

General Notes:

- Zoning: Site is being developed under the Amended 5th Edition of the Subdivision and Land Development Regulations for RA-15 (including the Supplementary Regulations for Traditional Residential neighborhoods) and B-1. This plan is subject to the Amended Zoning Regulations per CB-75-2003.
- Applicable DPZ File Reference: S 04-04 (Approved 2/15/05), NP 04-105, F 06-014, NP 06-045 ZRA-65, F 07-001 and F-06-001.
- This project is in conformance with the latest Howard County standards unless waivers have been approved (NP 04-105 and NP 06-045 see Note 26 below). Bulk Parcel Plat F 07-001 which created Parcel C was recorded as Plat Nos. 18428 thru 18431 on July 14, 2006.
- Boundary information is from boundary surveys by Gutschick, Little, and Weber, P.A., dated May, 2003.
- The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System. Howard County Monument nos. 31GA and 31A4 were used for this project.
- The existing topography is taken from aerial on a survey with two foot contour intervals prepared by McKenzie Snyder, Inc. on 3/23/03.
- Wetland and stream delineation by Exploration Research, Inc. submitted and approved under Sketch Plan S 04-04 dated 2/15/05. Jurisdictional determination and verification of delineation of waters of the U.S. by U.S. Army Corps of Engineers on 3/28/05. No clearing, grading or construction is permitted within wetlands, streams or their required buffers, unless approved by DPZ as necessary disturbances or waivers have been approved. The Department of Planning and Zoning has determined that the proposed road crossing located within the environmental features and buffers are considered necessary road disturbances in accordance with Section 16.116(c) of the Howard County Subdivision and Land Development Regulations.
- The Cemetery Inventory Maps do not show any cemeteries within the project limits.
- The Scenic Roads Map does not indicate any scenic roads within or adjacent to the project limits.
- Existing utilities were taken from available Howard County records.
- This property is within the Metropolitan District.
- Water and Sewer are public per Contract No. 24-4355-D and are with the Little Patuxent Sewerage Area.
- 100-Year Floodplain prepared by Gutschick, Little, and Weber, P.A. was submitted and approved as a part of F 06-014 on 04-14-06.
- Traffic Study and Traffic Signal Warrant Analysis by The Traffic Group, dated Jan. 26, 2004. This APFO study was approved on 02-15-2005 by Howard County.
- Vehicular ingress & egress to MD Route 108 is prohibited except as indicated. Vehicular ingress and egress to Snowden River Parkway and MD Route 100 is prohibited.
- All public streets within this development shall have sidewalks on both sides of the roadway. SFA lots may not be encumbered with sidewalks and/or sidewalk easements.
- A Sight Distance Analysis for the entrance from MD State Route 108 was provided and approved with the Sketch Plan S 04-04 on October 1, 2002.
- The Noise study by Nyle Engineering, Inc. was approved by Howard County on 02-15-05.
- A Forest Stand Delineation Plan was submitted and approved for the area covered by this plan under S 04-04 February 15, 2005. A Forest Conservation Plan was submitted and approved for the area covered by this plan under F 06-014.
- To fulfill the forest conservation requirements of this site, at least 10.01 acres of forest conservation easement is required. This requirement is addressed by providing 2.14 acres of easement area on-site that is comprised of 1.48 acres of net tract forest retention, 1.51 acres of non-credited forest retention within the floodplain and 5.74 acres of on-site forest planting, 2.13 ac. of the total 3.74 ac. of afforestation in FCE #5 on non-buildable Parcel B on the approved F-06-014 FCF, and the easement for 2.13 ac. afforestation FCE #5 is to be recorded on the future resubdivision plat for Non-buildable Parcel D. The outstanding forest conservation obligation of 130 acres of afforestation or 2.6 acres of offsite retention before the last phase of this project can obtain approval by the DPZ.
- Where referred to herein, "Lot(s)" includes lot(s) and, where appropriate, land condominium unit(s).
- On July 14, 2004, NP 04-105, a waiver of Section 16.120(c)(4) was granted which requires single family attached lots to have at least 15' of frontage onto a public road right-of-way. Section 16.114(a)(5), which requires truncation of public road right-of-way boundaries where public roads intersect (at corner lots); and Section 16.116(a)(2)(i), which prohibits disturbances to streams and stream buffers, to allow construction of two pedestrian bridges to cross the streams. Subject to the following 2 conditions in the approval letter:
 - The disturbance to the stream and stream buffer related to the pedestrian bridges shall be minimized. The Preliminary Plan shall show the limit of disturbance and proposed grading associated with the bridges, and shall be subject to review and approval by the Subdivision Review Committee.
 - If it is determined by the DED that the sight distance is inadequate at the intersections for which truncation as shown, then the appropriate easements must be added to the plan/plat.
 On March 23, 2006, NP-06-45, approved the waivers for the following: Section 16.116(a)(1) request to be permitted to grade within 25 feet of a wetland; Section 16.116(a)(2)(i), request to be permitted to grade within 75 feet of a perennial stream; Section 16.114(f)(1), request to be permitted to obtain vehicular access from minor arterial road instead of a lesser classification road for a proposed subdivision that fronts on minor and principle arterial roads and local road; Section 16.120(c)(1), request to be permitted to create commercial and apartment/multifamily parcels without a minimum of 60 feet of frontage on an approved public road, and Section 16.114(f) request to be permitted to not submit and obtain approval of the required preliminary plan for a major subdivision before submitting the required final plan/plat. Subject to the following 4 conditions in the approval letter:
 - Compliance with the DED comments of 2/14/06
 - The stream and wetland buffers shall be afforested in accordance with the forest conservation plan for final plan/plat, F-06-14.
 - The applicant must obtain all required State/COE permits.
 - The stream and wetland buffer disturbances shall not exceed the one shown on the NP-06-45 exhibits of 2/2/06.
- All Open Space Lots and Common Open Space Lots are to be conveyed to the Shipley's Grant Homeowner's Association.

- As indicated in the legend, there are parking spaces that are provided to meet the parking requirement of the Zoning Ordinance for this phase of the subdivision. These parking spaces are lot specific, as indicated on the plan, and shall be reserved by signage or other methods as approved by Howard County.
- During the 2006 legislative session, the County Council of Howard County introduced Bill ZRA-65 to amend the Howard County Zoning Regulations pertaining to Traditional Residential Neighborhoods by expanding the applicability of the regulations to B-1 and POR zoning districts, changing setback requirements, and changing maximum lot coverage, under certain circumstances. The effective date of the amended Zoning Regulations is April 10, 2006.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1800 AT LEAST 5 BUSINESS DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-251-TITI AT LEAST 48 HOURS TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME II (1993) AND AS MODIFIED BY "SPECIFICATIONS FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)". ALL TREES SHALL BE PLACED A MINIMUM OF 20' FROM ANY STREET LIGHT.
- 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.
- ALL ROAD FILL AREAS SHALL BE COMPACTED PER AASHTO T-100 SPECIFICATIONS.
- ALL HANDICAPPED RAMP SURFACE SHALL CONFORM TO ADAAG 4.24 FOR DETECTABLE MARKINGS. ADAAG 4.24 STATES: "DETECTABLE MARKINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.8", A HEIGHT OF NOMINAL 0.2" AND A CENTER TO CENTER SPACING OF NOMINAL 2.35" AND CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT ON DARK OR DARK ON LIGHT." CONTRACTOR SHALL COORDINATE WITH OWNER ARCHITECT ON COLOR SELECTION FOR ALL CURB RAMP. SEE MD-655.40
- MDE TRACKING NUMBER: 200667964
- THE APPROVED SKETCH AND PRELIMINARY PLANS FOR THIS SUBDIVISION PROJECT INDICATED THE 50' AND 75' STREAM BUFFERS REFERENCED FROM THE CENTERLINES OF THE STREAMS, WHICH DID NOT CAUSE THE STREAM BUFFERS TO BE LOCATED ON ANY RESIDENTIAL LOTS. A DPZ AND H&CD POLICY DECISION WAS MADE AT THE FINAL PLAT AND SITE DEVELOPMENT PLAN STAGES OF THIS SUBDIVISION PROJECT INDICATE THE 50' AND 75' STREAM BUFFERS REFERENCED FROM THE STREAMBANKS, TO ALLOW THE STREAM BUFFERS ON RESIDENTIAL LOTS LESS THAN 10 ACRES IN SIZE, AND TO NOT REQUIRE THE 35' STRUCTURE SETBACK REFERENCED FROM A STREAM BUFFER LOCATED ON A RESIDENTIAL LOT AS NORMALLY REQUIRED BY SUBDIVISION SECTION 16.120(b)(4)(ii). THIS "GRANDFATHERING" POLICY WAS BASED ON EARLIER APPROVAL OF THE RELATED SKETCH AND PRELIMINARY PLANS FOR THIS SUBDIVISION PROJECT.

Stormwater Management Notes

Stormwater management facility A is a privately owned and maintained, non-fee facility stormwater management facility A is made up of three separate parts: a) an above ground Micro-Biorotation facility that provides a portion of the flow of the water. The 48" diameter CMP pipe (Facility A) provides the remainder of the flow underground and drains to a 48" storm pit. The 48" diameter CMP pipe (Facility A) provides CFI, land to year management. All of these facilities are tied together and outfall at the downstream end of a splitter structure. In-1400 Recharge for this area will be provided in an infiltration facility located in Phase 2 (approx. station 18+00 Logan in Way).

Water Quality and Channel Protection for the remaining Phase 1 area not draining to SWMF 'A' is provided by existing SWM-Facility 'B' approved under F-06-014. The Recharge (Rev) Requirement for the remaining area of Phase 1 (6.22 acres) not draining to SWMF 'A' will be provided by 2 infiltration devices.

Infiltration devices Rev#1 is located within the stream of the development (detailed on these plans). Infiltration device Rev#2 will be located on an open space lot (Community Center) detailed on these plans. These infiltration devices are to be installed in accordance with Section 16.114(f) where pre-treated by a horizontal water infiltration device (Rev-1400).

Rev Area provided by Rev 7B = 4.71 acres
Rev Area provided by Rev12 and Rev34 Facilities = 6.22 acres

SWMF 'A', Rev12, Rev34, Rev 7B are to be privately owned and maintained.

AREAS/LOTS CONTROLLED

PARCEL A
PARCEL B
0+00 TO 5+50 ROAD 'A'
16+250 TO 17+00 WATERLOO ROAD

Facility A provides for stormwater management measures (water quality, and channel protection) for Parcel B. However, prior to Parcel B's use of Facility A, Deep Run Property Management, LLC must execute a joint maintenance agreement with BA Waterloo Townhomes, LLC.

CONSTRUCTION PLANS

SHIPLEY'S GRANT

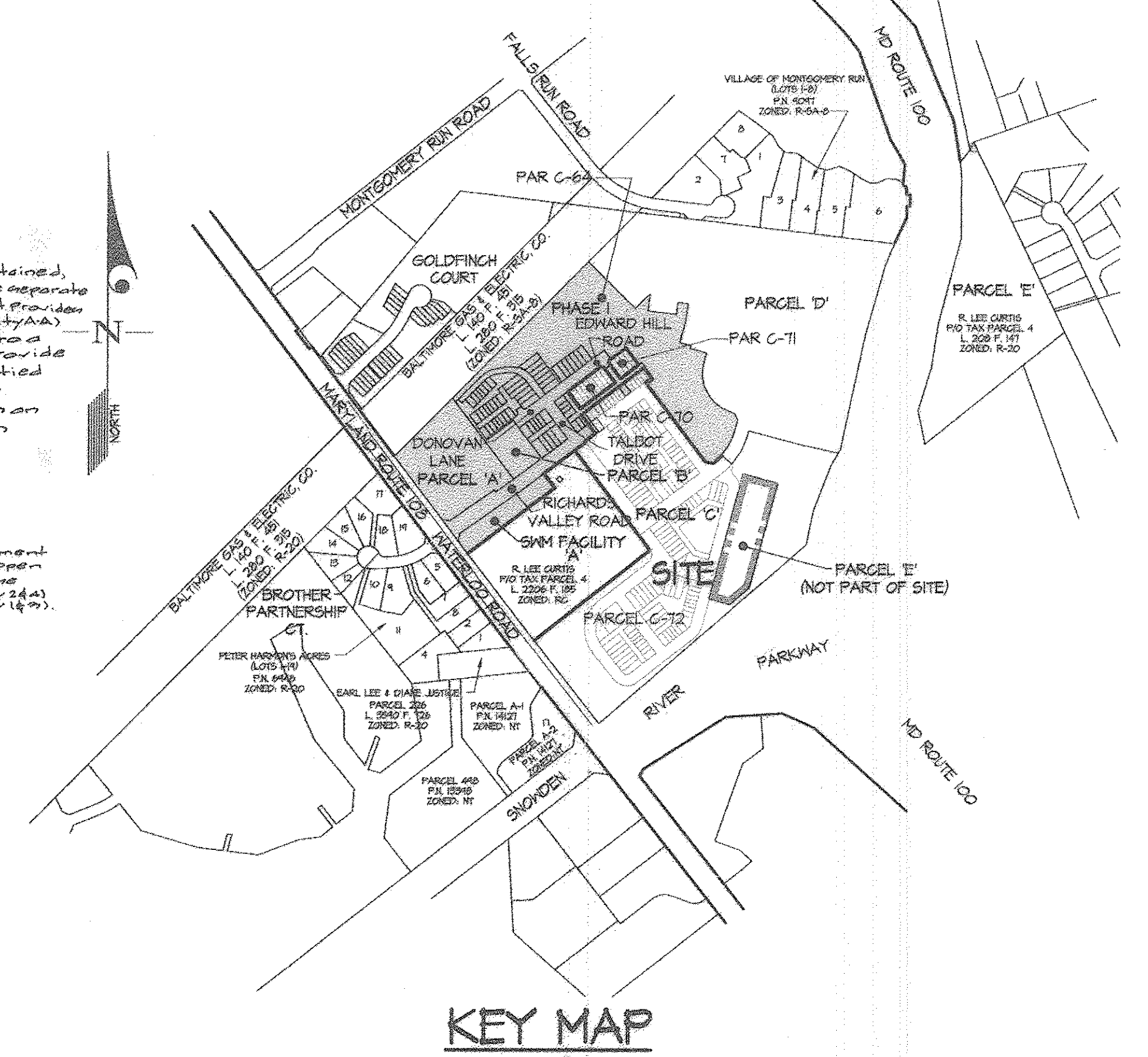
PHASE I

LOTS C-1 THRU C-62,

OPEN SPACE LOTS C-63, C-64, C-65,

COMMON OPEN SPACE LOTS C-66 THRU C-69

AND PARCELS 'A', 'B', C-70, C-71 and C-72



DEVELOPMENT TRACKING CHART AND SITE ANALYSIS

PHASE No.	CO. FLIE No.	R-A-15 ZONE AREAS										B-1 ZONE		POR ZONE				
		GROSS	100 YR FLOOD PLAIN	NET	SFA LOTS	MIN. REQ'D. 0/5 ¹	CREDITED 0/5 PROV. ²	NON-CREDITED 0/5 PROVIDED	TOTAL 0/5 PROVIDED	MIN. REQ'D. REC. 0/5 ³	REC. 0/5 PROVIDED	MIN. REQ'D. TND 0/5 ⁴	TND 0/5 PROVIDED		APT. PARCELS	PUBLIC ROADS	PRIVATE ROADS	GROSS ACREAGE
PHASE I	F 06-001 / F-07-243	13.63 AC.	1.36 AC.	12.27 AC.	2.15 AC.	3.4 AC.	6.2 AC. (60%)	0.4 AC.	8.6 AC.	24,800 S.F.	56,471 S.F.	0.7 AC./29,686 S.F.	0.9 AC./39,810 S.F.	0 AC.	2.0 AC.	0.9 AC.	4.1 AC.	0 AC.
CUMULATIVE TOTAL		13.63 AC.	1.36 AC.	12.27 AC.	2.15 AC.	3.4 AC.	6.2 AC. (60%)	0.4 AC.	8.6 AC.	24,800 S.F.	51,245 S.F.	0.7 AC./29,686 S.F.	0.9 AC./39,810 S.F.	0 AC.	2.0 AC.	0.9 AC.	4.1 AC.	0 AC.

* PARCELS 'A' AND 'B' PREVIOUSLY RECORDED UNDER F 06-014

- 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) IS CALCULATED AS 400 S.F. PER UNIT.
 - MINIMUM REQUIRED TRADITIONAL NEIGHBORHOOD O/S IS CALCULATED AS 20% OF THE REQUIRED OPEN SPACE.

PHASE No.	CO. FLIE No.	REQUIRED/MAXIMUM R-A-15 UNITS				PROPOSED R-A-15 UNITS			
		MAX. NO. OF UNITS PROPOSED	MAX. NUMBER OF UNITS PERMITTED (15 UNITS/NET AC.)	REQUIRED MIH'S @ 10% OF TOTAL UNITS PROP.	SFA UNITS	MIH'S	APT. UNITS	TOTAL UNITS	PROPOSED UNIT DENSITY
PHASE I	F 06-001 / F-07-243	62	184	6.2	52	10	0	62	5 UNITS / NET AC.
CUMULATIVE TOTAL		62	184	6.2	52	10	0	62	5 UNITS / NET AC.

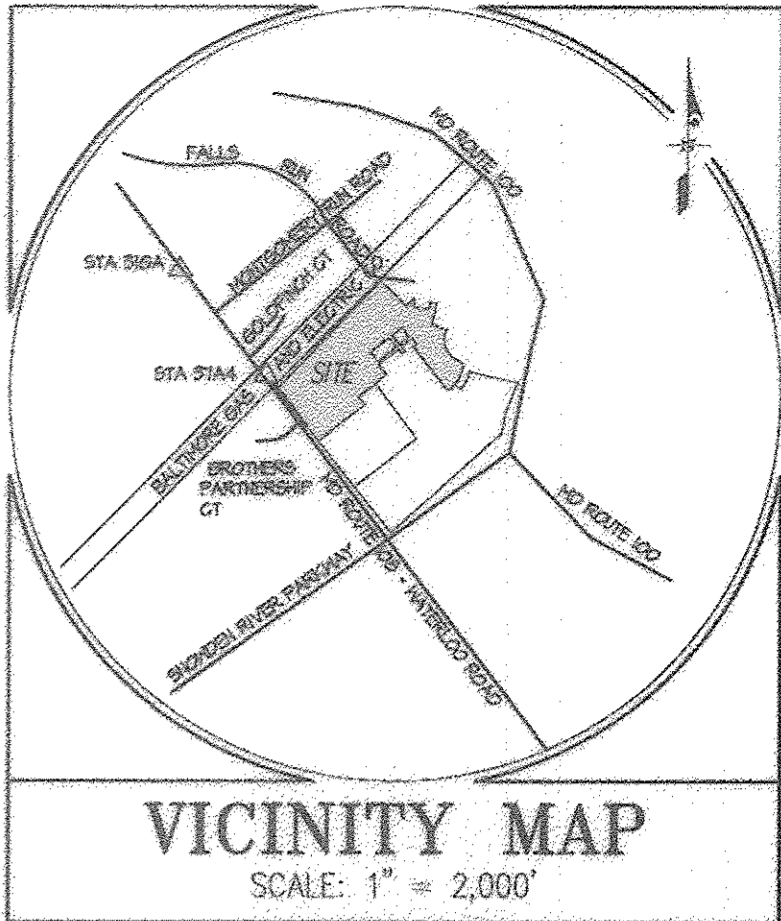
OWNER PARCEL 'A'
SHIPLEY'S GRANT RETAIL, LLC
1966 GREENSPRING DRIVE SUITE 508
LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
DEEP RUN PROPERTY MANAGEMENT, INC.
191 MILLER HOLLOW LANE
LAKE CITY, TENNESSEE 37769

Howard County Control Stations

516A ELEV. = 511.65
STANDARD DISC ON CONCRETE MONUMENT
N 564,925.75, E 1,267,067.65

57A4 ELEV. = 497.26
STANDARD DISC ON CONCRETE MONUMENT
N 563,835.91, E 1,267,971.65



LEGEND

- EXIST. CURB & GUTTER/PAVEMENT
- STANDARD CURB & GUTTER
- PROPOSED REVERSE
- TEMPORARY BITUMINOUS CURB
- EXISTING SEWER MAIN
- EXISTING WATER MAIN
- PROPOSED SEWER MAIN
- PROPOSED WATER MAIN/BURB & GUTTER
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- PROPOSED SIDEWALK
- NUMBER OF PARKING SPACES
- PROP. BARRICADE
- STRUCTURE NUMBER
- EXISTING CONTOUR
- PROP. CONTOUR
- EXISTING TREELINE
- 25' WETLAND BUFFER
- STREAM BUFFER
- 100 YEAR FLOODPLAIN
- CENTRLINE OF STREAM
- NETLAND
- LIMIT OF SUBMISSION
- PROPOSED / EXISTING EASEMENT
- PROPOSED PAVEMENT
- MIH OFF-STREET PARKING SPACE (LOT SPECIFIC)
- ON-SITE AFFORESTATION AREA PER F-06-014
- FLOODPLAIN FOREST RETENTION PER F-06-014 (NO CREDIT FOR RETENTION)
- NET TRACT FOREST RETENTION PER F-06-014
- AFFORESTATION AREA IN THE FLOODPLAIN PER F-06-014
- NATURAL FOREST REGENERATION AREA AND FOREST REMOVAL AREA IN THE FLOODPLAIN PER F-06-014

Sheet Index

- Sheet No. Sheet Title
- COVER SHEET
 - RICHARDS VALLEY ROAD PLAN AND PROFILE
 - TALBOT DRIVE PLAN AND PROFILE
 - EDWARD HILL ROAD & DONOVAN LANE PLAN AND PROFILE
 - HANDICAP RAMP DETAIL SHEET
 - ROAD DETAILS AND NOTES
 - PAVING DELINEATION - STRIPING - STREET LIGHT - AND SIGNAGE PLAN
 - SEDIMENT EROSION CONTROL SEQUENCE OF CONSTRUCTION AND OVERVIEW
 - SEDIMENT EROSION CONTROL & GRADING PLAN
 - SEDIMENT EROSION CONTROL & GRADING PLAN
 - SEDIMENT CONTROL DETAILS
 - STORM DRAIN PROFILES
 - STORM DRAIN PROFILES
 - STORM DRAIN DRAINAGE AREA MAP
 - STORMWATER MANAGEMENT FACILITY 'A' PLAN AND DETAILS
 - STORMWATER MANAGEMENT FACILITY 'A' DETAILS
 - STORMWATER MANAGEMENT FACILITY 'A' BORING LOGS
 - STORMWATER MANAGEMENT DRAINAGE AREA MAP - EX CONDITION
 - STORMWATER MANAGEMENT DRAINAGE AREA MAP - PROP CONDITION
 - LANDSCAPE PLAN
 - LANDSCAPE NOTES AND DETAILS
 - MARYLAND ROUTE 108 SEDIMENT EROSION CONTROL & IMPROVEMENT PLAN
 - MARYLAND ROUTE 108 IMPROVEMENT DETAILS AND NOTES
 - MARYLAND ROUTE 108 IMPROVEMENTS PAVING & STRIPING
 - MARYLAND ROUTE 108 IMPROVEMENTS TYPICAL SECTIONS

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14433, Expiration Date: May 21, 2008.

Date: 9/9/07

Professional Engineer

SFA PARKING ANALYSIS

Total Parking Required: 62 units x 2 spaces/unit = 124 Spaces

Garages: 104 Spaces (2 Car Garages)
8 Spaces (1 Car Garage - MIH's)
4 Spaces (1 Car Garage/1 Driveway Space - MIH's)
8 Spaces Off-Street Parking

Total: 124 Spaces

Overflow/Guest Parking Requirements (per Design Manual Volume III, 2.B.2)
Parking Required: 62 units x 0.3 spaces per unit = 19 Spaces
Overflow/Guest Parking available: 21 Spaces (On-Street Parking)

ASBUILT SHEET 1 OF 11

EXISTING FOREST CONSERVATION EASEMENT AREA TABULATION (SEE F-06-19)	FOREST CONSERVATION EASEMENT (FCE) AREA				TOTAL
	1	2	3	4	
FOREST CONSERVATION EASEMENT (FCE) AREA					
PARCEL WHERE FCE IS LOCATED	C	C	C	C	
CREDITED FOREST RETENTION AREA ON NET TRACT (IN AC.)	N/A	1.40	0.08	N/A	1.48
NON-CREDITED FOREST RETENTION AREA IN FLOODPLAIN (IN AC.)	N/A	1.21	0.30	0.08	1.57
FOREST PLANTING AREA OUTSIDE THE FLOODPLAIN (IN AC.)	0.27	2.33	0.32	0.46	3.38
FOREST PLANTING AREA WITHIN THE FLOODPLAIN (IN AC.)	N/A	0.14	0.04	0.05	0.23
TOTAL ACREAGE OF AFFORESTATION PROVIDED (IN AC.)	0.27	2.47	0.36	0.51	3.61
NATURAL REGENERATION AREA (IN AC.)	N/A	N/A	N/A	N/A	N/A
MINIMUM TOTAL AREA IN CONSERVATION EASEMENT (IN AC.)	0.27	5.08	0.74	0.57	6.66

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways

5-29-07

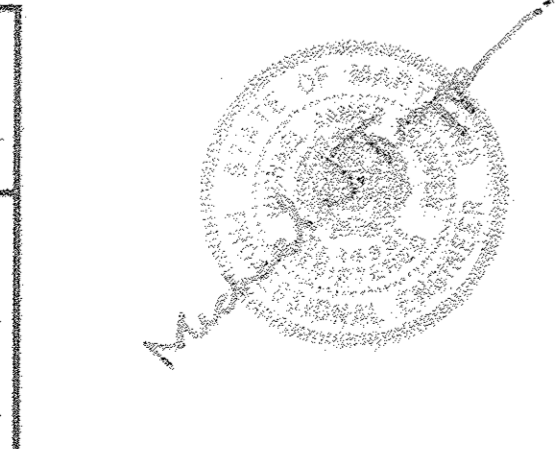
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development

6/1/07

Chief, Development Engineering Division

5/31/07



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: 301-421-4024

DATE	REVISION
12-15-11	Rev. stormwater Management Notes
5-23-07	Rev. stormwater Management Notes

PREPARED FOR AND OWNER PARCEL 'C':

BA WATERLOO TOWNHOMES, LLC
C/O BOZZUTO HOMES, INC.
7850 WALKER DRIVE SUITE 400
GREENBELT, MARYLAND 20770
ATTN: DUNCAN SLIDELL
301-623-1525

COVER SHEET

SHIPLEY'S GRANT

PHASE I

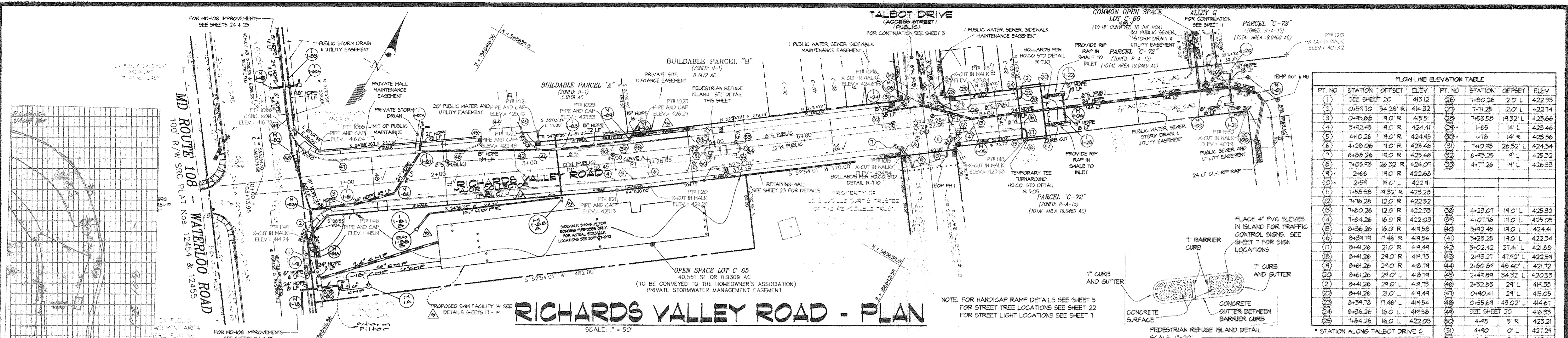
LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65

COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72

A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738

HOWARD COUNTY, MARYLAND

SCALE	ZONING	C. L. W. FILE No.
AS SHOWN	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
AUG, 2016	37-1&2	1 OF 27



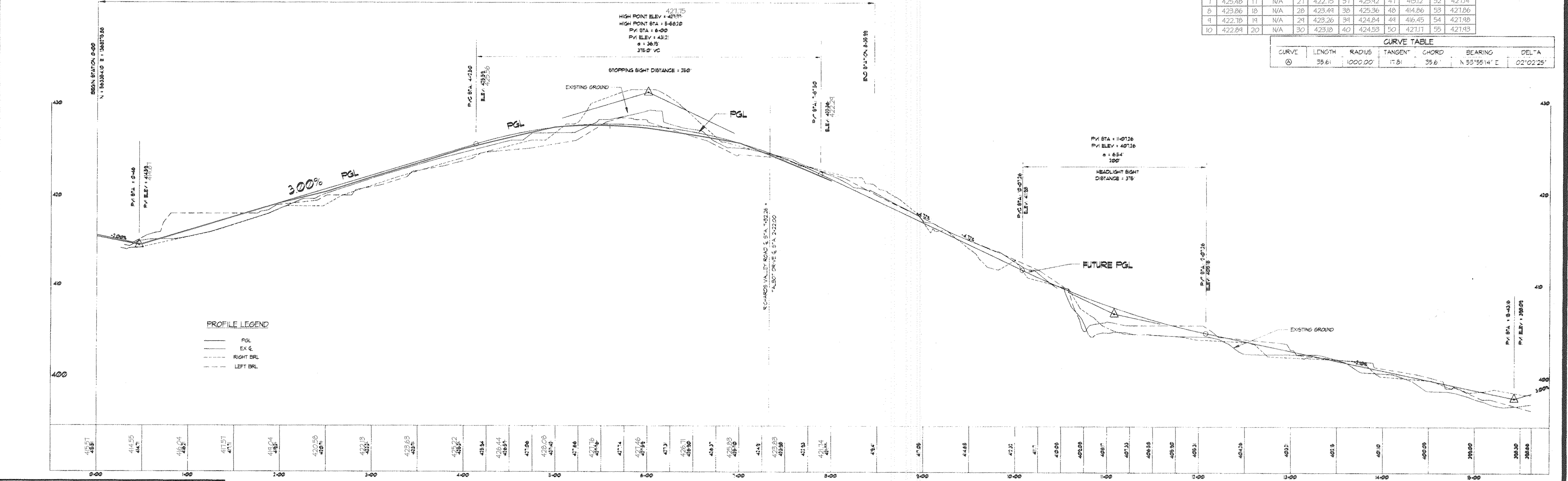
FLOW LINE ELEVATION TABLE

PT NO	STATION	OFFSET	ELEV	PT NO	STATION	OFFSET	ELEV
1	SEE SHEET 20		418.12	26	7+80.26	12.0' L	422.53
2	0+59.70	34.28' R	414.52	27	7+71.25	12.0' L	422.74
3	0+45.88	19.0' R	415.51	28	7+53.58	19.32' L	423.66
4	3+42.45	19.0' R	424.41	29	7+18.5	14' L	423.46
5	4+10.26	19.0' R	424.95	30	7+10.43	26.32' L	424.34
6	4+28.06	19.0' R	425.46	31	6+45.25	19' L	425.32
7	6+88.26	19.0' R	425.46	32	4+71.26	19' L	426.53
8	7+05.93	26.32' R	424.01				
9	2+66	19.0' R	422.68				
10	2+54	19.0' L	422.41				
11	7+58.58	19.32' R	423.28				
12	7+16.26	12.0' R	422.52				
13	7+80.26	12.0' R	422.33	33	4+23.07	19.0' L	425.32
14	7+84.26	16.0' R	422.03	34	4+07.16	19.0' L	425.05
15	8+36.26	16.0' R	418.58	35	3+42.45	19.0' L	424.41
16	8+34.19	17.46' R	418.54	36	3+23.25	19.0' L	422.34
17	8+41.26	21.0' R	419.44	37	3+02.42	27.41' L	421.88
18	8+41.26	29.0' R	419.73	38	2+43.27	47.92' L	422.54
19	8+61.26	29.0' R	418.79	39	2+60.84	48.40' L	421.72
20	8+41.26	29.0' L	418.73	40	2+44.84	34.32' L	420.53
21	8+41.26	21.0' L	419.44	41	2+32.85	24' L	419.33
22	8+41.26	21.0' L	419.44	42	0+40.41	24' L	415.05
23	8+34.78	17.46' L	419.54	43	0+55.69	43.02' L	414.67
24	8+36.26	16.0' L	418.58	44	SEE SHEET 20		416.33
25	7+84.26	16.0' L	422.03	45	4+45	5' R	423.21
				46	4+40	0' L	427.29
				47	4+45	5' L	423.21
				48	5+25	5' L	427.51
				49	5+30	0' L	427.69
				50	5+25	5' R	427.51

* STATION ALONG TALBOT DRIVE

MAJOR COLLECTOR DESIGN SPEED = 35 MPH
ACCESS STREET DESIGN SPEED = 25 MPH

NOTE: FOR HANDICAP RAMP DETAILS SEE SHEET 5
 FOR STREET TREE LOCATIONS SEE SHEET 22
 FOR STREET LIGHT LOCATIONS SEE SHEET 7



CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	CHORD	BEARING	DELTA
1	35.61	1000.00'	17.81	35.6'	N 53°55'14" E	02°02'25"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 Date: 5-29-07

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development
 Date: 6/1/07

RICHARDS VALLEY ROAD - PROFILE

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14483, Expiration Date: May 21, 2008.

7/9/16
 Date

STATE OF MARYLAND
 PROFESSIONAL ENGINEER

OWNER PARCEL 'A'
 SHIPLEY'S GRANT RETAIL, LLC
 1966 GREENSPRING DRIVE SUITE 508
 LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
 DEEP RUN PROPERTY MANAGEMENT, INC.
 191 MILLER HOLLOW LANE
 LAKE CITY, TENNESSEE 37769

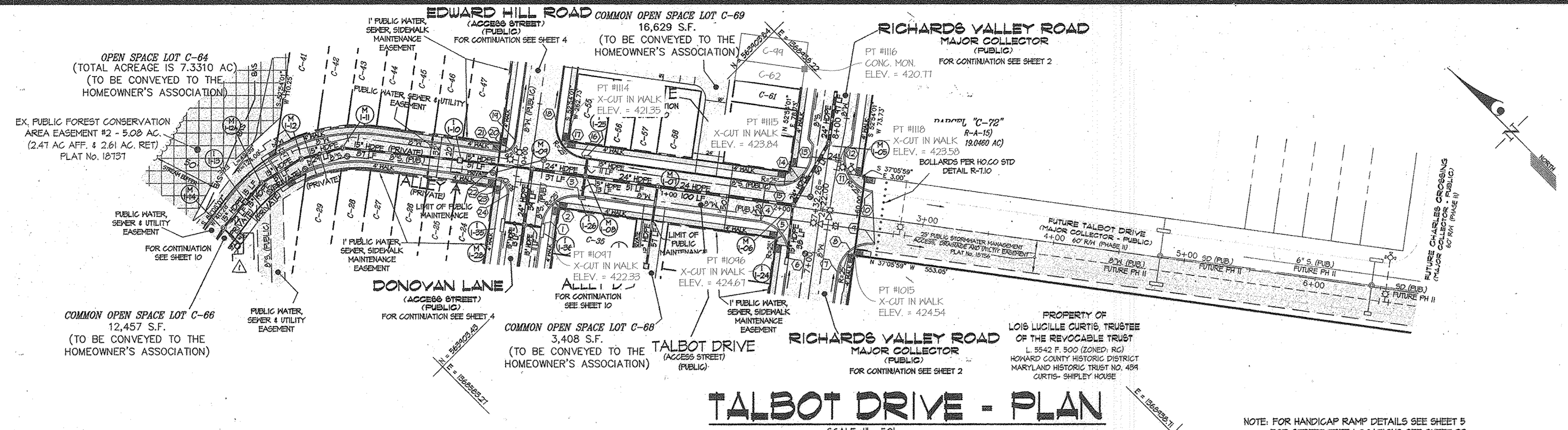
GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE SUITE 250 BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

PREPARED FOR AND OWNER PARCEL 'C':
 BA WATERLOO TOWNHOMES, LLC
 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SLIDELL
 301-623-1525

RICHARDS VALLEY ROAD PLAN AND PROFILE SEE ASBUILT SET 08/20/2016
SHIPLEY'S GRANT PHASE I
 LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65
 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
 A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
 ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISION	BY	APPR.
06-28-10	Remove H&M Ramp @ Richards Valley Road Sta. 9+00 Right	gt	
12-22-14	Remove entrance to Buildable Parcel 'B' (Chapel), continue curb and sidewalk, added 1 street tree	gt	
12-19-11	GWMA Res. recharge facility removed, 1.81B & M-82A added	Woj	

SCALE: AS SHOWN
 ZONING: R-A-15 B-1
 G. L. W. FILE NO.: 05030
 DATE: AUG. 2016
 TAX MAP - GRID: 37-1&2
 SHEET: 2 OF 27
 May, 2007



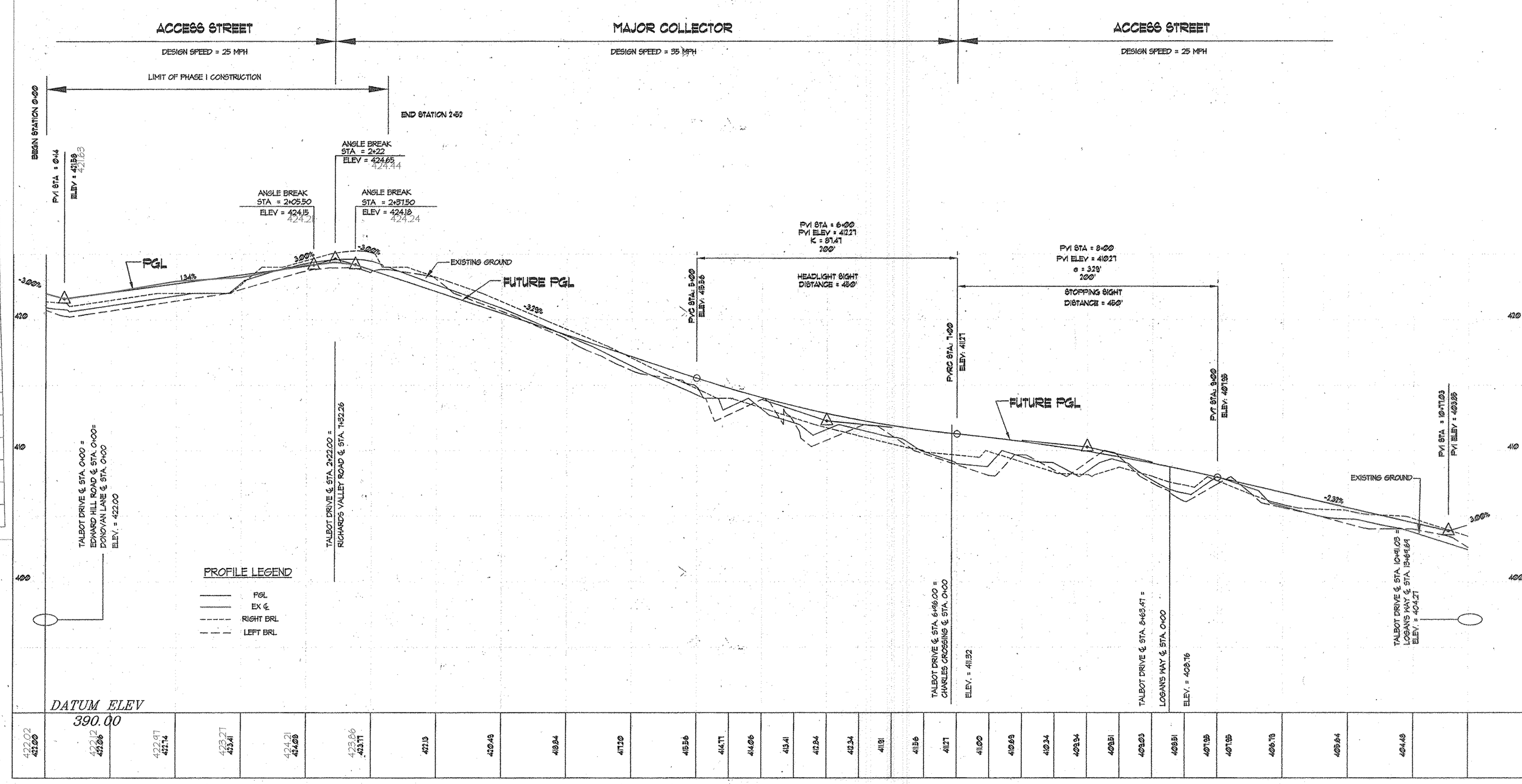
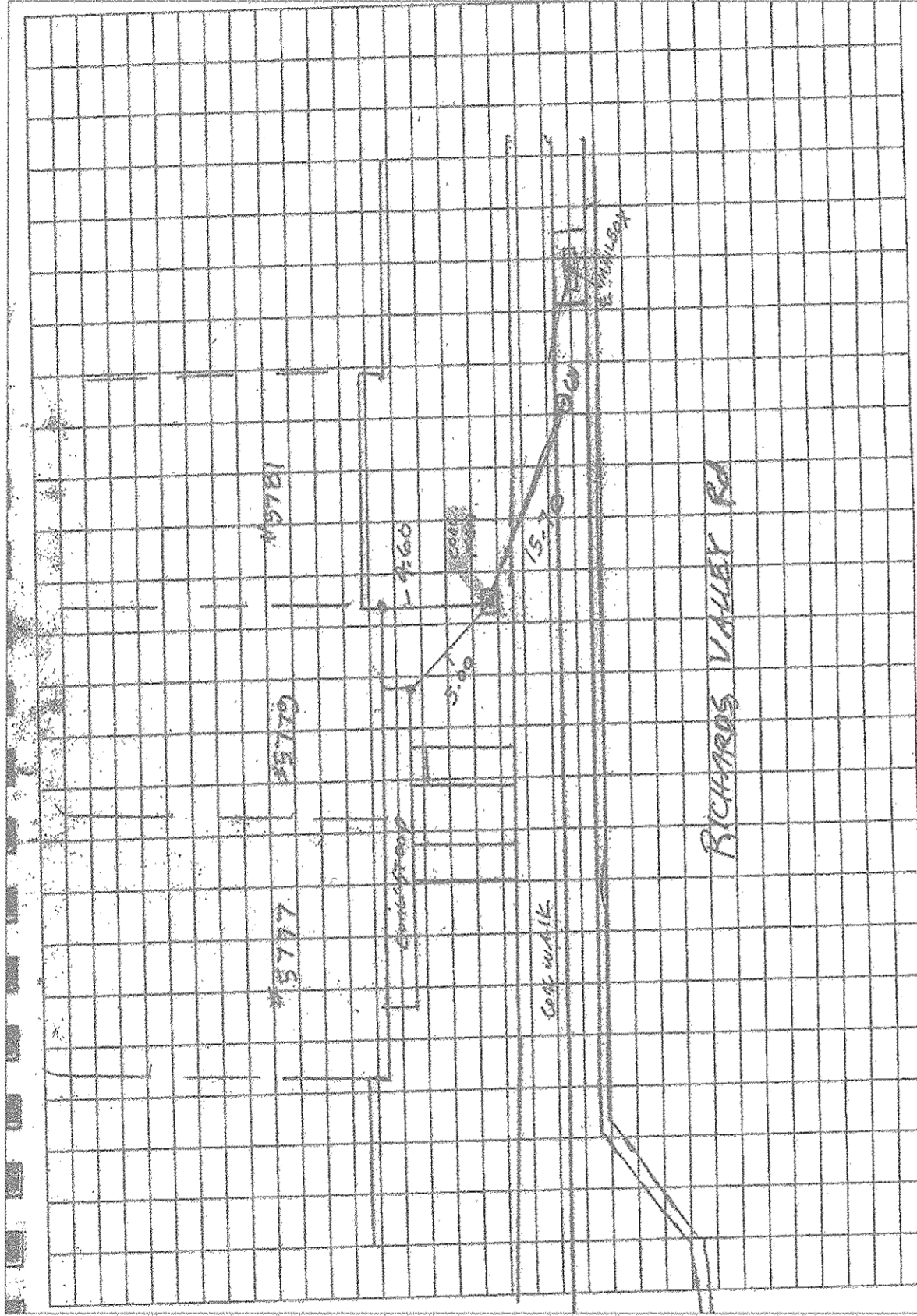
PT. NO.	STATION	OFFSET	ELEV.	ASBUILT ELEVATION
(1)*	0+39	14.0' L	422.20	421.91
(2)*	0+21.52	21.52' R	421.70	422.01
(3)	0+39	14.0' R	421.50	421.40
(4)	1+75	14.0' R	423.36	423.04
(5)	1+45.68	21.52' R	424.54	424.52
(6)**	6+43.25	19.0' L	425.32	425.18
(7)**	6+43.26	19.0' R	425.46	425.34
(8)	2+48.32	26.32' R	424.07	424.44
(9)	2+66	14.0' R	422.68	422.64
(10)	2+34	14.0' L	422.91	422.80
(11)	2+41.32	26.32' L	423.28	423.25
(12)**	7+16.26	12.0' R	422.52	422.48
(13)**	7+11.25	12.0' L	422.74	422.66
(14)	2+02.68	21.52' L	423.66	423.51
(15)	1+85	14.0' L	423.46	423.11
(16)	0+39	14.0' L	421.50	421.35
(17)**	0+21.52	21.52' L	420.45	420.16
(18)**	0+39	14.0' R	420.41	420.63
(19)**	0+20	14.0' L	420.43	421.20
(20)**	0+12.43	16.43' L	421.15	421.52
(21)**	0+10	24.0' R	421.40	421.90
(22)*	0+10	24.0' L	422.00	422.06
(23)*	0+12.43	16.43' R	421.80	421.91
(24)*	0+20	14.0' R	421.90	422.05

* STATION ALONG DONOVAN LANE &
 ** STATION ALONG RICHARDS VALLEY ROAD &
 *** STATION ALONG EDWARD HILL ROAD &

TALBOT DRIVE - PLAN

SCALE: 1" = 50'

NOTE: FOR HANDICAP RAMP DETAILS SEE SHEET B
 FOR STREET TREE LOCATIONS SEE SHEET 22
 FOR STREET LIGHT LOCATIONS SEE SHEET 7



TALBOT DRIVE - PROFILE

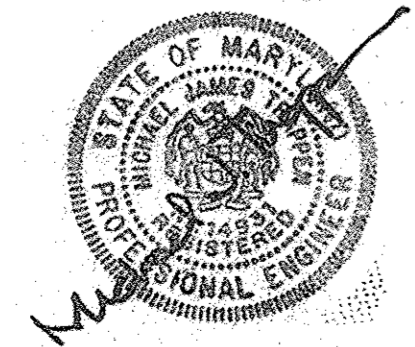
SCALE: (H) 1" = 50'
(V) 1" = 5'

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14191, Expiration Date: May 21, 2018.
 Date: 9/19/16
 [Professional Engineer Seal]

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 5-29-07
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 [Signature] 6/1/07
 Chief, Division of Land Development

