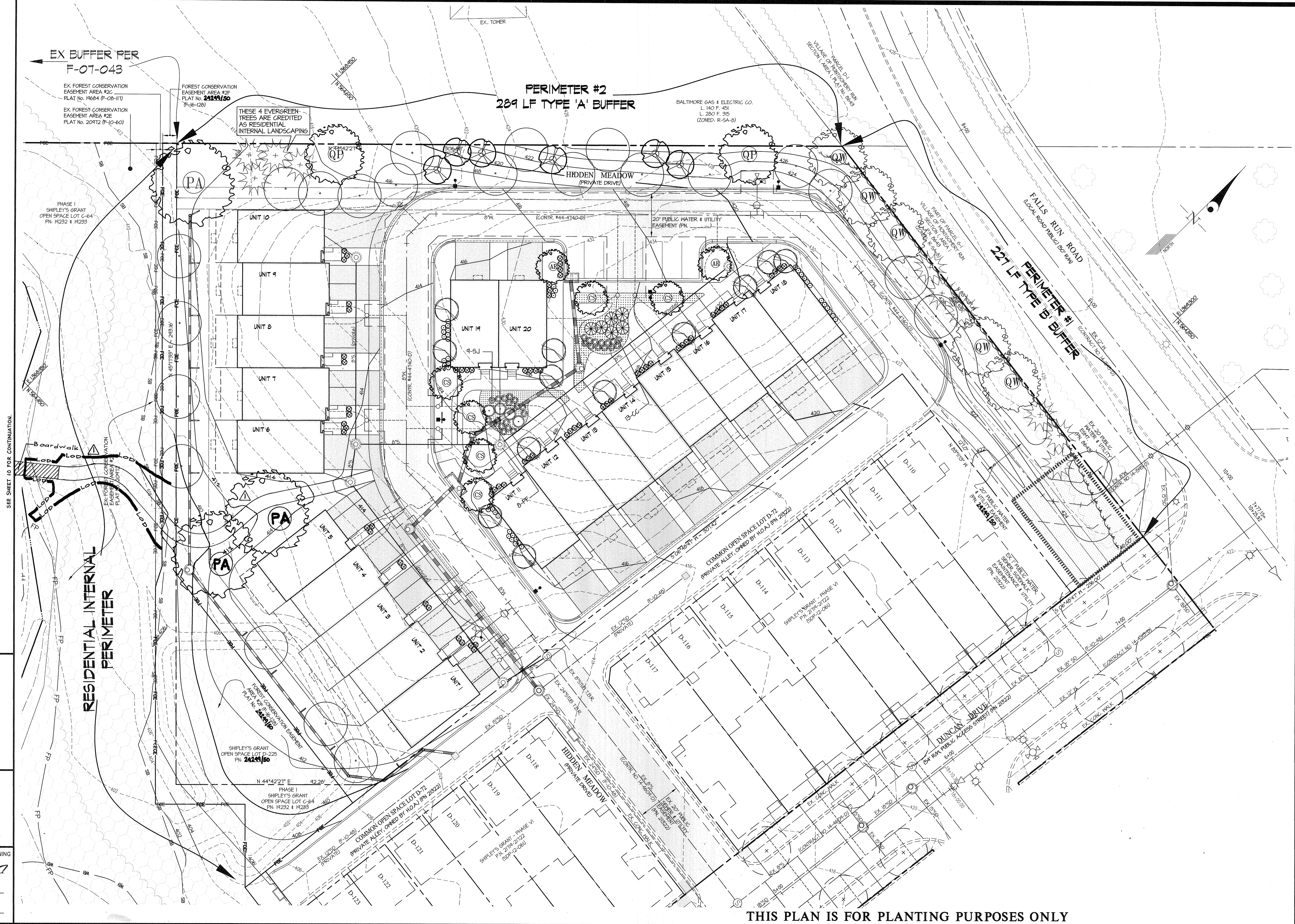
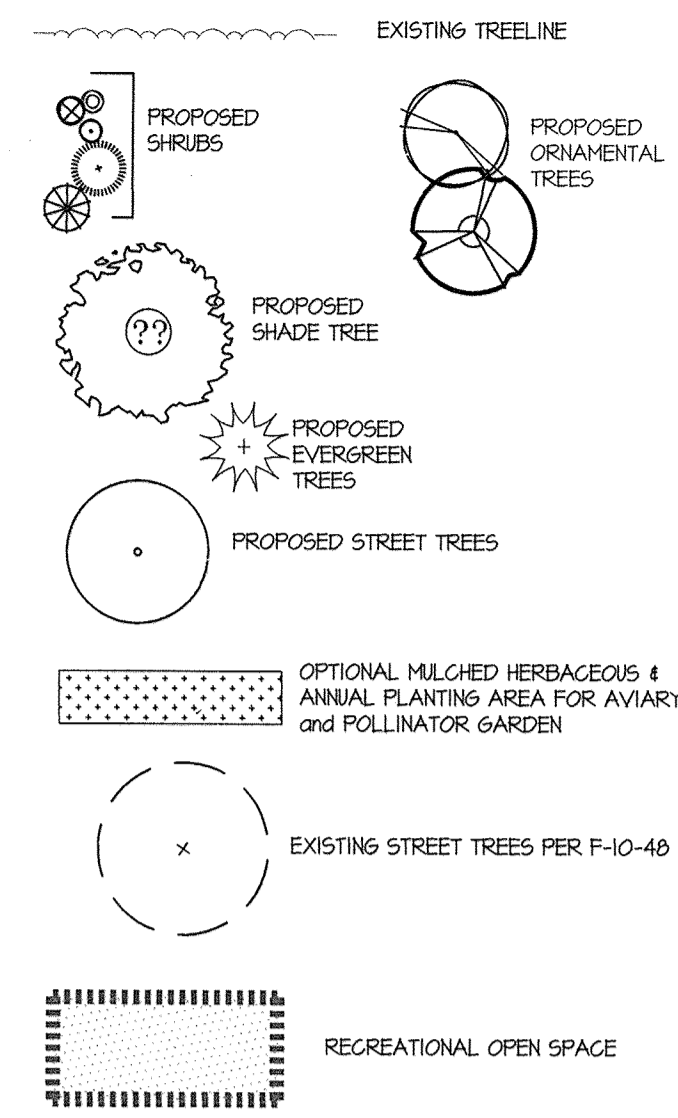
UTILITY PROFILES