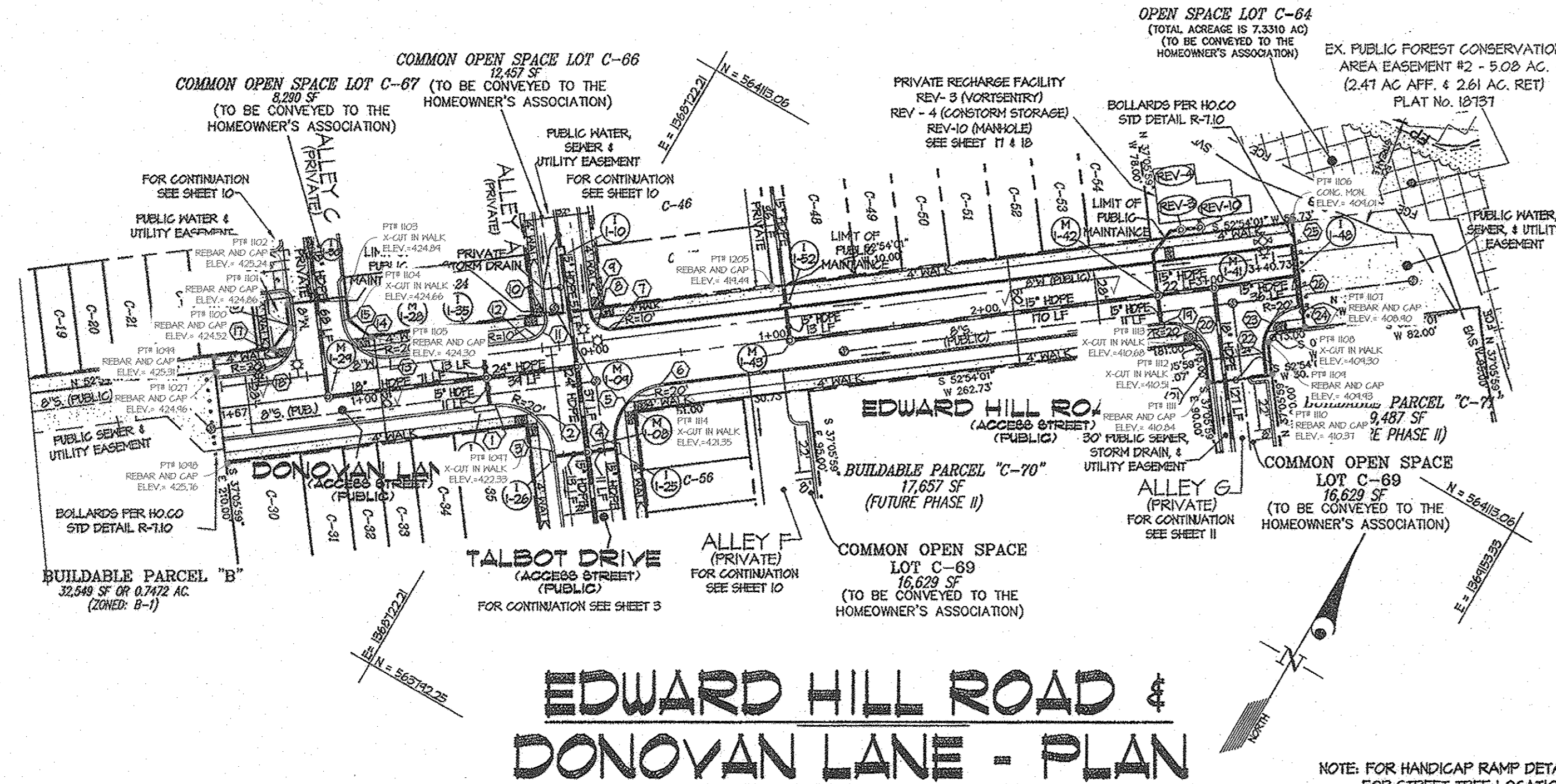
[Signature] 5/10/07
 Chief, Development Engineering Division



OWNER PARCEL 'A'
 SHIPLEY'S GRANT RETAIL, LLC
 1966 GREENSPRING DRIVE SUITE 508
 LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
 DEEP RUN PROPERTY MANAGEMENT, INC.
 191 MILLER HOLLOW LANE
 LAKE CITY, TENNESSEE 37769

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: 410-883-1820 DC/VA: 301-988-2524 FAX: 301-421-4186	PREPARED FOR AND OWNER PARCEL 'C': BA WATERLOO TOWNHOMES, LLC c/o BOZZUTO HOMES, INC. 7850 WALKER DRIVE SUITE 400 GREENBELT, MARYLAND 20770 ATTN: DUNCAN SLIDELL 301-623-1525	TALBOT DRIVE PLAN AND PROFILE SHIPLEY'S GRANT PHASE I COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', 'C', '70, C-71 and C-72 A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18755 - 18758 HOWARD COUNTY, MARYLAND	SCALE AS SHOWN	ZONING R-A-15 B-1	G. L. W. FILE NO. 05030
			DATE AUG. 2016 May, 2007	TAX MAP - GRID 37-1&2	SHEET 3 OF 27



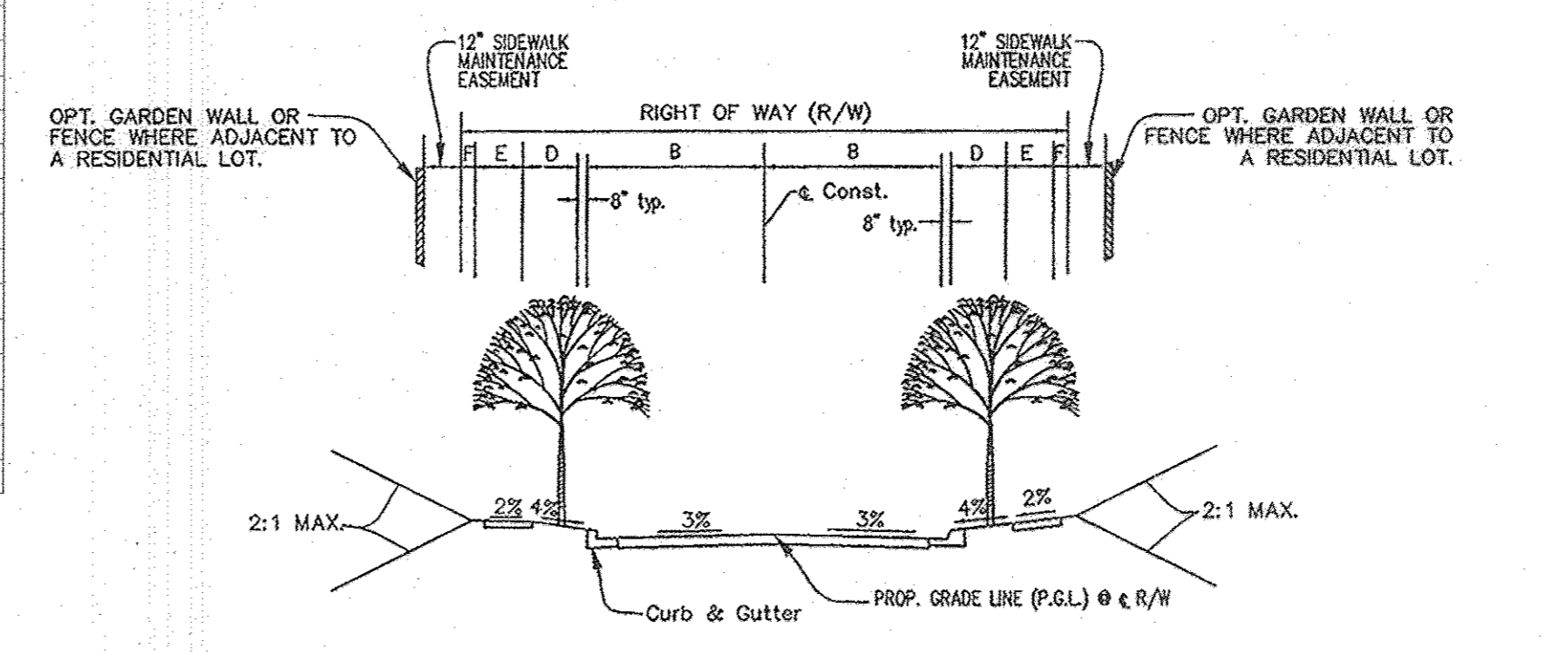
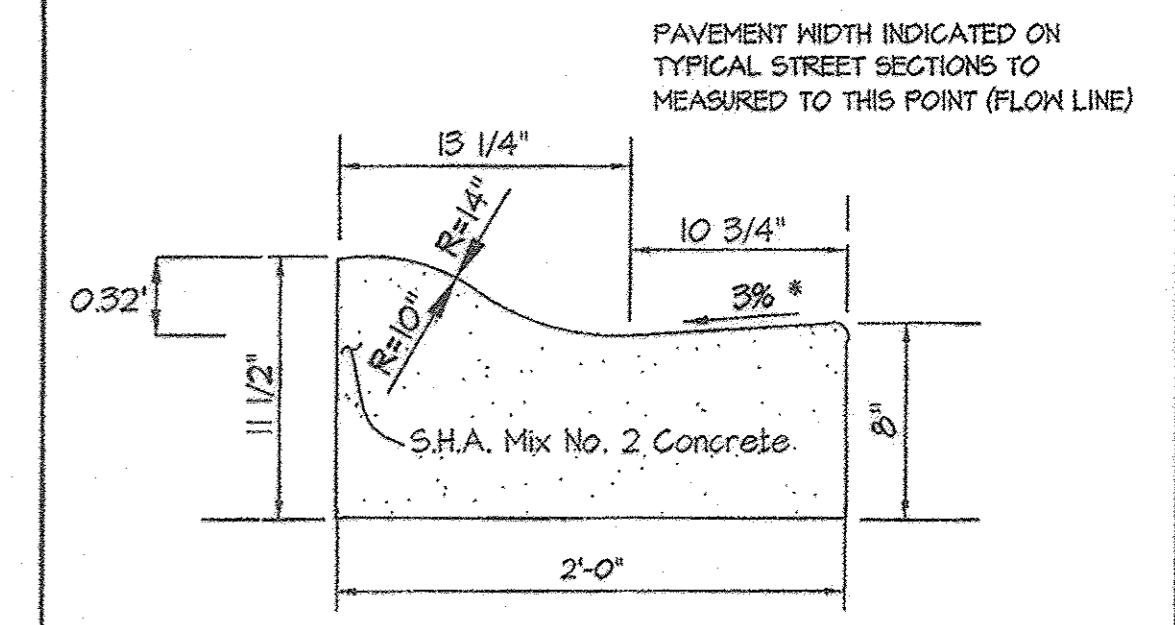
FLOW LINE ELEVATION TABLE

PT. NO.	STATION	OFFSET	ROAD	ELEV.	ASBESTOS ELEV.
(1)	0+39.1	14' L	DL	422.20	422.24
(2)	0+21.32	21.32' L	DL	421.70	422.01
(3)	0+39.1	14' R	TD	421.50	421.51
(4)	0+39.1	14' L	TD	421.44	421.51
(5)	0+21.32	21.32' R	EHR	420.95	421.16
(6)	0+39.1	14' R	EHR	420.41	420.95
(7)	0+20	14' L	EHR	420.98	421.19
(8)	0+12.43	16.43' R	DL	421.15	421.22
(9)	0+10	24.0' L	EHR	421.40	421.61
(10)	0+10	24.0' R	DL	422.00	422.06
(11)	0+12.43	16.43' R	DL	421.80	421.91
(12)	0+20	14' R	DL	421.90	422.04
(13)	0+85	14' R	DL	422.42	422.52
(14)	0+99.14	14.06' R	DL	423.40	423.50
(15)	1+05	34.0' R	DL	423.40	423.48
(16)	1+27	34.0' R	DL	424.20	424.30
(17)	1+32.26	14.06' R	DL	423.40	423.48
(18)	1+47	14' R	DL	423.40	423.48
(19)	2+15.73	14' R	EHR	410.74	410.84
(20)	2+42.27	14.06' R	EHR	410.00	410.05
(21)	2+45.73	34.0' R	EHR	410.50	410.51
(22)	3+14.73	34.0' R	EHR	409.65	409.76
(23)	3+25.24	20.22' R	EHR	404.10	404.15
(24)	3+38.73	14' R	EHR	408.50	408.51
(25)	3+38.73	14' L	EHR	408.50	408.51
(26)	3+38.73	CL	EHR	408.06	408.03

DL = DONOVAN LANE
TD = TALBOT DRIVE
EHR = EDWARD HILL ROAD

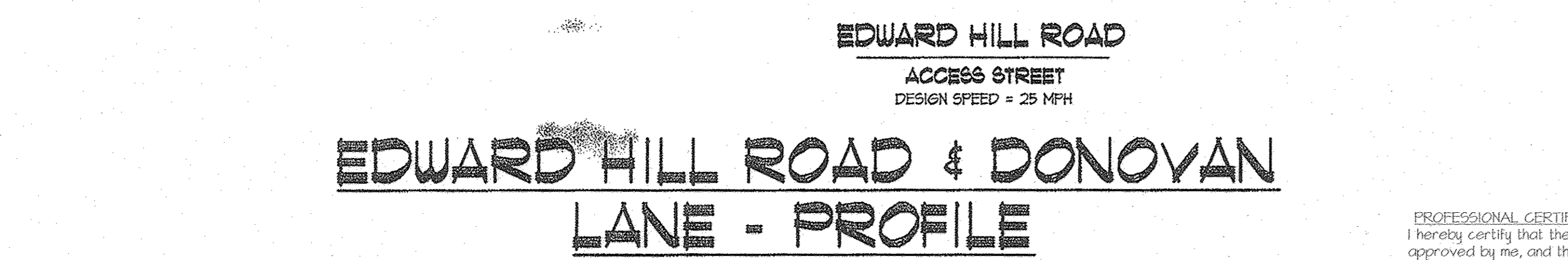
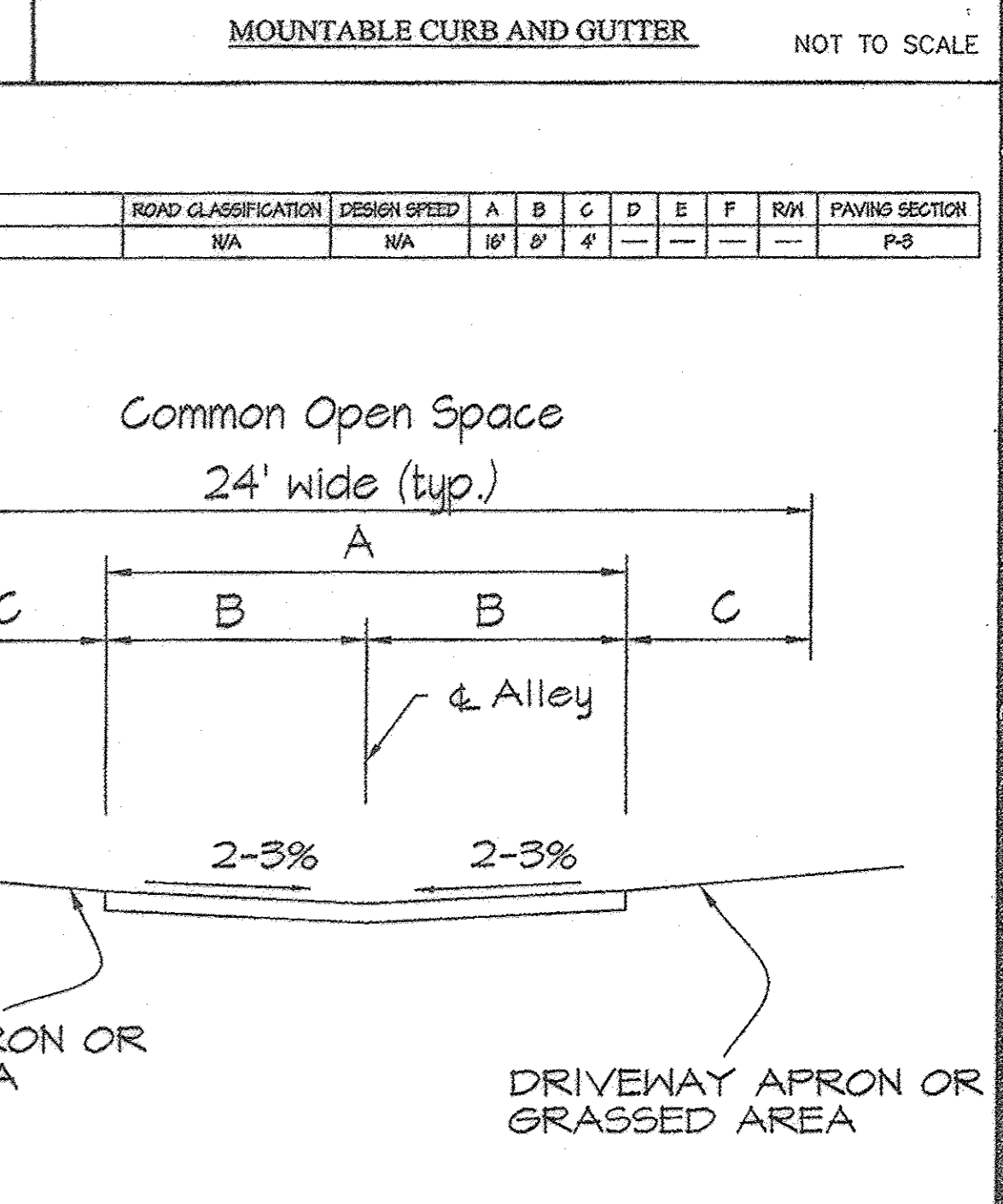
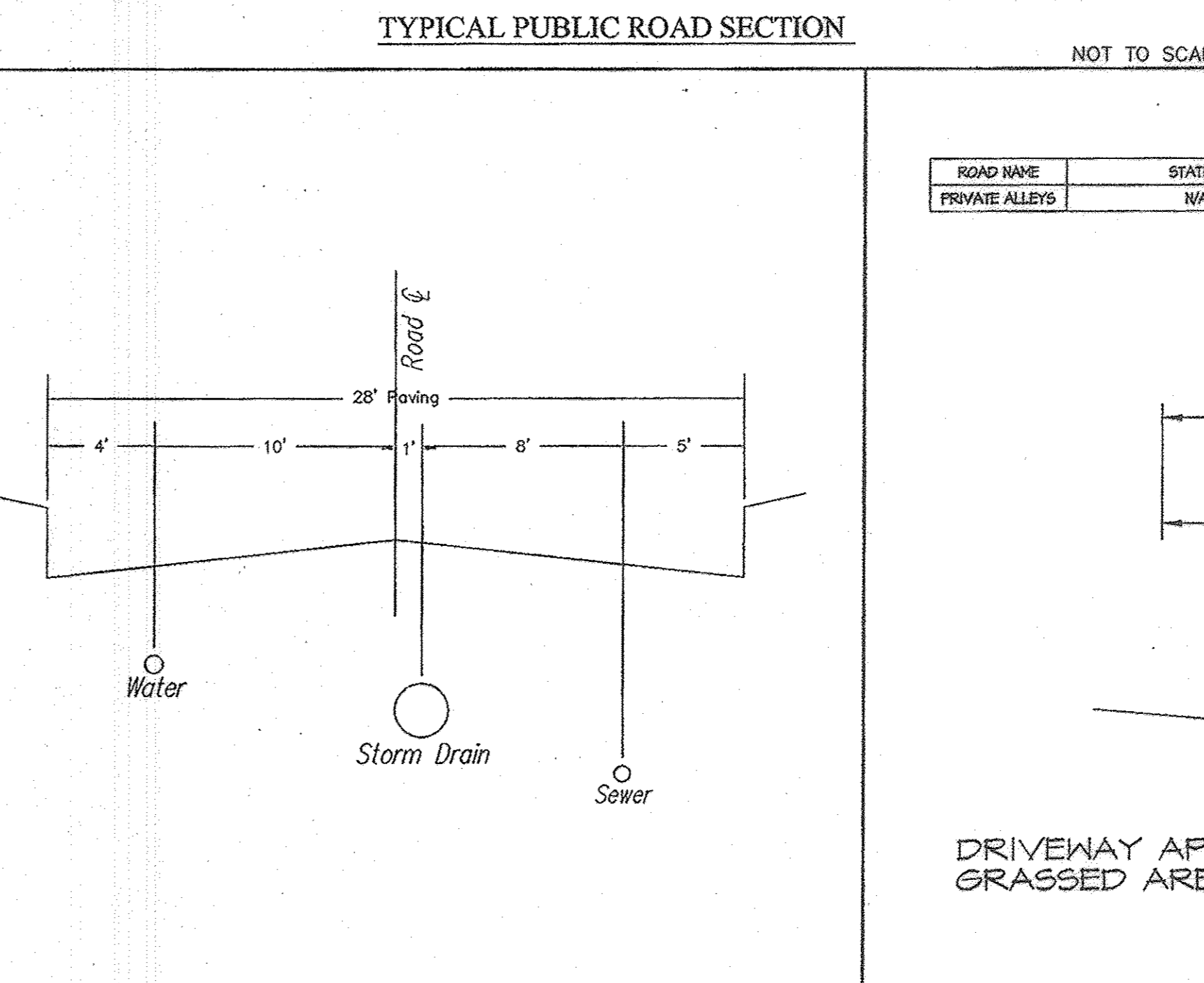
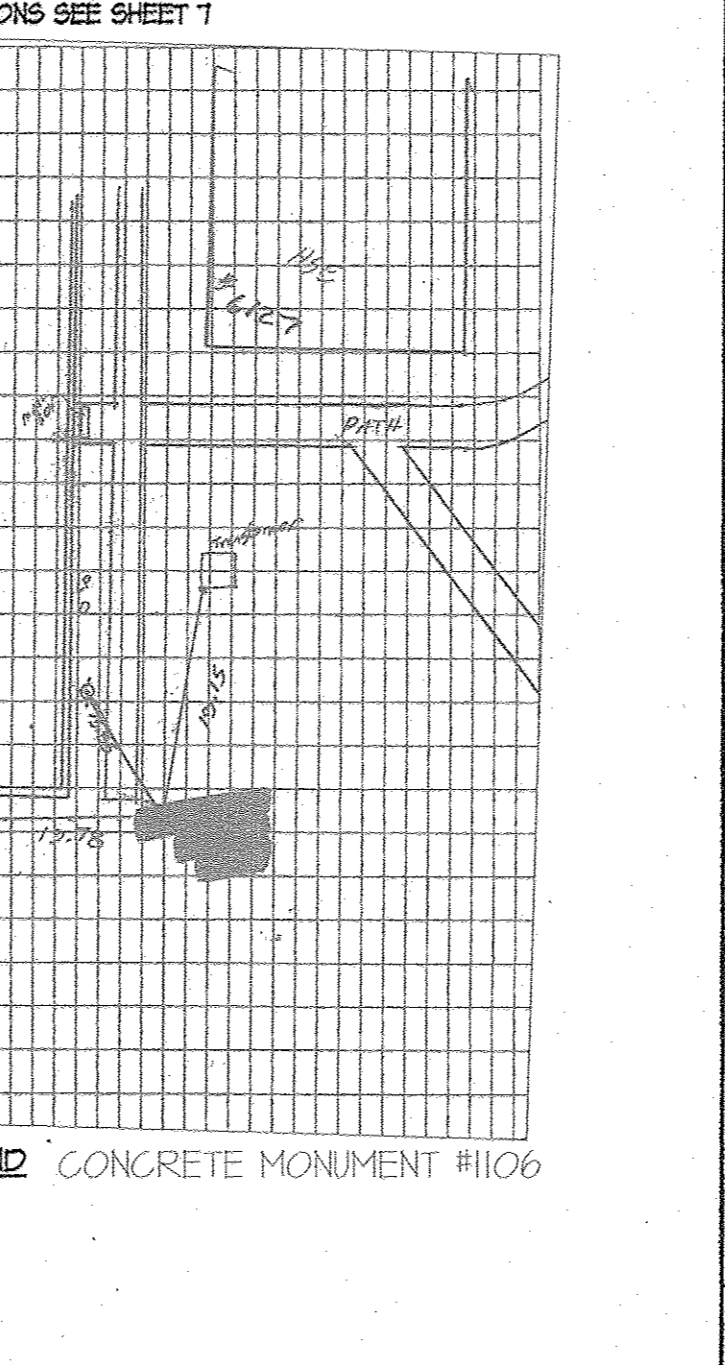
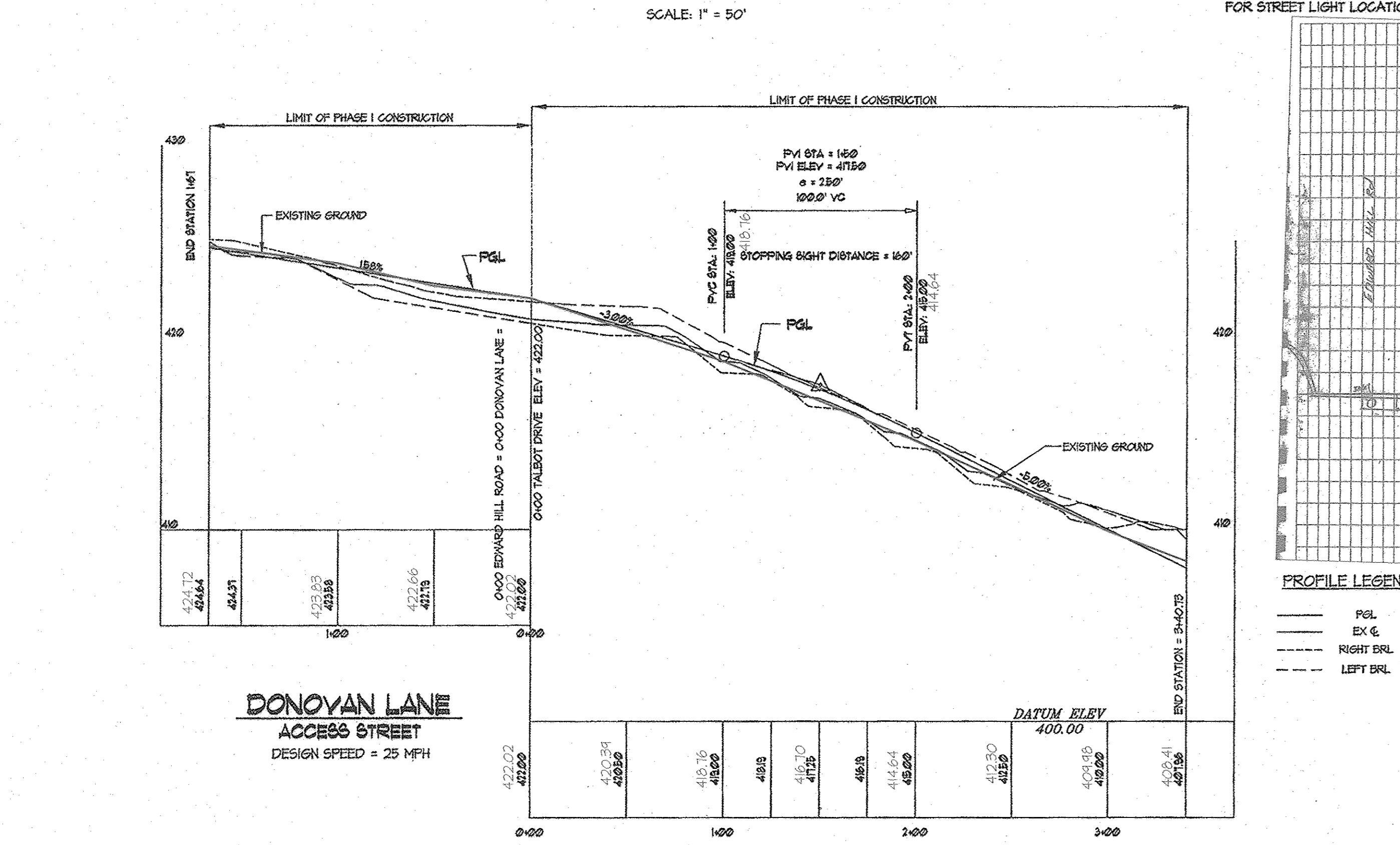
TYPICAL PUBLIC ROAD SECTION ROAD INFORMATION

ROAD NAME	STATION	ROAD CLASSIFICATION	DESIGN SPEED	A	B	C	D	E	F	R/W	PAVING SECTION
RICHARDS VALLEY ROAD	0+00 TO 7+23.26	MAJOR COLLECTOR	40 MPH	18"	2.33'	4'	1'	180"			P-5
RICHARDS VALLEY ROAD	7+23.26 TO 8+33.99	ACCESS STREET	25 MPH	14"	6'	4'	4'	150"			P-3
EDWARD HILL ROAD	0+00 TO 3+42.73	ACCESS STREET	25 MPH	14"	6'	4'	4'	150"			P-3
TALBOT DRIVE	0+00 TO 2+22	ACCESS STREET	25 MPH	14"	6'	4'	4'	150"			P-3
DONOVAN LANE	2+22 TO 2+52	MAJOR COLLECTOR	40 MPH	18"	5.33'	4'	1'	180"			P-5
DONOVAN LANE	0+00 TO 1+67	ACCESS STREET	25 MPH	14"	6'	4'	4'	150"			P-3



NOTES:

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William F. ... 5-29-07
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Candy ... 6/1/07
Chief, Division of Land Development

... 5/31/07
Chief, Development Engineering Division

OWNER PARCEL 'A'
SHIPLEY'S GRANT RETAIL, LLC
1866 GREENSPRING DRIVE SUITE 508
LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
DEEP RUN PROPERTY MANAGEMENT, INC.
191 MILLER HOLLOW LANE
LAKE CITY, TENNESSEE 37769

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14431, Expiration Date: May 21, 2016.

7/9/16
Date

STATE OF MARYLAND
PROFESSIONAL ENGINEER

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3900 NATIONAL DRIVE - SUITE 250 - BIRTONSVILLE OFFICE PARK
BIRTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-830-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

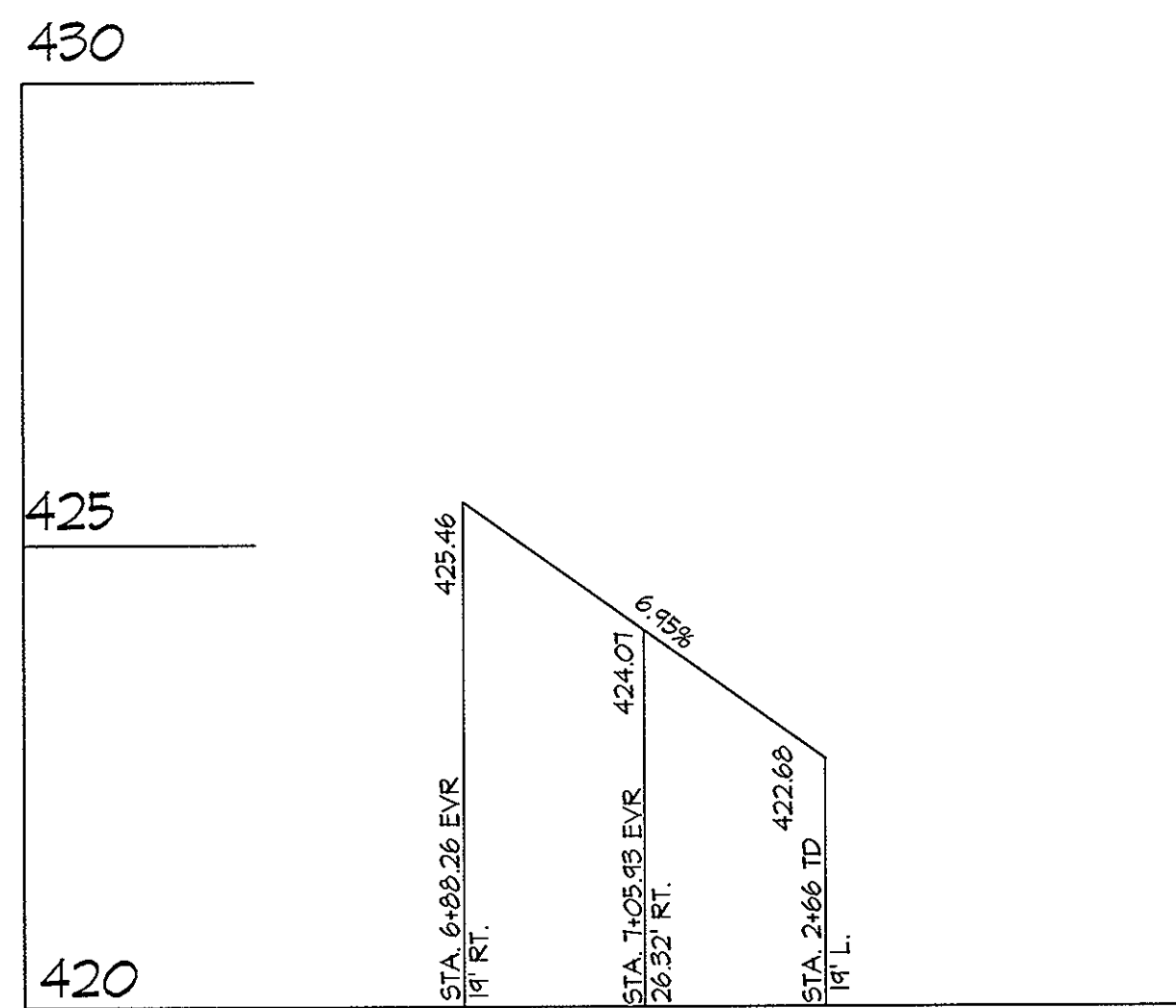
NO.	DATE	REVISION	BY	APPR.

PREPARED FOR AND OWNER PARCEL 'C':
BA WATERLOO TOWNHOMES, LLC
c/o BOZZUTO HOMES, INC.
7850 WALKER DRIVE SUITE 400
GREENBELT, MARYLAND 20770
ATTN: DUNCAN SLIDELL
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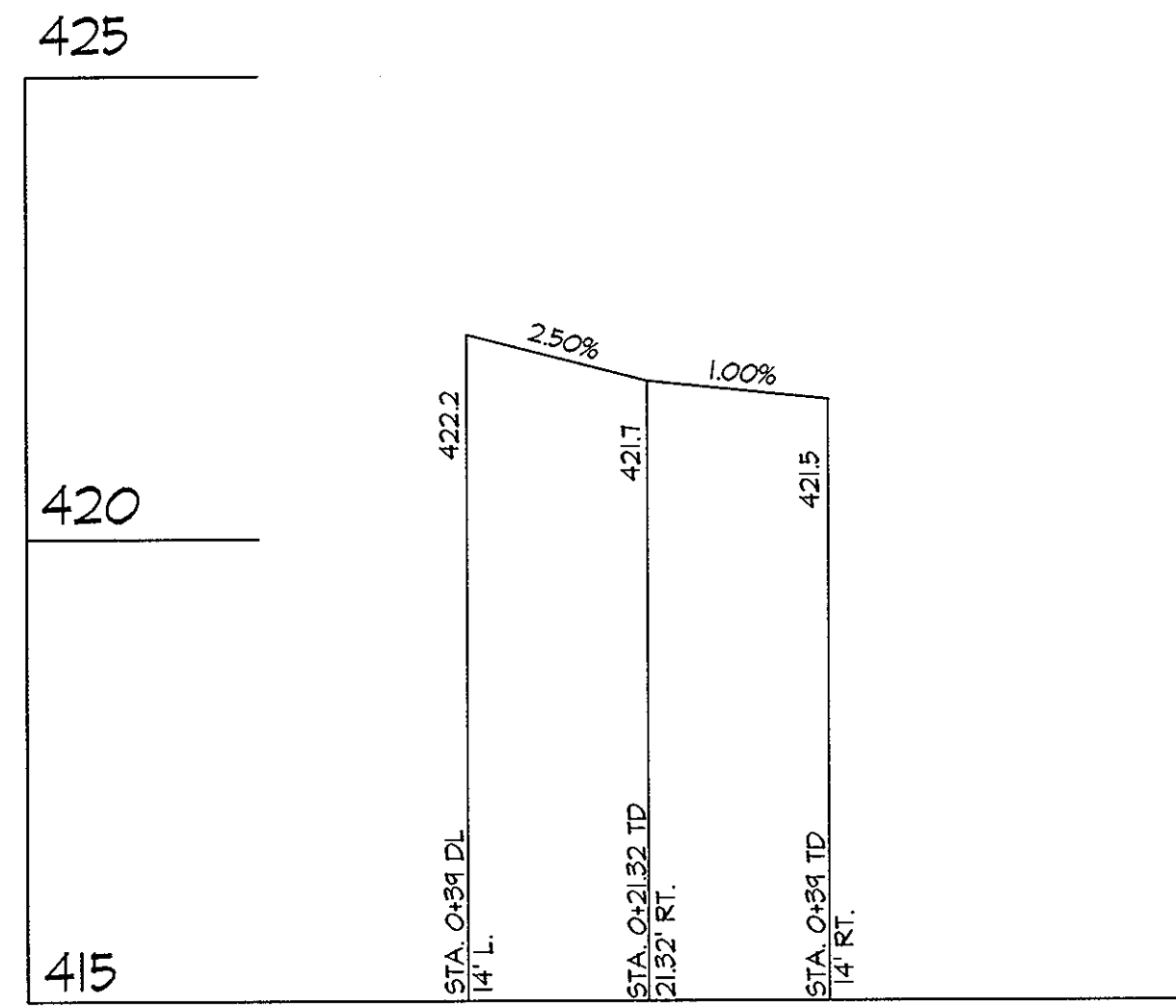
EDWARD HILL ROAD & DONOVAN LANE PLAN PROFILE & ROAD DETAILS

SHIPLEY'S GRANT
PHASE I
LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65
COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', 'C-70, C-71 and C-72
A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
ELECTION DISTRICT No. 1

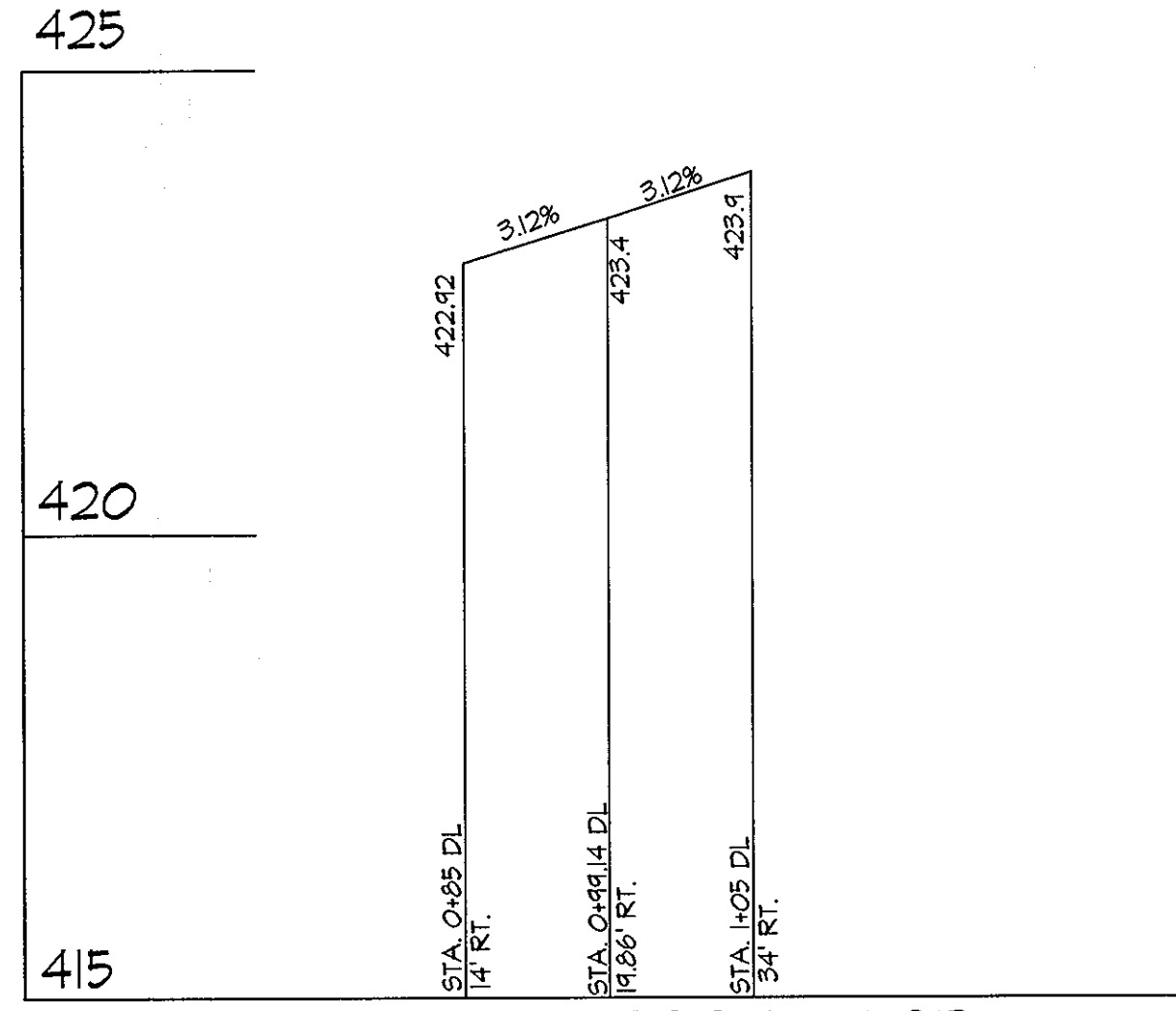
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
JAN. 2015 May, 2007	37-1&2	4 OF 27



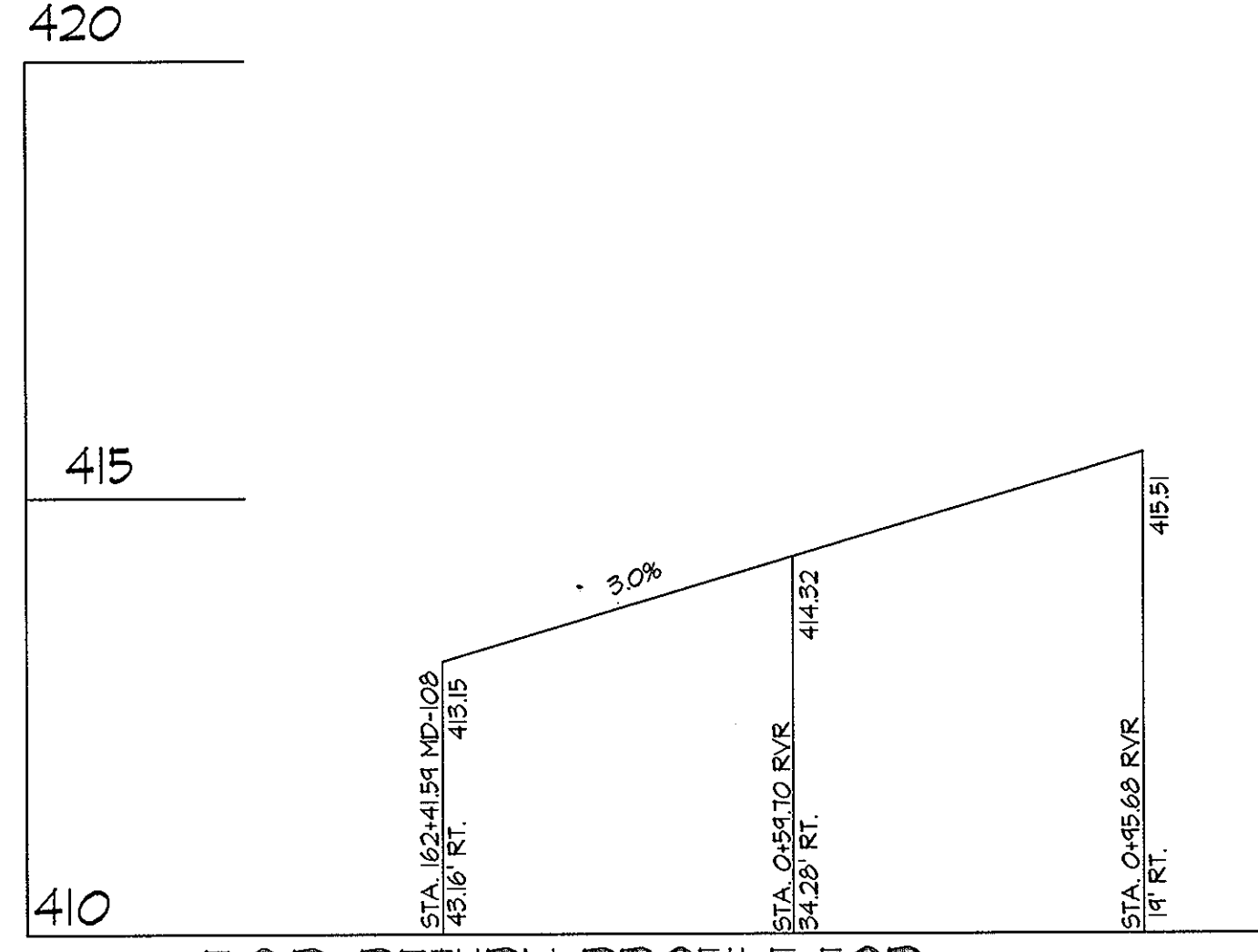
E.O.P. RETURN PROFILE FOR RICHARDS VALLEY ROAD AND TALBOT DRIVE



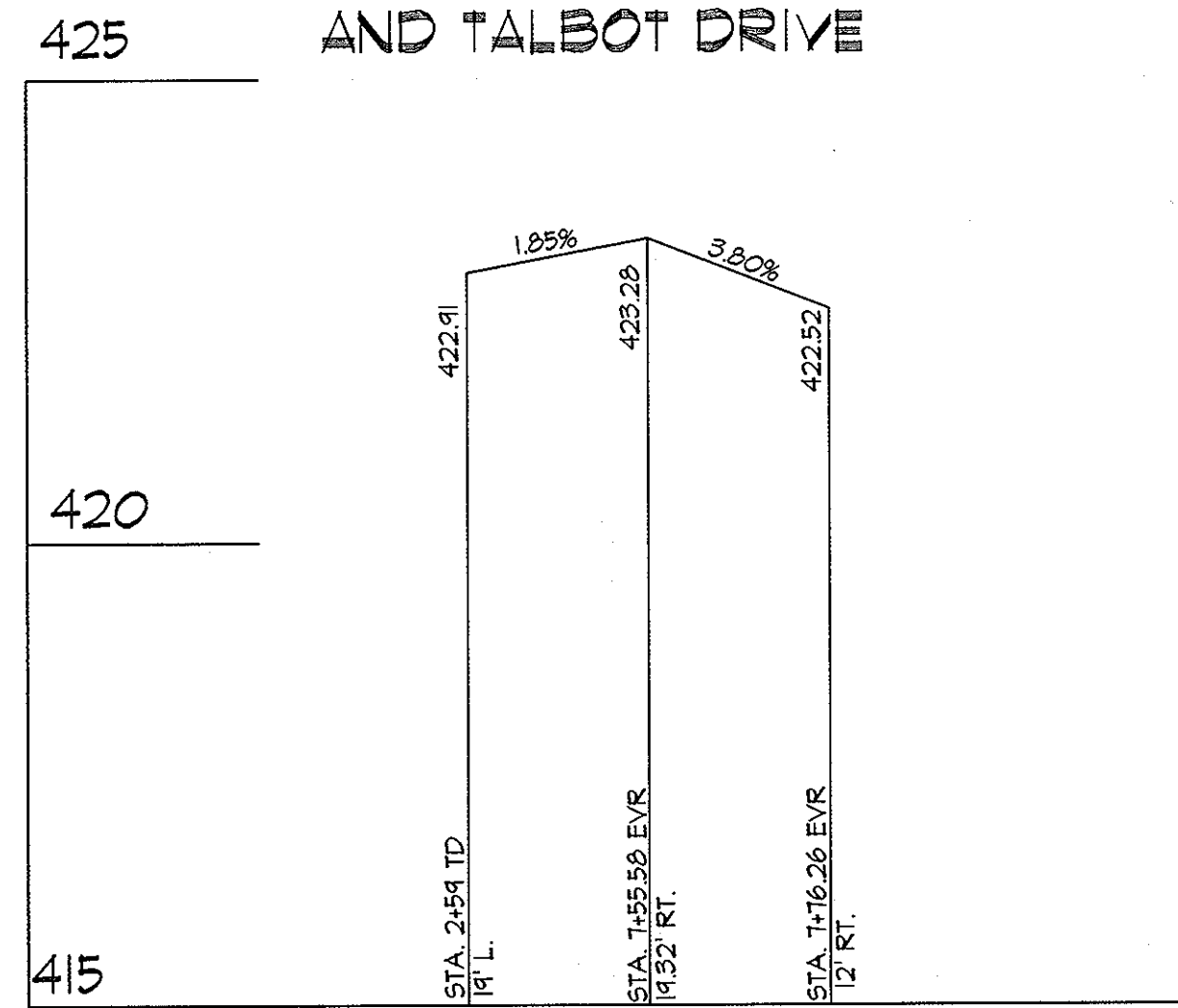
E.O.P. RETURN PROFILE FOR DONOVAN LANE AND TALBOT DRIVE



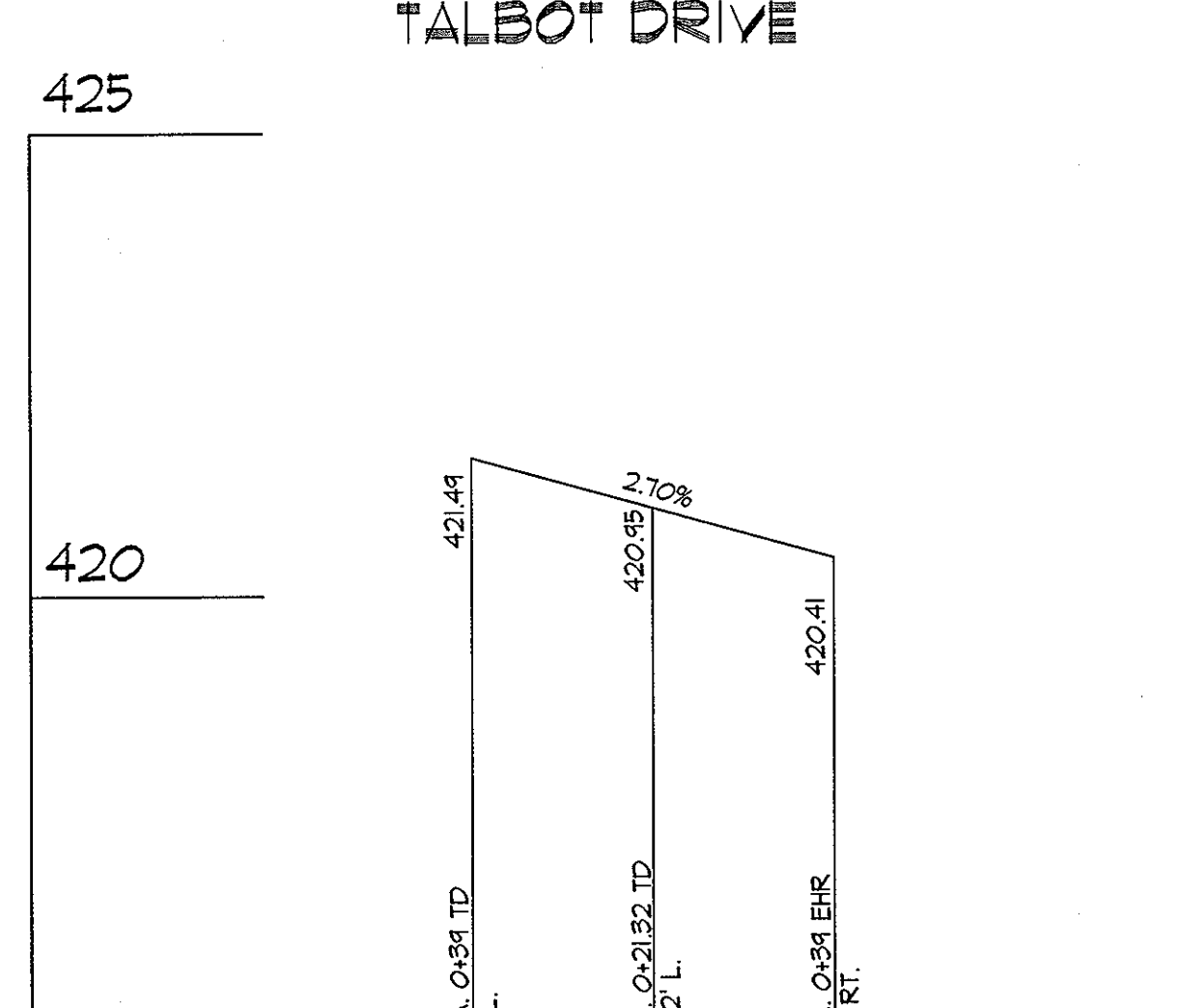
E.O.P. RETURN PROFILE FOR DONOVAN LANE AND ALLEY C



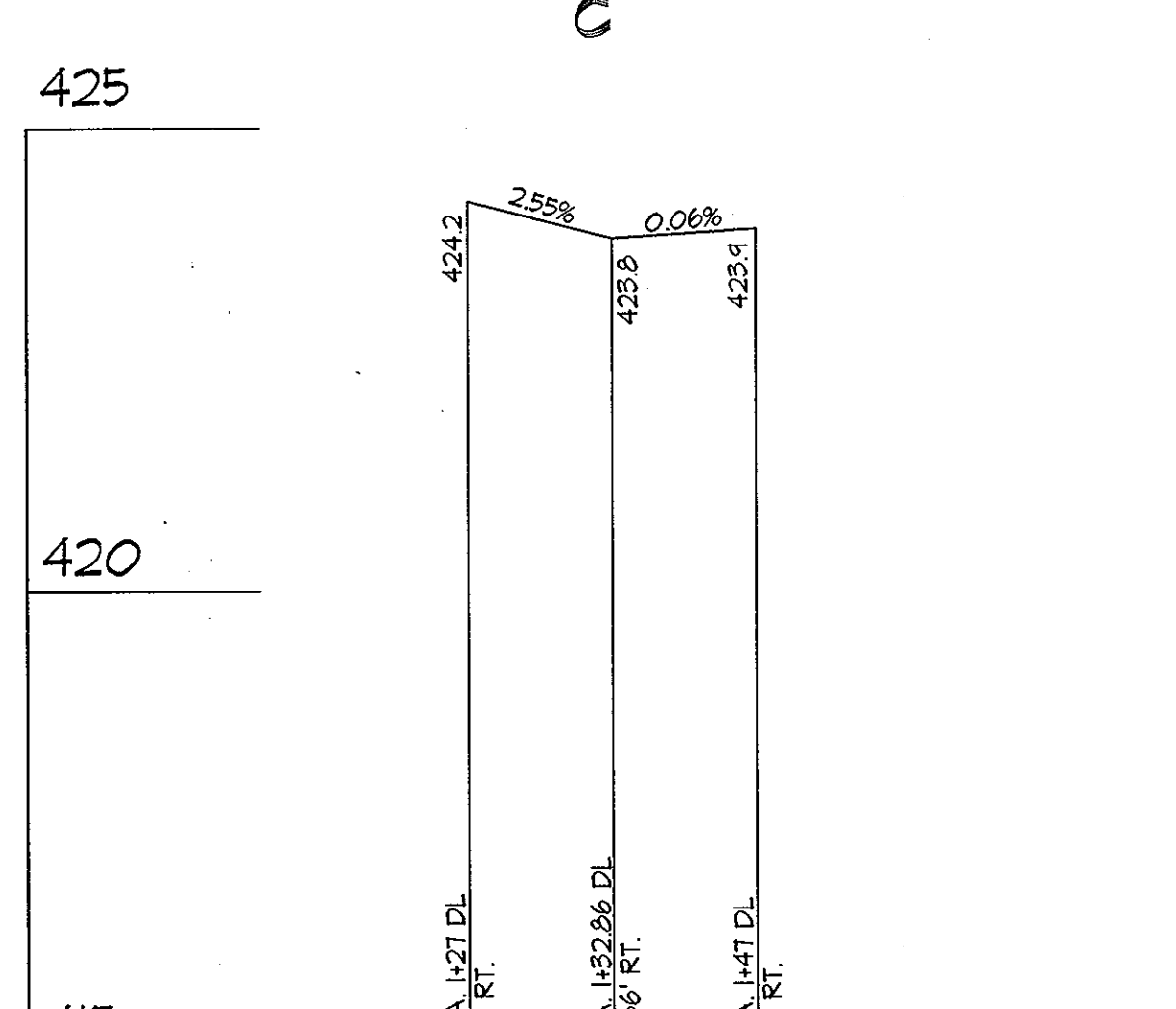
E.O.P. RETURN PROFILE FOR MD-108 AND RICHARDS VALLEY ROAD



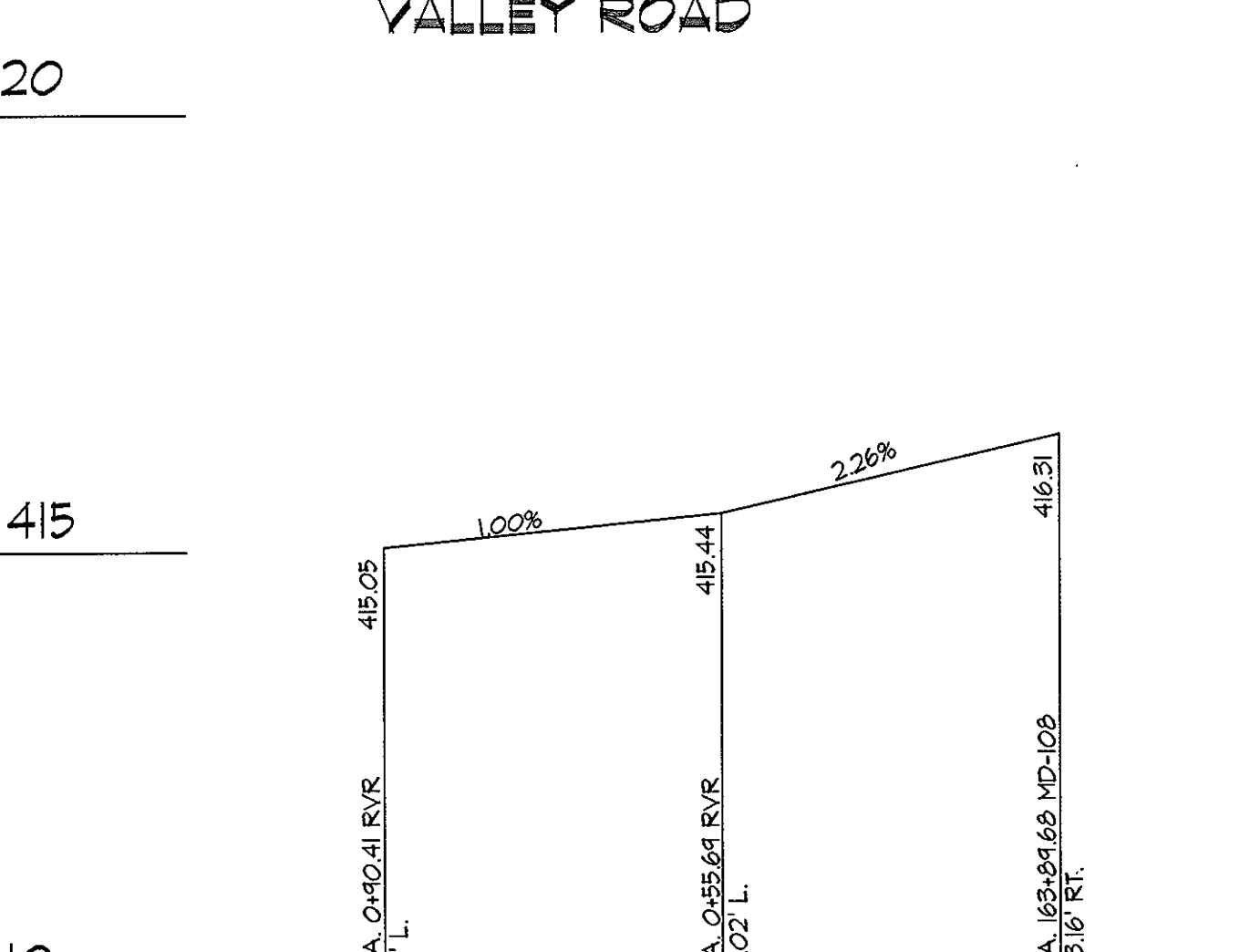
E.O.P. RETURN PROFILE FOR TALBOT DRIVE AND RICHARDS VALLEY ROAD



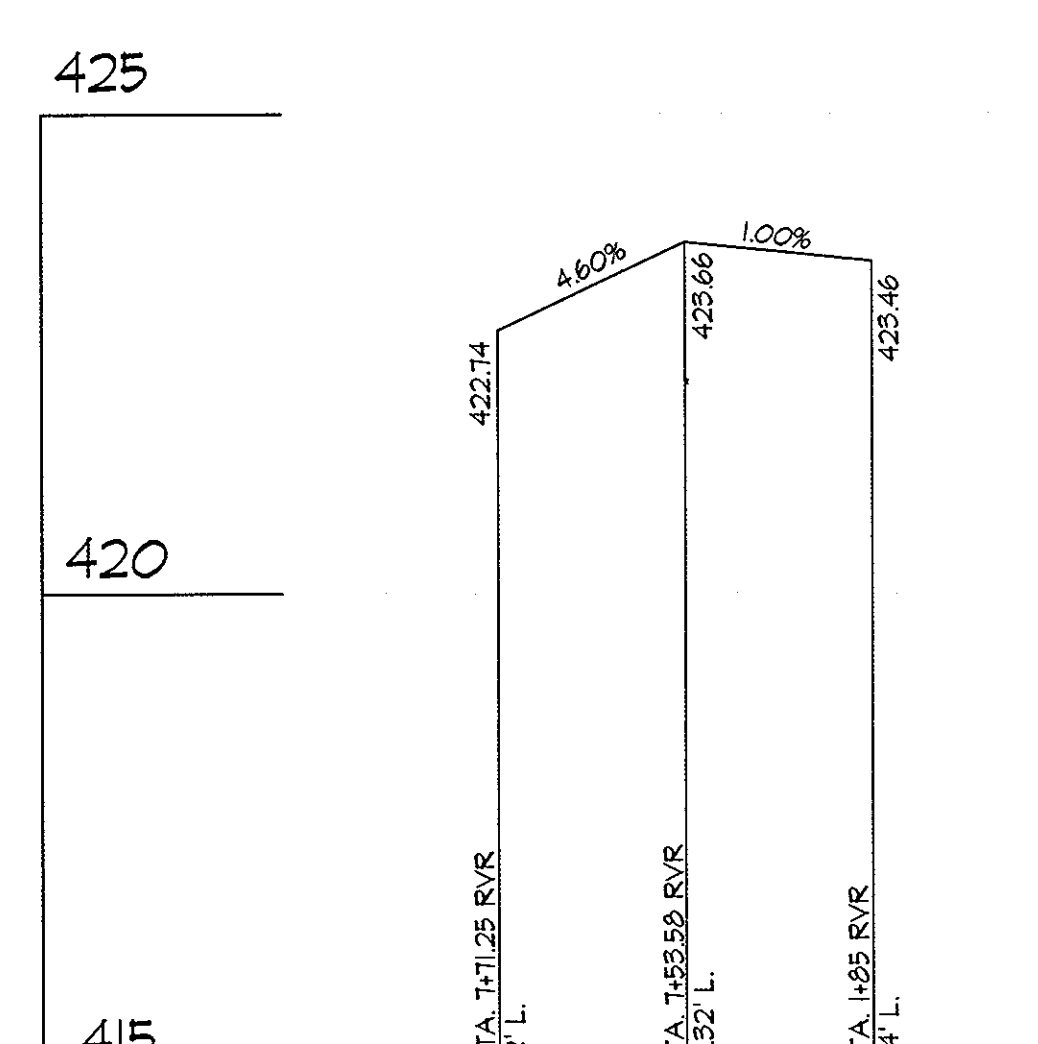
E.O.P. RETURN PROFILE FOR EDWARD HILL ROAD AND TALBOT DRIVE



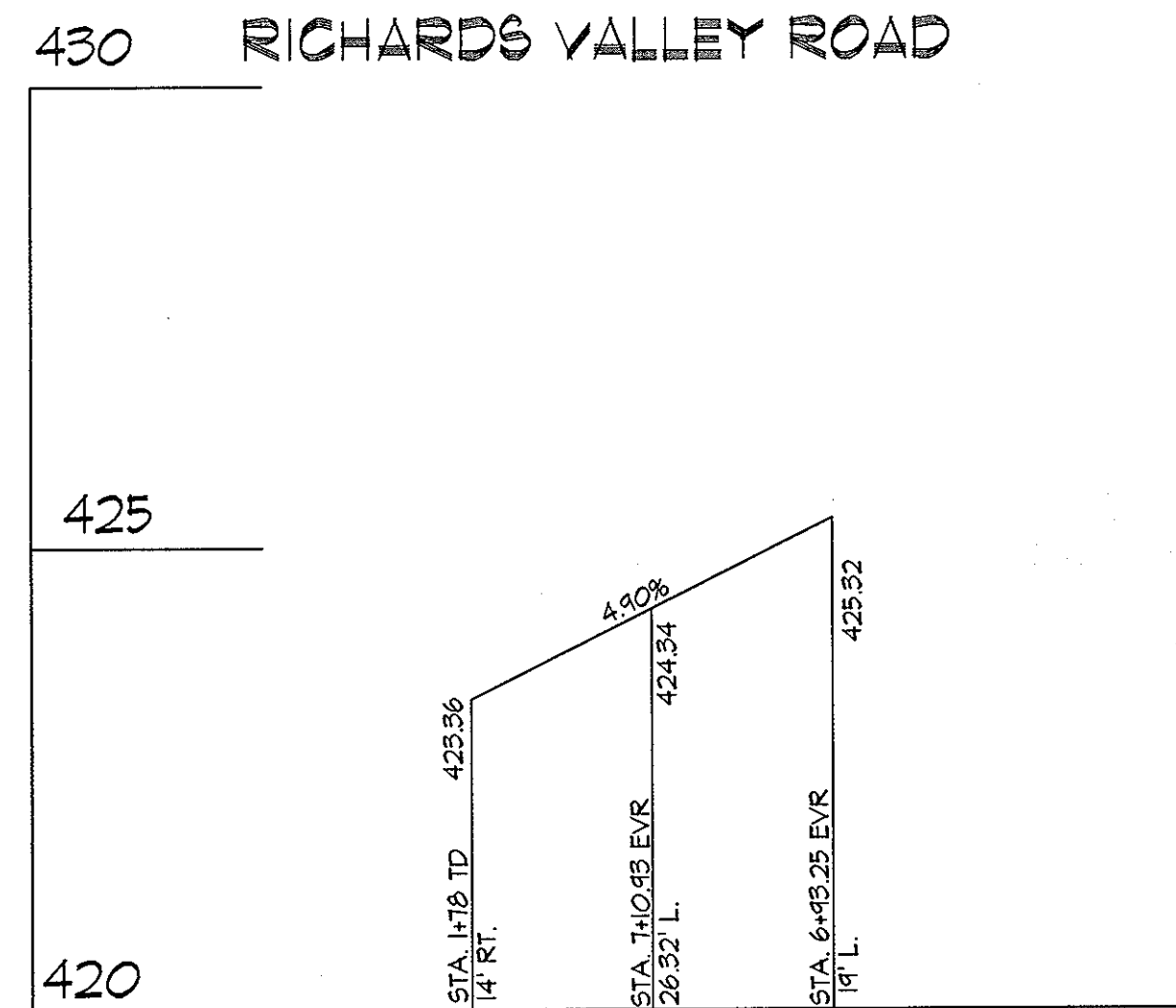
E.O.P. RETURN PROFILE FOR ALLEY C AND DONOVAN LANE



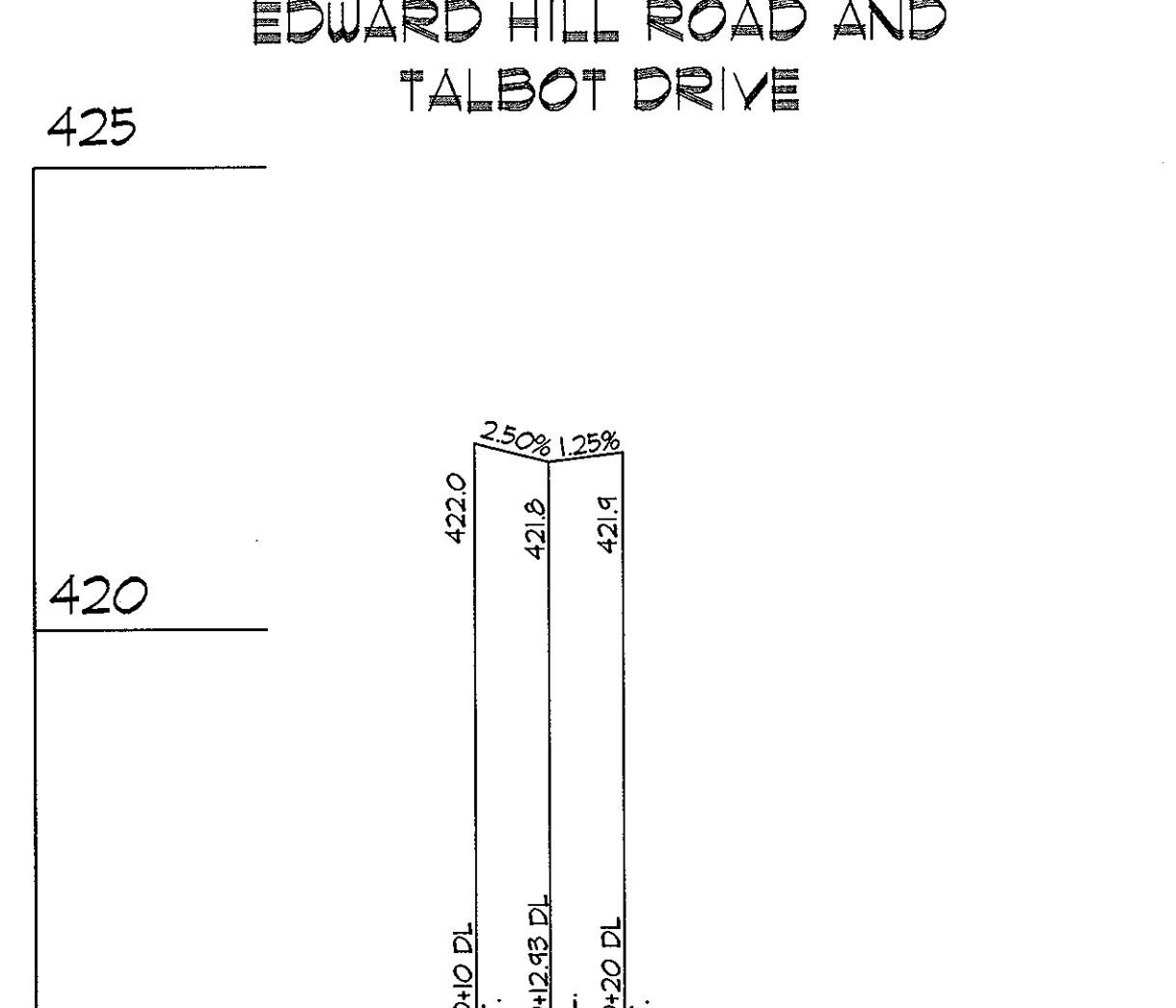
E.O.P. RETURN PROFILE FOR RICHARDS VALLEY ROAD AND MD-108



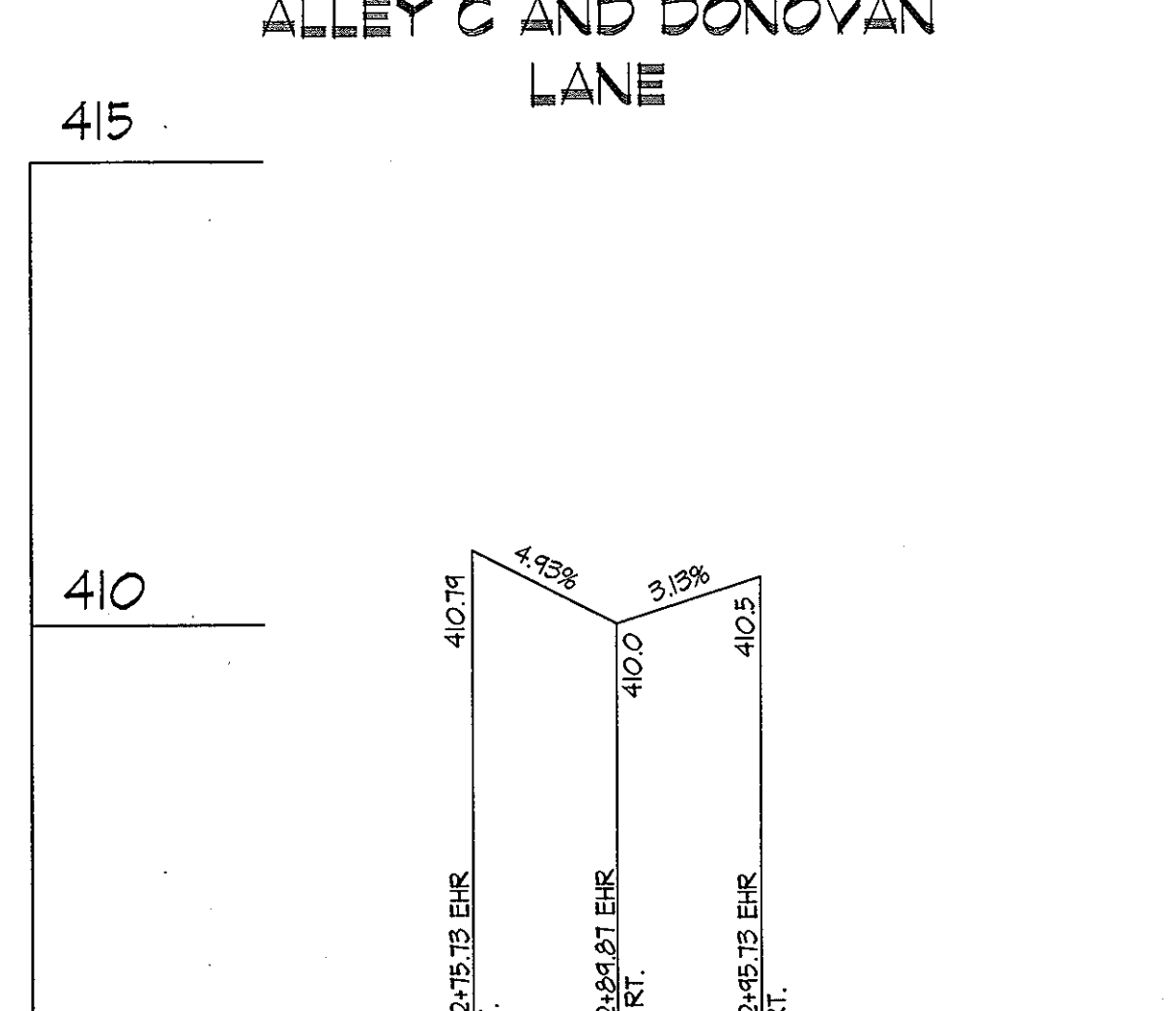
E.O.P. RETURN PROFILE FOR RICHARDS VALLEY ROAD AND TALBOT DRIVE



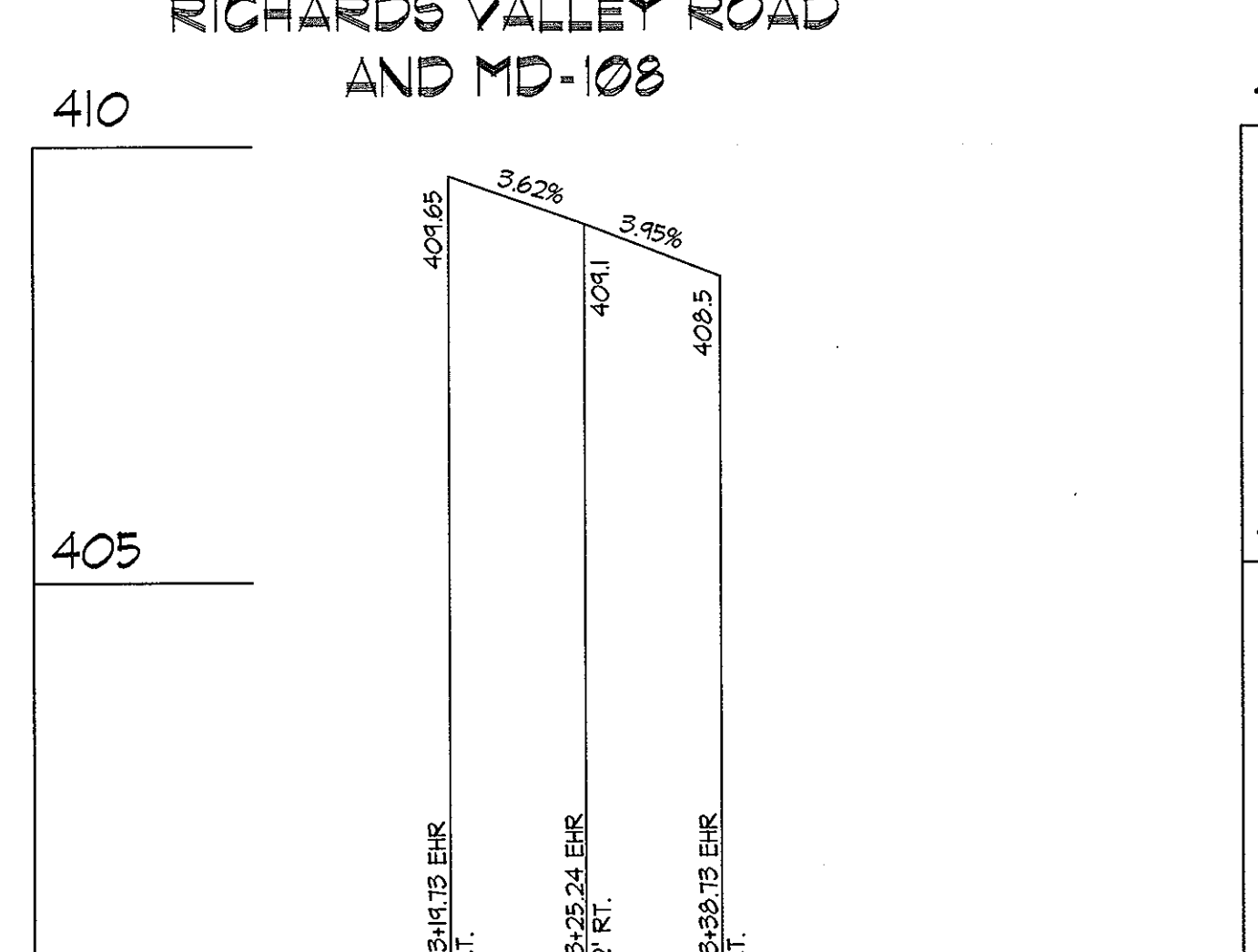
E.O.P. RETURN PROFILE FOR TALBOT DRIVE AND RICHARDS VALLEY ROAD



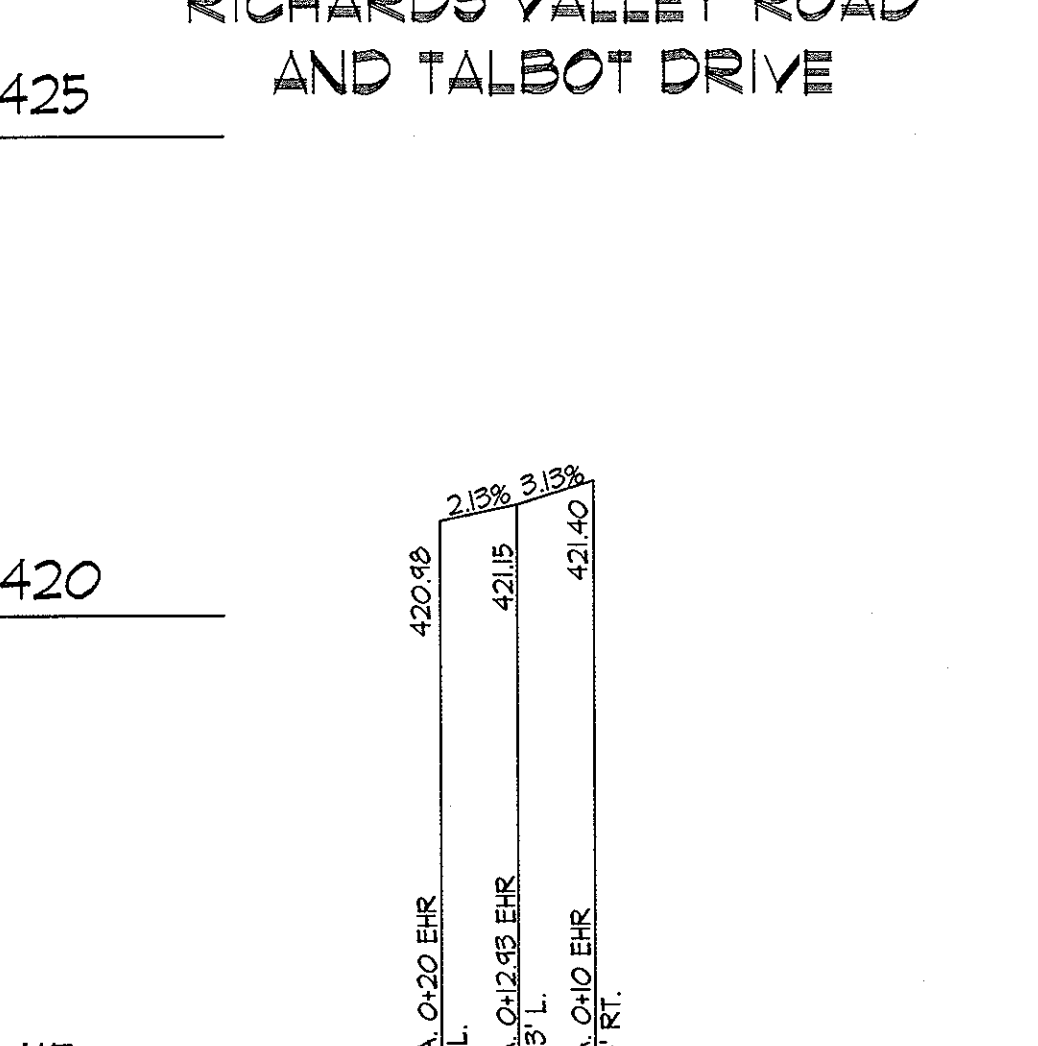
E.O.P. RETURN PROFILE FOR ALLEY A AND DONOVAN LANE



E.O.P. RETURN PROFILE FOR EDWARD HILL ROAD AND ALLEY G



E.O.P. RETURN PROFILE FOR ALLEY G AND EDWARD HILL ROAD



E.O.P. RETURN PROFILE FOR EDWARD HILL ROAD AND ALLEY A

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 5-29-07
 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development
 6/1/07
 Date

Chief, Development Engineering Division
 6/21/07
 Date



SCALE: 1" = 20' (H)
 1" = 2' (V)

PREPARED FOR AND OWNER PARCEL 'C':
 BA WATERLOO TOWNHOMES, LLC
 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SLIDELL
 301-623-1525

ROAD DETAILS AND NOTES

SHIPLEY'S GRANT
 PHASE I

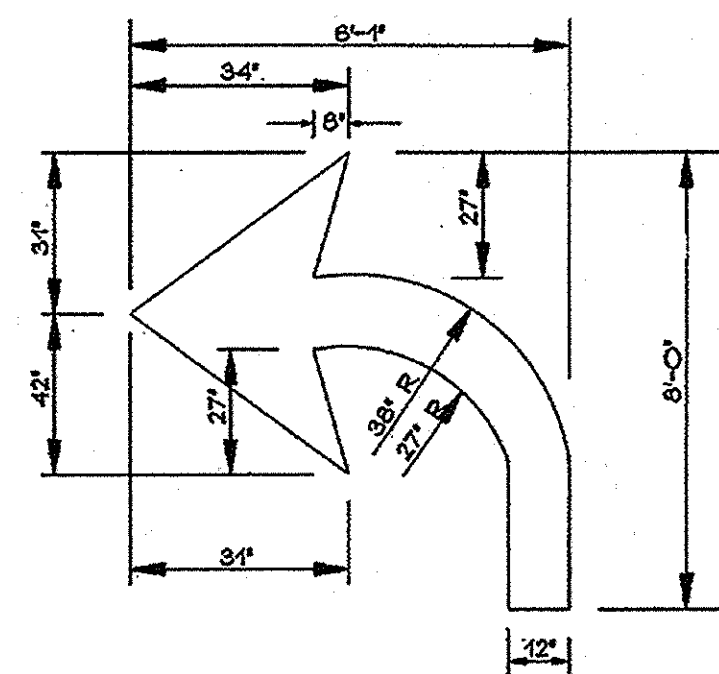
LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65
 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
 A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
May, 2007	37-1&2	6 OF 27

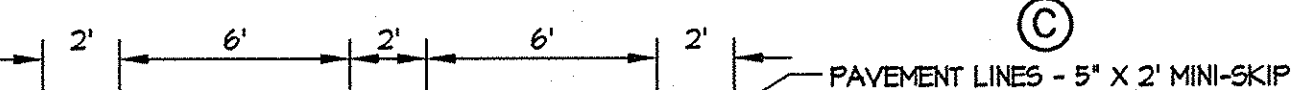
GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-999-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

NOTE: OPPOSITE SIMILAR



PAVEMENT SYMBOL MARKING DETAILS



LONGITUDINAL PAVEMENT LINE DETAILS

ALLEY ENTRANCE NOTES

- 1. ALLEYS THAT ARE ADJACENT TO MAJOR COLLECTORS WITH STANDARD CURB AND GUTTER SHALL UTILIZE COUNTY STANDARD R.6.01 FOR DRIVEWAY CONNECTIONS TO THE PUBLIC ROADWAY.
2. ALLEYS THAT ARE ADJACENT TO PUBLIC ROADS, OTHER THAN MAJOR COLLECTORS, WITH MODIFIED CURB AND GUTTER AND STANDARD SIDEWALK SHALL UTILIZE COUNTY STANDARD R.6.03 FOR DRIVEWAY CONNECTIONS TO THE PUBLIC ROADWAY EXCEPT AS NOTED BELOW.
3. NO COUNTY STANDARD DRIVEWAY SHALL BE REQUIRED AT ALLEYS THAT CONNECT TO PUBLIC ROADS WITH CURB AND GUTTER (EITHER STANDARD OR MODIFIED).

OPEN SPACE LOT C-64 (TOTAL ACREAGE IS 7.3310 AC) (TO BE CONVEYED TO THE HOMEOWNER'S ASSOCIATION)

COMMON OPEN SPACE LOT C-66 (TO BE CONVEYED TO THE HOMEOWNER'S ASSOCIATION) 12,457 SF

OPEN SPACE LOT C-64 (TOTAL ACREAGE IS 7.3310 AC) (TO BE CONVEYED TO THE HOMEOWNER'S ASSOCIATION)

CURB TRANSITION NOTES

- 1. TRANSITION FROM STANDARD TO MODIFIED CURB AND GUTTER.
2. TRANSITION FROM STANDARD CURB AND GUTTER TO FLUSH CURB AND GUTTER.
3. FLUSH CURB.
4. TRANSITION FROM MODIFIED CURB AND GUTTER TO FLUSH CURB AND GUTTER.
5. TRANSITION FROM MODIFIED TO STANDARD CURB AND GUTTER AT INLETS. FOR ADDITIONAL INFORMATION, SEE HOWARD COUNTY STANDARD R-5.06.
6. TRANSITION FROM 6" CURB AND GUTTER TO FLUSH CURB AND GUTTER.
7. 3.33' OF STANDARD CURB AND GUTTER ADJACENT TO INLET FOLLOWED BY A TRANSITION FROM STANDARD CURB AND GUTTER TO FLUSH CURB AND GUTTER.

STREET LIGHT LEGEND

- PROPOSED STREET LIGHT. 100 WATT HIGH PRESSURE SODIUM VAPOR TRADITIONAIRE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS EMBEDDED POLE.
PROPOSED STREET LIGHT. 150 WATT HIGH PRESSURE SODIUM VAPOR TRADITIONAIRE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS EMBEDDED POLE.
PROPOSED STREET LIGHT. 250 WATT HIGH PRESSURE (LOCATED 4' BEHIND THE BACK OF CURB) SODIUM VAPOR COBRA STYLE FIXTURE (CUT OFF OPTICS) MOUNTED AT A HEIGHT OF 30' ON A BREAK AWAY TRANSFORMER BASE STREET LIGHT POLE WITH A 12' ARM.

PAVING LEGEND

- P-5 SHA PAVING
P-5 COUNTY PAVING
P-3 COUNTY PAVING
P-3 PRIVATE PAVING

SIGN LEGEND

- PRIMARY SIGN (MOUNTED AT 7' HGT)
SECONDARY SIGN (IF READ) (MOUNTED DIRECTLY UNDER PRIMARY SIGN)
PROPOSED STREET SIGN (FOR SIGN TYPE, SEE SIGN DETAILS)

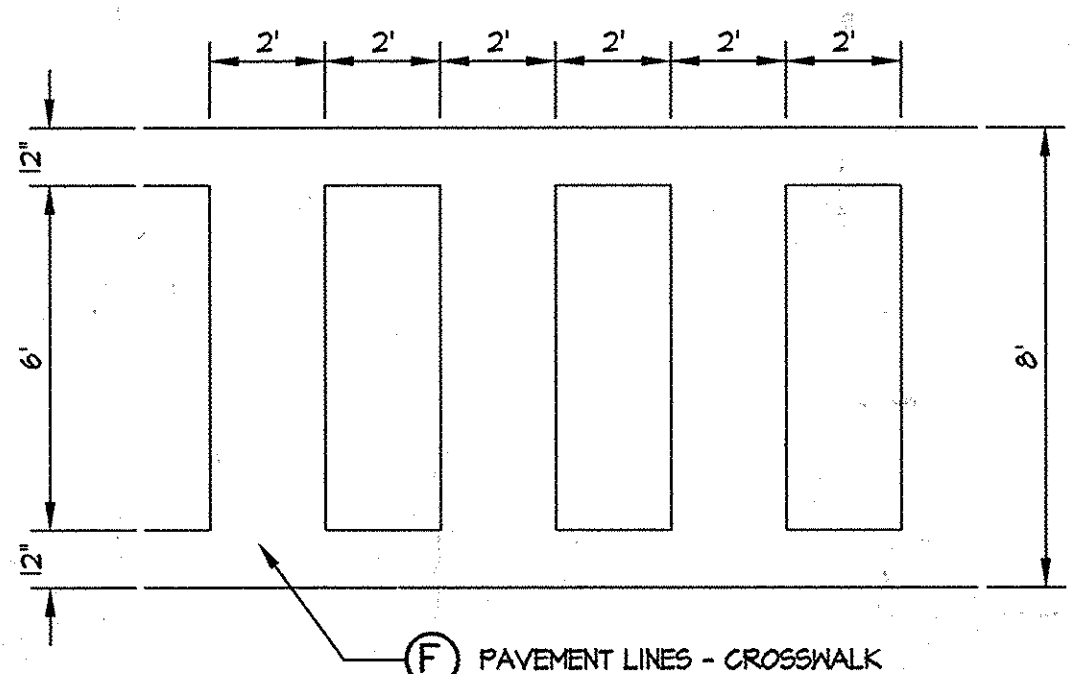
STREET LIGHT LOCATIONS

Table with columns: STREET, STATION, OFFSET. Lists locations for Richards Valley Drive, Edward Hill Road, Talbot Drive, and Donovan Lane.

NOTE: FOR LOCATIONS OF PRIVATE STREET LIGHTS SEE PLAN (ALLEY A & E).
NOTE: INSTALL 4" SCHEDULE 80 PVC CONDUITS 24" BELOW GRADE. SEE PLAN FOR LOCATIONS.

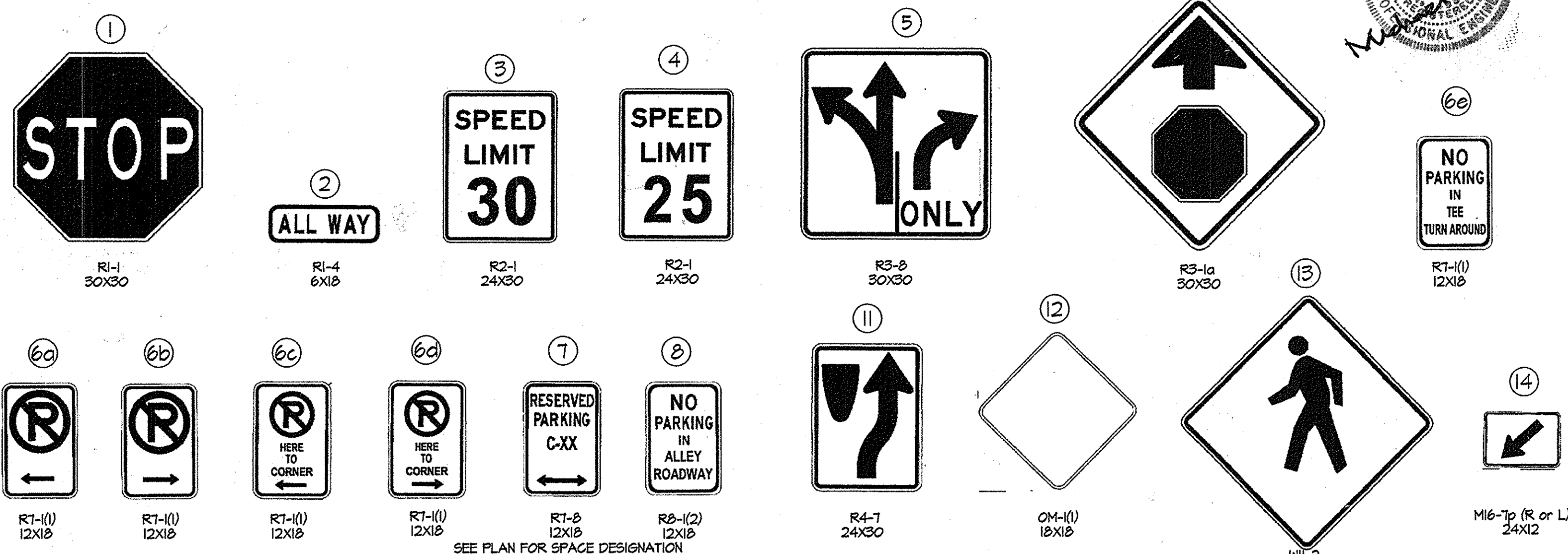
STRIPING LEGEND

- A. PAVEMENT LINES - 5" WHITE SOLID
B. PAVEMENT LINES - 5" X 2" WHITE MINI-SKIP
C. PAVEMENT LINES 5" DOUBLE YELLOW SOLID
D. PAVEMENT LINES - 24" WHITE TRANSVERSE STOP BAR (THERMOPLASTIC OR PREFORMED HEAT APPLIED TAPE)
E. PAVEMENT SYMBOL - WHITE TURN ARROW (THERMOPLASTIC OR PREFORMED HEAT APPLIED TAPE)
F. PAVEMENT LINES - WHITE CROSSWALK (SEE PAVEMENT MARKING DETAILS) (THERMOPLASTIC OR PREFORMED HEAT APPLIED TAPE)



TRANSVERSE PAVEMENT LINE DETAILS

SIGN DETAILS



SIGNING NOTES

- 1. SIGN ERRECTED AT THE SIDE OF THE ROAD SHALL BE MOUNTED AT A HEIGHT OF AT LEAST 7 FEET MEASURES FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVING.
2. 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.
3. SIGNS SHALL BE 12" TO 18" FROM EDGE OF SIGN TO CURBLINE. STOP SIGNS SHALL BE LOCATED 15' BACK FROM INTERSECTING STREET CURB LINE OR AS DIRECTED BY HOWARD COUNTY TRAFFIC DIVISION.
4. ALL SIGN LOCATIONS WITHIN THE PUBLIC RIGHT OF WAY SHALL BE APPROVED BY THE HOWARD COUNTY TRAFFIC DIVISION PRIOR TO ANY INSTALLATIONS.

PAVEMENT MARKING NOTES

- 1. ALL PAVEMENT MARKINGS TO BE APPLIED USING THERMOPLASTIC.
2. EXACT LOCATION OF ALL MARKINGS, INCLUDING STOP BARS, ARE TO BE ESTABLISHED IN THE FIELD BY THE HOWARD COUNTY TRAFFIC DIVISION.

GENERAL NOTES

- 1. A 20' MINIMUM DISTANCE SHALL BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND ANY STREET LIGHT.
2. A 5' MINIMUM DISTANCE SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND A FIRE HYDRANT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
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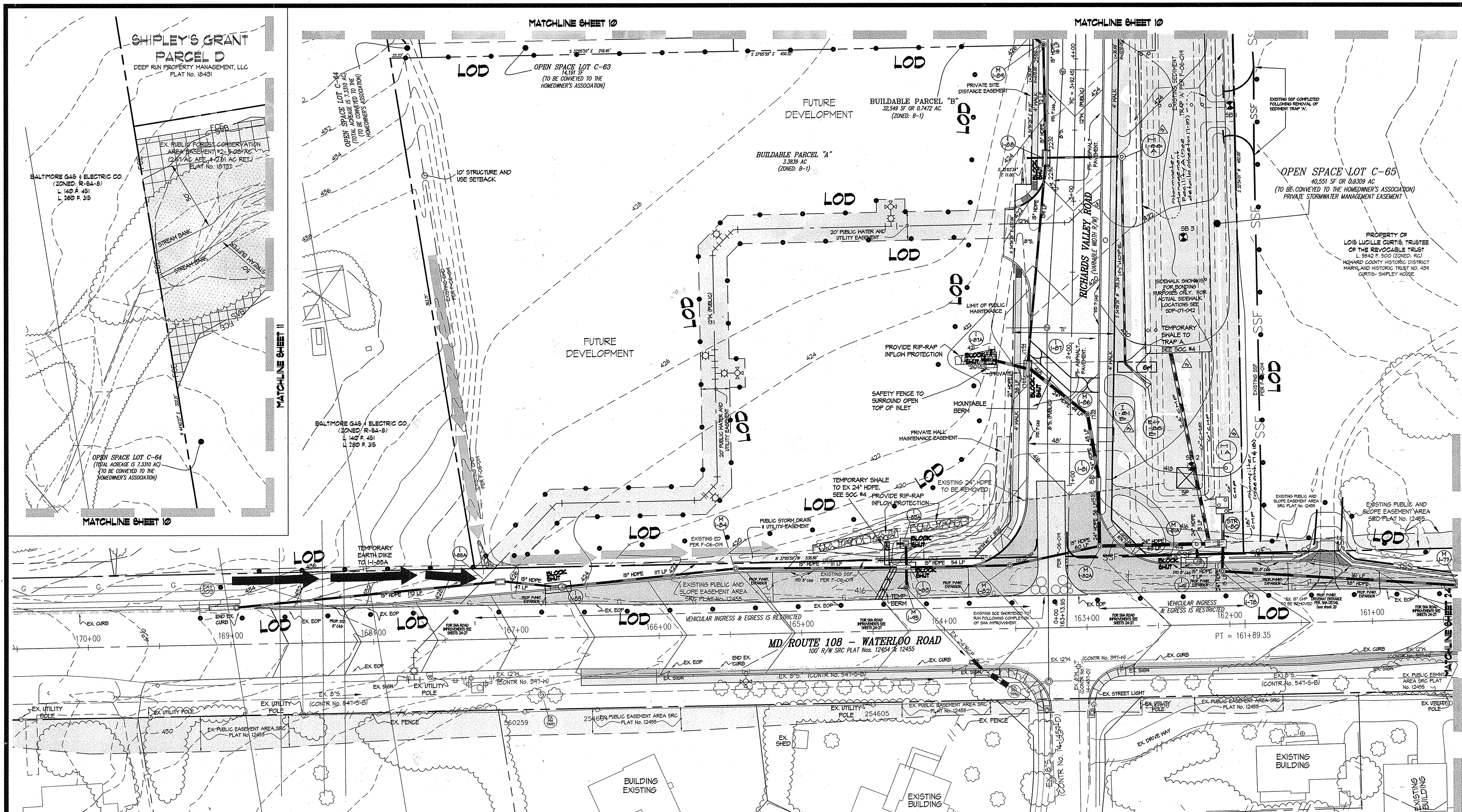
Revision table with columns: NO., DATE, REVISION, BY, APPR.