SHIPLEY'S GRANT
PHASE VI, BUILDABLE PARCEL D-224 and OPEN SPACE LOT D-225
20 TOWNHOUSE CONDOMINIUM DWELLING UNITS
PLAT No. 24249-24250

ELECTION DISTRICT No. 1

SCALE	ZONING	G. L. W. FILE No.
1" = 50' (H) 1" = 5' (V)	R-A-15	16022
DATE	TAX MAP - GRID	SHEET
MAY, 2017	37 - 1&2	7 of 10

PLANTING LEGEND



DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN SECTION 82.04 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL AND THE MFL LANDSCAPE DESIGN CRITERIA. I/WE FURTHER CERTIFY THAT UPON COMPLETION A LETTER OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

NAME: *Michael B. Tran* DATE: 5-12-17

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Nancy J. Griffin* DATE: 7-7-17

Chief, Division of Land Development Control: *Kathleen A. ...* DATE: 7-7-17

Chief, Development Engineering Division: *Chad ...* DATE: 6-14-17

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R
1/24/19	Pathway to Lot C-64 added	3+	DDs

PREPARED FOR:
 OWNER/DEVELOPER (Seller): BA Waterloo Townhomes, LLC
 c/o Bozzuto Homes, Inc.
 6406 Ivy Lane, Suite 700
 Greenbelt, MD 20770
 301-220-0100
 Attn: Chris Block

BUILDER (Buyer): NVR INC.
 9720 Patuxent Woods Dr.
 Columbia, MD 21046
 Phone: 410-379-5956
 Attn: TIM NAUGHTON

LANDSCAPE PLAN
SHIPLEY'S GRANT
 PHASE VI, PARCEL D-224 and OPEN SPACE LOT D-225
 20 TOWNHOUSE CONDOMINIUM DWELLING UNITS
 PLAT No. 24249-24250