PREPARED FOR AND OWNER PARCEL 'C':
BA WATERLOO TOWNHOMES, LLC
c/o BOZZUTO HOMES, INC.
7850 WALKER DRIVE SUITE 400
GREENBELT, MARYLAND 20770
ATTN: DUNCAN SLIDELL
301-623-1525

PAVING DELINEATION - STRIPING - STREET LIGHT - AND SIGNAGE PLAN
SHIPLEY'S GRANT
PHASE I
LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65
COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
HOWARD COUNTY, MARYLAND

Table with columns: SCALE, ZONING, G. L. W. FILE No., DATE, TAX MAP - GRID, SHEET.

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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Walter J. Mawla 5-29-07
 Chief, Bureau of Highways Date

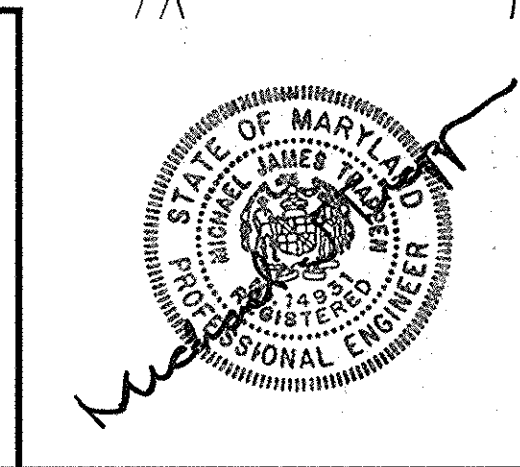
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Conny Hanft 6/4/07
 Chief, Division of Land Development Date
William J. ... 5/21/07
 Chief, Development Engineering Division Date

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John S. ... 5/29/07
 HOWARD S.C.D. DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.
Jill ... 5/29/07
 NATURAL RESOURCES CONSERVATION SERVICE DATE

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
Duncan Slidell 5/23/07
 SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
Michael J. Tropp 5/21/07
 ENGINEER'S SIGNATURE DATE



OWNER PARCEL 'A'
 SHIPLEY'S GRANT RETAIL, LLC
 1966 GREENSPRING DRIVE SUITE 508
 LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
 DEEP RUN PROPERTY MANAGEMENT, INC.
 191 MILLER HOLLOW LANE
 LAKE CITY, TENNESSEE 37769

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
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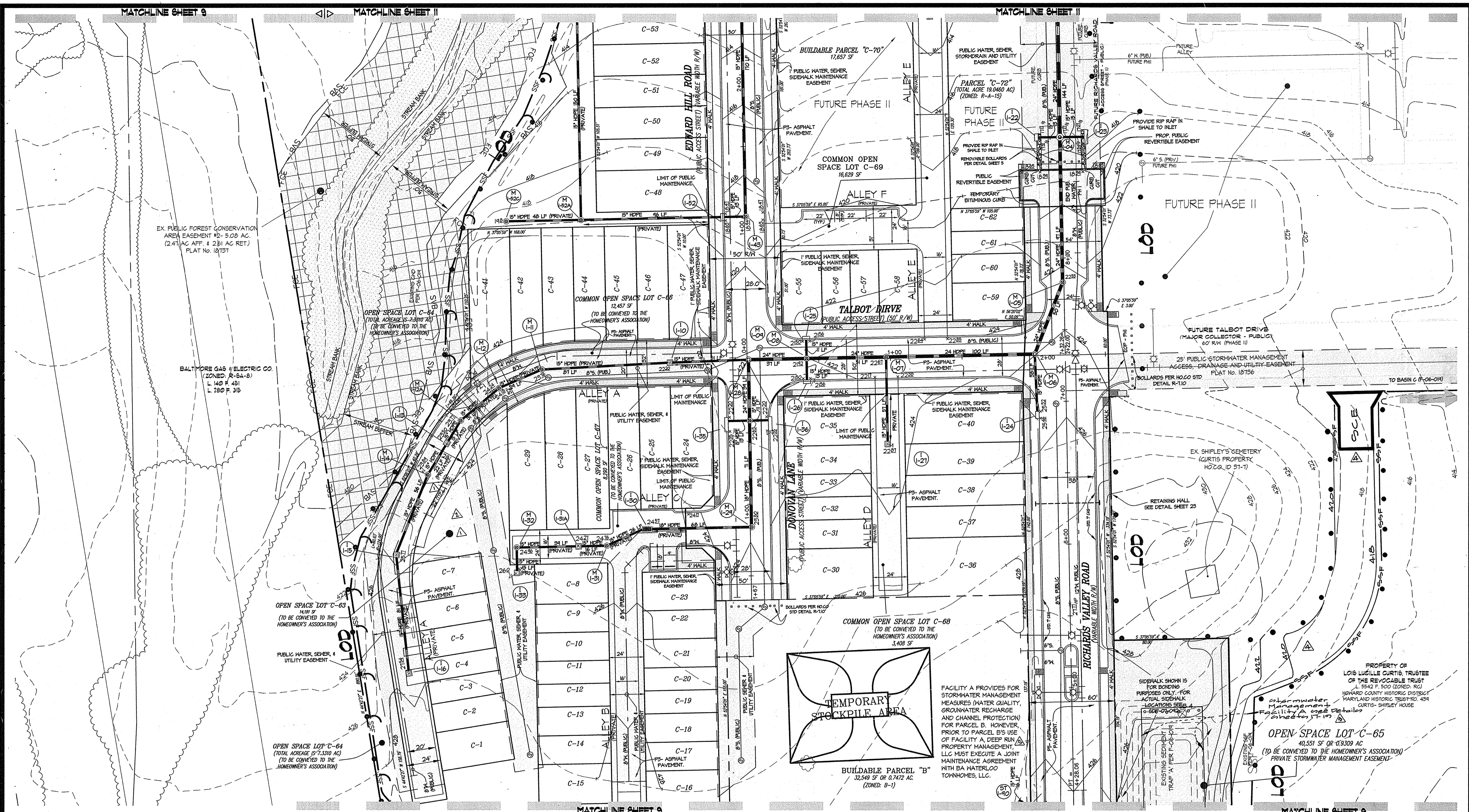
NO.	REVISION	DATE	BY	APPR.
1	Remove Ho Ramp at Richards Valley Rd. Sta 7+00 Right	5/23/07	WJL	
2	Install Reinforced Facility Removed 1-BIB & M-BB added	5/23/07	WJL	

PREPARED FOR AND OWNER PARCEL 'C':
 BA WATERLOO TOWNHOMES, LLC
 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SLIDELL
 301-623-1525

SEDIMENT EROSION CONTROL & GRADING PLAN
SHIPLEY'S GRANT
 PHASE I
 LOTS C-1 THRU C-6, OPEN SPACE LOTS C-63, C-64, C-65
 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
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 ELECTION DISTRICT No. 1

SCALE	ZONING	G. L. W. FILE No.
1"=30'	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
May, 2007	37-1&2	9 OF 27

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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William F. ... 5-29-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
... 6/1/07
 Chief, Division of Land Development Date

... 5/24/07
 HOWARD S.C.D. DATE

... 5/24/07
 NATURAL RESOURCES CONSERVATION SERVICE DATE

... 5/22/07
 SIGNATURE OF DEVELOPER/BUILDER DATE

Michael J. Tropp 5/21/07
 ENGINEER'S SIGNATURE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
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OWNER PARCEL 'A'
 SHIPLEY'S GRANT RETAIL, LLC
 1966 GREENSPRING DRIVE SUITE 508
 LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
 DEEP RUN PROPERTY MANAGEMENT, INC.
 191 MILLER HOLLOW LANE
 LAKE CITY, TENNESSEE 37769

GLW GUTSCHICK LITTLE & WEBER, P.A.
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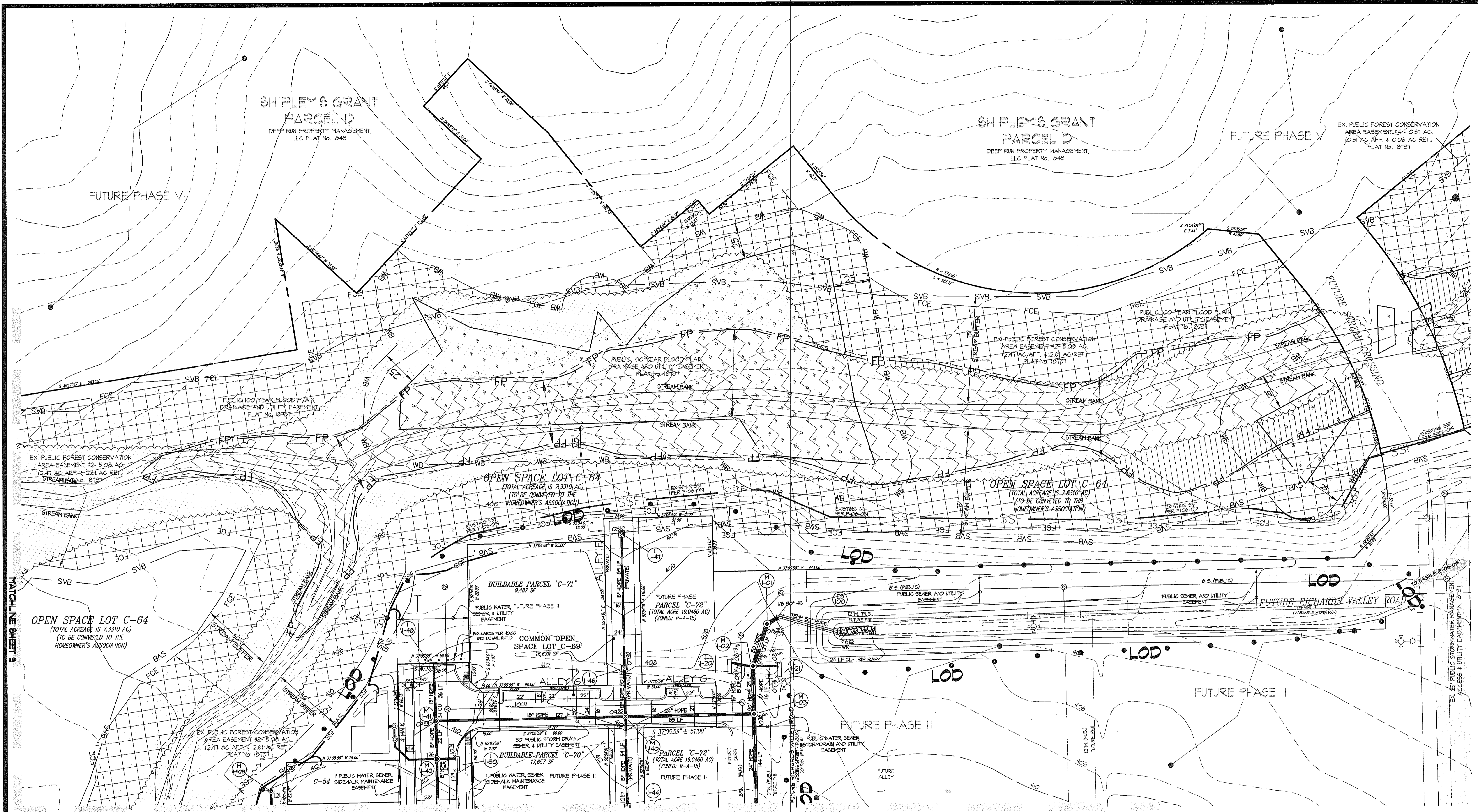
DATE	REVISION	BY	APP'R.
12-22-14	Remove entrance to Buildable Parcel "B" (chapel), continue curb and sidewalk, added 1 street tree
0-19-12	Temp storm construction access added through Curtis Property
12-15-11	OWMFA REV
5-27-10	Remove Rev 12
1-03-09	Rev Location REV 142A

PREPARED FOR AND OWNER PARCEL 'C':
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 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SLIDELL
 301-623-1525

SEDIMENT EROSION CONTROL & GRADING PLAN
SHIPLEY'S GRANT
 PHASE I
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 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
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SCALE	ZONING	G. L. W. FILE No.
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DATE	TAX MAP - GRID	SHEET
May, 2007	37-1&2	10 OF 27

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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William J. White 5-29-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Harve 6/1/07
 Chief, Division of Land Development Date

Michael J. Trap 5/21/07
 Chief, Development Engineering Division Date

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

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

Jim Maguire 5/22/07
 HOWARD S.C.D. DATE

John D. ... 5/22/07
 NATURAL RESOURCES CONSERVATION SERVICE DATE

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David ... 5/22/07
 SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

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Michael J. Trap 5/21/07
 ENGINEER'S SIGNATURE DATE



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May, 2007	37-1&2	11 OF 27

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENED).

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES

- 1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC Limestone (42 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (4 LBS/1000 SQ FT) BEFORE SEEDING. HARRON OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (1 LBS/1000 SQ FT).
- 2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC Limestone (42 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (2 LBS/1000 SQ FT) BEFORE SEEDING. HARRON OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ FT) OF KEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF MELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE MELL ANCHORED STRAW.

MULCHING: APPLY 1/2 TO 2 TONS PER ACRE (10 TO 40 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 216 GALLONS PER ACRE (6 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 6 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.

TEMPORARY SEEDING NOTES

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

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENED).

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (1.4 LBS/1000 SQ FT).

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (32 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF KEEPING LOVEGRASS (0.7 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF MELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1/2 TO 2 TONS PER ACRE (10 TO 40 LBS/1000 SQ FT) OF UNROTTED NEED-FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 216 GAL PER ACRE (6 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 6 FT OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

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

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (410) 318-1855.

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 1974 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES AND PERIMETER SLOPES AND ALL SLOPES GREATER THAN 5:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1993 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING AND MULCHING (SEC. 6).

TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7. SITE ANALYSIS:

TOTAL AREA OF SITE	15.75 ACRES±
AREA DISTURBED	15.99 ACRES±
AREA TO BE ROOFED OR PAVED	12.0 ACRES±
AREA TO BE VEGETATIVELY STABILIZED	2.99 ACRES±
TOTAL CUT	5,000 Cu. Yds.
TOTAL FILL	5,000 Cu. Yds.
WASTE BORROW AREA	N/A

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPH SEDIMENT CONTROL INSPECTOR.

10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO 3 PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

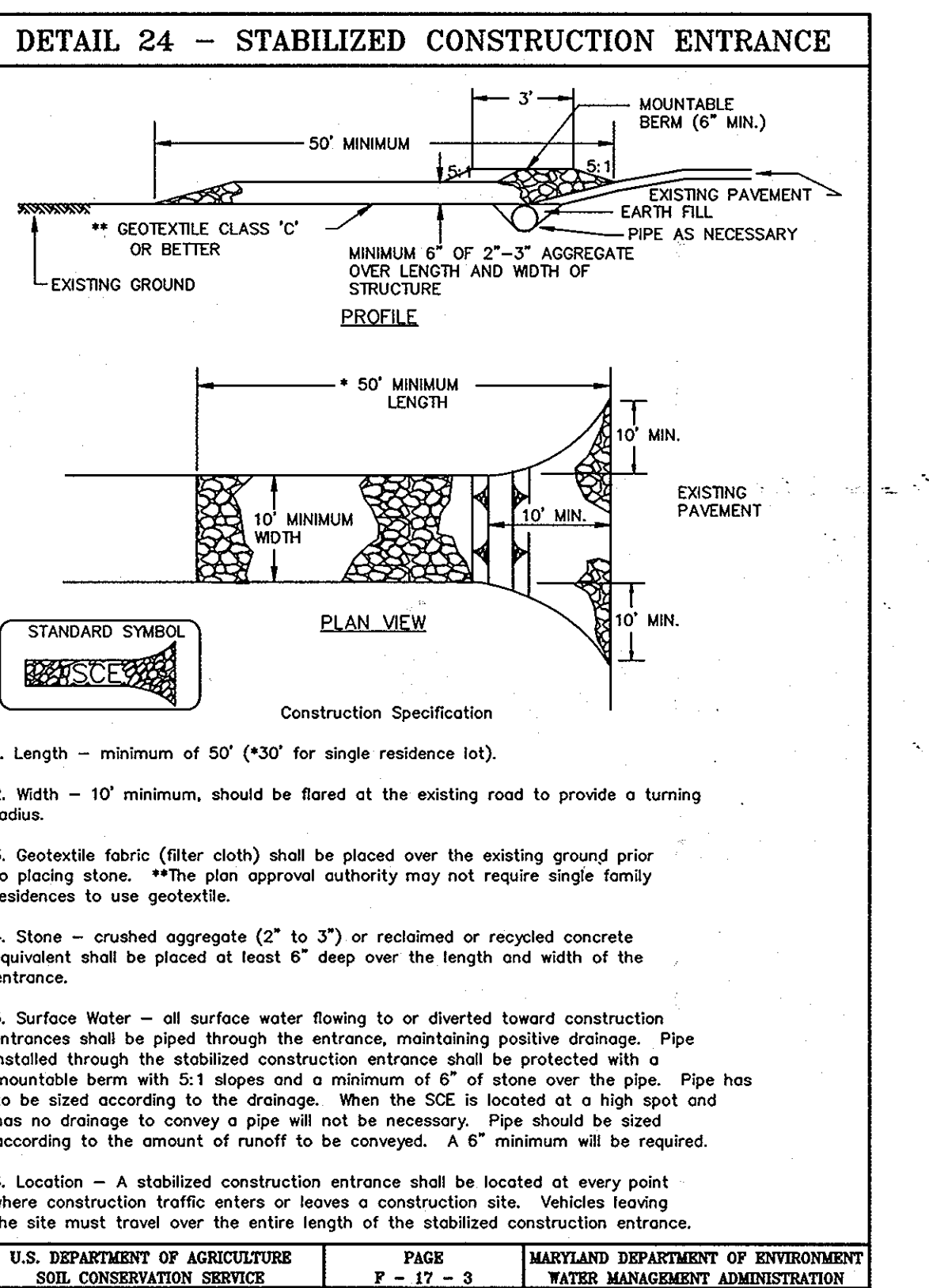
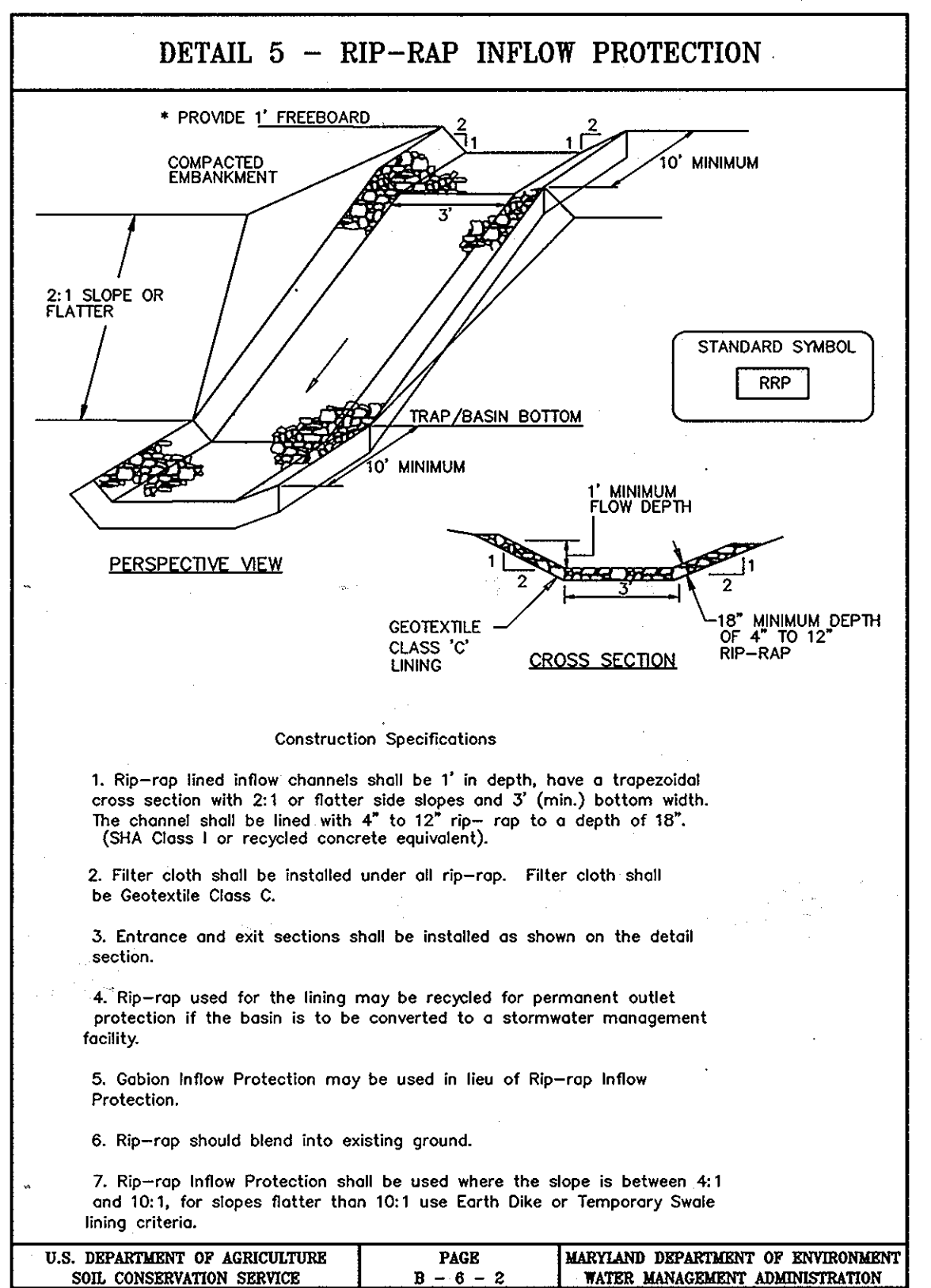
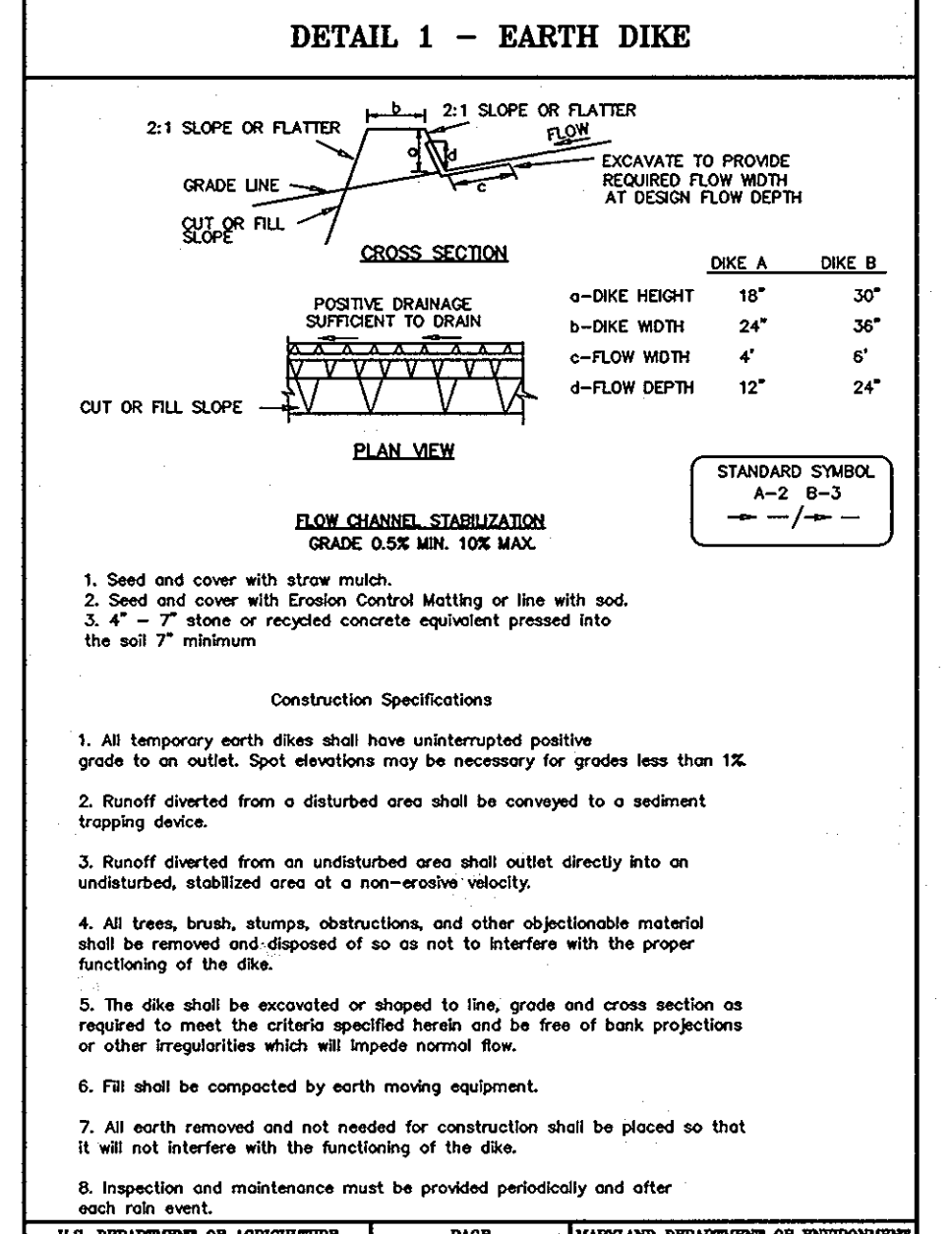
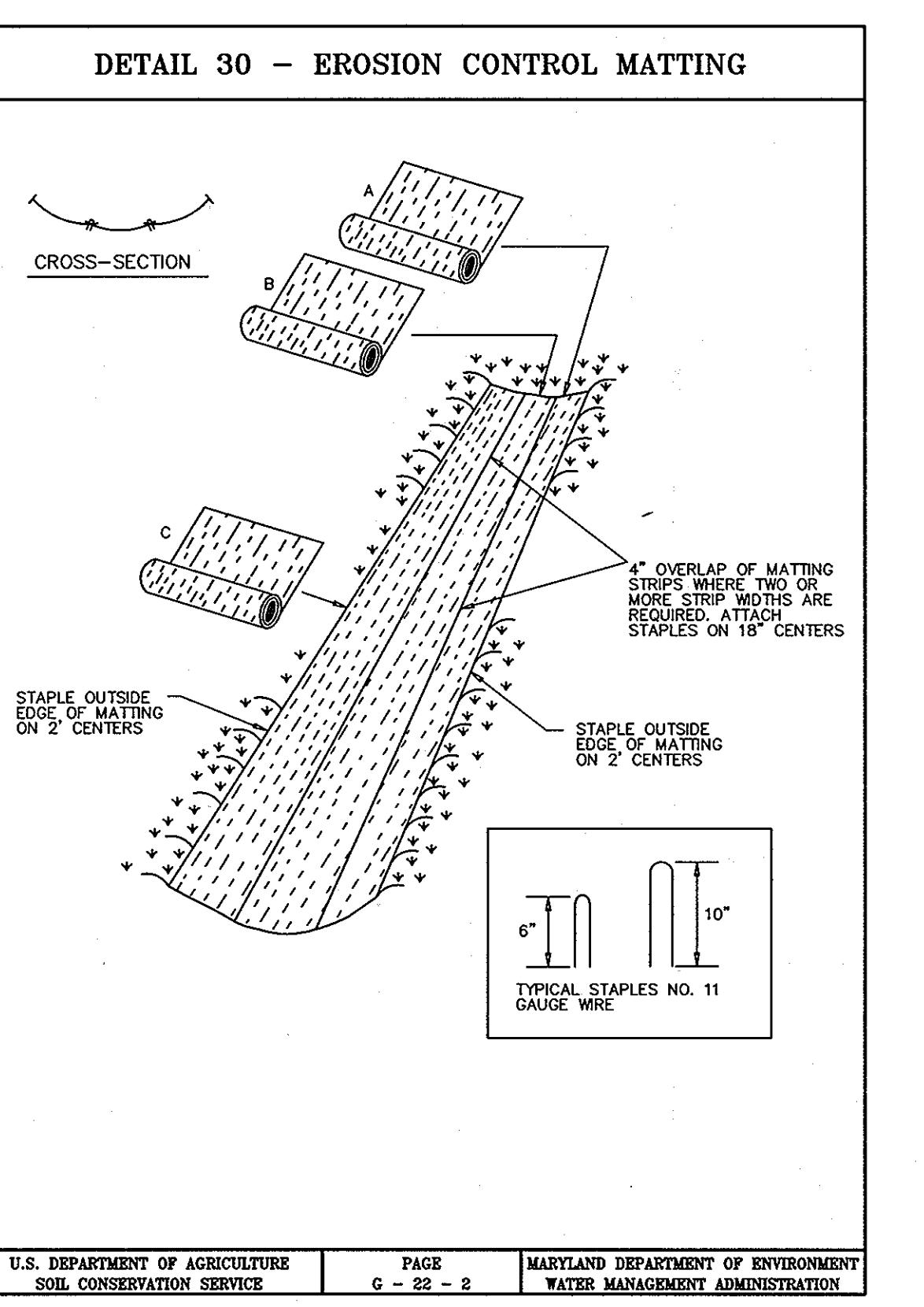
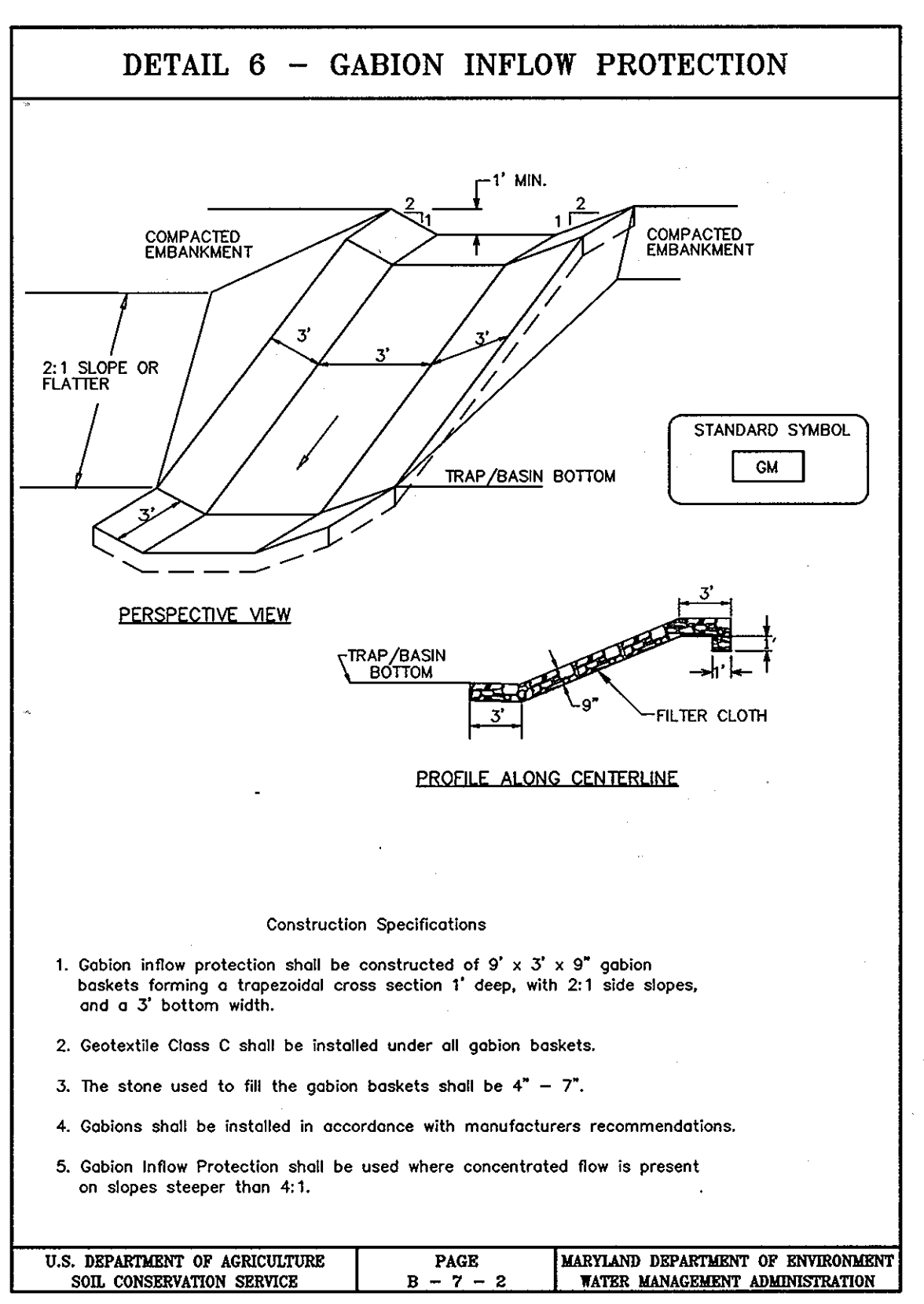
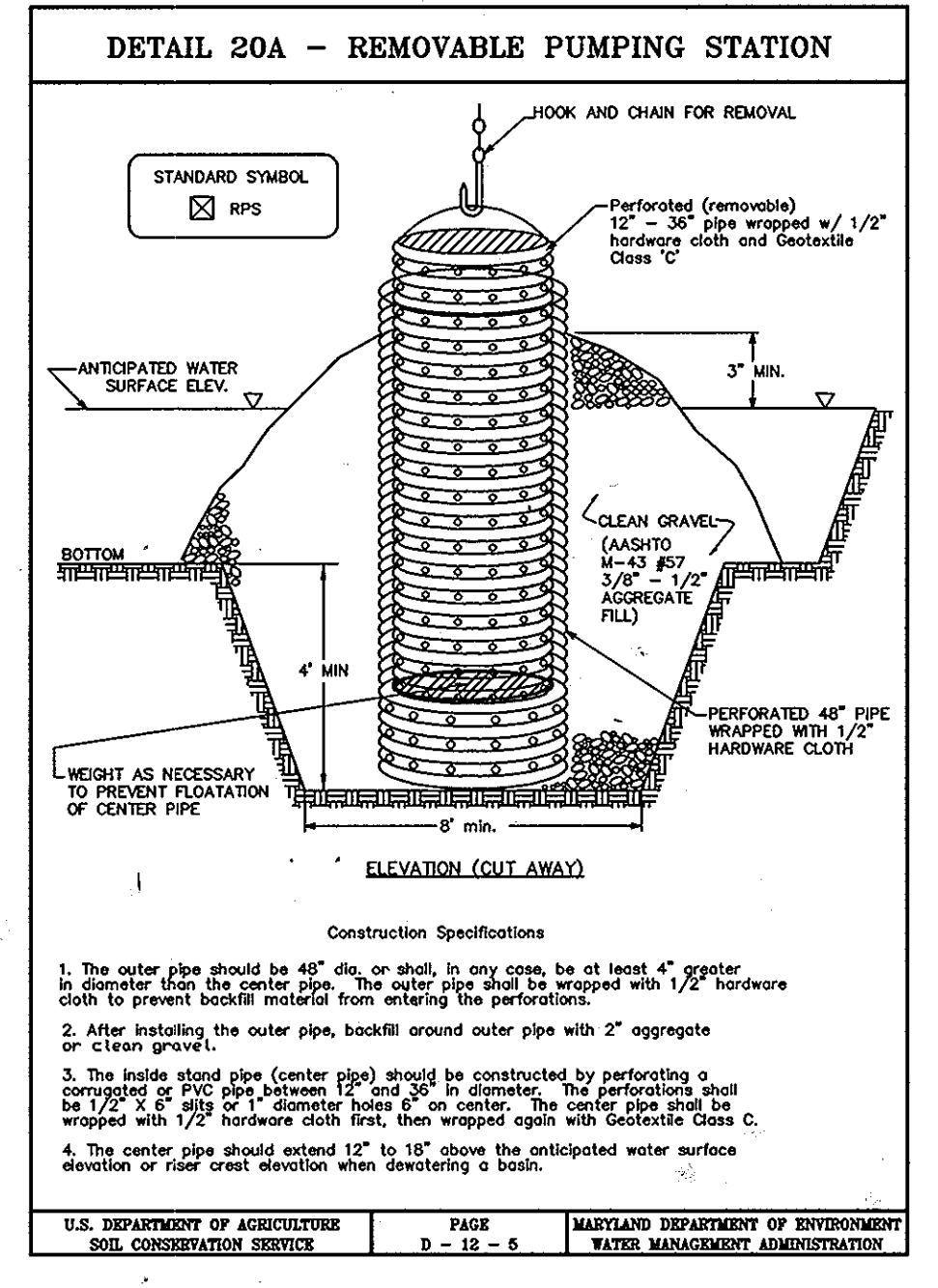
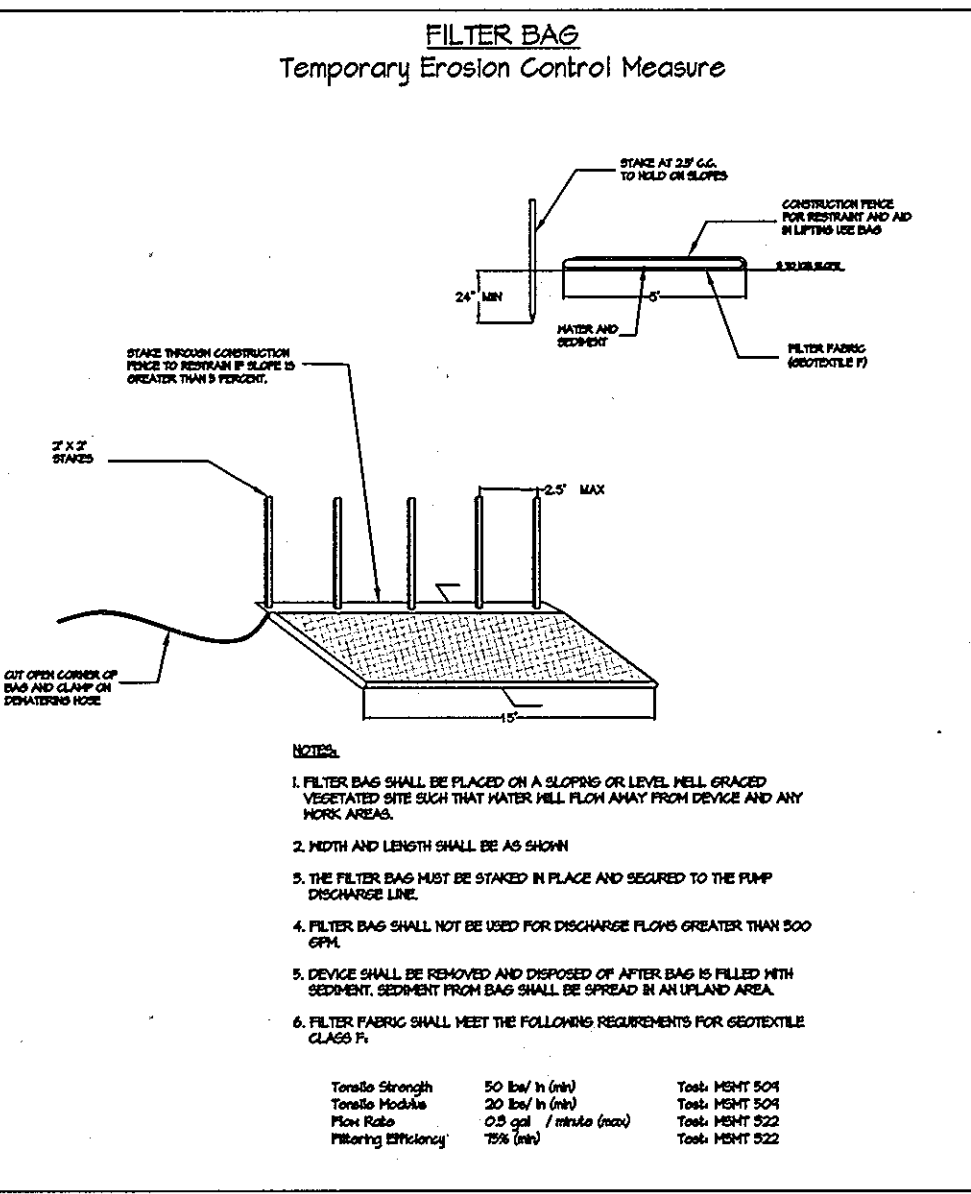
CONSTRUCTION AND MATERIAL & TOPSOIL SPECIFICATIONS

1. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT 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 RESPECTIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 A. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY A AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 3% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 B. TOPSOIL MUST BE FREE OF FLAMMABLE PARTS SUCH AS BERNARD GRASS, QUACKGRASS, JOHNSGRASS, NETTLE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 C. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GRIND Limestone SHALL BE SPREAD AT THE RATE OF 4 TONS/ACRE (200-400 POUNDS PER 1000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 A. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS (OR SEE SEEDING NOTES).

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 A. ON SOIL MEETINGS TOPSOIL SPECIFICATIONS TO OBTAIN TEST RESULTS DIGITATING FERTILIZER LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 1. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
 2. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 3. TOPSOIL HAVING SOLUBLE SALT GREATER THAN 500 PARTS PER MILL SHALL NOT BE USED.
 4. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (4 DAYS MIN) TO PERMIT DISSIPATION OF PHOTO-TOXIC MATERIALS.



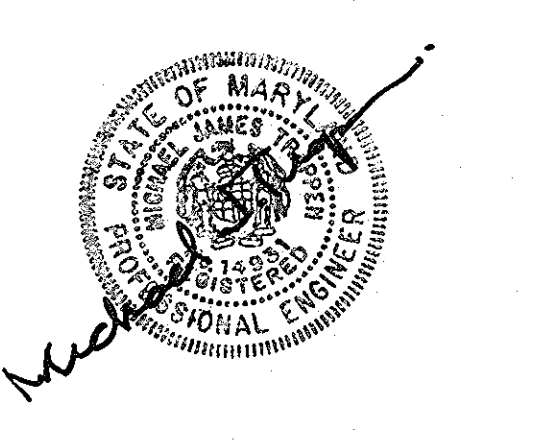
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William T. Mahaffey 5-29-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cynthia Hanner 6/1/07
 Chief, Division of Land Development Date
William T. Mahaffey 5/23/07
 Chief, Development Engineering Division Date

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.
Howard S.C.D. DATE
Natural Resources Conservation Service DATE

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
Developer/Builder Signature DATE

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
Engineer Signature DATE



GLWGuttschick 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: 301-421-4186

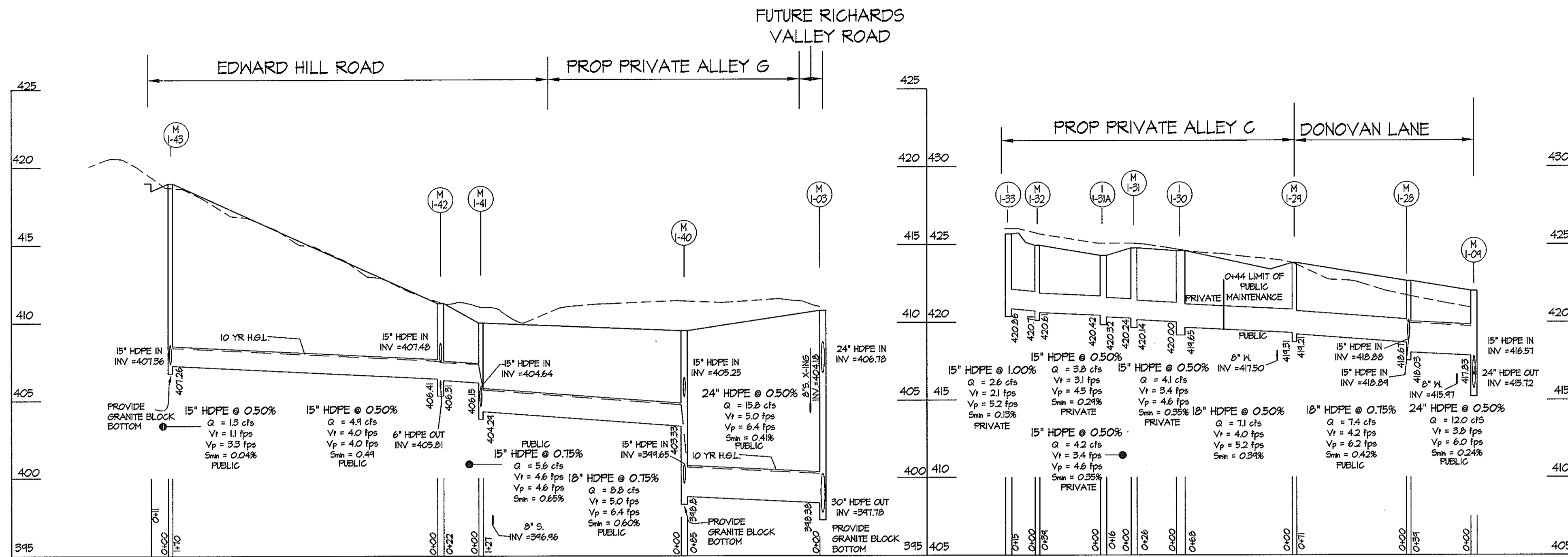
NO.	DATE	DESCRIPTION	BY	APPR.
1	5-10-07	Site analysis updated for opposite LOD	WGS	

DATE: 5/24/07
 BY: WGS
 APPR.:

PREPARED FOR AND OWNER PARCEL 'C':
 BA WATERLOO TOWNHOMES, LLC
 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SLIDELL
 301-623-1525

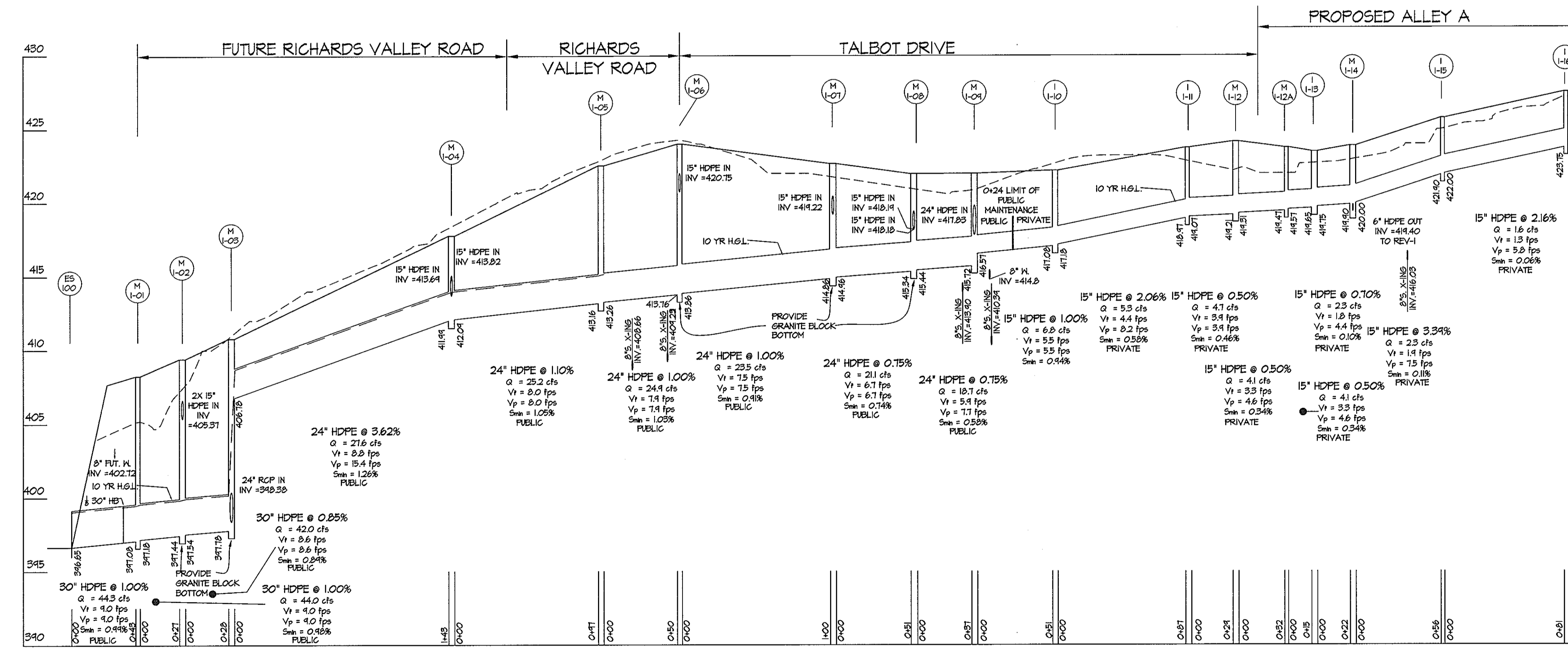
SEDIMENT CONTROL DETAILS
SHIPLEY'S GRANT
 PHASE I
 LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65
 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
 A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
 HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT No. 1