SCALE	ZONING	G. L. W. FILE No.
1"=20'	R-A-15	16022
DATE	TAX MAP - GRID	SHEET
MAY, 2017	37 - 1&2	8 of 10

THIS PLAN IS FOR PLANTING PURPOSES ONLY

SPECIFICATIONS: PLANT MATERIALS AND PLANTING METHODS

- A. PLANT MATERIALS
1. PLANT STANDARDS
2. PLANT MEASUREMENTS
3. PLANT IDENTIFICATION
4. PLANT INSPECTION

- B. PLANTING METHODS
1. PLANTING SEASONS
2. DIGGING
3. EXCAVATION OF PLANT PITS
4. LOCATIONS OF ALL PROPOSED PLANT MATERIAL SHALL BE STAKED AND APPROVED IN THE FIELD

- C. STAKING, CUTTING AND WRAPPING
A. STAKES
B. WIRE AND CABLE
C. HOSE
D. ALL TREES UNDER 3" IN CALIPER ARE TO BE PLANTED AND STAKED IN ACCORDANCE WITH THE ATTACHED PLANTING DETAILS

LANDSCAPE NOTES

- 1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE & THE HOWARD COUNTY LANDSCAPE MANUAL.
2. CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST (5) FIVE DAYS BEFORE STARTING WORK.
3. FIELD VERIFY UNDERGROUND UTILITY LOCATIONS AND EXISTING CONDITIONS BEFORE STARTING PLANTING WORK.

SCHEDULE-A: PERIMETER LANDSCAPE EDGE

Table with columns: PERIMETER #, USE SITUATION, LANDSCAPE BUFFER TYPE, CREDIT FOR EX. VEGETATION, CREDIT FOR WALL, FENCE OR BERM, NUMBER OF PLANTS REQUIRED (SHADE TREES, EVERGREEN TREES, ORNAMENTALS, SHRUBS).

SCHEDULE-B: PARKING LOT INTERNAL LANDSCAPING

Table with columns: NUMBER OF PARKING SPACES, NUMBER OF SHADE TREES REQUIRED (1 PER 10 RES. SPACES), NUMBER OF TREES PROVIDED, OTHER TREES (2:1 SUBSTITUTION).

SCHEDULE-C: RESIDENTIAL INTERNAL LANDSCAPING

Table with columns: NUMBER OF DWELLING UNITS, NUMBER OF TREES REQUIRED (1 per SFA), NUMBER OF SHRUBS REQUIRED, NUMBER OF TREES PROVIDED (SHADE TREES, OTHER TREES), NUMBER OF SHRUBS PROVIDED, OTHER SUBSTITUTIONS.

PRIVATE STREET TREE REQUIREMENTS

Table with columns: LOCATION, LENGTH OF CURB (L.F.), CALCULATED NUMBER OF TREES REQUIRED, NUMBER OF TREES PROVIDED.

TABULATION OF LANDSCAPE & PRIVATE STREET TREES FOR REQUIRED LANDSCAPE SURETY

Table with columns: SCHEDULE-A, SCHEDULE-B, SCHEDULE-C, HIDDEN MEADOW, TOTAL. Includes notes on surety requirements.