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
May, 2007	37-1&2	12 OF 27



S.D. STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STANDARD DETAIL	NOTES	OWNERSHIP & MAINTENANCE
			UPPER	LOWER	UPPER	LOWER			
E5-100	END SECTION		394.65	----	396.65	----			PUBLIC
M-1-01	MANHOLE	5'-0"	408.25	----	391.08	391.08	HO. CO. G. 5.13		PUBLIC
M-1-02	MANHOLE	5'-0"	409.40	----	405.57	397.44	HO. CO. G. 5.13		PUBLIC
M-1-03	MANHOLE	5'-0"	410.78	----	406.78	397.78	HO. CO. G. 5.13		PUBLIC
M-1-04	MANHOLE	4'-0"	411.77	----	415.82	411.91	HO. CO. G. 5.13		PUBLIC
M-1-05	MANHOLE	4'-0"	422.53	----	413.26	413.16	HO. CO. G. 5.13		PUBLIC
M-1-06	MANHOLE	4'-0"	424.05	----	420.75	413.76	HO. CO. G. 5.13		PUBLIC
M-1-07	MANHOLE	4'-0"	422.67	----	419.22	414.86	HO. CO. G. 5.13		PUBLIC
M-1-08	MANHOLE	4'-0"	421.98	----	418.19	415.34	HO. CO. G. 5.13		PUBLIC
M-1-09	MANHOLE	4'-0"	422.00	----	417.83	415.72	HO. CO. G. 5.13		PUBLIC
I-1-10	SINGLE S	2'-11/2"	422.20	----	417.08	417.08	HO. CO. SD. 4.37	USE RECTANGULAR REPLACEMENT GRATE PER MD 379.08	PRIVATE
M-1-11	MANHOLE	4'-0"	423.76	----	419.07	418.97	HO. CO. G. 5.13		PRIVATE
M-1-12	MANHOLE	4'-0"	424.18	----	419.31	419.21	HO. CO. G. 5.13		PRIVATE
M-1-12A	MANHOLE	4'-0"	423.77	----	419.57	419.47	HO. CO. G. 5.13		PRIVATE
I-1-13	SINGLE S	2'-11/2"	423.50	----	419.75	419.65	HO. CO. SD. 4.37	USE RECTANGULAR REPLACEMENT GRATE PER MD 379.08	PRIVATE
M-1-14	MANHOLE	4'-0"	423.84	----	420.00	419.40	HO. CO. G. 5.13		PRIVATE
I-1-15	SINGLE S	2'-11/2"	422.20	----	422.0	421.9	HO. CO. SD. 4.37	USE RECTANGULAR REPLACEMENT GRATE PER MD 379.08	PRIVATE
I-1-16	SINGLE S	2'-11/2"	421.54	----	423.75	terminal	HO. CO. SD. 4.37	USE RECTANGULAR REPLACEMENT GRATE PER MD 379.08	PRIVATE
M-1-28	MANHOLE	4'-0"	422.63	----	418.84	418.05	HO. CO. G. 5.13		PUBLIC
M-1-29	MANHOLE	4'-0"	423.80	----	419.31	419.21	HO. CO. G. 5.13		PUBLIC
I-1-30	DOUBLE S	2'-11/2"	424.57	----	420.00	419.65	HO. CO. SD. 4.38	USE RECTANGULAR REPLACEMENT GRATE PER MD 379.08	PRIVATE
M-1-31	MANHOLE	4'-0"	424.76	----	420.24	420.14	HO. CO. G. 5.13		PRIVATE
I-1-31A	SINGLE S	2'-11/2"	424.27	----	420.42	420.32	HO. CO. SD. 4.37	USE RECTANGULAR REPLACEMENT GRATE PER MD 379.08	PRIVATE
M-1-32	MANHOLE	4'-0"	424.96	----	420.71	420.61	HO. CO. G. 5.13		PRIVATE
I-1-33	SINGLE S	2'-11/2"	426.00	----	420.86	terminal	HO. CO. SD. 4.37	USE RECTANGULAR REPLACEMENT GRATE PER MD 379.08	PRIVATE
M-1-40	MANHOLE	4'-0"	409.50	----	405.25	398.80	HO. CO. G. 5.13		PUBLIC
M-1-41	MANHOLE	4'-0"	409.94	----	406.15	404.24	HO. CO. G. 5.13		PUBLIC
M-1-42	MANHOLE	4'-0"	411.26	----	407.48	406.31	HO. CO. G. 5.13		PUBLIC
M-1-43	MANHOLE	4'-0"	418.96	----	415.16	407.26	HO. CO. G. 5.13		PUBLIC
I-1-44	SINGLE S	2'-11/2"	412.65	----	408.40	terminal	HO. CO. SD. 4.37	USE RECTANGULAR REPLACEMENT GRATE PER MD 379.08	PRIVATE

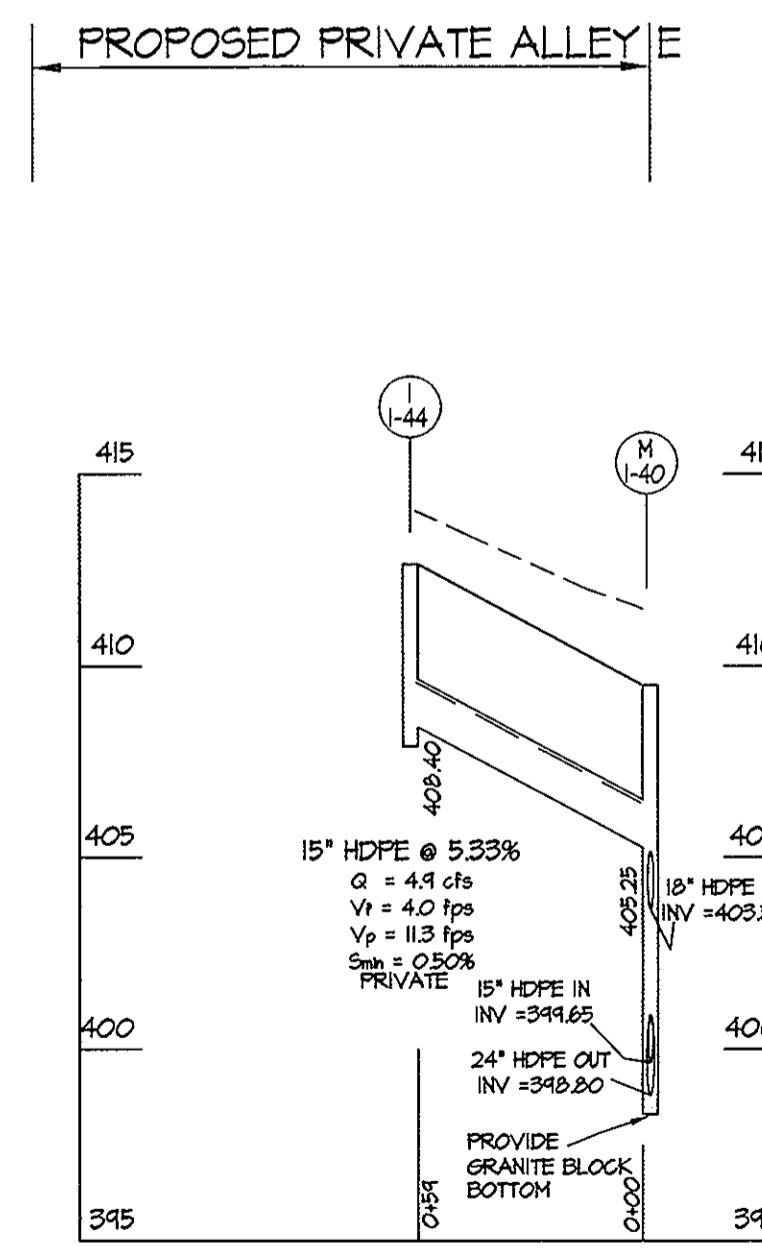


S.D. Pipe Summary Table PUBLICLY OWNED AND MAINTAINED

Size (in.)	Type	Quantity (L.F.)	Remarks
15	HDPE	203	ADS N12 or equiv.
18	HDPE	148	ADS N12 or equiv.
24	HDPE	602	ADS N12 or equiv.
30	HDPE	98	ADS N12 or equiv.

S.D. Pipe Summary Table PRIVATELY OWNED AND MAINTAINED

Size (in.)	Type	Quantity (L.F.)	Remarks
15	HDPE	528	ADS N12 or equiv.
18	HDPE	68	ADS N12 or equiv.



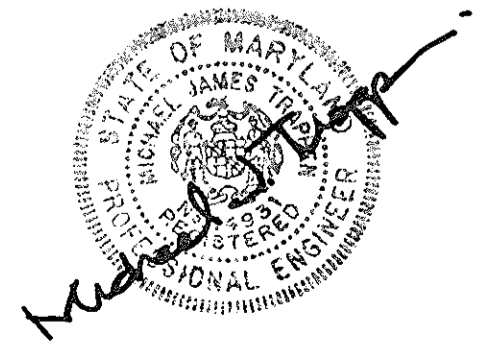
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William J. ... 5-29-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Candy Hamilton 6/1/07
 Chief, Division of Land Development Date

Chad ... 5/31/07
 Chief, Development Engineering Division Date

OWNER PARCEL 'A'
 SHIPLEY'S GRANT RETAIL, LLC
 1966 GREENSPRING DRIVE SUITE 508
 LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
 DEEP RUN PROPERTY MANAGEMENT, INC.
 191 MILLER HOLLOW LANE
 LAKE CITY, TENNESSEE 37769



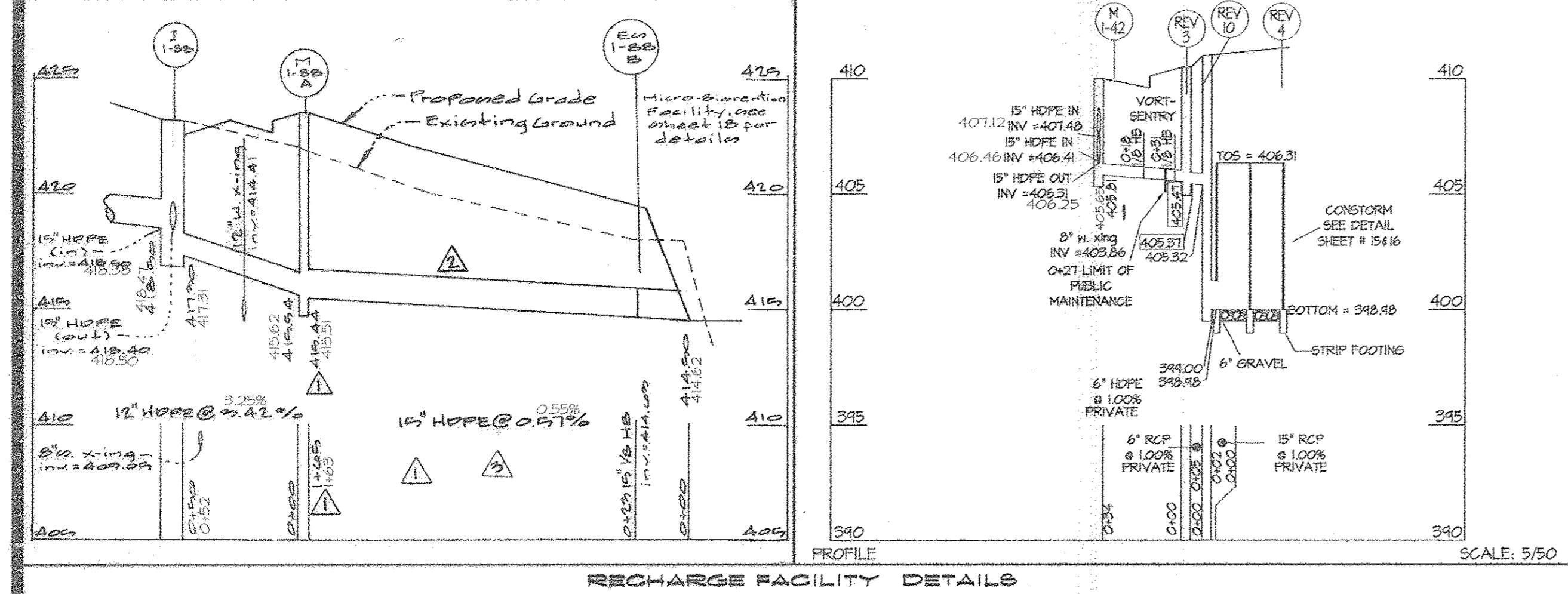
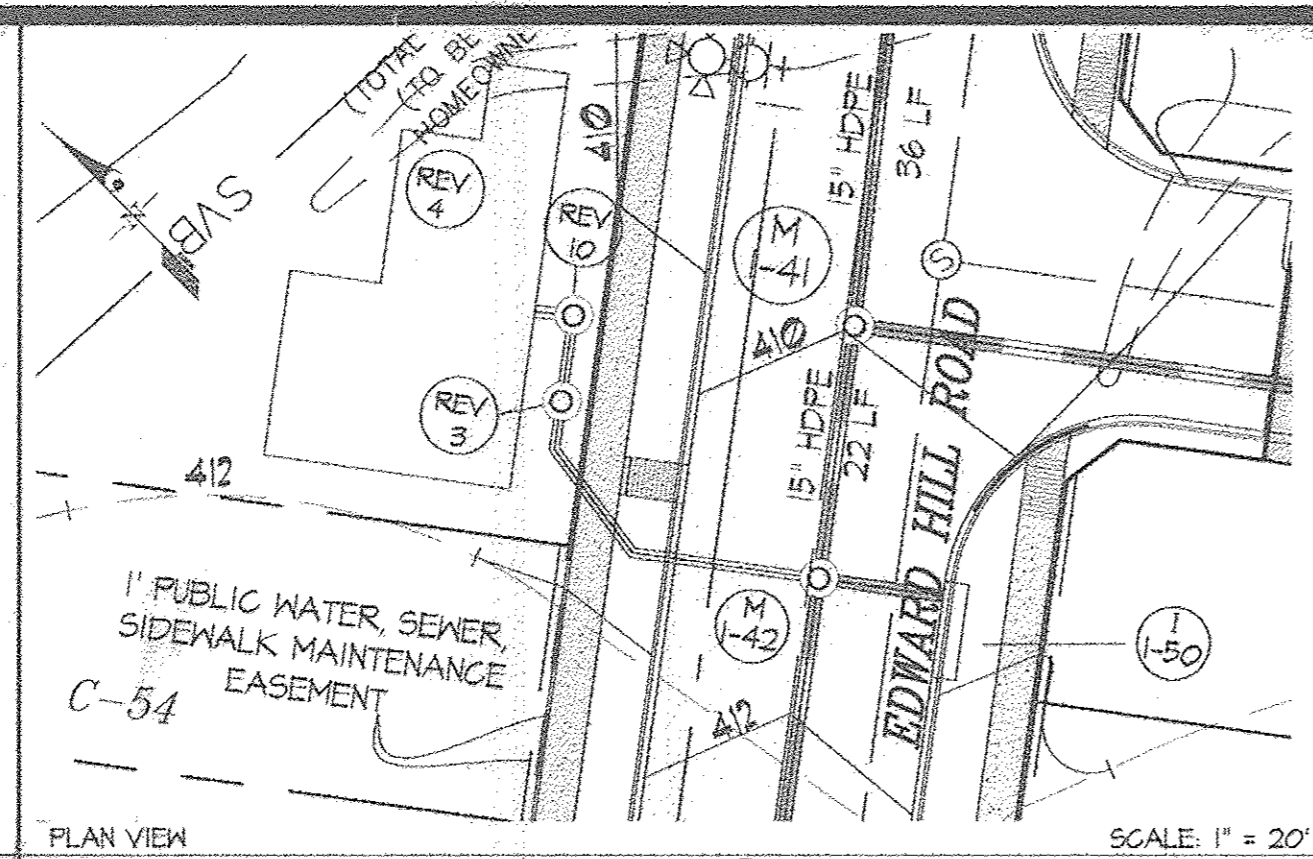
GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3809 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-993-2524 FAX: 301-421-4186

NO.	DATE	REVISION	BY	APP'R.

PREPARED FOR AND OWNER PARCEL 'C':
 BA WATERLOO TOWNHOMES, LLC
 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SLIDELL
 301-623-1525

**STORM DRAIN PROFILES
 SHIPLEY'S GRANT
 PHASE I**
 LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65
 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
 A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
May, 2007	37-1&2	13 OF 27



S.D. STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STANDARD DETAIL	NOTES	OWNERSHIP & MAINTENANCE
			UPPER	LOWER	UPPER	LOWER			
M-1-74	MANHOLE	4'-0"	398.55	---	391.18	391.08	HO. CO. G. 5.15		PUBLIC
I-1-75	COG 10	2'-0"	398.83	399.63	395.61	391.60	SHA SD. 374.62		PUBLIC
I-1-76	COG 10	2'-0"	407.06	406.83	400.71	400.61	SHA SD. 374.62		PUBLIC
M-1-77	MANHOLE	4'-0"	409.32	---	401.63	401.53	HO. CO. G. 5.15		PUBLIC
M-1-78	MANHOLE	4'-0"	413.20	---	402.53	402.43	HO. CO. G. 5.15		PUBLIC
STR-1-20	SPECIAL	5'-0"	414.75	---	408.24	402.60	SEE DETAIL SHEET 16	8" x 9" PRECAST SPILLER STRUCTURE BOX WITH INTERNAL VEIL - SEE DETAIL SHEET 16	PRIVATE
M-1-21A	STORMCEPTOR	8'-0"	414.26	---	404.00	403.90	SEE DETAIL SHEET 17		PRIVATE
M-1-82	MANHOLE	4'-0"	415.53	---	411.51	411.41	HO. CO. G. 5.15		PUBLIC
M-1-82A	MANHOLE	5'-0"	414.30	---	410.75	409.90	HO. CO. G. 5.15		PUBLIC
I-1-83	A-10	2'-6"	417.81	417.75	413.25	412.38	SEE DETAIL SHEET 16	BOX WITH INTERNAL HEAD SPLIT - SEE DETAIL SHEET 16	PUBLIC
I-1-83A	'S'	2'-7"	417.00	---	413.61	413.71	HO. CO. SD. 4.22		PRIVATE
M-1-84	MANHOLE	4'-0"	420.85	---	416.01	415.91	HO. CO. G. 5.15		PUBLIC
I-1-85A	DOUBLE S	3'-5"	426.00	---	421.50	421.40	HO. CO. SD. 4.48		PUBLIC
I-1-85	COG 10	2'-0"	425.08	424.66	419.70	419.60	SHA SD. 374.62		PUBLIC
I-1-87A	A-5	2'-6"	420.00	---	417.92	415.44	HO. CO. SD. 4.40	DO NOT REPAIR TOP SLAB. INLET WILL BE RAISED TO ULTIMATE GRADE. BEER SDF-01-093. INSTALL SAFETY FENCE AROUND INLET.	PRIVATE
M-1-88	MANHOLE	4'-0"	417.42	---	413.30	413.30	HO. CO. G. 5.15		PUBLIC
M-1-90	HEADWALL	NA	394.71	---	391.21	terminal	HO. CO. SD. 5.21		PUBLIC
REV-1-81B	24" HDPE	12'	417.46	417.15	---	---	---	SHA SD. No. 112-374.62	PRIVATE
REV-3	VortSentry	4'-0"	410.5	---	405.41	405.31	SEE DETAIL SHEET 19		PRIVATE
REV-3A	Manhole	4'-0"	410.5	---	415.54	415.44	HO. CO. G. 5.15		PRIVATE
REV-3	MANHOLE	6'-0"	410.00	---	412.00	terminal	HO. CO. G. 5.15		PRIVATE
REV-4	MANHOLE	6'-0"	424.15	---	412.00	terminal	HO. CO. G. 5.15		PRIVATE
REV-10	MANHOLE	4'-0"	410.75	---	405.25	398.17	HO. CO. G. 5.15		PRIVATE
I-1-80	COG-15	6'-0"	416.36	415.98	408.71	408.66	SHA SD. 374.51		PUBLIC

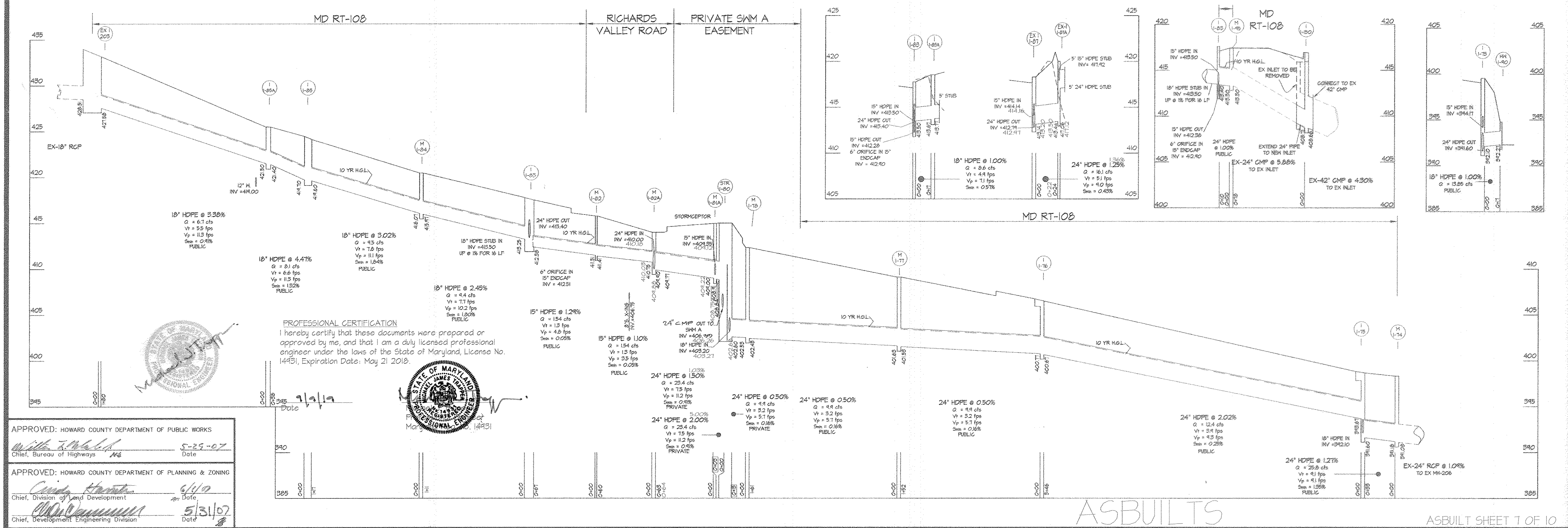
S.D. Pipe Summary Table PUBLICLY OWNED AND MAINTAINED

Size (in.)	Type	Quantity (L.F.)	Remarks
15	HDPE	121	ADS N12 or equiv.
18	HDPE	480	ADS N12 or equiv.
24	HDPE	726	ADS N12 or equiv.

S.D. Pipe Summary Table PRIVATELY OWNED AND MAINTAINED

Size (in.)	Type	Quantity (L.F.)	Remarks
6	HDPE	51	ADS N12 or equiv.
6	RCP	10	
12	HDPE	52	ADS N12 or equiv.
15	RCP	2	
24	HDPE	81	ADS N12 or equiv.

OWNER PARCEL 'A': SHIPLEY'S GRANT RETAIL, LLC, 1966 GREENSPRING DRIVE, SUITE 508, LUTHERVILLE, MD 21083
 OWNER PARCEL 'B': DEEP RUN PROPERTY MANAGEMENT, INC., 191 MILLER HOLLOW LANE, LAKE CITY, TENNESSEE 37789



PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14931, Expiration Date: May 21 2018.

Mark J. Little
 Mark J. Little, P.E.
 PROFESSIONAL ENGINEER
 State of Maryland
 License No. 14931

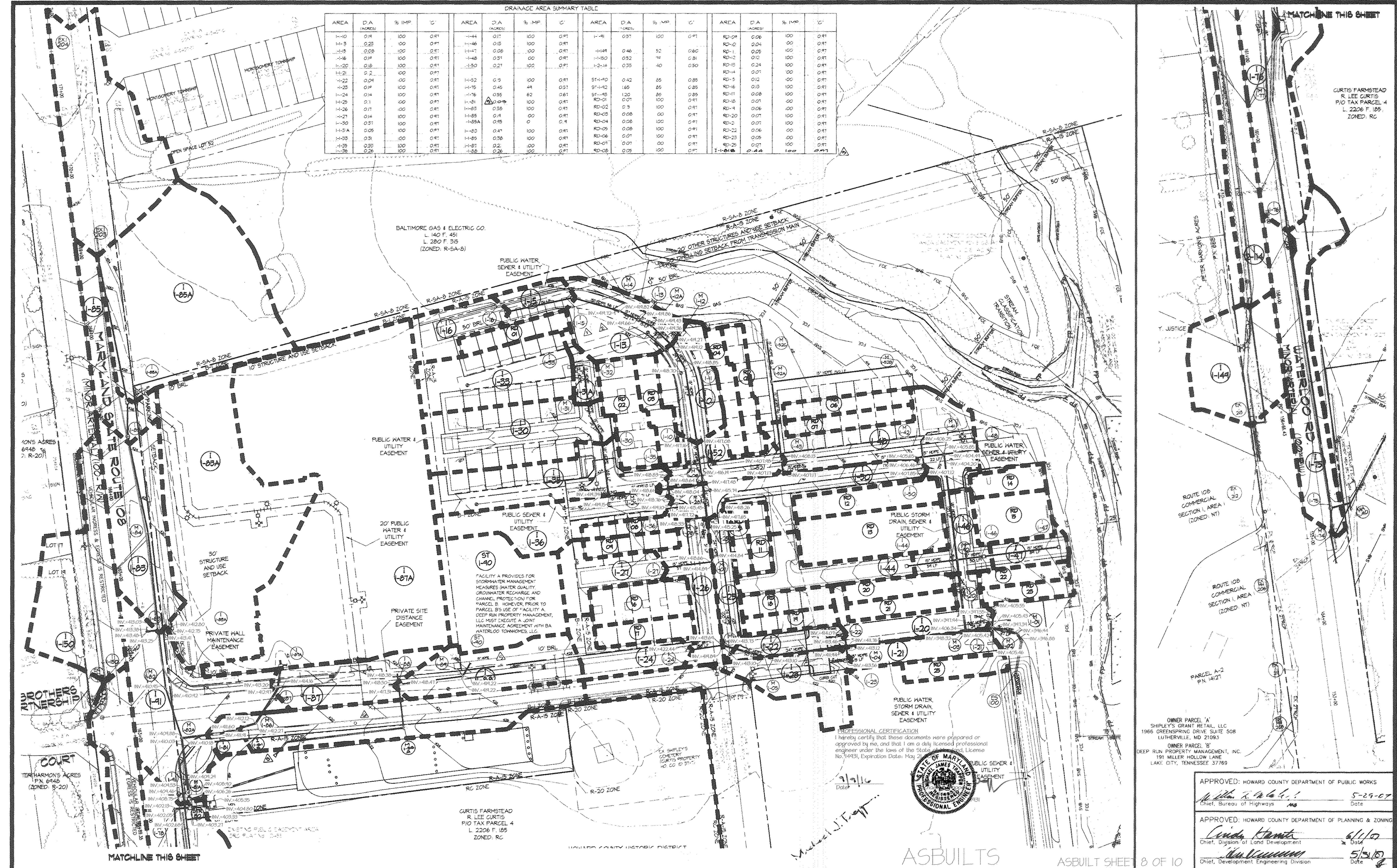
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
With Small
 Chief, Bureau of Highways
 Date: 5-25-07

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Harris
 Chief, Division of Land Development
 Date: 6/10

Mark J. Little
 Chief, Development Engineering Division
 Date: 5/31/07

GLWGuttschick Little & Weber, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS 3809 NATIONAL DRIVE - SUITE 250 - BARTONSVILLE OFFICE PARK BARTONSVILLE, MARYLAND 20856 TEL: 301-421-4024 FAX: 301-980-2524 FAX: 301-421-4186	12-10-11 AS Recharge pipe removed, profile starting with I-155 revised 5-27-07 Remove Rev 12 Plan Profile, Remove Rev 1 from structure schedule 1-10-09 Rev Location Rev 1 & 2	PREPARED FOR AND OWNER PARCEL 'C': BA WATERLOO TOWNHOMES, LLC c/o BOZZUTO HOMES, INC. 7850 WALKER DRIVE SUITE 400 GREENBELT, MARYLAND 20770 ATTN: DUNCAN SLIDELL 301-623-1525	ASBUILTS SHIPLEY'S GRANT PHASE I LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72 A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738 HOWARD COUNTY, MARYLAND	SCALE: 1" = 50' ZONING: R-A-15 B-1 G. L. W. FILE NO.: 05030 DATE: AUG. 2016 TAX MAP - GRID: 37-1&2 SHEET: 15 OF 27
	DES. DRN. CHG. DATE REVISION BY APPR.	ELECTION DISTRICT No. 1	ASBUILT SHEET 7 OF 10	F 01-43

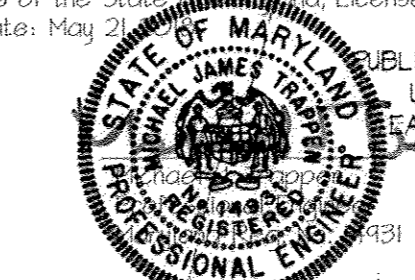
AREA	D.A. (ACRES)	% IMP.	C'	AREA	D.A. (ACRES)	% IMP.	C'	AREA	D.A. (ACRES)	% IMP.	C'	AREA	D.A. (ACRES)	% IMP.	C'
I-10	0.18	100	0.97	I-44	0.17	100	0.97	RD-08	0.06	100	0.97	RD-08	0.06	100	0.97
I-11	0.23	100	0.97	I-46	0.18	100	0.97	RD-09	0.04	100	0.97	RD-09	0.04	100	0.97
I-12	0.28	100	0.97	I-47	0.08	100	0.97	RD-10	0.02	100	0.97	RD-10	0.02	100	0.97
I-13	0.18	100	0.97	I-48	0.01	100	0.97	RD-11	0.12	100	0.97	RD-11	0.12	100	0.97
I-14	0.18	100	0.97	I-50	0.27	100	0.97	RD-12	0.38	100	0.97	RD-12	0.38	100	0.97
I-15	0.18	100	0.97	I-51	0.15	100	0.97	RD-13	0.14	100	0.97	RD-13	0.14	100	0.97
I-16	0.18	100	0.97	I-52	0.15	100	0.97	RD-14	0.07	100	0.97	RD-14	0.07	100	0.97
I-17	0.18	100	0.97	I-53	0.15	100	0.97	RD-15	0.12	100	0.97	RD-15	0.12	100	0.97
I-18	0.18	100	0.97	I-54	0.15	100	0.97	RD-16	0.13	100	0.97	RD-16	0.13	100	0.97
I-19	0.18	100	0.97	I-55	0.15	100	0.97	RD-17	0.08	100	0.97	RD-17	0.08	100	0.97
I-20	0.18	100	0.97	I-56	0.15	100	0.97	RD-18	0.07	100	0.97	RD-18	0.07	100	0.97
I-21	0.18	100	0.97	I-57	0.15	100	0.97	RD-19	0.06	100	0.97	RD-19	0.06	100	0.97
I-22	0.18	100	0.97	I-58	0.15	100	0.97	RD-20	0.07	100	0.97	RD-20	0.07	100	0.97
I-23	0.18	100	0.97	I-59	0.15	100	0.97	RD-21	0.07	100	0.97	RD-21	0.07	100	0.97
I-24	0.18	100	0.97	I-60	0.15	100	0.97	RD-22	0.06	100	0.97	RD-22	0.06	100	0.97
I-25	0.18	100	0.97	I-61	0.15	100	0.97	RD-23	0.05	100	0.97	RD-23	0.05	100	0.97
I-26	0.18	100	0.97	I-62	0.15	100	0.97	RD-24	0.07	100	0.97	RD-24	0.07	100	0.97
I-27	0.18	100	0.97	I-63	0.15	100	0.97	RD-25	0.07	100	0.97	RD-25	0.07	100	0.97
I-28	0.18	100	0.97	I-64	0.15	100	0.97	RD-26	0.05	100	0.97	RD-26	0.05	100	0.97
I-29	0.18	100	0.97	I-65	0.15	100	0.97	RD-27	0.07	100	0.97	RD-27	0.07	100	0.97
I-30	0.18	100	0.97	I-66	0.15	100	0.97	RD-28	0.05	100	0.97	RD-28	0.05	100	0.97
I-31	0.18	100	0.97	I-67	0.15	100	0.97	RD-29	0.07	100	0.97	RD-29	0.07	100	0.97
I-32	0.18	100	0.97	I-68	0.15	100	0.97	RD-30	0.05	100	0.97	RD-30	0.05	100	0.97
I-33	0.18	100	0.97	I-69	0.15	100	0.97	RD-31	0.07	100	0.97	RD-31	0.07	100	0.97
I-34	0.18	100	0.97	I-70	0.15	100	0.97	RD-32	0.05	100	0.97	RD-32	0.05	100	0.97
I-35	0.18	100	0.97	I-71	0.15	100	0.97	RD-33	0.07	100	0.97	RD-33	0.07	100	0.97
I-36	0.18	100	0.97	I-72	0.15	100	0.97	RD-34	0.05	100	0.97	RD-34	0.05	100	0.97



BALTIMORE GAS & ELECTRIC CO.
L. 140 F. 451
L. 280 F. 315
(ZONED R-SA-B)

FACILITY A PROVIDES FOR STORMWATER MANAGEMENT MEASURES WATER QUALITY, GROUNDWATER RECHARGE AND CHANNEL PROTECTION FOR PARCEL B. HOWEVER PRIOR TO PARCEL B'S USE OF FACILITY A, DEEP RUN PROPERTY MANAGEMENT, LLC MUST EXECUTE A JOINT MAINTENANCE AGREEMENT WITH BA WATERLOO TOWNSHIPS, LLC.

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14431, Expiration Date: May 21, 2016.



OWNER PARCEL 'A'
SHIPLEY'S GRANT RETAIL, LLC
1966 GREENSPRING DRIVE SUITE 508
LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
DEEP RUN PROPERTY MANAGEMENT, INC.
191 MILLER HOLLOW LANE
LAKE CITY, TENNESSEE 37769

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways
Date: 5-29-07

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development
Date: 6/1/07

Chief, Development Engineering Division
Date: 5/31/07

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 FAX: 301-899-2524

DATE	REVISION	BY	APPR.
6-20-10	Remove Ho Ramp at Richards Valley Rd. etc. 7200 Right	gt	
11-11-14	Remove entrance to Buildable Parcel 'B' (channel), continue curb and sidewalk, added 1 street tree	gt	
12-15-11	OWNER A Rev. Recharge Facility Removed, I-10141-10142 added	WesJ	
5-27-09	Remove REV 12	WesJ	
1-17-09	Rev Location REV 142	WesJ	

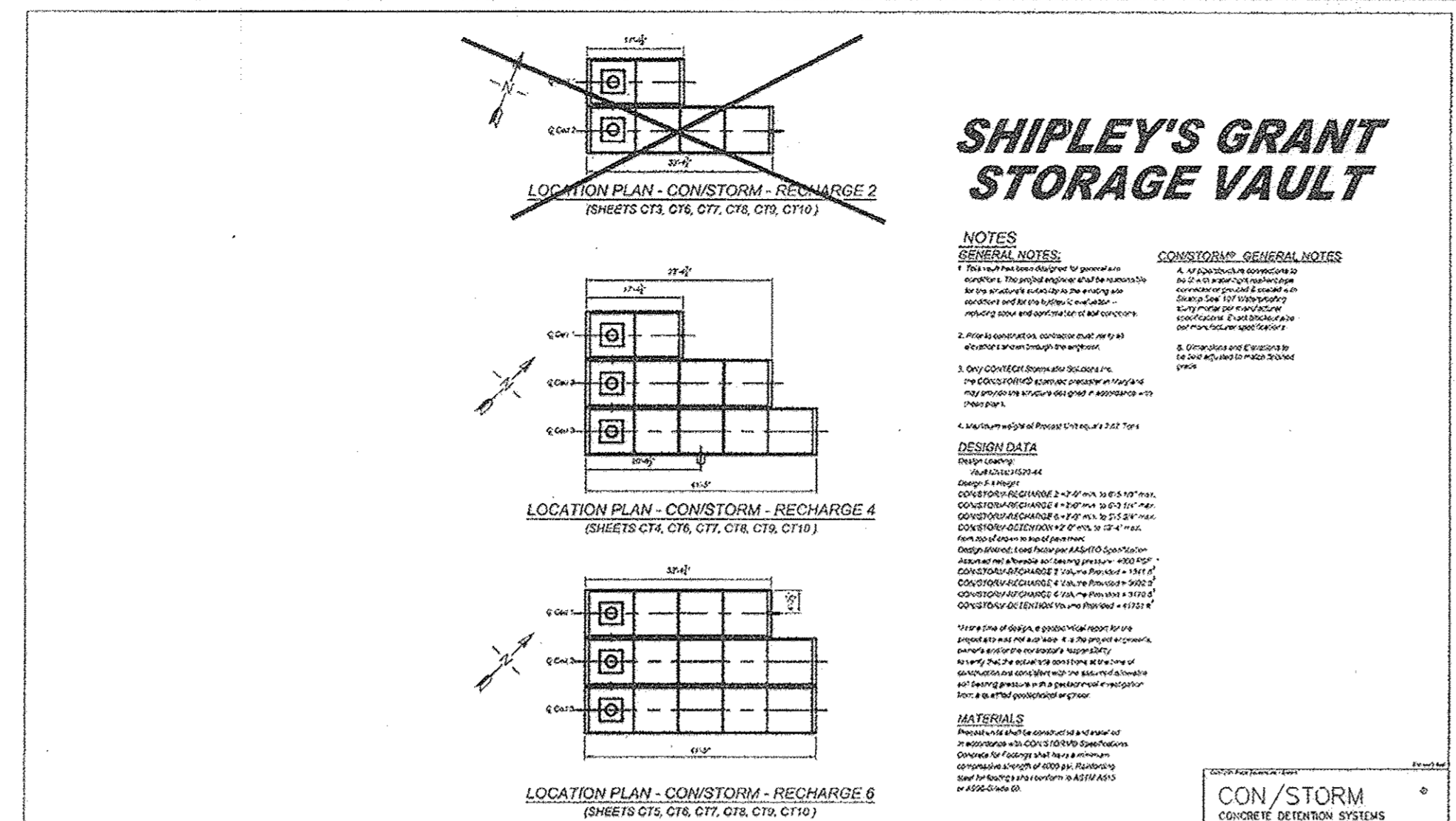
PREPARED FOR AND OWNER PARCEL 'C':
BA WATERLOO TOWNSHIPS, LLC
c/o BOZZUTO HOMES, INC.
7850 WALKER DRIVE SUITE 400
GREENBELT, MARYLAND 20770
ATTN: DUNCAN SLODELL
301-623-1525

STORM DRAIN DRAINAGE AREA MAP
SHIPLEY'S GRANT
PHASE I
LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65
COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
ELECTION DISTRICT No. 1

SCALE: 1"=50'
ZONING: R-A-15 B-1
G. L. W. FILE No. 05030
DATE: AUG., 2016
MAY, 2007
TAX MAP - GRID: 37-1&2
SHEET: 16 OF 27

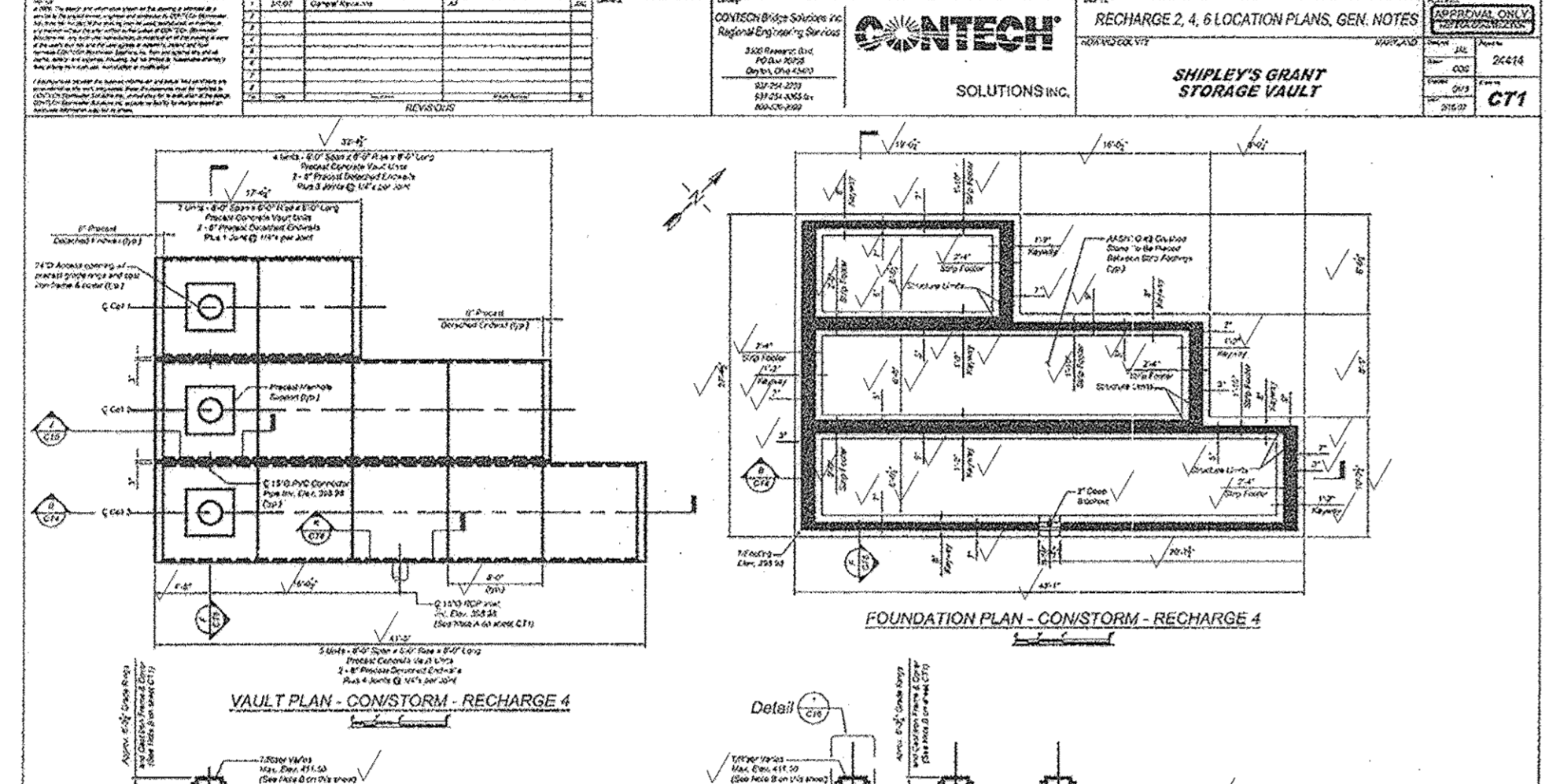
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED VORTSENTRY WATER QUALITY DEVICE

- The Vortsenentry water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor Inspection/Monitoring Form. Inspections shall be done by using clear plexiglass tube ("bridge judge") to extract a water column sample. When the sediment depth exceeds the level specified in Table 6 of the Vortsenentry Technical Manual, the unit must be cleaned.
- The Stormceptor water quality structure shall be checked and cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies.
- The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove water, sediment, debris, floating hydrocarbons, and other materials to each unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- The inlet and outlet pipes shall be checked for any obstructions at least once every six months. If obstructions are found, the owner shall have them removed. Structural parts of the Stormceptor unit shall be repaired as needed.
- The owner shall retain and make the Stormceptor Inspection/Monitoring Forms available to the Howard County Officials upon their request.



OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES

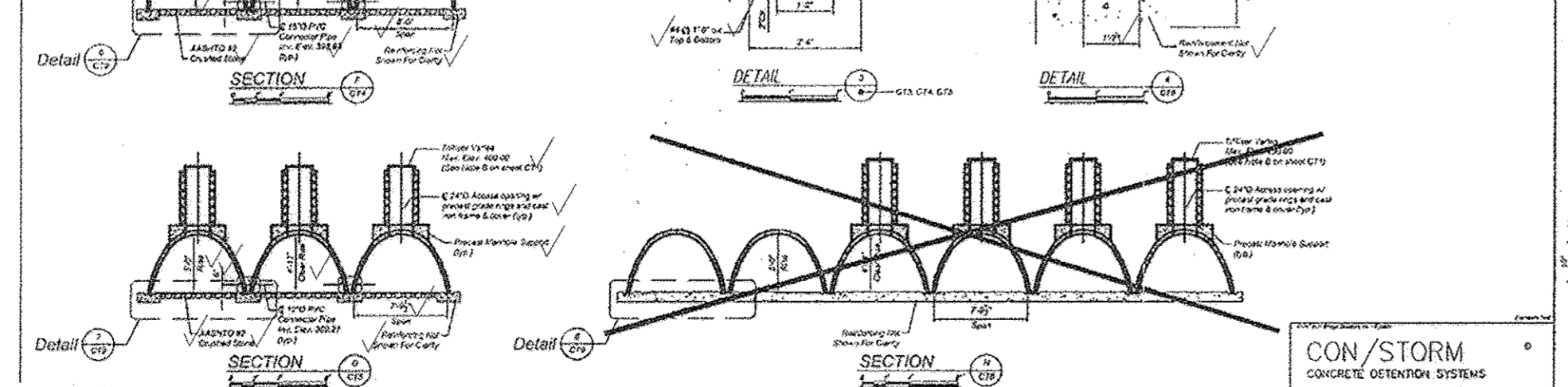
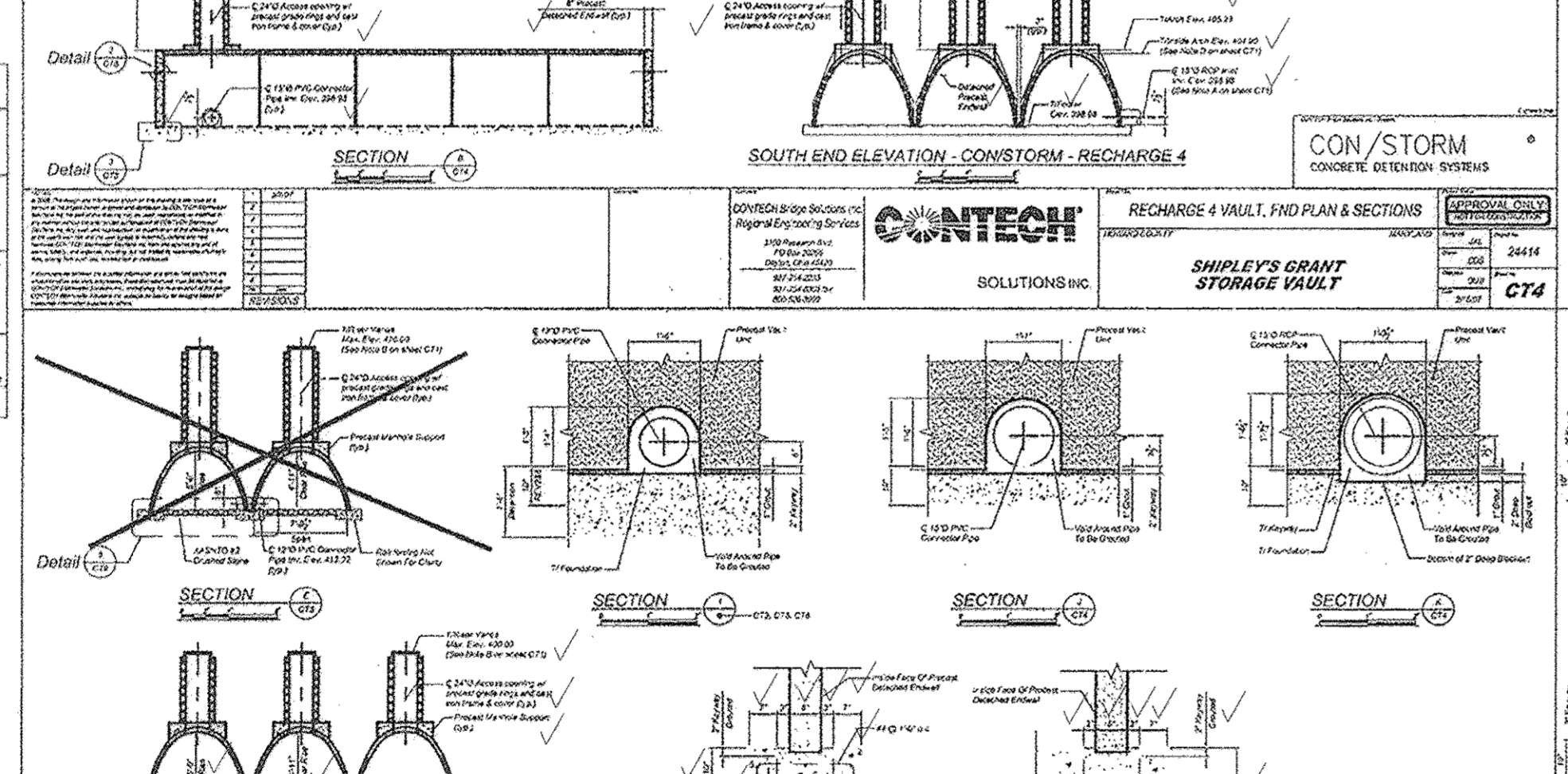
- The monitoring wells and structures shall be inspected on a quarterly basis and after every large storm event.
- Water levels and sediment build up in the monitoring wells shall be recorded over a period of several days to insure trench drainage.
- A log book shall be maintained to determine the rate at which the facility drains.
- When the facility becomes clogged so that it does not drain within the 72 hour time period, corrective action shall be taken.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration facility have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.



OPERATION AND MAINTENANCE SCHEDULE

NOTE: COMPONENTS ARE TO BE INSPECTED QUARTERLY

FACILITY COMPONENT	RECORDING MAINTENANCE	MAINTENANCE ACTIVITY	WHEN MAINTENANCE ACTIVITY IS REQUIRED
STORM FILTER STRUCTURE AND STORAGE MANIFOLD		TRASH AND DEBRIS REMOVAL & SEDIMENT REMOVAL	FLOATABLE OBJECTS OR OTHER DEBRIS IS PRESENT IN THE FILTER OR MANIFOLD SYSTEM.
PIPING FITTINGS AND CONTROL DEVICES		ENGINE ALL FITTINGS ARE SECURE AND THAT ALL CONTROLS ARE UNDETECTED. TIGHTEN WHEN NEEDED.	BRASSAGE SYSTEM IS OBSTRUCTED BY SEDIMENT OR SOLIDS.
STORM FILTER COMPONENTS		REPLACE CHARCOLES AND RESINS AS ALL RESINS AND SEDIMENT WHEN THE SYSTEM IS FULL.	NOVA BECOMES CHARRED AND IS NO LONGER REMOVING POLLUTANTS, OR HIGH BASES OR AFTER A SILE.
VORTSENTRY & STORMCEPTOR		REMOVE ALL WATER AND POLLUTANTS FROM STRUCTURE.	SEDIMENT ACCUMULATES TO A DEPTH OF THREE FEET IN THE TRENCHES SOAP OR AFTER A SILE.
FACILITY COMPONENT RECORDING MAINTENANCE		EXPECTED FACILITY PERFORMANCE AFTER MAINTENANCE	
STORM FILTER STRUCTURE AND STORAGE MANIFOLD		FILTRATION CAPACITY IS MAINTAINED.	
PIPING FITTINGS AND CONTROL DEVICES		SYSTEM FLOWS FREELY.	
STORM FILTER COMPONENTS		SYSTEMS POLLUTANT REMOVAL CAPACITY IS MAINTAINED.	
VORTSENTRY & STORMCEPTOR		STRUCTURE IS EMPTY.	



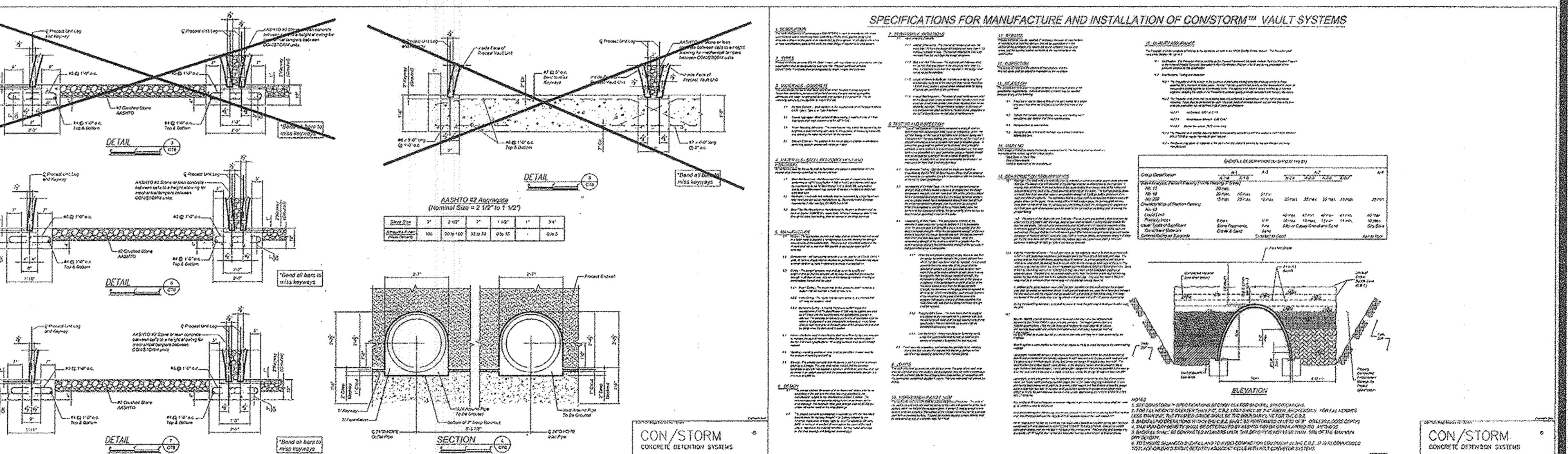
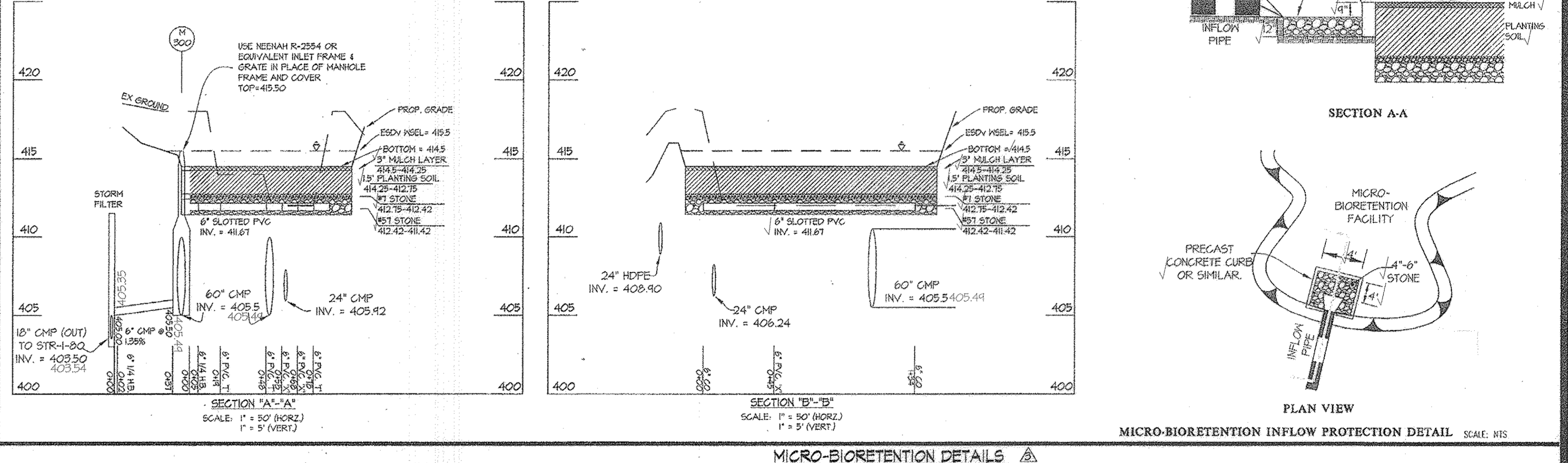
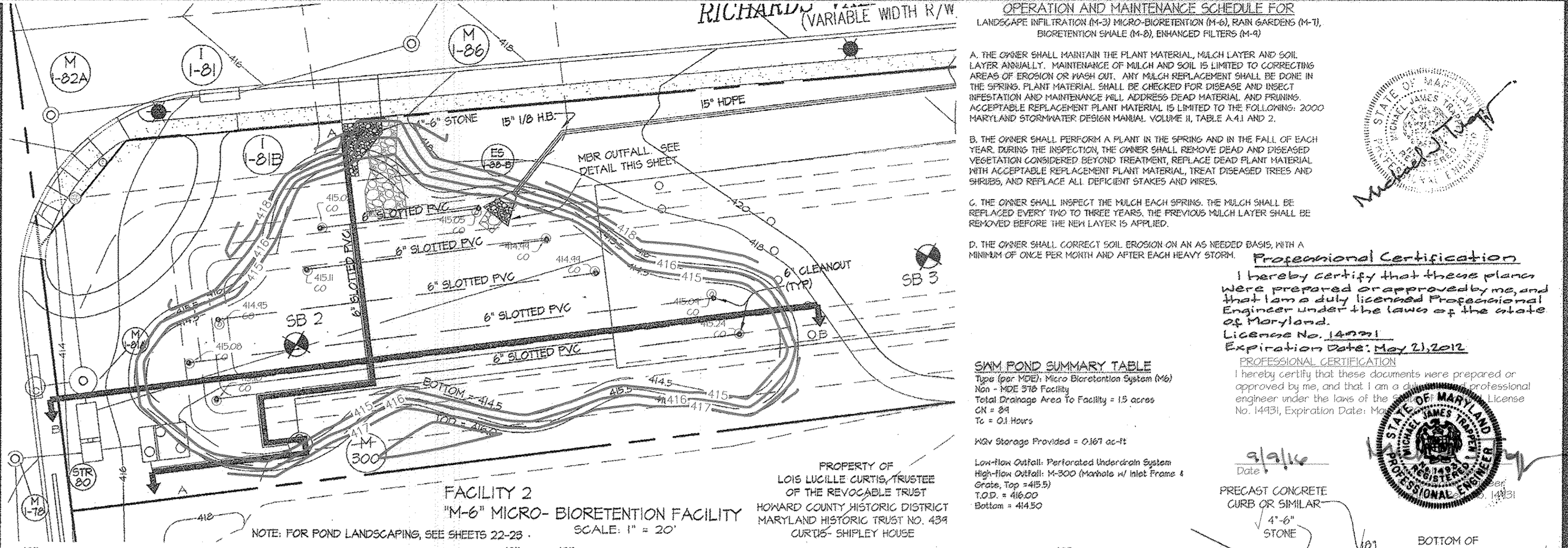
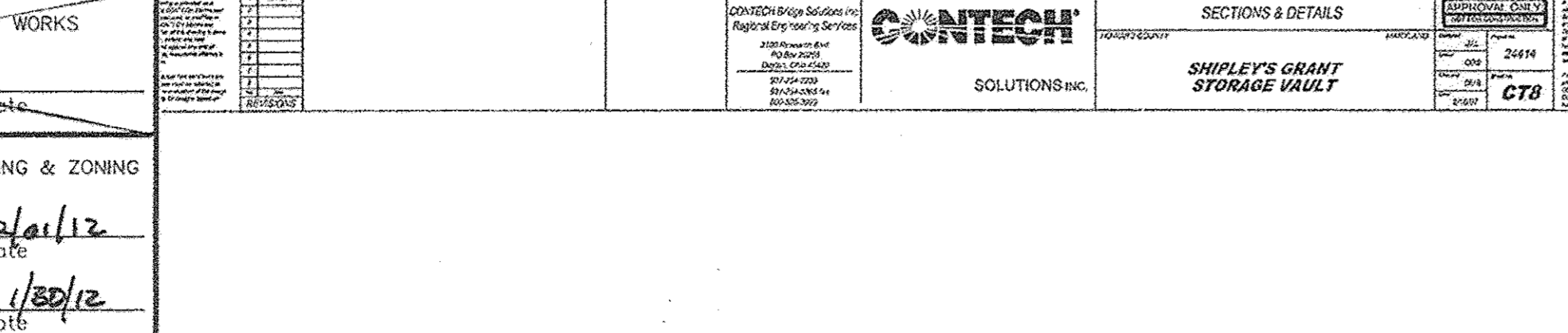
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways *[Signature]* Date *2/1/12*

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development *[Signature]* Date *1/30/12*

Chief, Development Engineering Division *[Signature]* Date *1/30/12*



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways *[Signature]* Date *2/1/12*

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development *[Signature]* Date *1/30/12*

Chief, Development Engineering Division *[Signature]* Date *1/30/12*

GLWGUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK
BURTONVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-686-1820 DC/FX: 301-988-2824 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
01/2012	CON/STORM SWM-A DETAILS REMOVED, MICRO-BIORETENTION DETAILS ADDED		

PREPARED FOR AND OWNER PARCEL 'C':

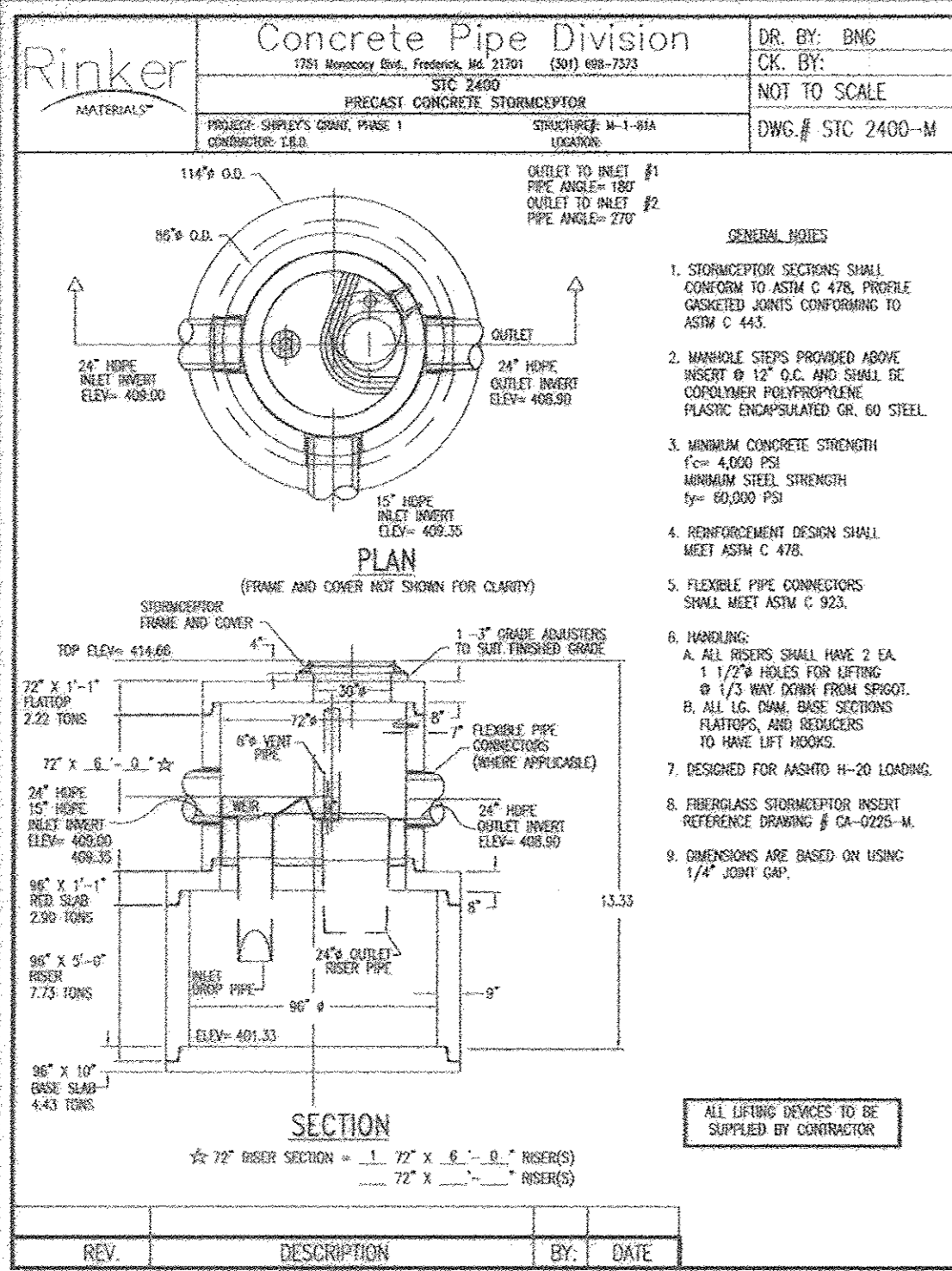
BA WATERLOO TOWNHOMES, LLC
c/o BOZZUTO HOMES, INC.
7850 WALKER DRIVE SUITE 400
GREENBELT, MARYLAND 20770
ATTN: DUNCAN SLIDELL
301-623-1525

REVISED STORMWATER MANAGEMENT FACILITY 'A' DETAILS

SHIPLEY'S GRANT

PHASE I
COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
A RESUBDIVISION OF PARCEL 'C' PLAT NOS. 18429, 18430, AND 18735 - 18738
ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
AUG. 2016 JAN., 2012	37-1&2	18 OF 27



INFILTRATION TEST FIELD LOG

DATE: 06/20/06
 PROJECT: Shipley's Grant
 PROJECT NO.: 031863
 TEST NO.: A-3
 TOTAL PIPE LENGTH: 10.05 H.
 BOTTOM ELEVATION: 409.75 R.

TIME	DEPTH TO WATER LEVEL, FEET	TIME CHANGE, MINUTES	DEPTH CHANGE, FEET	RATE, INCHES PER HOUR
11:42	4.97	0		
12:11	6.51	29	1.54	
12:36	8.05	34	0.11	22.40
13:01	6.74	89	0.11	
13:29	8.85	116	0.11	2.32
13:54	7.55	140	0.20	
14:25	7.16	173	0.11	3.92
14:51	7.23	189	0.07	
15:18	7.28	238	0.06	
15:42	7.50	250	0.07	1.87
16:10	7.44	278	0.08	
				AVG = 7.63

Water level prior to addition of water = 7.23 feet
 Total depth of pipe below existing grade = 9.05 feet
 Top of pipe above ground surface = 1.0 feet

SPECIALIZED ENGINEERING BORING NUMBER A-1

PROJECT NAME: Shipley's Grant
 PROJECT LOCATION: 18127 Rte. 270, Greenbelt, Maryland 21043
 DATE STARTED: 05/20/06
 COMPLETED: 05/20/06
 GROUND ELEVATION: 414.77
 HOLE NO.: 1
 LOGGED BY: J. B. Smith
 CHECKED BY: J. B. Smith
 AT END OF DRILLING: 7' BELOW EXISTING GRADE (ELEV. 411.2)

DEPTH (FEET)	DESCRIPTION	PERCENT MOISTURE (%)	UNIT WEIGHT (PCF)	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX	SOIL CLASSIFICATION
0.0	TOPSOIL	12.5	105	12.5	25	12.5	OH
0.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
1.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
1.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
2.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
2.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
3.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
3.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
4.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
4.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
5.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
5.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
6.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
6.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
7.0	SANDY SILT	18.5	115	18.5	25	7.0	SM

SPECIALIZED ENGINEERING BORING NUMBER A-2

PROJECT NAME: Shipley's Grant
 PROJECT LOCATION: 18127 Rte. 270, Greenbelt, Maryland 21043
 DATE STARTED: 05/20/06
 COMPLETED: 05/20/06
 GROUND ELEVATION: 414.12
 HOLE NO.: 2
 LOGGED BY: J. B. Smith
 CHECKED BY: J. B. Smith
 AT END OF DRILLING: 7' BELOW EXISTING GRADE (ELEV. 411.2)

DEPTH (FEET)	DESCRIPTION	PERCENT MOISTURE (%)	UNIT WEIGHT (PCF)	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX	SOIL CLASSIFICATION
0.0	TOPSOIL	12.5	105	12.5	25	12.5	OH
0.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
1.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
1.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
2.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
2.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
3.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
3.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
4.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
4.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
5.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
5.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
6.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
6.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
7.0	SANDY SILT	18.5	115	18.5	25	7.0	SM

SPECIALIZED ENGINEERING BORING NUMBER A-3

PROJECT NAME: Shipley's Grant
 PROJECT LOCATION: 18127 Rte. 270, Greenbelt, Maryland 21043
 DATE STARTED: 05/20/06
 COMPLETED: 05/20/06
 GROUND ELEVATION: 414.12
 HOLE NO.: 3
 LOGGED BY: J. B. Smith
 CHECKED BY: J. B. Smith
 AT END OF DRILLING: 7' BELOW EXISTING GRADE (ELEV. 411.2)

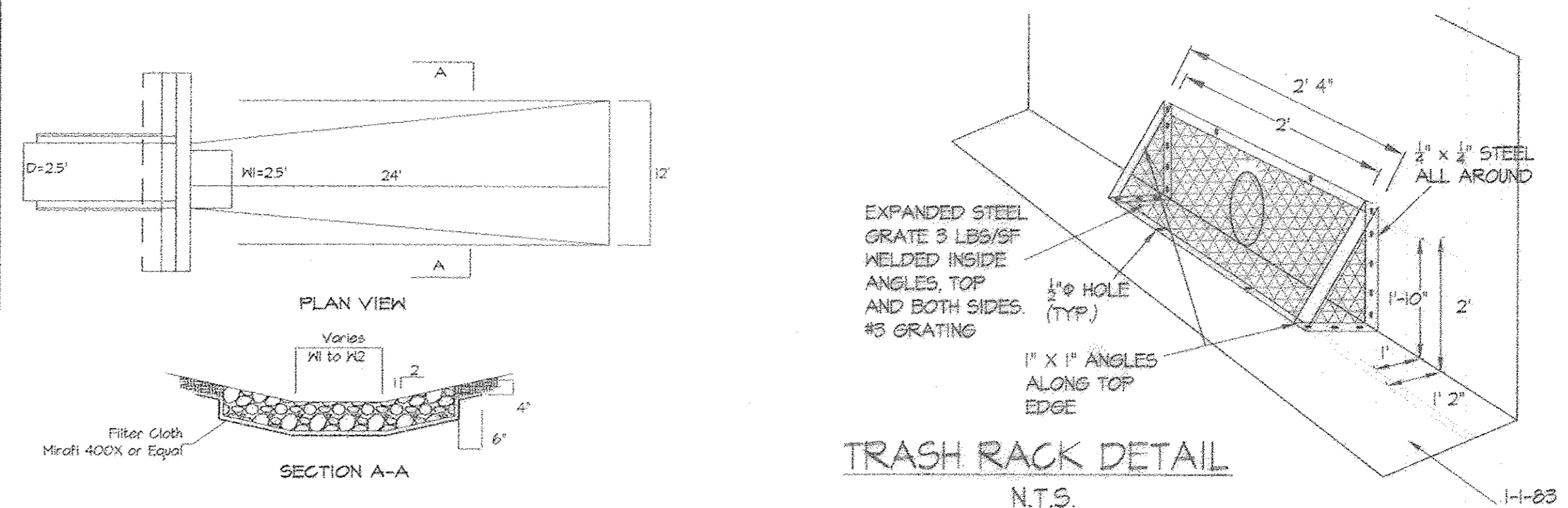
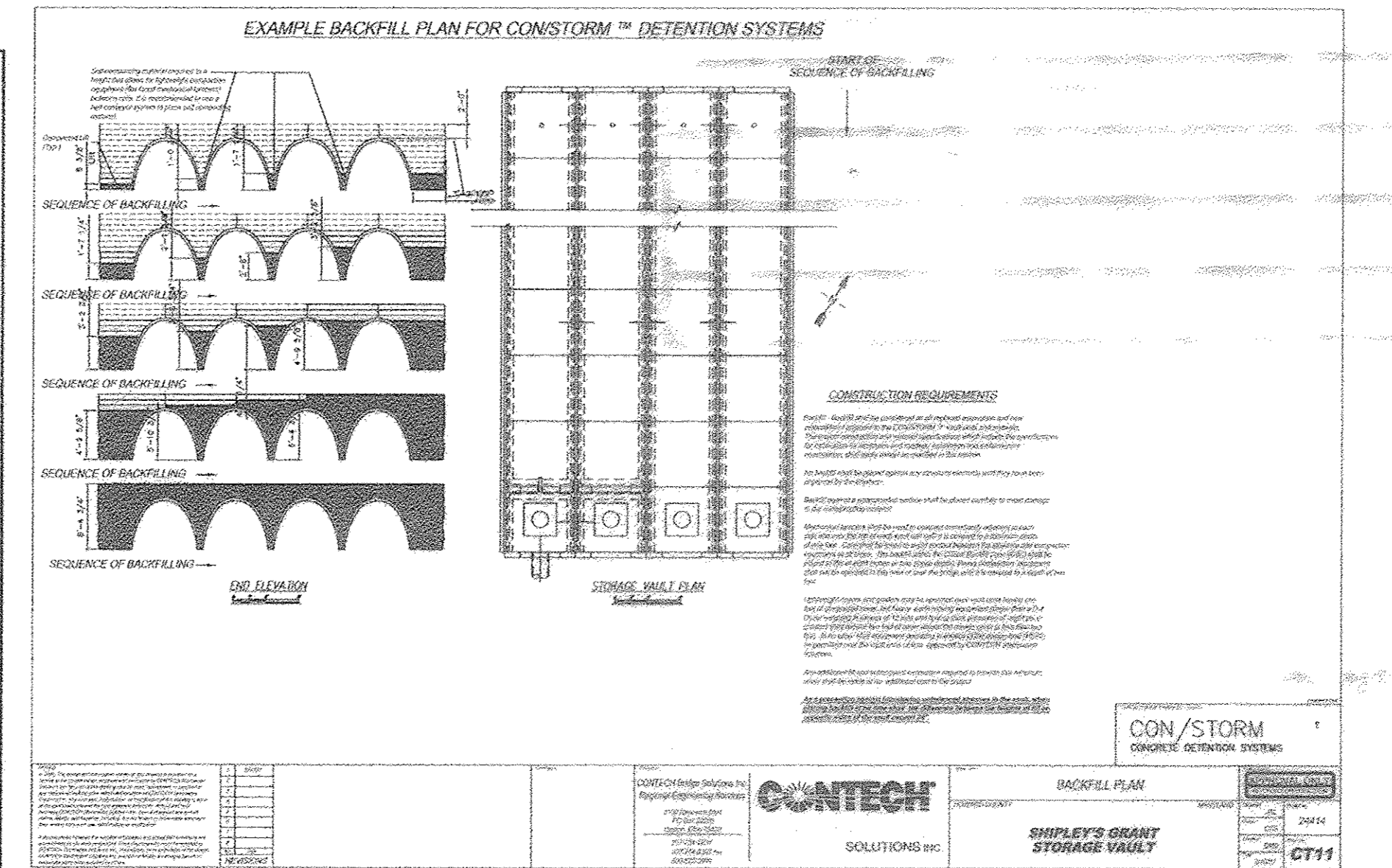
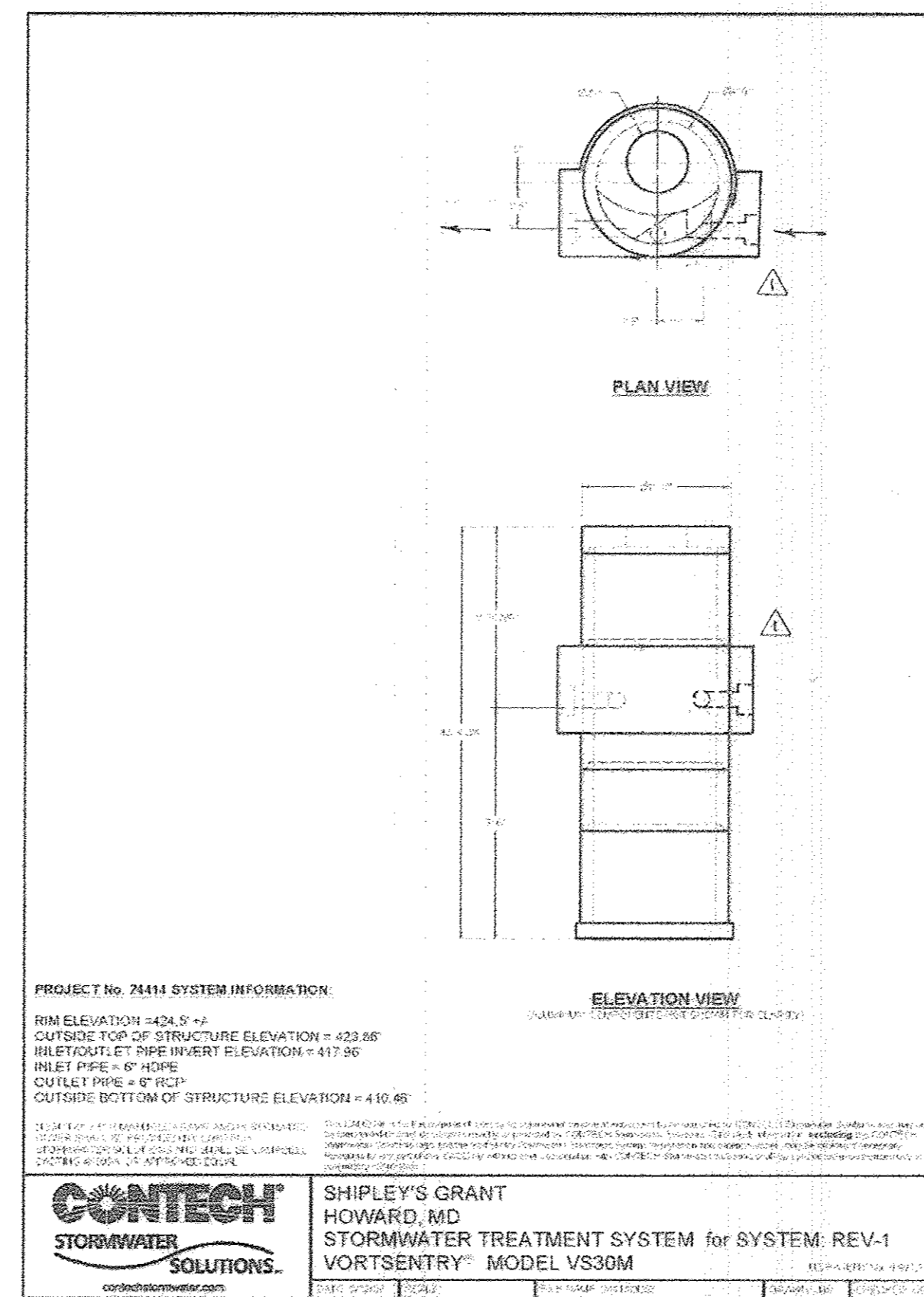
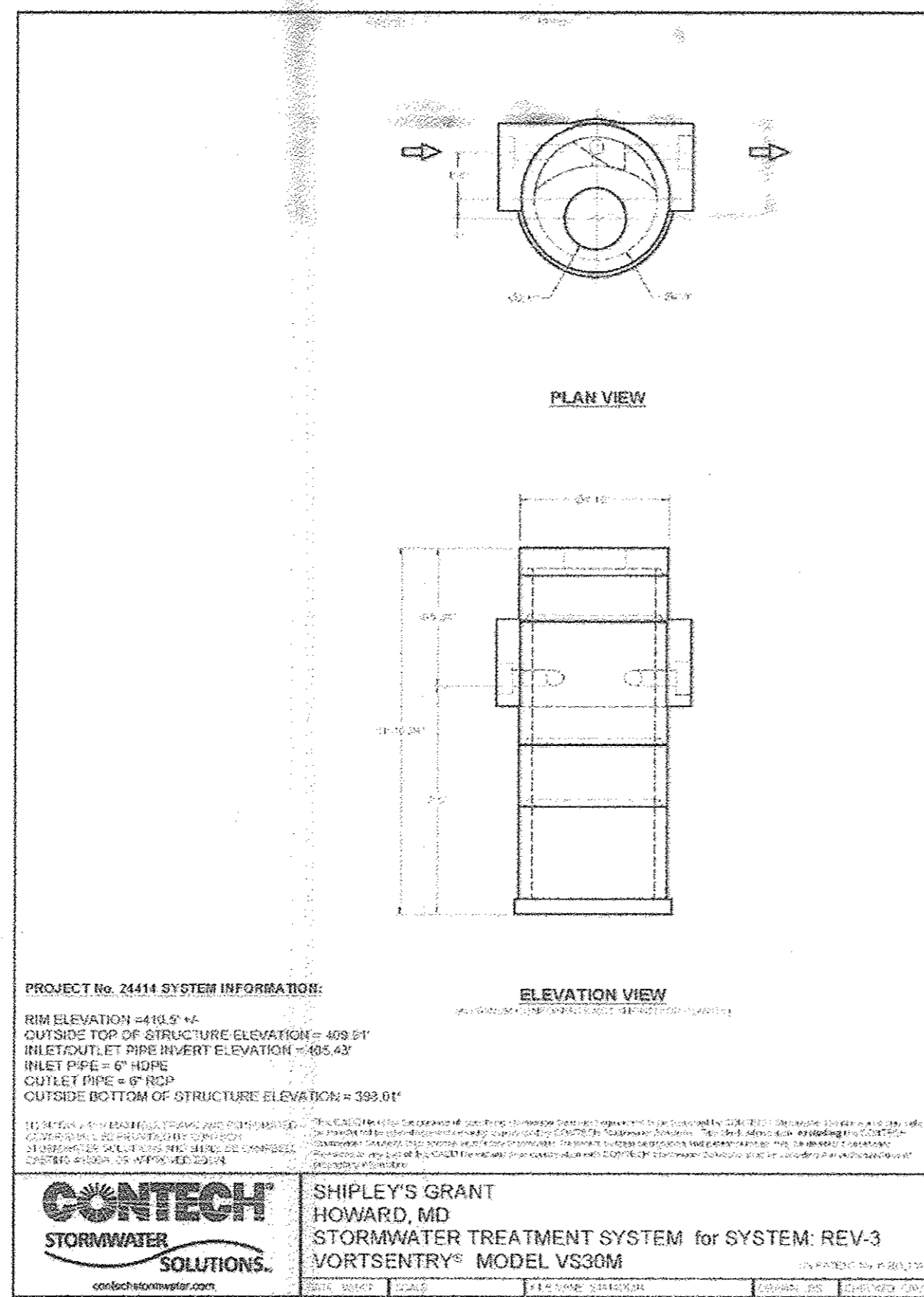
DEPTH (FEET)	DESCRIPTION	PERCENT MOISTURE (%)	UNIT WEIGHT (PCF)	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX	SOIL CLASSIFICATION
0.0	TOPSOIL	12.5	105	12.5	25	12.5	OH
0.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
1.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
1.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
2.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
2.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
3.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
3.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
4.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
4.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
5.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
5.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
6.0	SANDY SILT	18.5	115	18.5	25	7.0	SM
6.5	SANDY SILT	18.5	115	18.5	25	7.0	SM
7.0	SANDY SILT	18.5	115	18.5	25	7.0	SM

INFILTRATION TEST FIELD LOG

DATE: 05/20/06
 PROJECT: Shipley's Grant
 PROJECT NO.: 031863
 TEST NO.: A-2
 TOTAL PIPE LENGTH: 10.28 H.
 BOTTOM ELEVATION: 409.81 R.

TIME	DEPTH TO WATER LEVEL, FEET	TIME CHANGE, MINUTES	DEPTH CHANGE, FEET	RATE, INCHES PER HOUR
11:41	6.88	0		
12:00	6.97	28	0.09	
12:30	6.98	54	0.01	14.07
12:59	7.19	79	0.20	
13:27	7.95	106	0.47	
13:56	7.19	135	0.31	12.36
14:23	8.47	162	0.31	
14:50	8.77	189	0.30	3.00
15:17	8.83	213	0.06	
				AVG = 11.68

Water level prior to addition of water = 6.83 feet
 Total depth of pipe below existing grade = 8.89 feet
 Top of pipe above ground surface = 0.60 feet



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 Date: 5-29-07

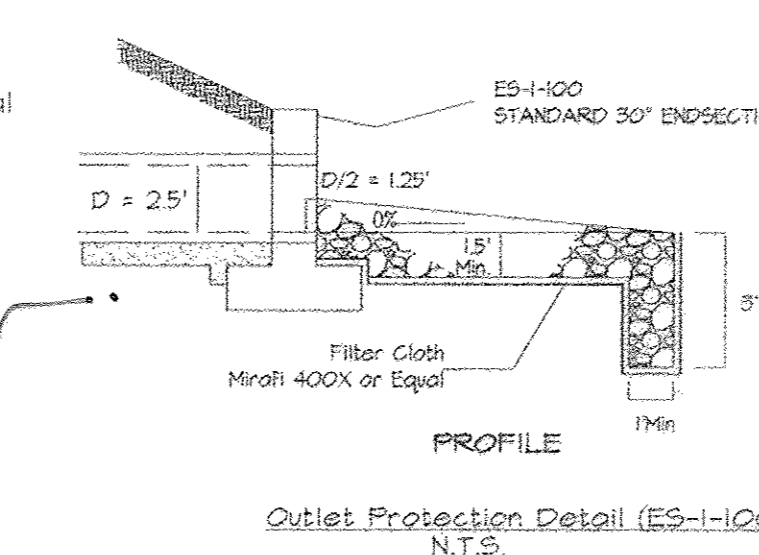
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development
 Date: 6/1/07

APPROVED: Chief, Development Engineering Division
 Date: 5/31/07



PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14931, Expiration Date: May 21, 2008.

7/9/16
 Date



NOTE: I-1-83 STRUCTURE IS PART OF THE SHA RT. 108 IMPROVEMENTS. THIS STRUCTURE IS BONDED AND INSPECTED BY THE STATE HIGHWAY ADMINISTRATION.

OWNER PARCEL 'A'
 SHIPLEY'S GRANT RETAIL, LLC
 1966 GREENSPRING DRIVE SUITE 508
 LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
 DEEP RUN PROPERTY MANAGEMENT, INC.
 191 MILLER HOLLOW LANE
 LAKE CITY, TENNESSEE 37769

DATE	REVISION	BY	APPR.
12-10-11	REV 7 Detail removed	Woj	
10-17-09	REV 1 Detail	Woj	

PREPARED FOR AND OWNER PARCEL 'C':
 BA WATERLOO TOWNHOMES, LLC
 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SLODLE
 301-623-1525

STORMWATER MANAGEMENT FACILITY 'A' BORING LOGS
SHIPLEY'S GRANT
 PHASE I
 LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65
 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
 A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
May, 2007	37-1&2	19 OF 27

LEGEND

- SOILS DELINEATION LINE B' SOIL
- C' SOIL
- D' SOIL
- EXISTING DRAINAGE DIVIDE
- TC PATH
- DRAINAGE AREA LABEL

EXISTING DISCHARGE SUMMARY APPROVED UNDER F-06-019

	Q1 (cfs)	Q10 (cfs)	Q100 (cfs)
STUDY POINT 1	1.86	6.24	10.21
STUDY POINT 2	13.68	44.12	82.32
STUDY POINT 3	20.38	65.99	101.38

EXISTING DISCHARGE SUMMARY

	Q1 (cfs)	Q10 (cfs)	Q100 (cfs)
STUDY POINT 4	5.54	14.91	23.01

DEVELOPER'S/BUILDER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Davis 5/22/07
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Michael J. Tropp 5/21/07
ENGINEER'S SIGNATURE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Wills Z. Embrey 5-29-07
Chief, Bureau of Highways Date

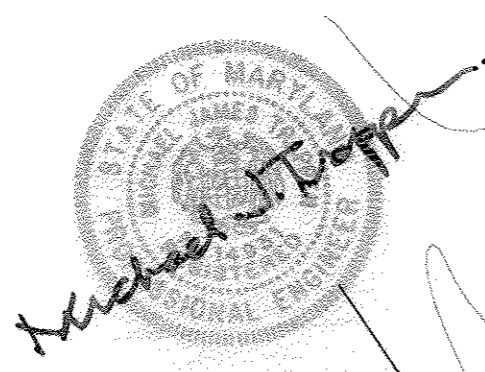
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hammett 6/1/07
Chief, Division of Land Development Date
Michael J. Tropp 5/21/07
Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

PREPARED FOR AND OWNER PARCEL 'C':
BA WATERLOO TOWNHOMES, LLC
c/o BOZZUTO HOMES, INC.
7850 WALKER DRIVE SUITE 400
GREENBELT, MARYLAND 20770
ATTN: DUNCAN SUIDELL
301-623-1525

STORMWATER MANAGEMENT DRAINAGE AREA MAP - EXISTING CONDITIONS
SHIPLEY'S GRANT PHASE I
NO AS-BUILT INFORMATION
COMMON OPEN SPACE LOTS C-61 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65
C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 1

SCALE	ZONING	G. L. W. FILE No.
1"=100'	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
May, 2007	37-1&2	20 OF 27



NOTE: THIS PLAN SHOWS THE SITE AS IT WAS BEFORE ANY DEVELOPMENT. ALL EXISTING EASEMENTS HAVE PURPOSELY BEEN LEFT OFF THIS PLAN.

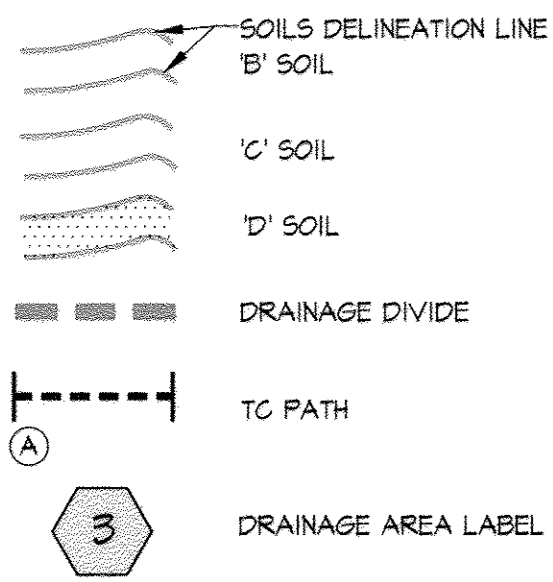
THIS PLAN IS FOR STORMWATER MANAGEMENT HYDRAULIC ANALYSIS AND DRAINAGE AREA INFORMATION ONLY FOR PLAN INFORMATION. SEE SHEETS 9 THROUGH 11

OWNER PARCEL 'A'
SHIPLEY'S GRANT RETAIL, LLC
1966 GREENSPRING DRIVE SUITE 508
LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
DEEP RUN PROPERTY MANAGEMENT, INC.
191 MILLER HOLLOW LANE
LAKE CITY, TENNESSEE 37769

C:\GWD\03006\PHASE I\FINALS\03006F_SWM-DAM.dwg

LEGEND



NOTES:

1. THE RECHARGE REQUIREMENT IS TO BE MET BY THE USE OF INFILTRATION TRENCHES PLACED THROUGHOUT THE FUTURE SITE. RECHARGE HAS BEEN ACCOUNTED FOR IN THE DESIGN OF PONDS B & C (DISCOUNTED FROM HGV). IT HAS ALSO BEEN ACCOUNTED FOR IN THE PRELIMINARY DESIGN OF POND A. THE CUMULATIVE RECHARGE REQUIREMENT FOR ALL DRAINAGE AREAS HAS THEN DIVIDED BY THE TOTAL AREA TO PONDS A, B AND C. THE RESULT YIELDS THE RECHARGE REQUIRED PER ACRE OF DEVELOPABLE PARCEL.

DA 1-A = 5.9 ACRES REV REQUIRED = 0.10 AC-FT.
 DA 2-C = 5.6 ACRES REV REQUIRED = 0.01 AC-FT
 DA 3-B = 17.6 ACRES REV REQUIRED = 0.21 AC-FT
 TOTAL AREA = 29.1 ACRES TOTAL REV REQUIRED = 0.46 AC-FT

REV REQUIREMENT/ACRE OF DEVELOPABLE PARCEL = 0.46 AC-FT/29.1ACRES = 0.016 AC-FT/ACRE = 103 CU-FT/ACRE

PEAK DISCHARGE SUMMARY

		Q1 (cfs)	Q10 (cfs)	Q100 (cfs)
STUDY POINT 1	EX. (F-06-14)	1.86	6.24	10.27
	PROP. (F-06-14)	0.30	50.01	54.82
STUDY POINT 2	EX. (F-06-14)	15.68	49.12	82.32
	PROP. (F-06-14)	1.84	24.99	33.50
STUDY POINT 3	EX. (F-06-14)	20.38	65.99	107.38
	PROP. (F-06-14)	0.80	84.56	116.70
STUDY POINT 4	EX. (F-06-14)	5.54	14.91	23.07
	PROP. (F-06-14)	---	---	---

RECHARGE REQUIREMENT PER F-06-014 NOTE 21

THE RECHARGE (REV) REQUIREMENT FOR SHIPLEY'S GRANT PARCELS A, B, & C IS TO BE PROVIDED BY INFILTRATION TRENCHES LOCATED ON EACH RESPECTIVE PARCEL. THE DESIGN AND DETAILS OF THE INFILTRATION TRENCHES ARE TO BE FINALIZED UNDER THE FUTURE PHASED PLANS FOR THIS SITE. THE INFILTRATION TRENCH STORAGE VOLUME IS TO BE SIZED TO PROVIDE A MINIMUM OF 103 CU-FT PER ACRE OF DEVELOPABLE AREA.

Stormwater Management Facility A

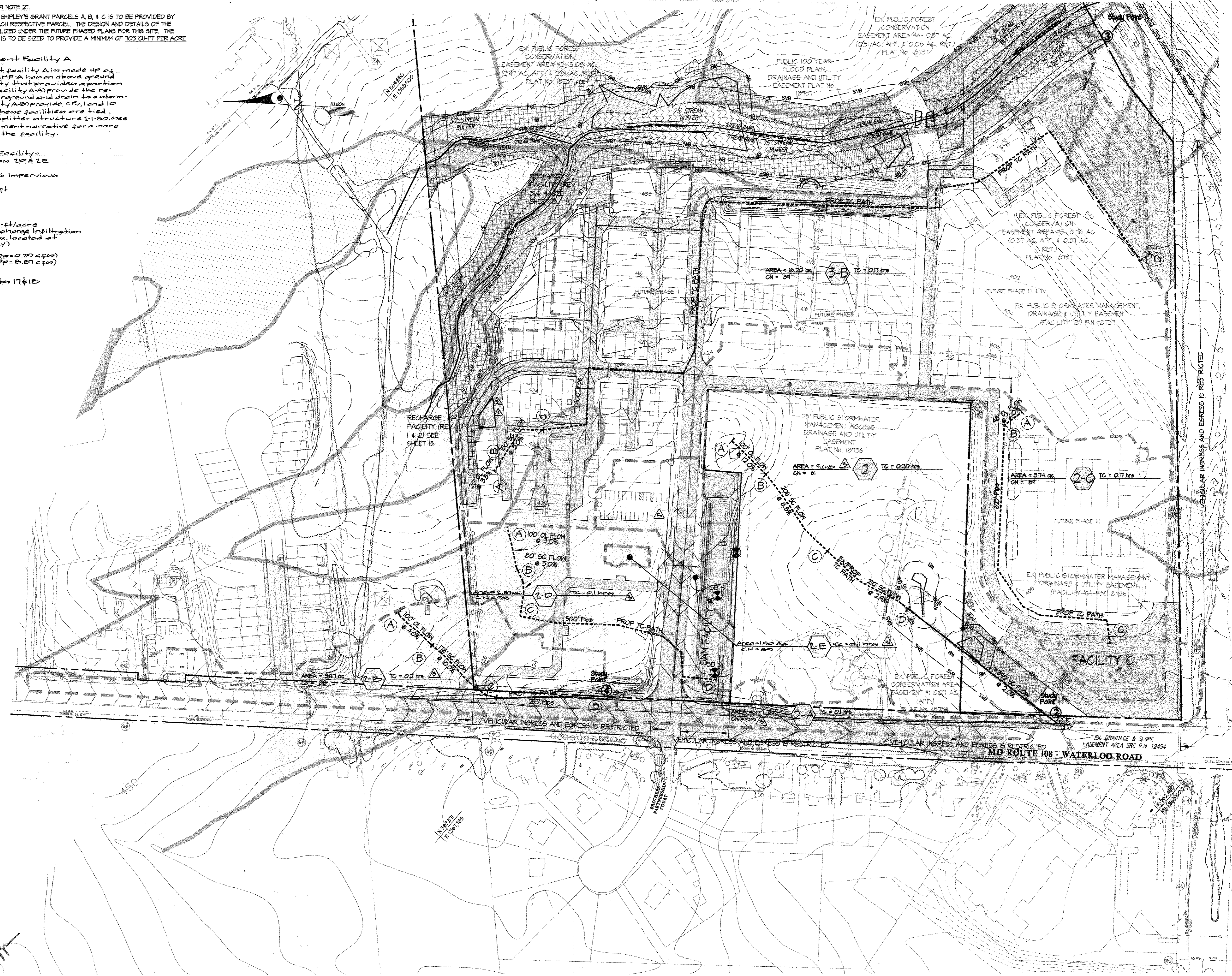
Stormwater management facility A is made up of three separate facilities. Facility A has an above ground Micro-Bioretention facility that provides a portion of the WQ. The ABCM (Facility A) provides the remainder of the WQ underground and drain to a storm filter. The ABCM (Facility A) provides CFI and 10 year management. All of these facilities are tied together and outfall at splitter structure I-1-80. See the stormwater management narrative for a more detailed description of the facility.