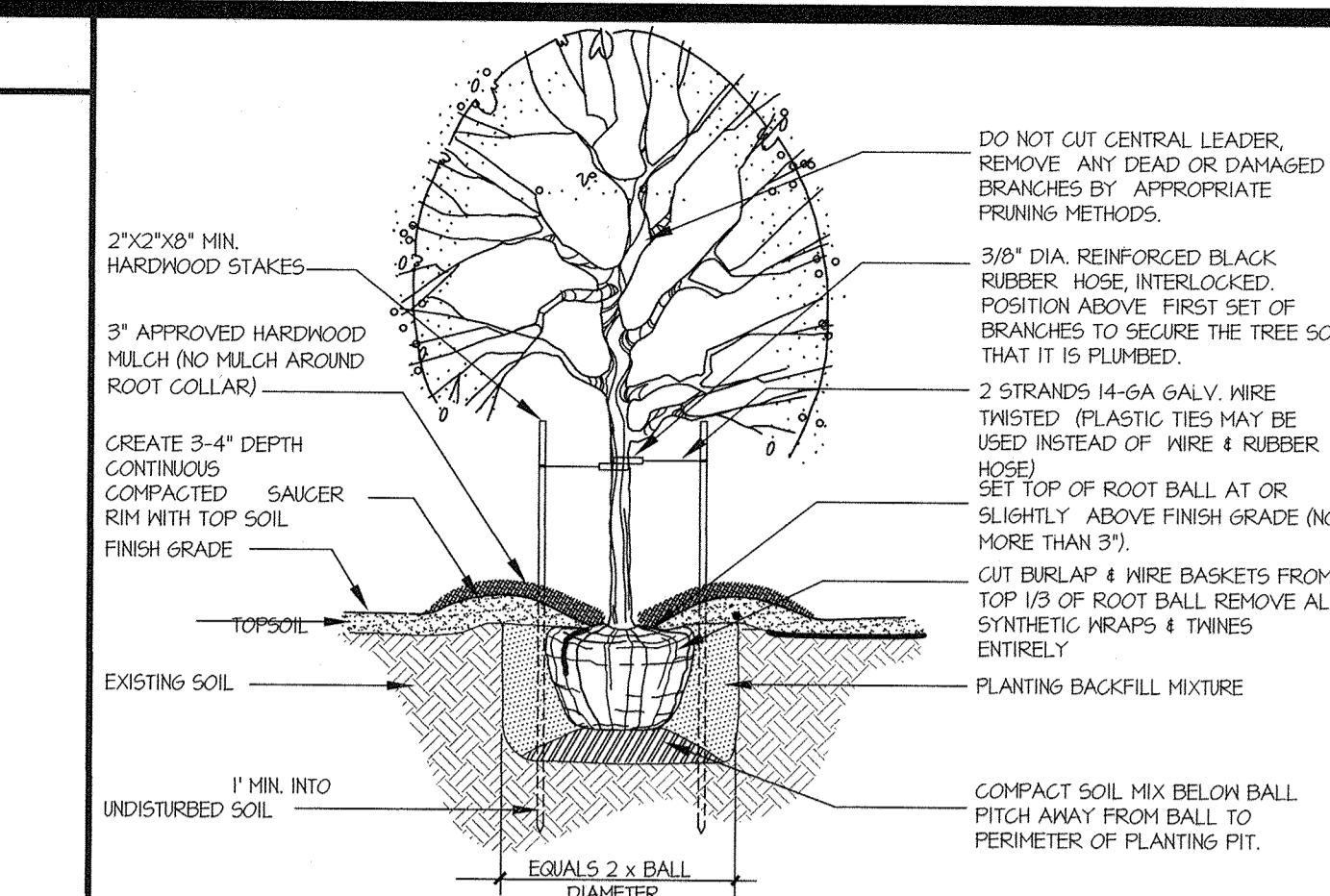
Table with columns: BUFFER TYPE, SHADE TREES/LF, EVG. TREES/LF, SHRUBS/LF.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: [Signature] 7-7-17
Chief, Development Engineering Division: [Signature] 6-14-17