Total Drainage Area To Facility = 4.97 acres (Drainage Areas 2D & 2E)
 CN = 0.2
 Zoning: Commercial, 85% Impervious
 T_s = 2100 hrs.
 WQ Required = 0.20 ac-ft
 WQ Provided = 0.91 ac-ft
 CFI Provided = 0.70 ac-ft

Rev Requirement = 0.05 ac-ft/acre
 Rev to be provided by Recharge Infiltration Facility in Phase 2. (Appendix located at station 12+00 Logan's Way)

1-yr. Leaving Facility A (Q₁₀ = 0.87 cfs)
 10-yr. Leaving Facility A (Q₁₀₀ = 8.87 cfs)
 Log: 2.0 hours

For Details see sheets 17 & 18



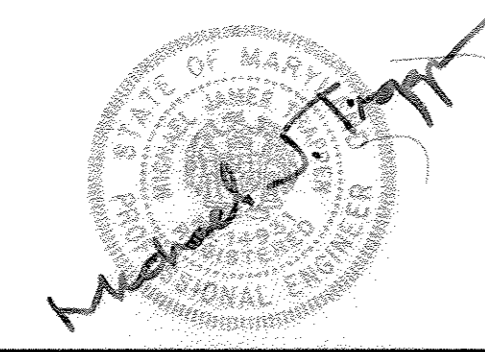
OWNER PARCEL 'A'
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 1966 GREENSPRING DRIVE SUITE 508
 LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
 DEEP RUN PROPERTY MANAGEMENT, INC.
 191 MILLER HOLLOW LANE
 LAKE CITY, TENNESSEE 37789

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 5-25-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 [Signature] 6/1/07
 Chief, Division of Land Development Date

[Signature] 5/21/07
 Chief, Development Engineering Division Date



THIS PLAN IS FOR STORMWATER MANAGEMENT HYDRAULIC ANALYSIS AND DRAINAGE AREA INFORMATION ONLY
 FOR PLAN INFORMATION, SEE SHEETS 2 THROUGH 4

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-988-2524 FAX: 301-421-4186

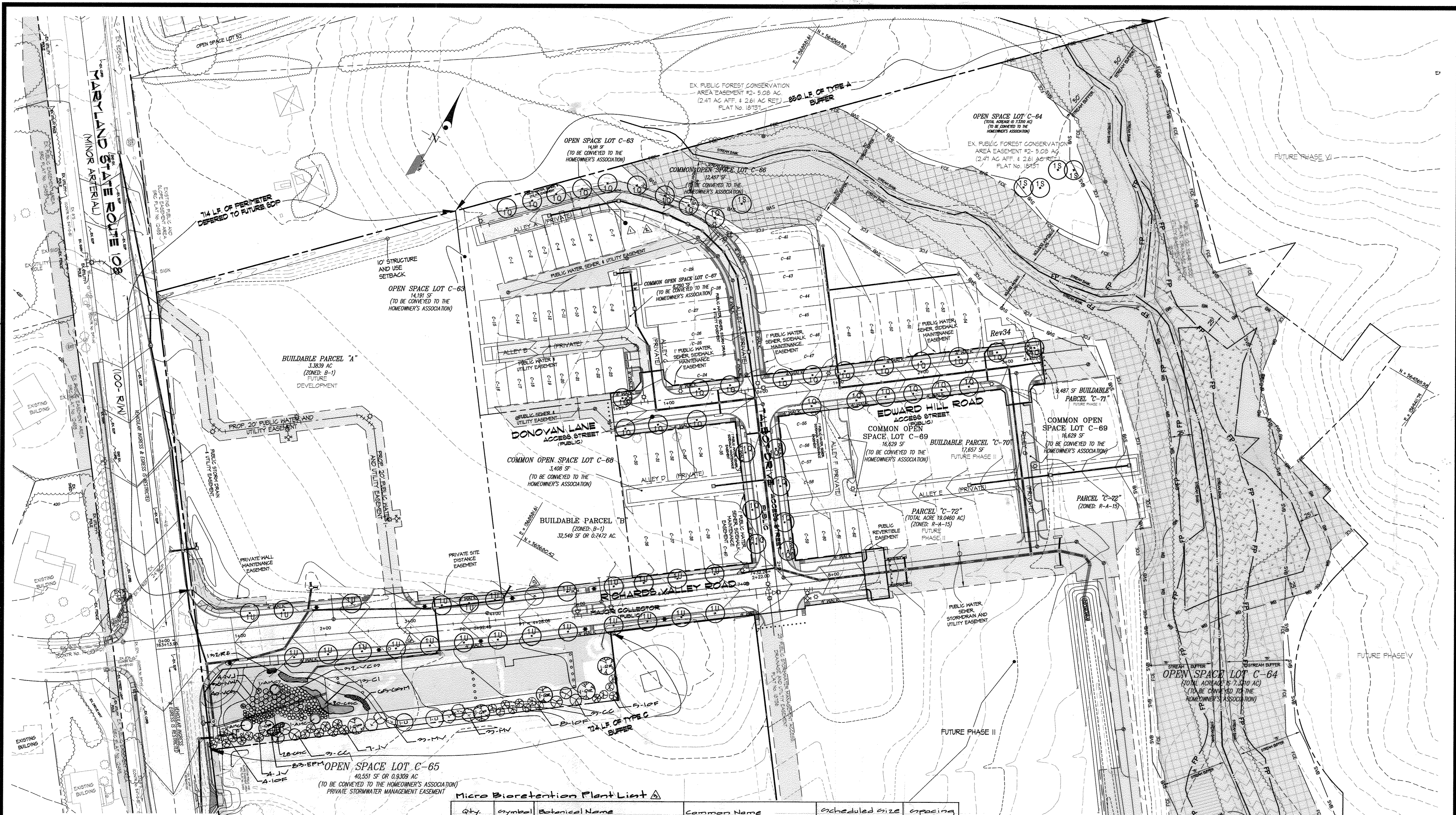
DATE	REVISION	BY	APPR.
12-22-14	Remove entrance to Building Parcel 'B' (chapel), continue curb and sidewalk, added 1 street tree	gt	
12-16-11	Rev. owner's data & drainage area info.	WGL	
5-21-07	Remove Rev. 12/1/07	WGL	
1-07-00	Rev. location of REV 1 & 2	WGL	

PREPARED FOR AND OWNER PARCEL 'C':
 BA WATERLOO TOWNHOMES, LLC
 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SIDDELL
 301-623-1525

STORMWATER MANAGEMENT DRAINAGE AREA MAP - PROPOSED CONDITION
SHIPLEY'S GRANT
 PHASE I
 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
 A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=100'	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
May, 2007	37-1&2	21 OF 27

\\DRAWINGS\03006\SPMG\03006SWM-DAMprop.dwg DES. BJM DRN. kp CHK. CKG



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 Date: 5-29-07

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development
 Date: 6/1/07

Chief, Development Engineering Division
 Date: 5/31/07

Micro Bioretention Plant List

Qty.	Symbol	Botanical Name	Common Name	Scheduled Size	Spacing
3	AMC	Amelanchier Canadensis	Canadian Serviceberry	8-10' Tall	As shown
13	CI	Clethra alnifolia 'Hummingbird'	Hummingbird Summersweet	#3, 10-24"	7'-0" O.C.
48	COC	Cornus sericea 'Cardinal'	Cardinal Red Twig Dogwood	#3, 24-30"	4'-0" O.C.
30	IWV	Ilex verticillata 'Sparkleberry'	Sparkleberry Winterberry	#3, 24-30"	4'-0" O.C.
72	VCS	Vaccinium corymbosum 'Spartan'	Spartan Highbush Blueberry	#3, 24-30"	4'-0" O.C.
4	IWJ	Ilex verticillata 'Jim Sandy'	Jim Sandy Winterberry	#3, 24-30"	4'-0" O.C.
85	EPM	Echinacea purpurea 'Magnus'	Purple Coneflower	#1	1'-0" O.C.
65	GM	Cerastium maculatum	Cranesbill	#1	1'-0" O.C.
192	RP	Rudbeckia fulgida 'Goldstrum'	Black Eyed Susan	#1	1'-0" O.C.

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 200 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
12-20-10	Remove He Ramp at Richards Valley Rd. etc. into Right	AT	
12-22-10	Remove entrance to Buildable Parcel B (channel), continue curbs and sidewalks, added street trees	AT	
12-16-11	10% A Rev. re: drainage facility removed plant list added	WJG	
5-22-09	Remove Rev 12A	WJG	
1-27-09	Rev location REV 12A	WJG	

PREPARED FOR AND OWNER PARCEL C:
 BA WATERLOO TOWNHOMES, LLC
 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SLIDELL
 301-623-1525

LANDSCAPE & STREET TREE PLAN
SHIPLEY'S GRANT
 PHASE I
 LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65
 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
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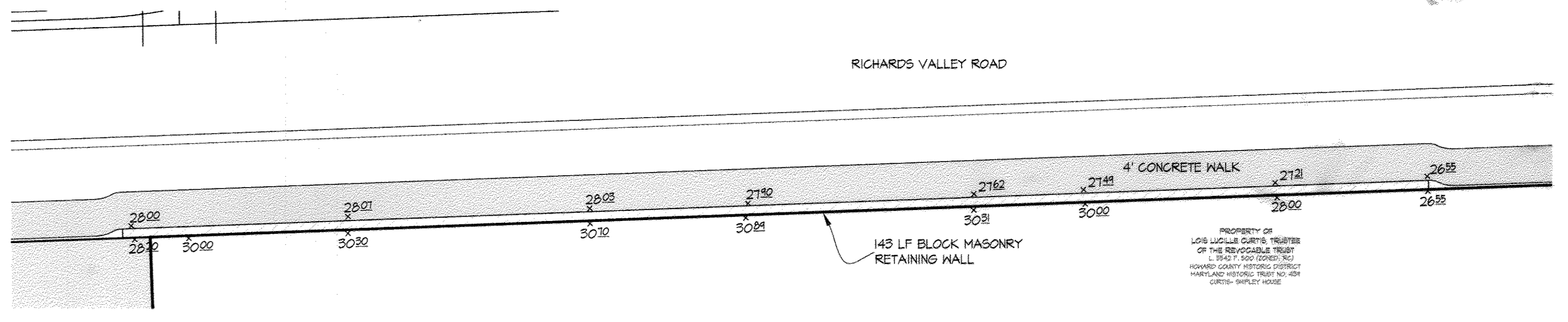
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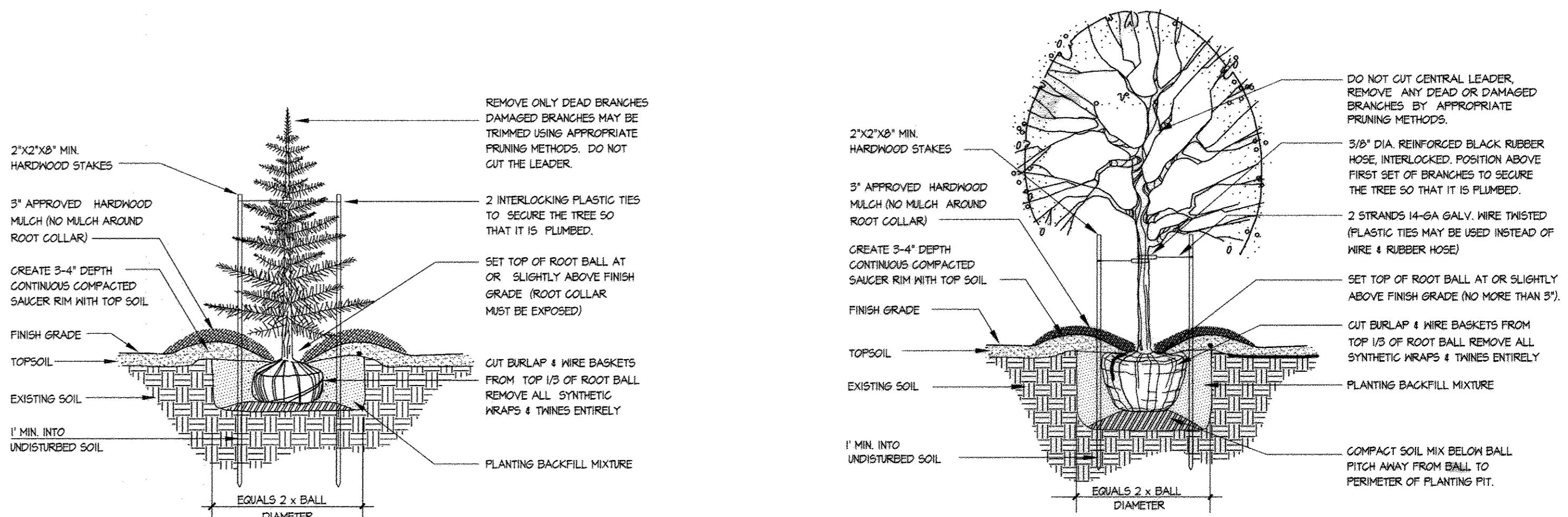
SCALE: 1"=50'
 ZONING: R-A-15 B-1
 DATE: May, 2007
 TAX MAP - GRID: 37-1&2
 SHEET: 22 OF 27
 G. L. W. FILE No.: 05030

△ BUFFER PLANT LIST				
SYMBOL	QUANT.	MIN. SIZE	NAME (BOTANICAL/COMMON) OF PLANTS FOR SELECTION BY OWNER/BUYER	COMMENTS
TREES - SHADE				
QR	5	2 1/2" cal. 12-14' hgt.	Quercus rubra/Red Oak	B+B, FULL
S	5	25" CAL. 12-14' HT. MIN.	PLATANUS OCCIDENTALIS / SYCAMORE	B+B, FULL
O/W	12	25" CAL. 12-14' HT. MIN.	QUERCUS PHellos / MELLOW OAK	B+B, FULL
U	2	2 1/2" cal. 12-14' hgt.	ULMUS AMERICANA PRINCETON / PRINCETON ELM	B+B, FULL
TREES - ORNAMENTAL				
MV	6	8-10' HT.	Magnolia Virginiana/Sweetbay Magnolia	
CC	6	8-10' hgt.	Cercis canadensis/Eastern Redbud	
TREES - EVERGREEN				
IOF	17	8-10' hgt.	Ilex opaca/American Holly	
IV	11	6-7' hgt.	Juniperus Virginiana/Eastern Red Cedar	

- LANDSCAPING NOTES
- Contractor shall notify all utilities at least (5) five days before starting work. All General Notes, especially those regarding utilities, on Sheet 1 shall apply.
 - Field verify underground utility locations and existing conditions before starting planting work. Contact engineer / landscape architect if any relocation's are required.
 - Plant quantities shown on Plant List are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on the plan and those shown on the plant list, the quantities on the plant list take precedence.
 - All plant material shall be full heavy, well formed, and symmetrical and conform to the A.A.N. Specifications, and be installed in accordance with project specifications.
 - No substitution shall be made without written consent of the owner or his representative.
 - All areas disturbed by construction activities but not otherwise planted, paved, or mulched shall be seeded or sodded in accordance with the project specifications.
 - The contractor shall notify the owner in writing if he/she encounters soil drainage conditions which may be detrimental to the growth of the plants.
 - All exposed earth within limits of planting beds shall be mulched with shredded hardwood mulch per Planting Details.
 - Financial surety for the required landscaping per schedule A shall be posted with the Developer's Agreements in the amount of \$12,600.00.
 - The owner, tenant, and /or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.



RETAINING WALL DETAIL SCALE 1" = 10'



NOTE: ALL SUPPORTING DEVICES (STAKES, TIES, ETC.) SHALL BE REMOVED AFTER 2 GROWING SEASONS.

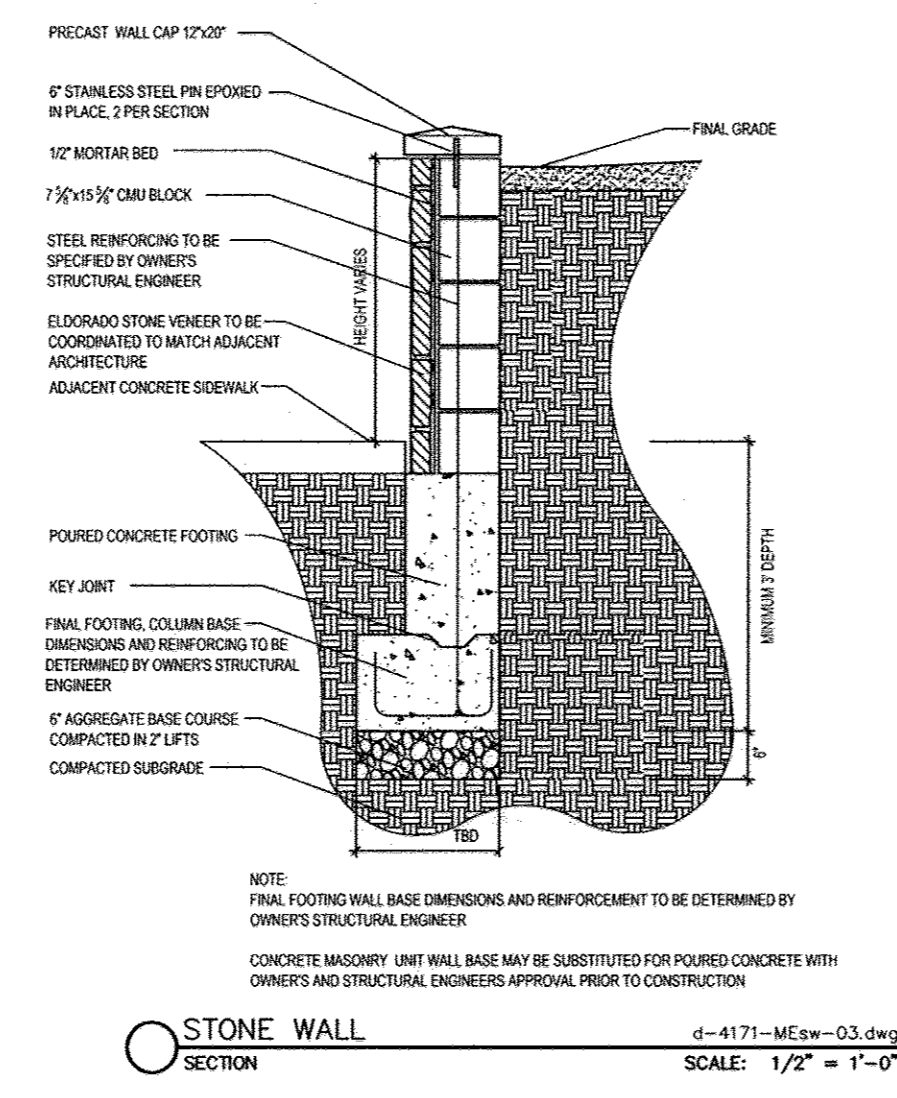
STREET TREE SCHEDULE

LINEAR FEET OF CURBLINE	2004 LF.
NUMBER OF STREET TREES REQUIRED: STREET TREES (1:40)	50
NUMBER OF STREET TREES PROVIDED: STREET TREES (2:1 SUBSTITUTION)	51
OTHER TREES (2:1 SUBSTITUTION)	0

SCHEDULE A: PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES	
	C	A
LANDSCAPE BUFFER TYPE	C	A
LOCATION	PERIMETER #1	PERIMETER #2
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	562 LF.	880 LF.
CREDIT FOR EXISTING VEGETATION	NONE	NONE
CREDIT FOR WALL FENCE OR BERM	NONE	NONE
NUMBER OF PLANTS REQUIRED		
SHADE TREES	14	14
EVERGREEN TREES	28	0
SHRUBS	0	0
NUMBER OF PLANTS PROVIDED		
SHADE TREES	28	14
EVERGREEN TREES	0	0
OTHER TREES (2:1 sub)	12*	0
SHRUBS (1:1 sub)	0	0
SUBSTITUTIONS	NONE	NONE

* 12 ORNAMENTAL TREES ARE SUBSTITUTED (@ 2:1) FOR THE REMAINING SHADE TREES.



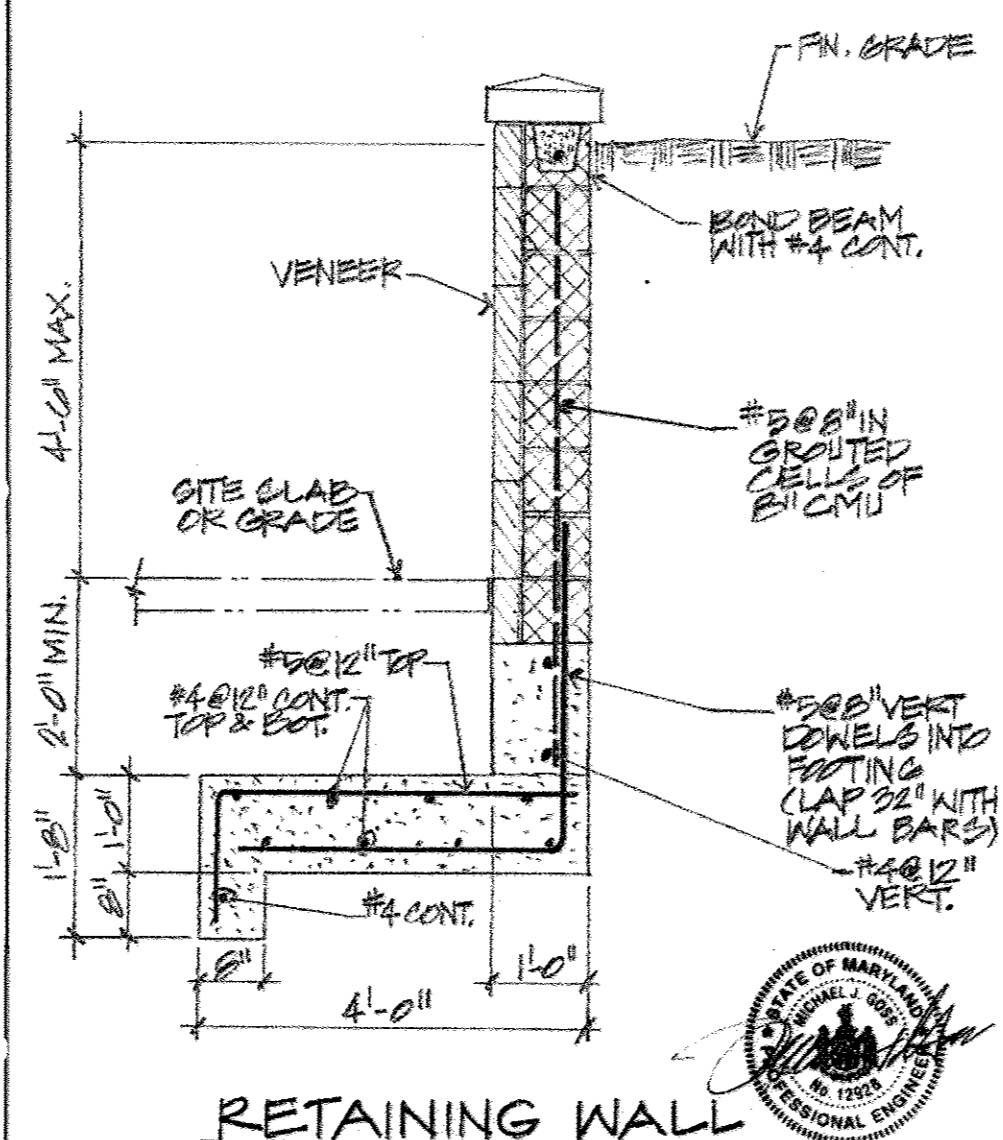
RATHGEBER/GOSS ASSOCIATES Consulting Structural Engineers

PROJECT: SHIPLEY'S GRANT

CLIENT: GLW

JOB NO: 701400 DATE: 5-17-07

ENGINEER: MJS PAGE 1 OF 1



PLANTING METHODS

- A. PLANT MATERIALS**
- THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL AND/OR DIG, BALL, BURLAP AND TRANSPORT ALL OF THE PLANT MATERIALS CALLED FOR ON DRAWINGS AND/OR LISTED IN THE PLANT SCHEDULE.
- B. PLANTING METHODS**
- ALL PROPOSED PLANT MATERIALS THAT MEET THE SPECIFICATIONS IN SECTION A ARE TO BE PLANTED IN ACCORDANCE WITH THE FOLLOWING METHODS DURING THE PROPER PLANTING SEASONS AS DESCRIBED IN THE FOLLOWING:
- PLANTING SEASONS**
THE PLANTING OF DECIDUOUS TREES, SHRUBS AND VINES SHALL BE FROM MARCH 15TH TO JUNE 15TH AND FROM SEPTEMBER 15TH TO DECEMBER 15TH. PLANTING OF DECIDUOUS MATERIAL MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDED THERE IS NO FROST IN THE GROUND AND FROST-FREE TOPSOIL PLANTING MIXTURES ARE USED.
THE PLANTING OF EVERGREEN MATERIAL SHALL BE FROM MARCH 15TH TO JUNE 15TH AND FROM AUGUST 15TH TO DECEMBER 15TH. NO PLANTING SHALL BE DONE WHEN THE GROUND IS FROZEN OR EXCESSIVELY MOIST. NO FROZEN OR WET TOPSOIL SHALL BE USED AT ANY TIME.
 - DIGGING**
ALL PLANT MATERIAL SHALL BE DUG, BALLED AND BURLAPPED (B4B) IN ACCORDANCE WITH THE 'AAN STANDARDS'.
 - EXCAVATION OF PLANT PITS**
THE LANDSCAPE CONTRACTOR SHALL EXCAVATE ALL PLANT PITS, VINE PITS, HEDGE TRENCHES AND SHRUB BEDS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:
A. LOCATIONS OF ALL PROPOSED PLANT MATERIAL SHALL BE STAKED AND APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT BEFORE ANY OF THE PROPOSED PLANT MATERIAL IS INSTALLED BY THE LANDSCAPE CONTRACTOR.
B. ALL PITS SHALL BE GENERALLY CIRCULAR IN OUTLINE, VERTICAL SIDES DEPTH SHALL NOT BE LESS THAN 6" DEEPER THAN THE ROOT BALL. DIAMETER SHALL NOT BE LESS THAN TWO TIMES THE DIAMETER OF THE ROOT BALL AS SET FORTH IN THE FOLLOWING SCHEDULE.
C. IF AREAS ARE DESIGNATED AS SHRUB BEDS OR HEDGE TRENCHES, THEY SHALL BE EXCAVATED TO AT LEAST 18" DEPTH MINIMUM. AREAS DESIGNATED FOR GROUND COVERS AND VINES SHALL BE EXCAVATED TO AT LEAST 12" IN DEPTH MINIMUM.
D. DIAMETER AND DEPTH OF TREE PITS SHALL GENERALLY BE AS FOLLOWS:
- | PLANT SIZE | ROOT BALL | PIT DIA. | PIT DEPTH |
|----------------|-----------|----------|-----------|
| 3" - 3.5" CAL. | 32" | 64" | 28" |
| 3.5" - 4" CAL. | 36" | 72" | 32" |
| 4" - 4.5" CAL. | 40" | 80" | 36" |
| 4.5" - 5" CAL. | 44" | 88" | 40" |
| 5" - 5.5" CAL. | 48" | 96" | 44" |
| 5.5" - 6" CAL. | 52" | 104" | 48" |
- A 20% COMPACTION FIGURE OF THE SOIL TO BE REMOVED IS ASSUMED AND WILL BE ALLOWED IN CALCULATION OF EXTRA TOPSOIL. THE TABULATED PIT SIZES ARE FOR PURPOSES OF UNIFORM CALCULATION AND SHALL NOT OVERRIDE THE SPECIFIED DEPTHS BELOW THE BOTTOMS OF THE ROOT BALLS.
- STAKING, GUYING AND WRAPPING**
ALL PLANT MATERIAL SHALL BE STAKED OR GUYED, AND WRAPPED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
A. STAKES SHALL BE SOUND HOOK 2" x 2" ROUGH SAWN OAK OR SIMILAR DURABLE WOODS, OR LENGTHS MINIMUM 7'-0" FOR MAJOR TREES AND 5'-0" MINIMUM FOR MINOR TREES.
- PLANT IDENTIFICATION**
LEGIBLE LABELS SHALL BE ATTACHED TO ALL SHADE TREES, MINOR TREES, SPECIMEN SHRUBS AND BUNDLES OR BOXES OF OTHER PLANT MATERIAL GIVING THE BOTANICAL AND COMMON NAMES, SIZE AND QUANTITY OF EACH. EACH SHIPMENT OF PLANTS SHALL BEAR CERTIFICATES OF INSPECTION AS REQUIRED BY FEDERAL, STATE AND COUNTY AUTHORITIES.
- PLANT INSPECTION**
THE DESIGN REVIEW COMMITTEE MAY, UPON REQUEST BY THE BUILDER OR DEVELOPER, AT LEAST TEN (10) DAYS PRIOR TO THE INSTALLATION OF ANY PROPOSED PLANT MATERIAL, INSPECT ALL PROPOSED PLANT MATERIAL AT THE SOURCE OF ORIGIN.
- PLANT GUARANTEE**
ALL PLANT MATERIAL SHALL BE GUARANTEED FOR THE DURATION OF ONE FULL GROWING SEASON AFTER FINAL INSPECTION AND ACCEPTANCE OF THE WORK IN THE PLANTING PROJECT. PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWING CONDITION AT THE END OF THE GUARANTEE PERIOD.
A. FOR THIS PURPOSE, THE 'GROWING SEASON' SHALL BE THAT PERIOD BETWEEN THE END OF THE 'SPRING' PLANTING SEASON AND THE COMMENCEMENT OF THE 'FALL' PLANTING SEASON.
B. GUARANTEE FOR PLANTING PERFORMED AFTER THE SPECIFIED END OF THE 'SPRING' PLANTING SEASON SHALL BE EXTENDED THROUGH THE END OF THE NEXT FOLLOWING 'SPRING' PLANTING SEASON.
C. SODDING
ALL SODDING SHALL BE IN ACCORDANCE TO THE 'LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS' LATEST EDITION, APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS.
ALL SOD SHALL BE STRONGLY ROOTED SOD, NOT LESS THAN TWO YEARS OLD AND FREE OF WEEDS AND UNDESIRABLE NATIVE GRASSES. PROVIDE ONLY SOD CAPABLE OF GROWTH DEVELOPMENT WHEN PLANTED AND IN STRIPS NOT MORE THAN 18" WIDE x 4' LONG. PROVIDE SOD COMPOSED PRINCIPALLY OF IMPROVED STRAIN KENTUCKY BLUEGRASS, SUCH AS COLUMBIA, VICTA, OR ESCORT.

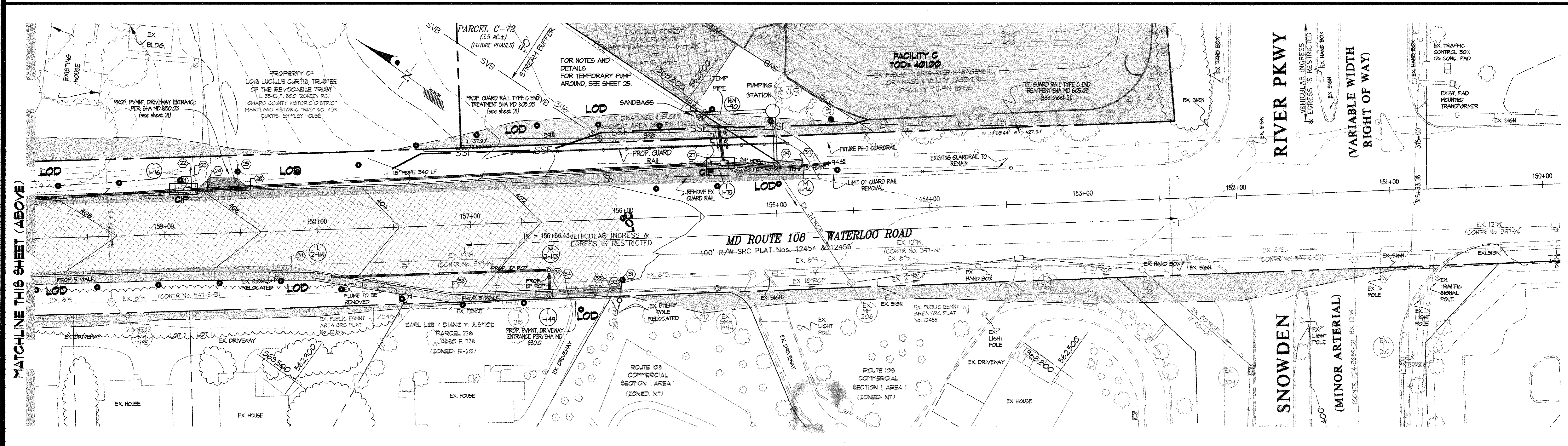
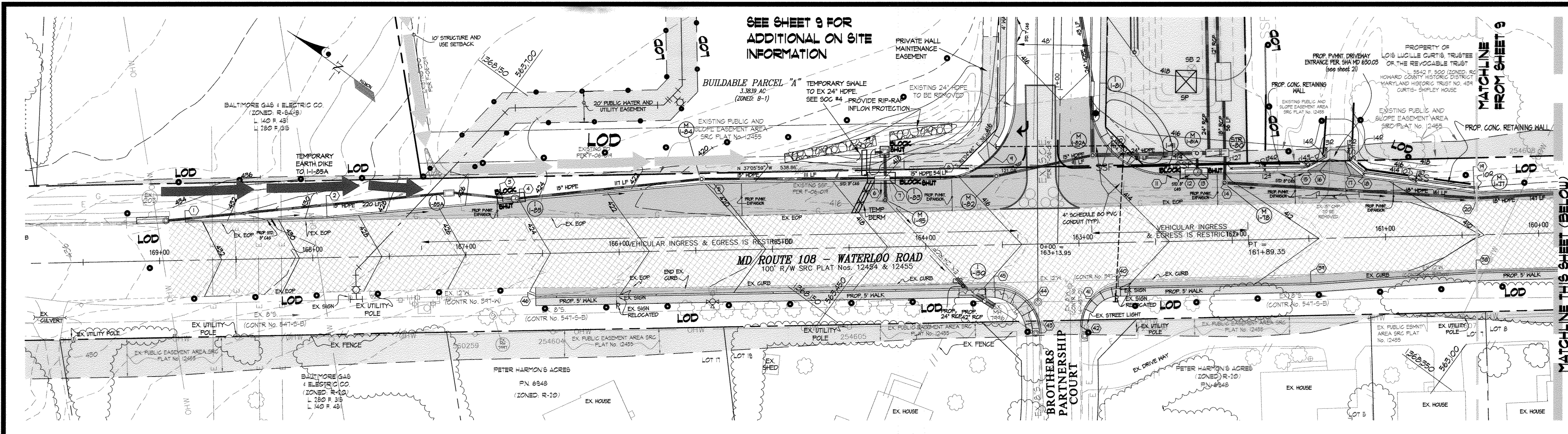
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways *[Signature]* 5-29-07 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development *[Signature]* 6/1/07 Date

APPROVED: *[Signature]* 5/21/07 Date

Michael J. Rathgeber, P.E.
 CONSULTING STRUCTURAL ENGINEER
 STATE OF MARYLAND PROFESSIONAL ENGINEERS

GLWGUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK BURTONSVILLE, MARYLAND 20886 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186			PREPARED FOR AND OWNER PARCEL 'C': BA WATERLOO TOWNHOMES, LLC c/o BOZZUTO HOMES, INC. 7850 WALKER DRIVE SUITE 400 GREENBELT, MARYLAND 20770 ATTN: DUNCAN SLIDELL 301-623-1525			LANDSCAPE NOTES AND DETAILS SHIPLEY'S GRANT PHASE I LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65, C-66, C-67, C-70, C-71 AND C-72 COMMON OPEN SPACE LOTS C-66 THRU C-69 AND PARCELS 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L', 'M', 'N', 'O', 'P', 'Q', 'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y', 'Z' A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738 HOWARD COUNTY, MARYLAND ELECTION DISTRICT No. 1			SCALE: AS SHOWN ZONING: R-A-15 B-1 G. L. W. FILE No.: 05030 DATE: May, 2007 TAX MAP - GRID: 37-1&2 SHEET: 23 OF 27		
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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
With 7 copies 5-25-07
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Hamilton 6/1/07
 Chief, Division of Land Development
John Wynn 5/31/07
 Chief, Development Engineering Division

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.
 DATE: 5/24/07
 DATE: 5/24/07

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A TRAINING PROGRAM PROVIDED BY THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
 DATE: 5/24/07

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 DATE: 5/24/07

NOTE: REMOVE AND RESET EXISTING SIGNS BEHIND PROPOSED CURB OR AS DIRECTED BY INSPECTOR
 FOR PROPOSED STRIPING INFORMATION SEE SHEETS 26
PAVING LEGEND
 1 1/2" PAVING MILL AND OVERLAY
 P-5 PAVING (MATCH EX. PAVING THICKNESS MIN)
 (P-5 PAVING IS A HOWARD COUNTY STANDARD PAVING SECTION)

OWNER PARCEL 'A'
 SHIPLEY'S GRANT RETAIL, LLC
 1966 GREENSPRING DRIVE SUITE 508
 LUTHERVILLE, MD 21093

OWNER PARCEL 'B'
 DEEP RUN PROPERTY MANAGEMENT, INC.
 191 MILLER HOLLOW LANE
 LAKE CITY, TENNESSEE 37769

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3009 NATIONAL DRIVE - SUITE 250 - BURTONTVILLE OFFICE PARK
 BURTONTVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

PREPARED FOR AND OWNER PARCEL 'C':
 BA WATERLOO TOWNHOMES, LLC
 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SLIDELL
 301-623-1525

MARYLAND ROUTE 108 SEDIMENT EROSION CONTROL & IMPROVEMENT PLAN
SHIPLEY'S GRANT
 PHASE I
 COMMON OPEN SPACE LOTS C-66 THRU C-69 AND PARCELS 'A', 'B', 'C', '70, 'C-71 AND 'C-72
 A RESUBDIVISION OF PARCEL 'C' PLAT NOS. 18429, 18430, AND 18735 - 18738
 HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT No. 1

SCALE	ZONING	G. L. W. FILE NO.
1"=30'	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
May, 2007	37-1&2	24 OF 27

Point No. Number	Station	Location	Direction	Proposed Curb Flowline Elevation	NOTES
1	168+82.77	25.24	Right	432.41	MATCH EXISTING
2	167+90.24	25.68	Right	428.79	
3	166+75.24	33.76	Right	424.41	
4	166+64.27	34.54	Right	423.99	
5	165+41.43	43.16	Right	420.11	
6	164+32.60	43.16	Right	417.32	INLET FLOW LINE
7	164+22.60	43.16	Right	417.08	INLET FLOW LINE
8	163+89.68	43.16	Right	416.31	
9	163+54.96	57.18	Right	415.44	SEE ROAD PLANS SHEET 2
10	162+77.57	58.44	Right	414.32	SEE ROAD PLANS SHEET 2
11	162+41.59	43.16	Right	413.15	
12	162+29.97	43.16	Right	412.91	INLET FLOW LINE
13	162+18.97	43.16	Right	412.58	INLET FLOW LINE
14	162+04.35	37.35	Right	412.20	MANHOLE CL RIM ELEVATION
15	161+49.81	43.13	Right	410.89	DRIVEWAY ENTRANCE
16	161+41.79	43.12	Right	410.68	DRIVEWAY ENTRANCE
17	161+22.01	40.04	Right	410.37	DRIVEWAY ENTRANCE
18	161+14.10	38.79	Right	410.25	DRIVEWAY ENTRANCE
19	160+41.42	27.16	Right	409.24	
20	160+39.97	23.85	Right	409.32	MANHOLE CL RIM ELEVATION
21	158+92.00	27.20	Right	406.39	INLET FLOW LINE
22	158+80.99	27.16	Right	406.16	INLET FLOW LINE
23	158+78.74	27.16	Right	406.11	DRIVEWAY ENTRANCE
24	158+70.74	27.16	Right	405.94	DRIVEWAY ENTRANCE
25	158+50.65	27.16	Right	405.50	DRIVEWAY ENTRANCE
26	158+42.64	27.16	Right	405.32	DRIVEWAY ENTRANCE
27	155+41.37	32.10	Right	399.16	INLET FLOW LINE
28	155+30.38	32.40	Right	398.96	INLET FLOW LINE
29	154+99.56	29.48	Right	398.53	
30	154+81.96	33.55	Right	398.20	
31	156+03.47	44.00	Left	400.12	
32	156+04.78	44.00	Left	400.14	
33	156+10.40	44.00	Left	400.25	
34	156+38.68	44.00	Left	400.82	
35	156+44.40	44.00	Left	400.93	
36	157+12.82	44.04	Left	402.38	
37	158+17.16	23.84	Left	404.93	
38	160+41.18	23.84	Left	409.34	
39	161+49.27	28.87	Left	411.26	
40	162+74.87	28.84	Left	414.26	
41	162+92.58	36.19	Left	414.56	
42	162+99.87	53.93	Left	415.39	
43	163+25.47	57.84	Left	415.49	
44	163+34.52	36.63	Left	415.49	
45	163+55.76	27.84	Left	415.85	
46	166+54.98	27.84	Left	423.78	

SIGNING NOTES:

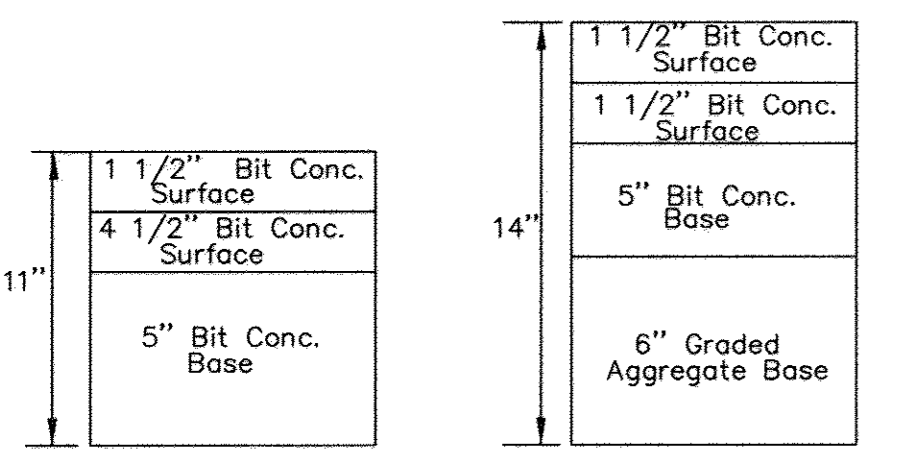
- SIGN ERECTED AT THE SIDE OF THE ROAD SHALL BE MOUNTED AT A HEIGHT OF AT LEAST 7 FEET MEASURED FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVING.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE 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.
- ALL SIGN POSTS USED FOR STATE TRAFFIC CONTROL SIGNS INSTALLED IN THE STATE RIGHT-OF-WAY SHALL BE MOUNTED ON PRESSURE TREATED 4"x4"x12" WOODEN POSTS.
- SIGNS SHALL BE 12" TO 18" FROM EDGE OF SIGN TO CURBLINE. STOP SIGNS SHALL BE LOCATED 15' BACK FROM INTERSECTING STREET CURB LINE OR AS DIRECTED BY HOWARD COUNTY TRAFFIC DIVISION.
- ALL SIGN LOCATIONS WITHIN THE PUBLIC RIGHT OF WAY SHALL BE APPROVED BY THE HOWARD COUNTY TRAFFIC DIVISION PRIOR TO ANY INSTALLATIONS.

PAVEMENT MARKING NOTES

- ALL PAVEMENT MARKINGS TO BE APPLIED USING 'SETFAST PREMIUM ALKYD TRAFFIC PAINT' BY SHERWIN WILLIAMS OR APPROVED EQUAL.
- ALL PAVEMENT MARKINGS AND STOP BARS ARE TO BE ESTABLISHED IN THE FIELD BY THE HOWARD COUNTY TRAFFIC DIVISION.