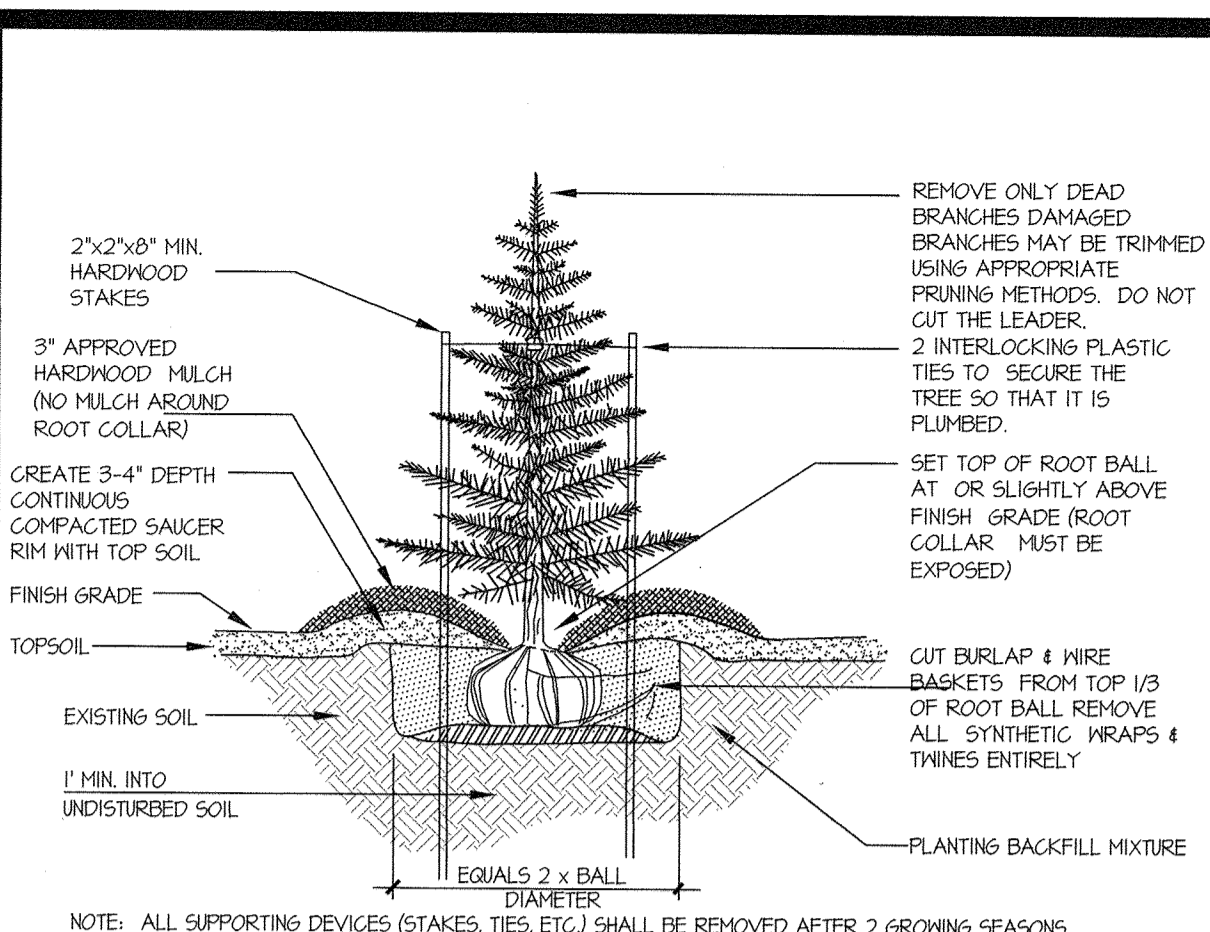
DEVELOPER'S/BUILDER'S CERTIFICATE
Michael B. Tran, Registered Professional Landscape Architect, dated 5-12-17.

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONTOWN, MARYLAND 20886

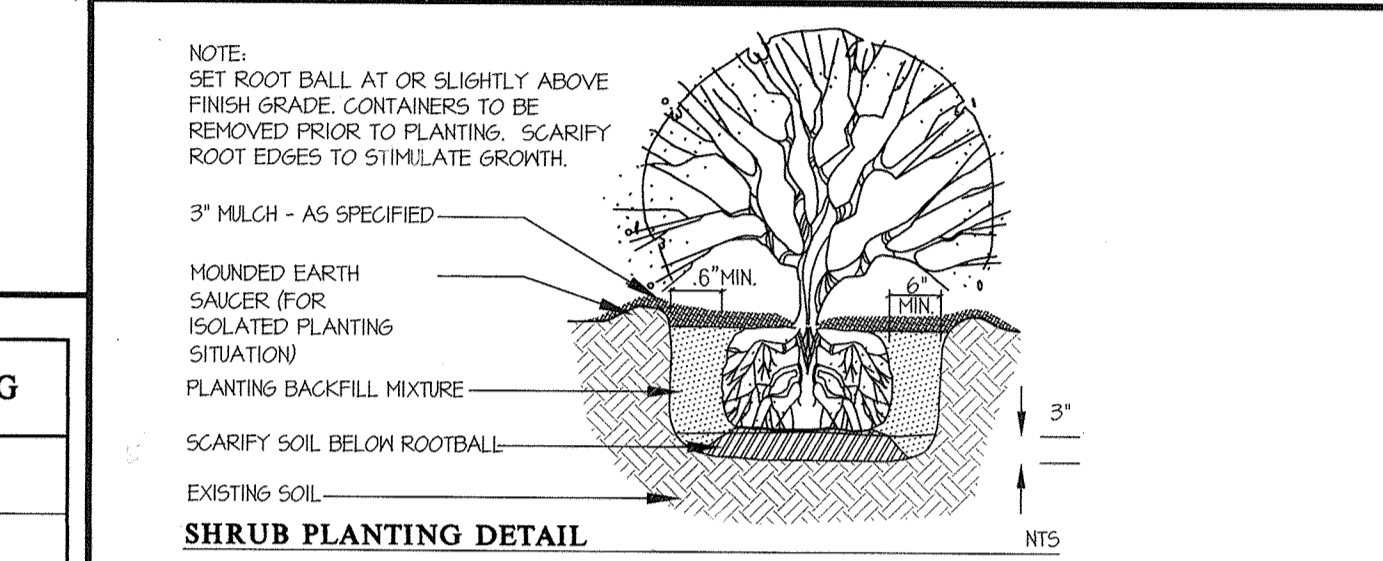
PREPARED FOR:
OWNER/DEVELOPER (Seller): BA Waterloo Townhomes, LLC
BUILDER (Buyer): NVR INC. 9720 Patuxent Woods Dr. Columbia, MD 21046



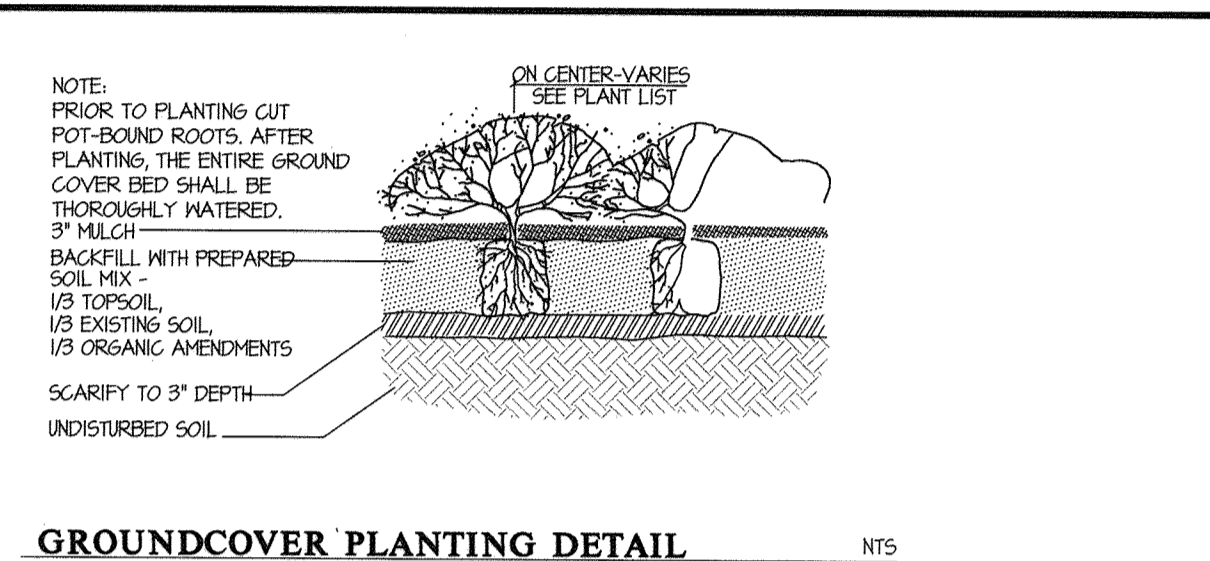
DECIDUOUS TREE PLANTING DETAIL



EVERGREEN TREE PLANTING DETAIL



SHRUB PLANTING DETAIL



GROUNDCOVER PLANTING DETAIL

PLANT LIST table with columns: SYMBOL, QTY., NAMES (BOTANICAL / SCIENTIFIC), SIZE, ROOT/COMMENTS. Lists various trees like Acer rubrum, Quercus phellos, and shrubs like Buddleia bicolor.

THIS PLAN IS FOR PLANTING PURPOSES ONLY
LANDSCAPE NOTES and DETAILS
SHIPLEY'S GRANT
PHASE VI, PARCEL D-224 and OPEN SPACE LOT D-225
20 TOWNHOUSE CONDOMINIUM DWELLING UNITS
PLAT No. 242.49- 242.50