STRIPING LEGEND

- (A) PAVEMENT LINES - 5" WHITE SOLID
- (B) PAVEMENT LINES - 5" X 10' WHITE SKIP
- (C) PAVEMENT LINES - 5" X 3' WHITE MINI-SKIP
- (D) PAVEMENT LINES 5" YELLOW DOUBLE SOLID
- (E) PAVEMENT LINES 2" WHITE TRANSVERSE STOP BAR
- (F) PAVEMENT SYMBOL - WHITE TURN ARROW
- (G) PAVEMENT LINES - 12" YELLOW TURN DIAGONAL SOLID



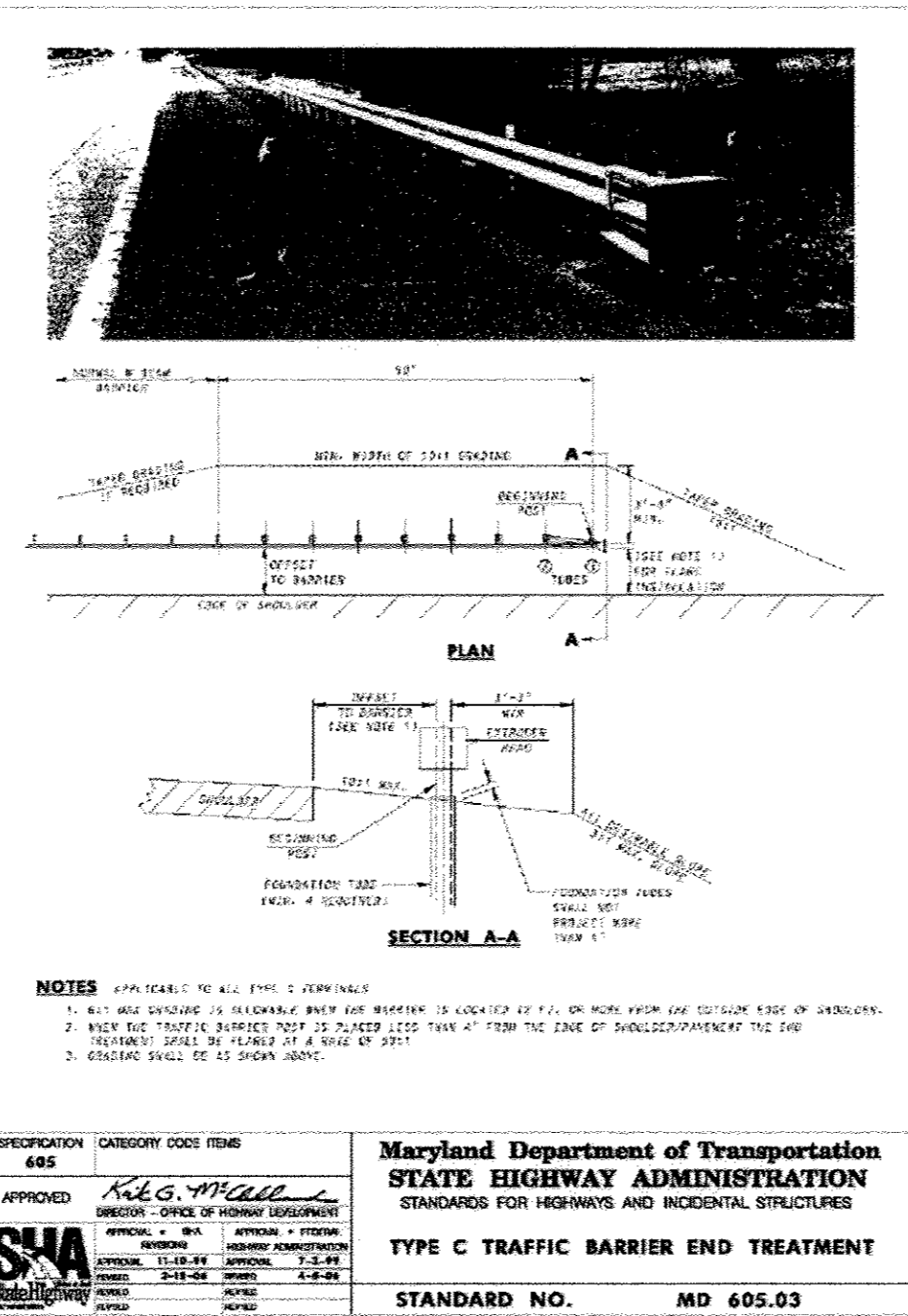
STANDARD S.H.A. PAVEMENT SECTION. N.T.S.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William J. ... 5-29-07
 Chief, Bureau of Highways

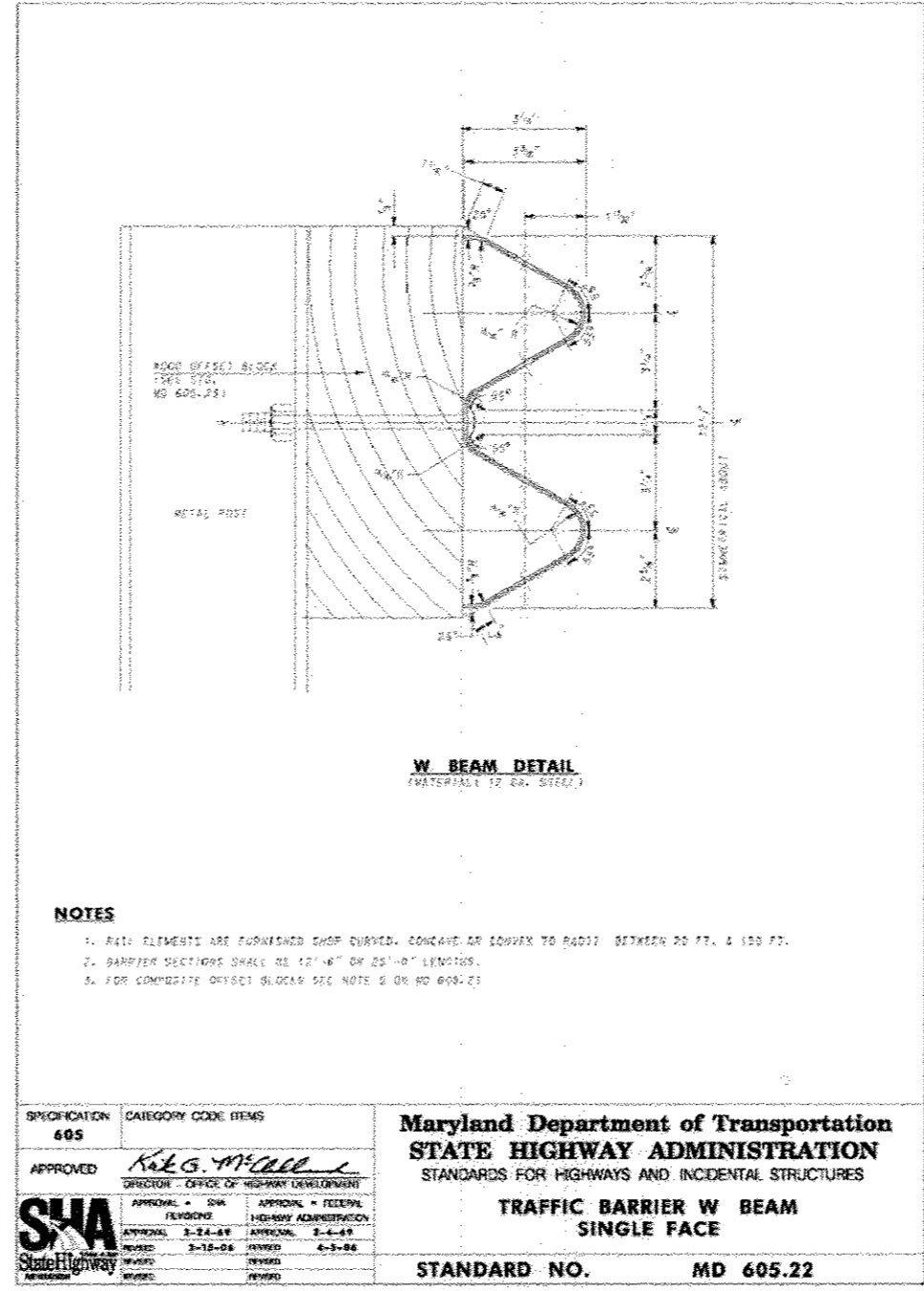
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Conrad Hamilton 6/1/07
 Chief, Division of Land Development

John ... 5/21/07
 Chief, Development Engineering Division

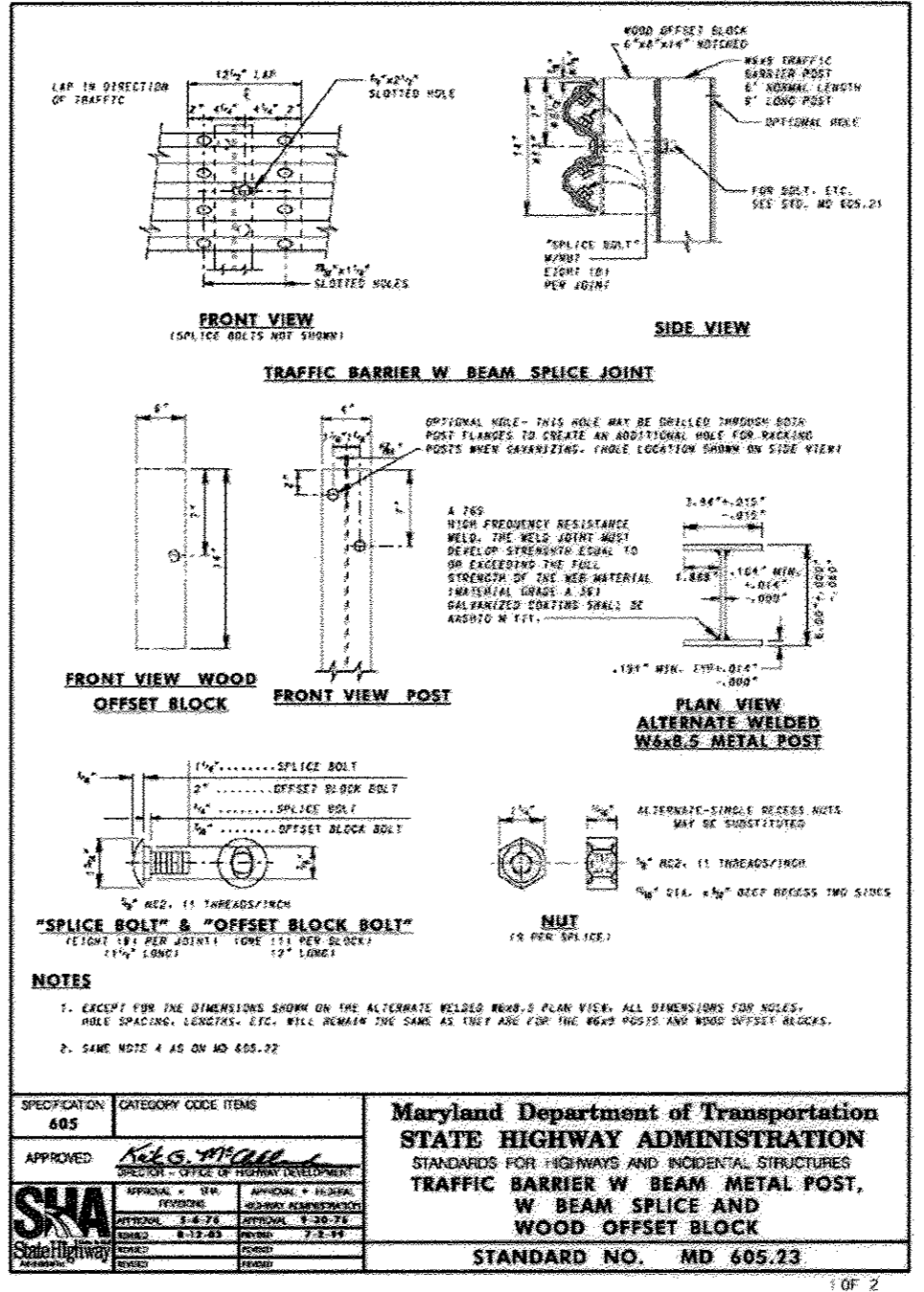
GLWGUTSCHICK LITTLE & WEBER, P.A.
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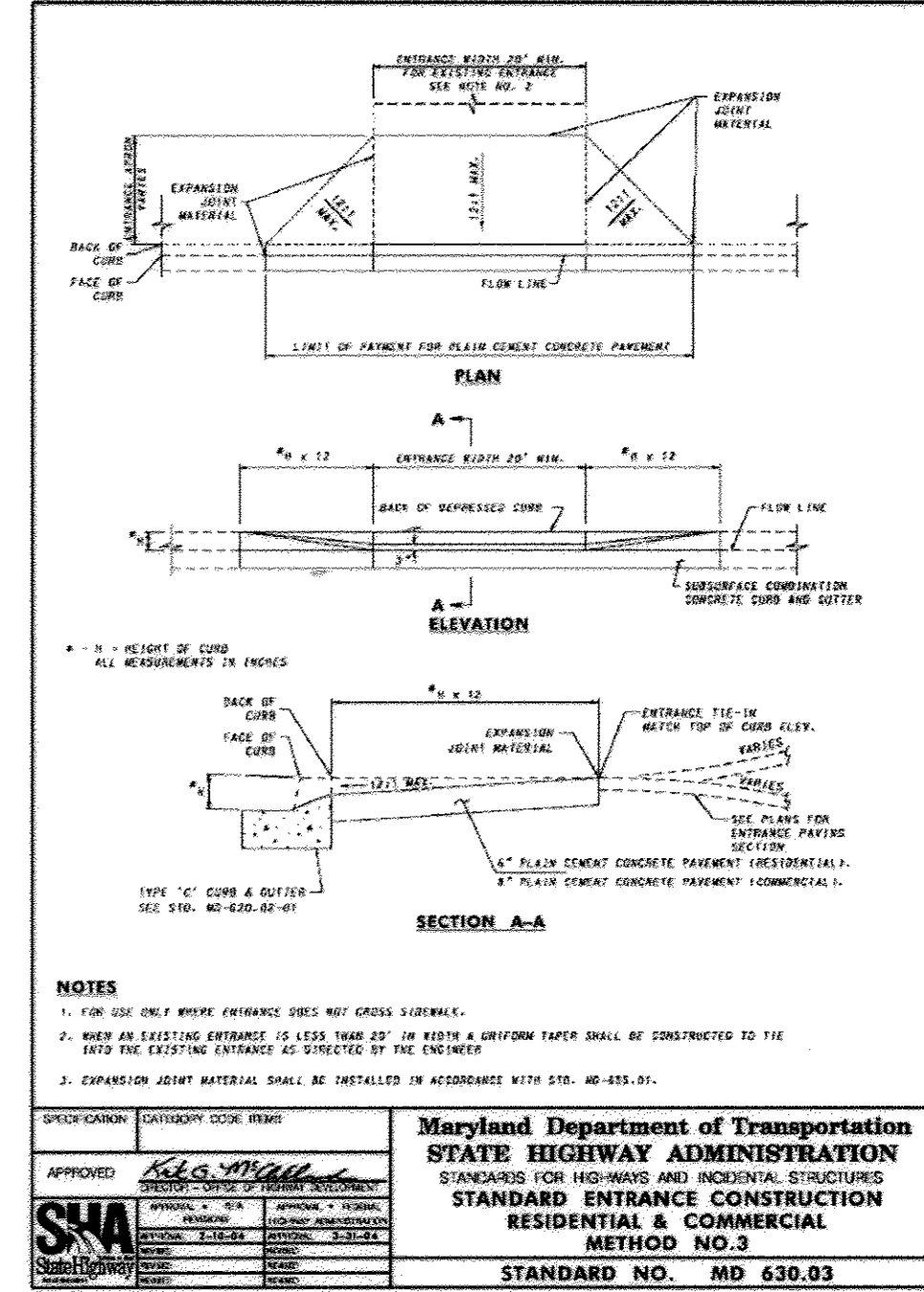
PROVISION: 605 CATEGORY CODE: TYPE C
 APPROVED: *...*
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
TYPE C TRAFFIC BARRIER END TREATMENT
 STANDARD NO. MD 605.03



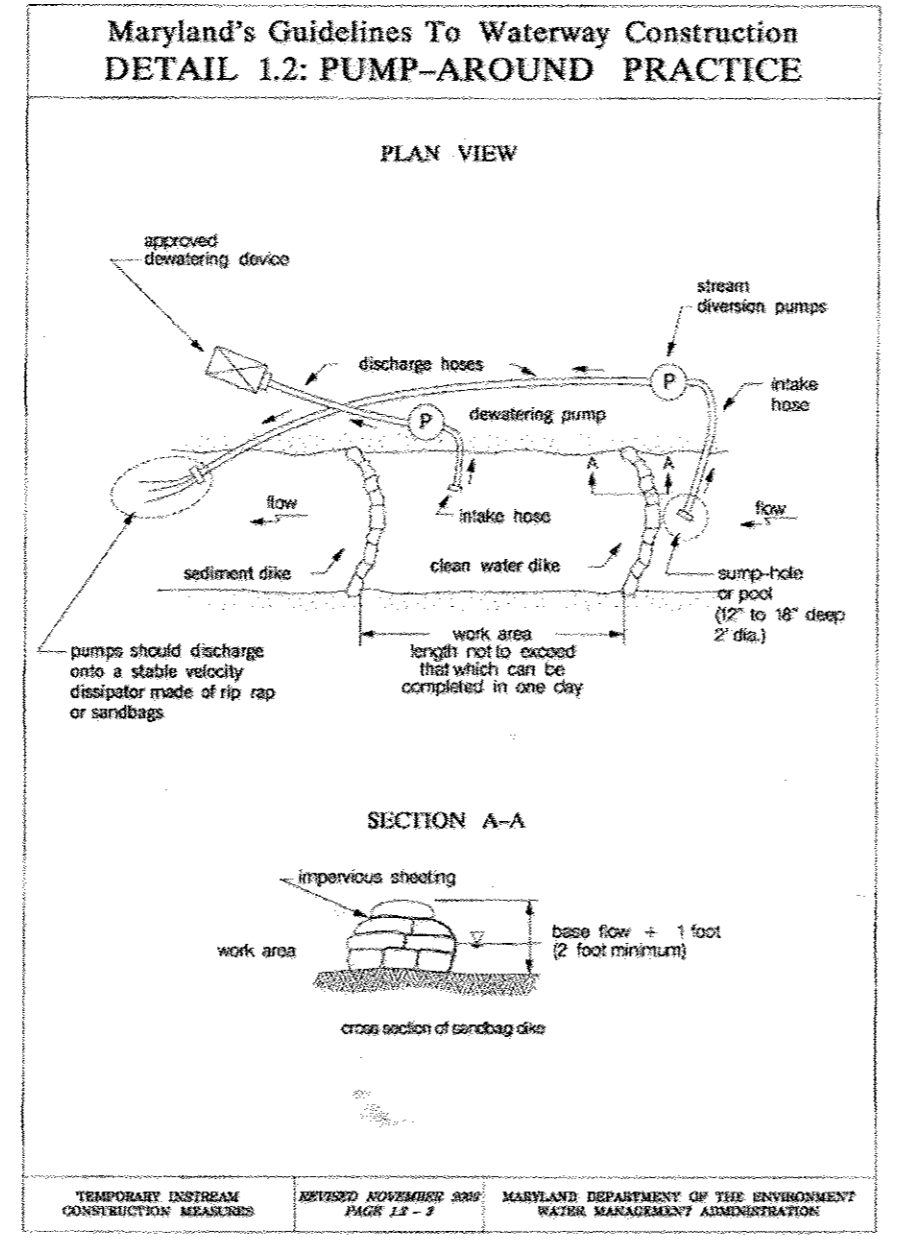
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 APPROVED: *...*
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
TRAFFIC BARRIER W-BEAM SPLICE JOINT
 STANDARD NO. MD 605.22



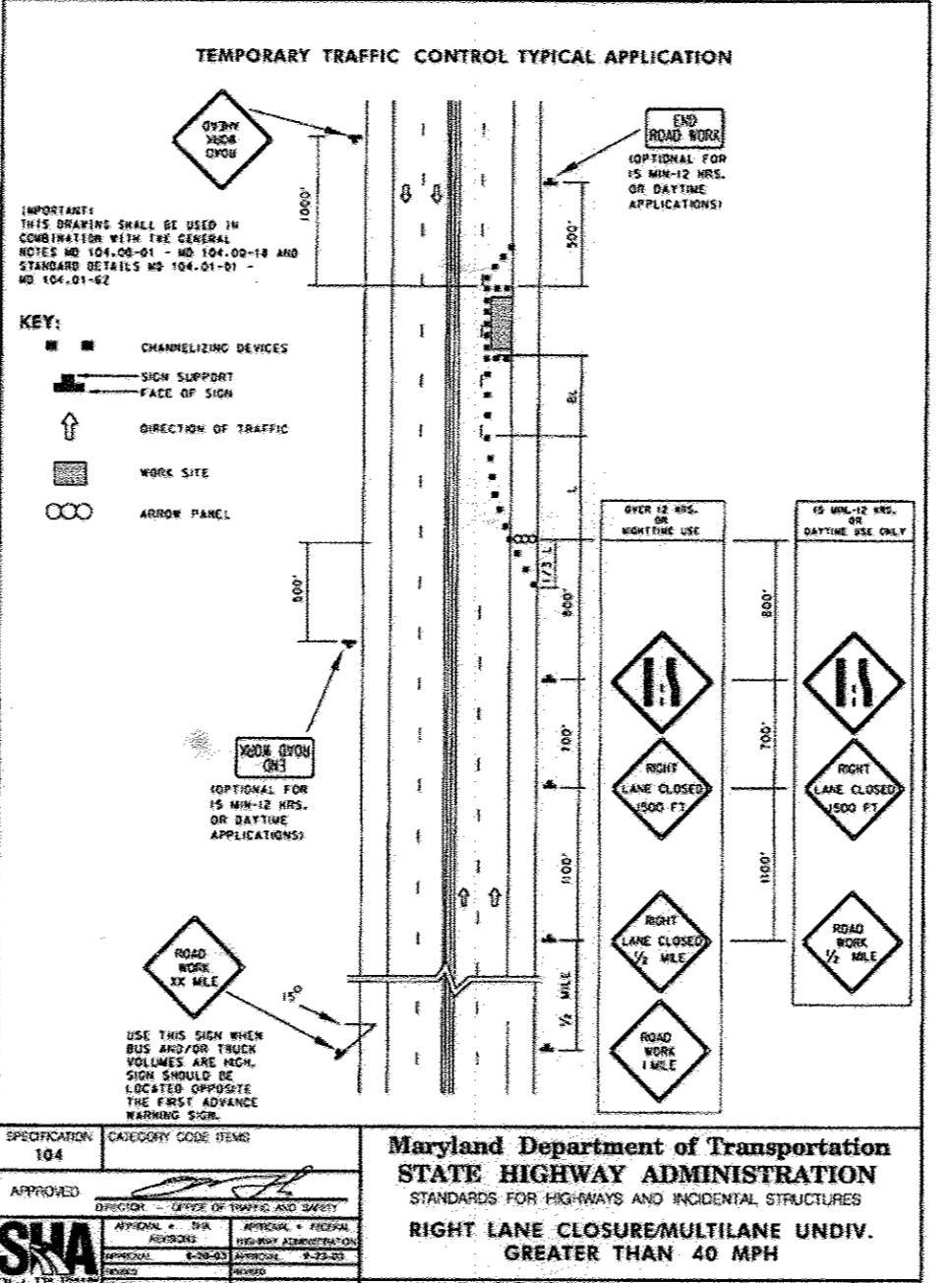
PROVISION: 605 CATEGORY CODE: TYPE C
 APPROVED: *...*
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
TRAFFIC BARRIER W-BEAM METAL POST
 STANDARD NO. MD 605.23



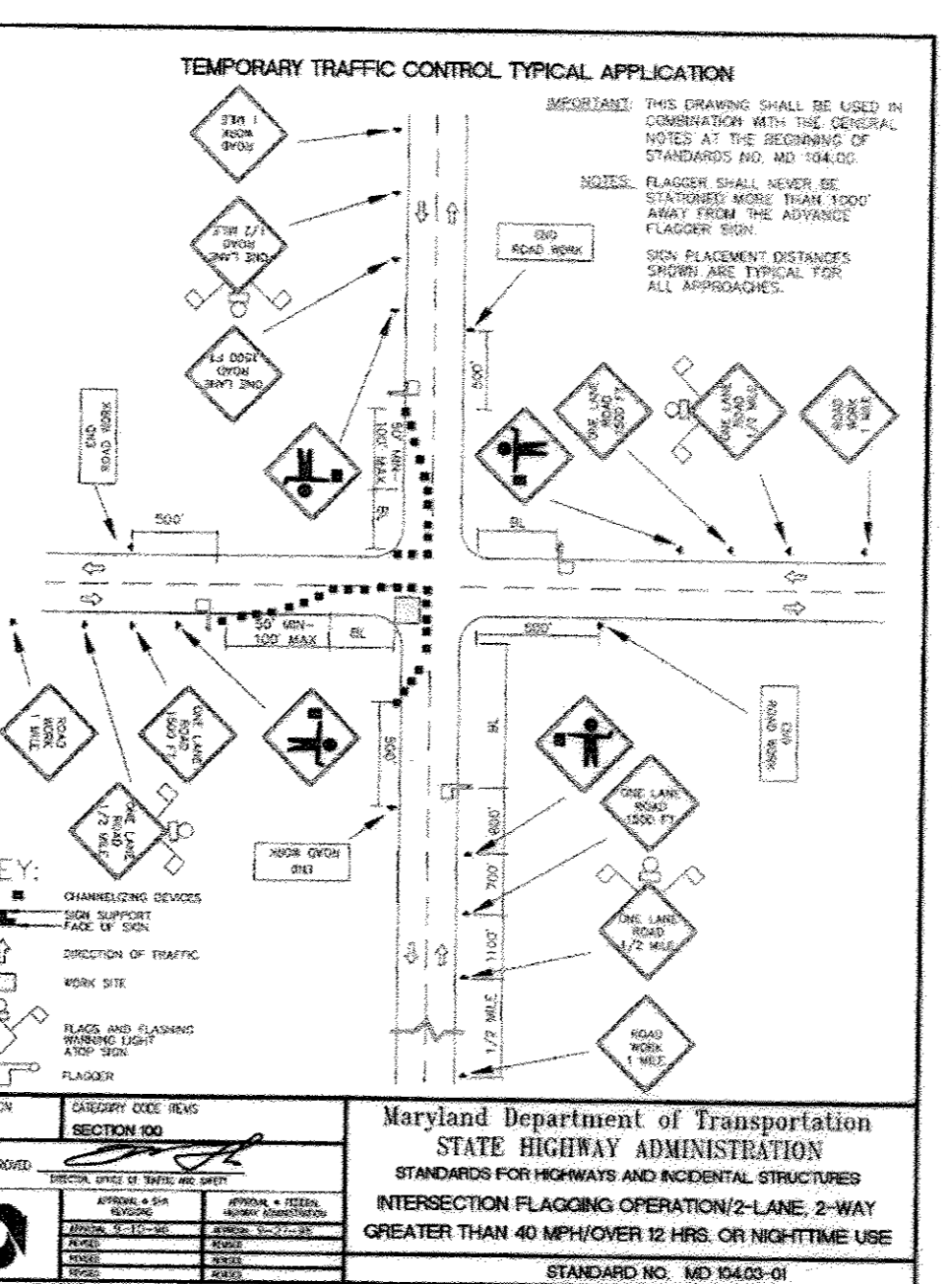
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 APPROVED: *...*
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD ENTRANCE CONSTRUCTION
 STANDARD NO. MD 630.03



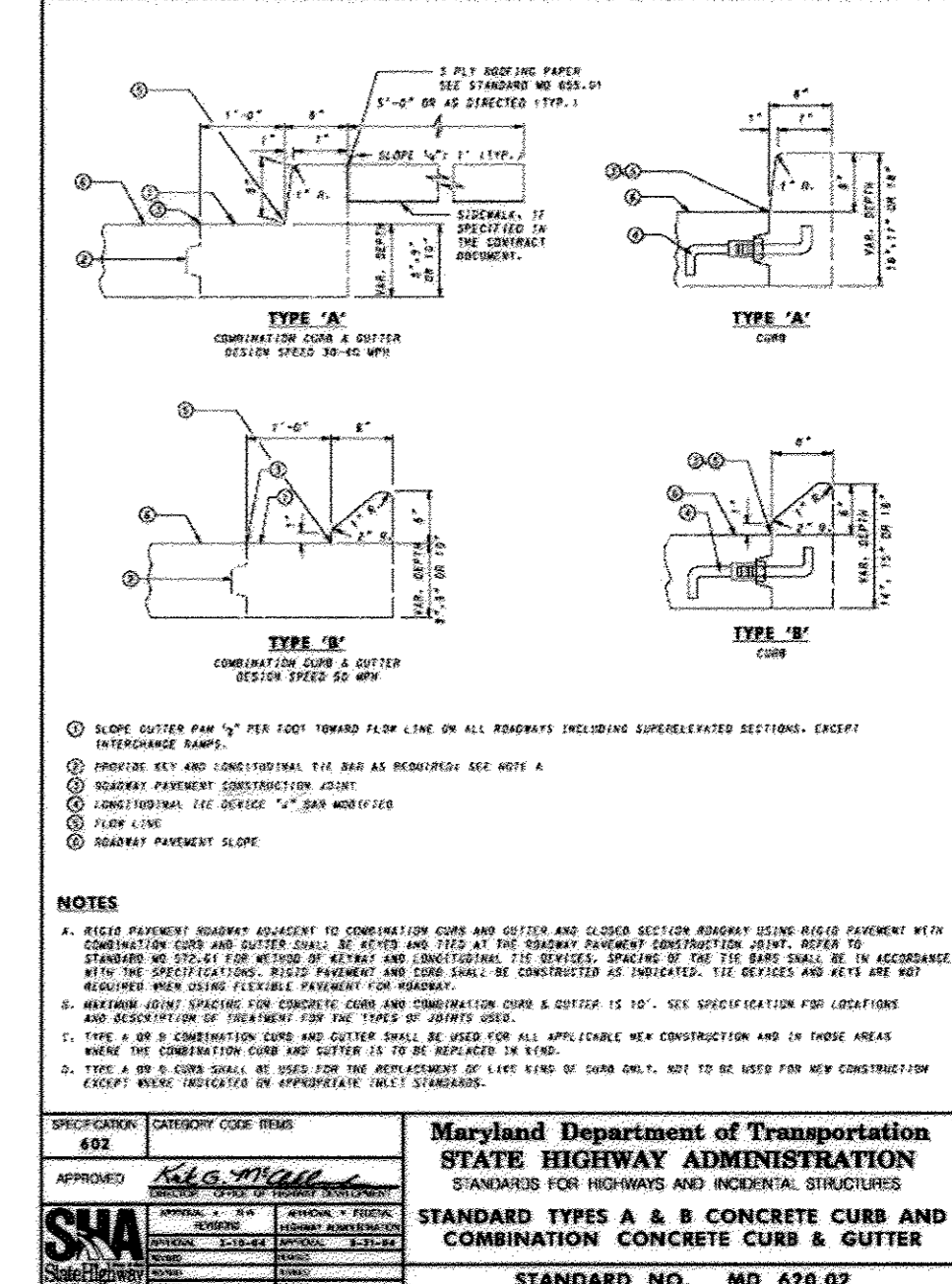
PROVISION: 104 CATEGORY CODE: TYPE C
 APPROVED: *...*
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
RIGHT LANE CLOSURE/MULTILANE UNDI. GREATER THAN 40 MPH
 STANDARD NO. MD 104.03-05



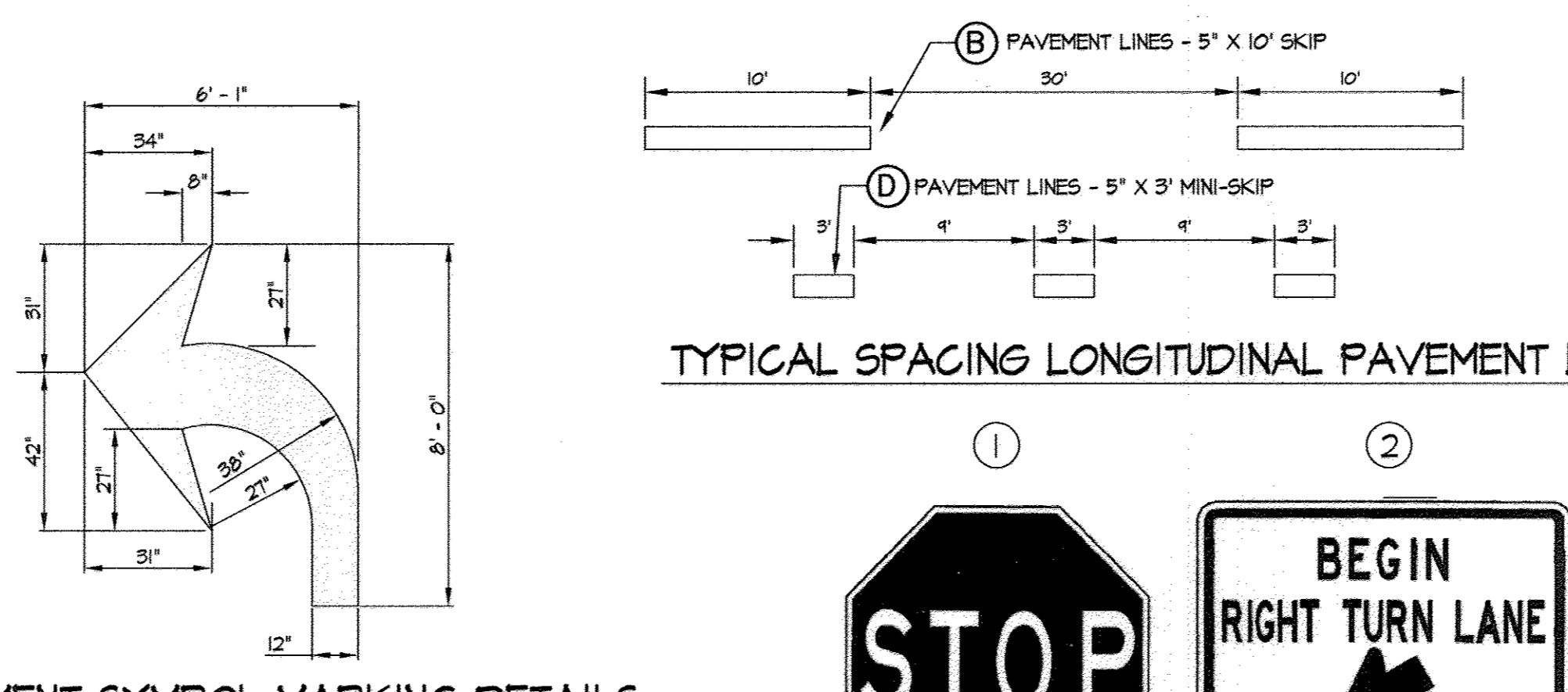
PROVISION: 104 CATEGORY CODE: TYPE C
 APPROVED: *...*
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
RIGHT LANE CLOSURE/MULTILANE UNDI. GREATER THAN 40 MPH
 STANDARD NO. MD 104.03-05



PROVISION: 104 CATEGORY CODE: TYPE C
 APPROVED: *...*
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
RIGHT LANE CLOSURE/MULTILANE UNDI. GREATER THAN 40 MPH
 STANDARD NO. MD 104.03-05



PROVISION: 602 CATEGORY CODE: TYPE C
 APPROVED: *...*
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD TYPES A & B CONCRETE CURBS AND COMBINATION CONCRETE CURB & GUTTER
 STANDARD NO. MD 620.02



TYPICAL SPACING LONGITUDINAL PAVEMENT LINES



PAVEMENT SYMBOL MARKING DETAILS

SIGN LEGEND

- 1 EXISTING SIGN TO REMAIN
- 1 EXISTING SIGN TO BE REMOVED AND SALVAGED
- 2 EXISTING SIGN TO BE REMOVED AND RESET AT NEW LOCATION
- 2 NEW SIGNS - SEE BELOW

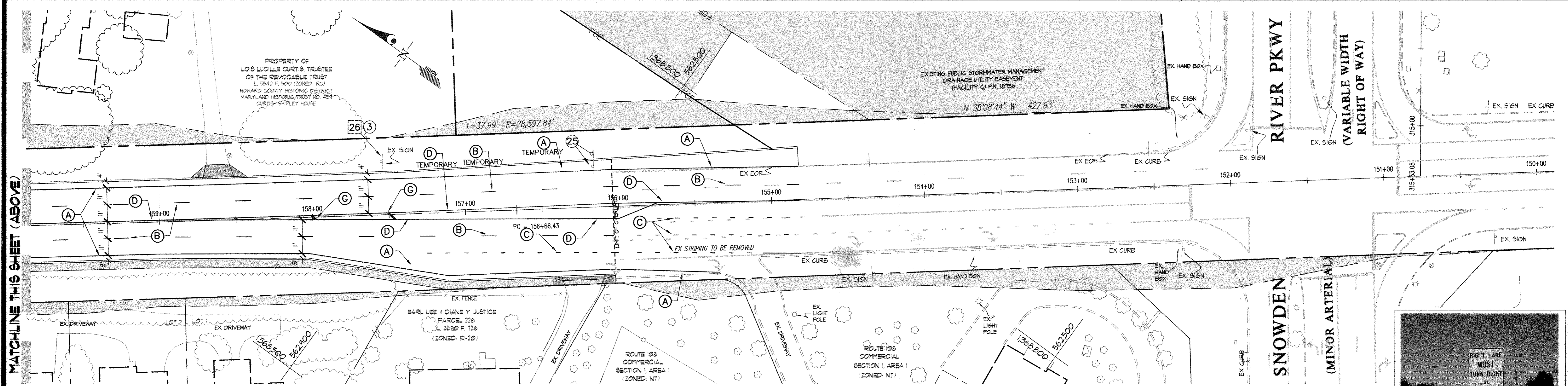
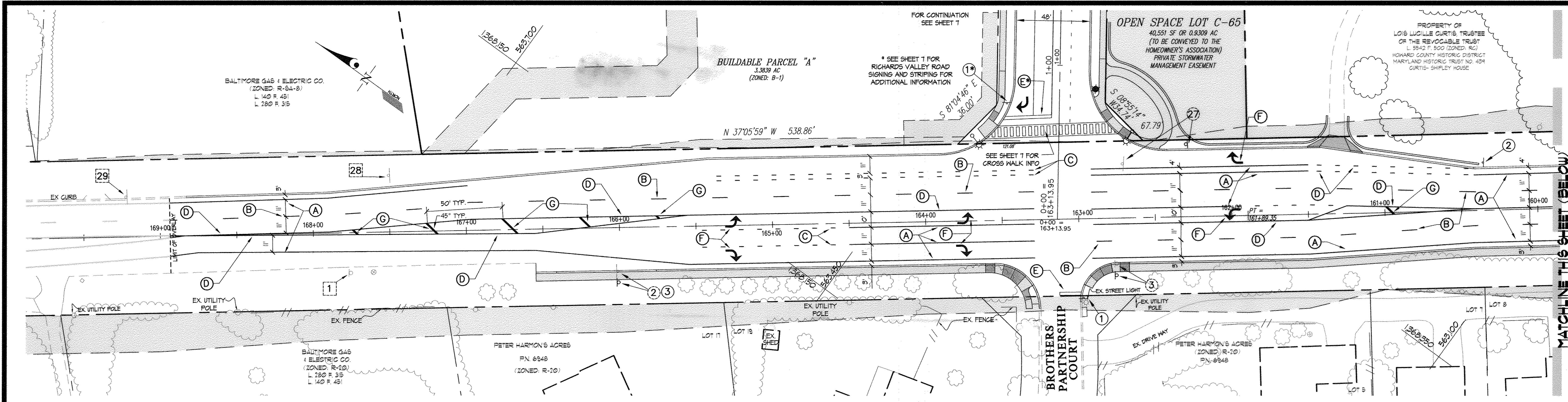
SIGN LEGEND

PREPARED FOR AND OWNER PARCEL 'C':
 BA WATERLOO TOWNHOMES, LLC
 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SLIDELL
 301-623-1525

MARYLAND ROUTE 108 IMPROVEMENT DETAILS AND NOTES
SHIPLEY'S GRANT
 PHASE I
 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
 A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN
 ZONING: R-A-15 B-1
 DATE: May, 2007
 TAX MAP - GRID: 37-1&2
 SHEET: 25 OF 27

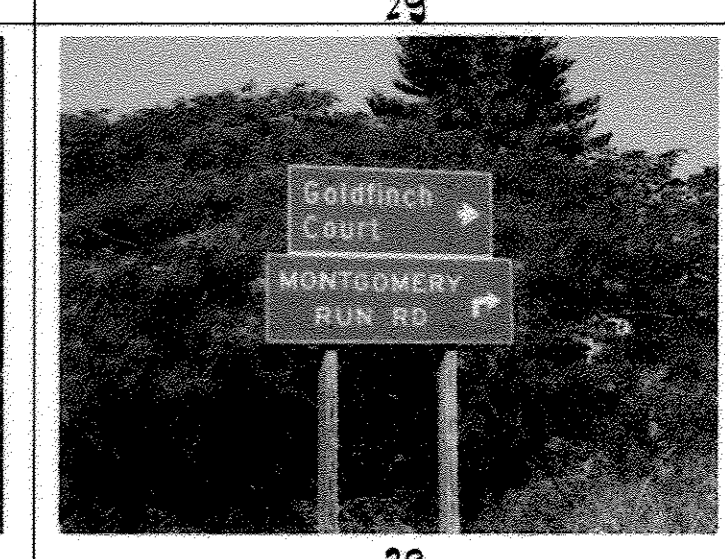
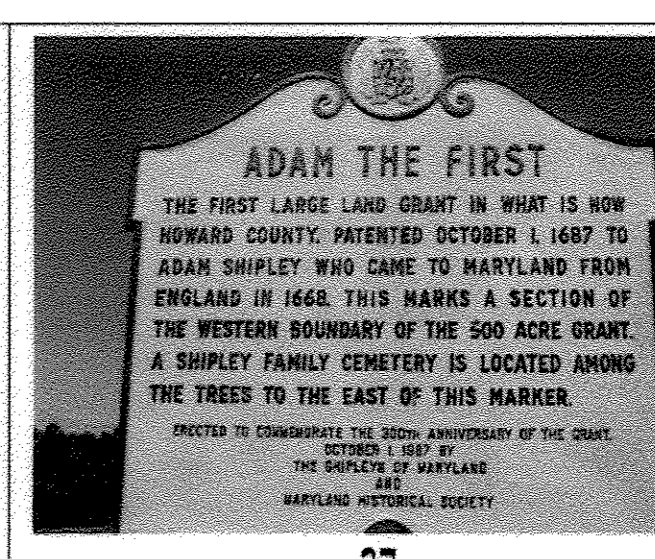
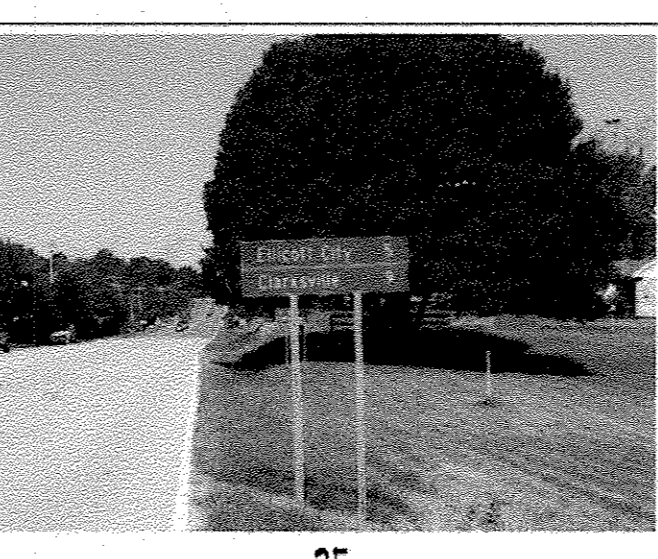
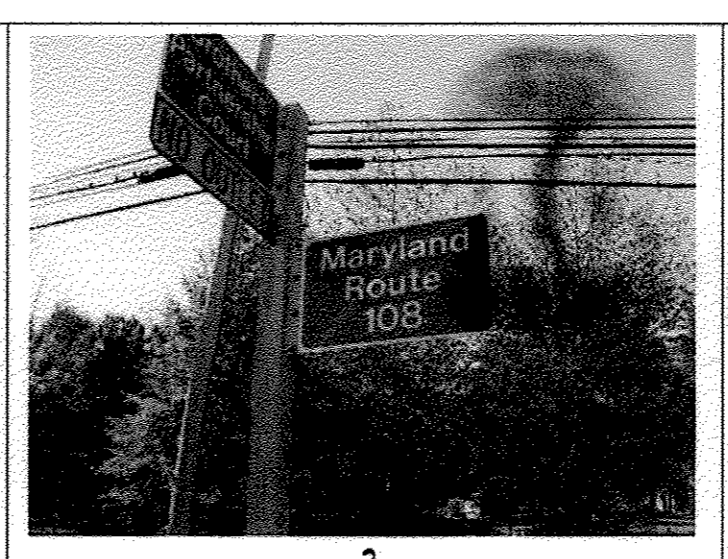
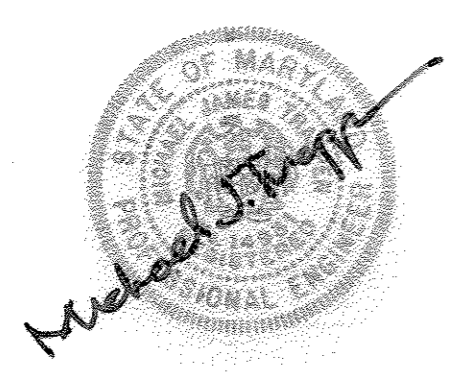
G. L. W. FILE No. 05030



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Walter F. ... 5-25-07
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Andy ... 6/1/07
 Chief, Division of Land Development

Michael J. ...
 Chief, Development Engineering Division



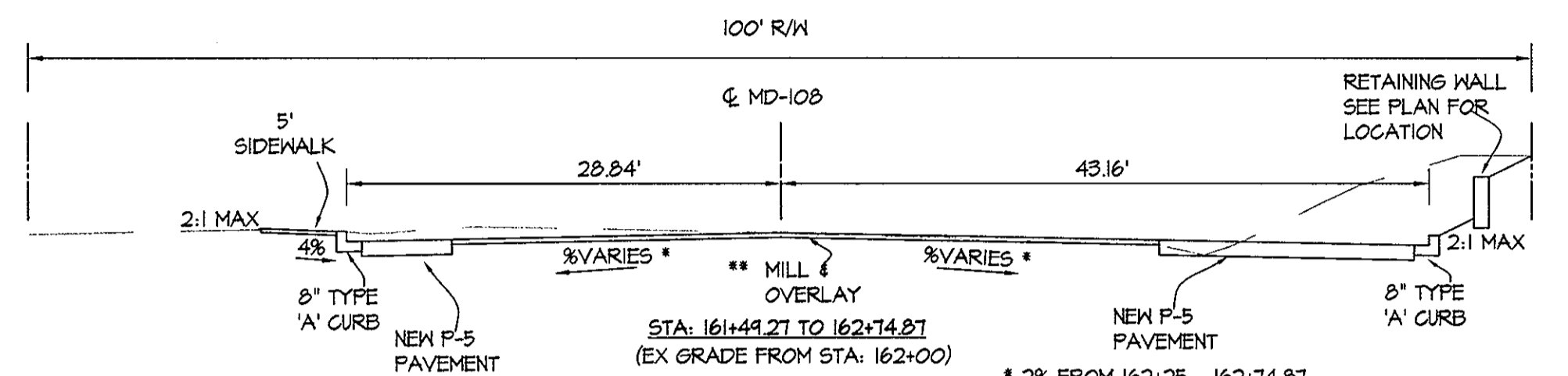
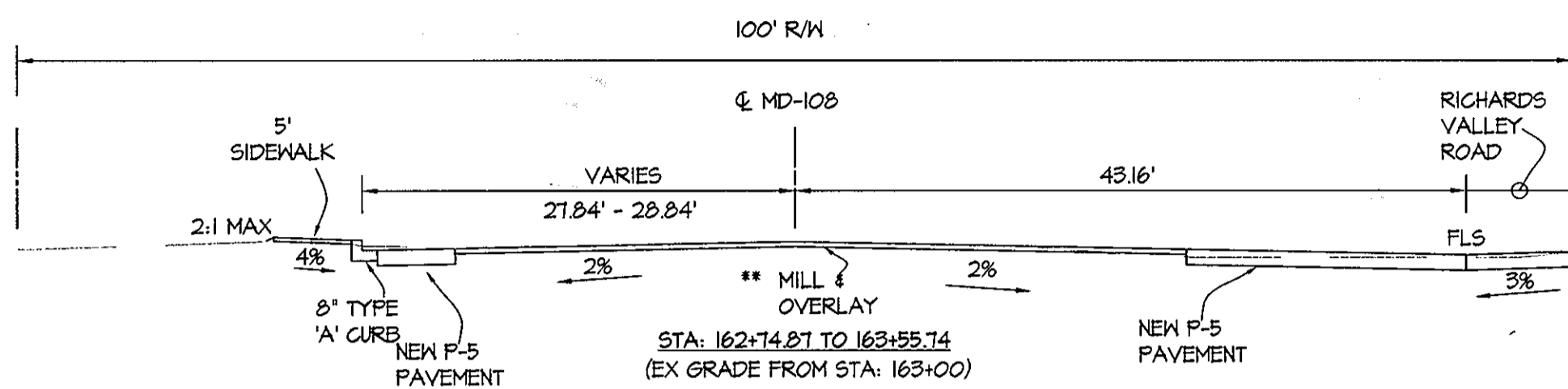
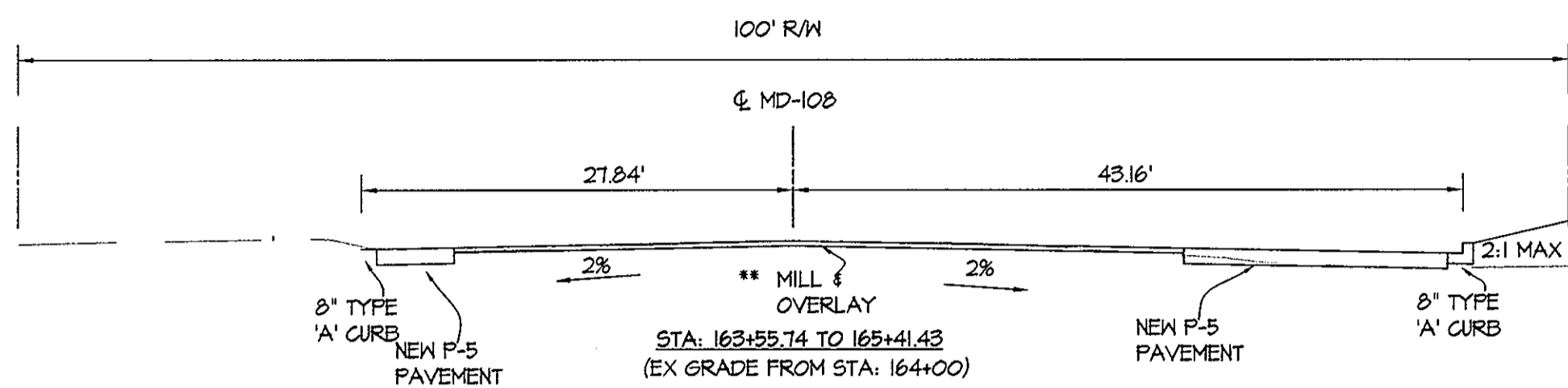
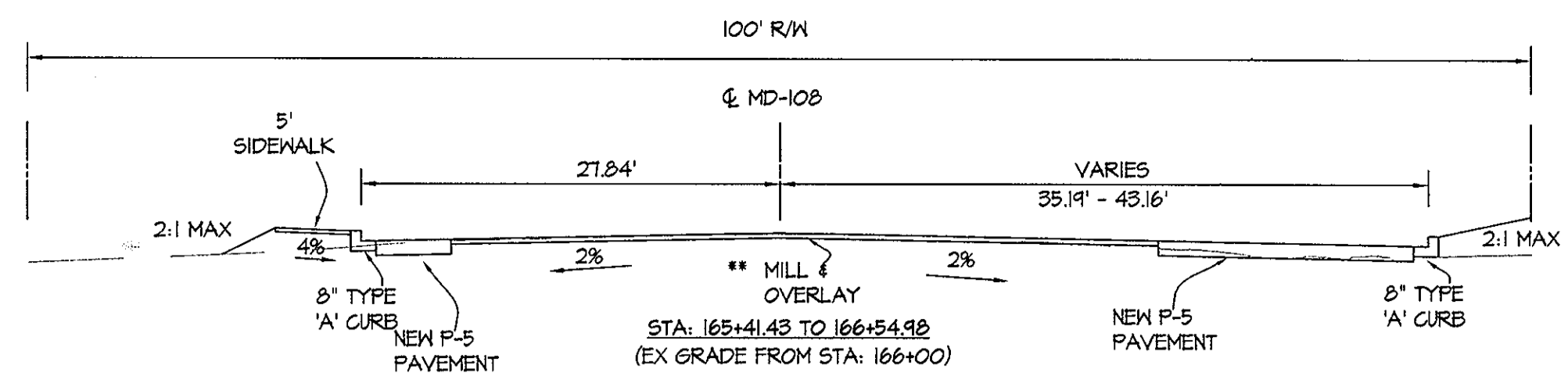
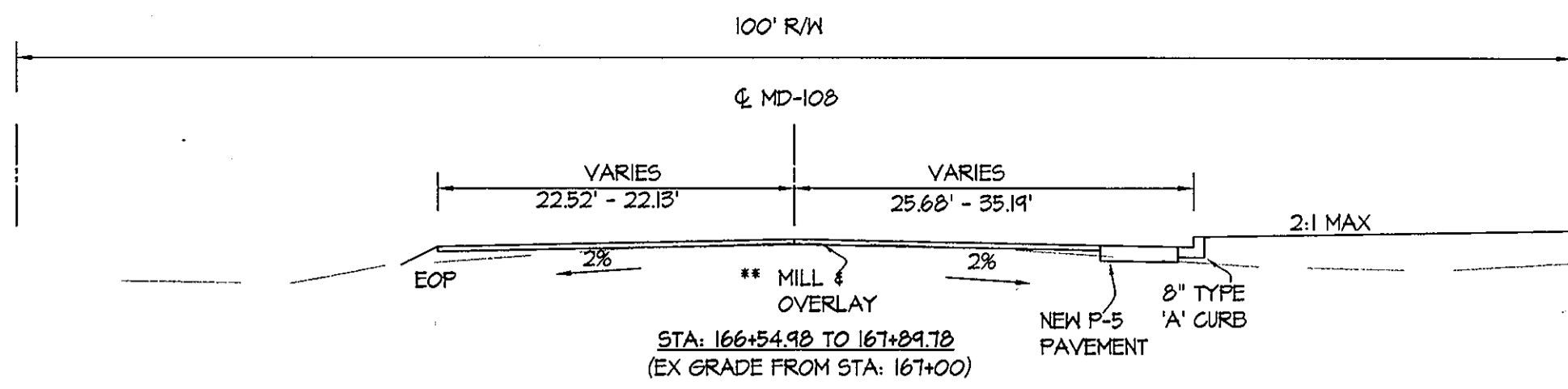
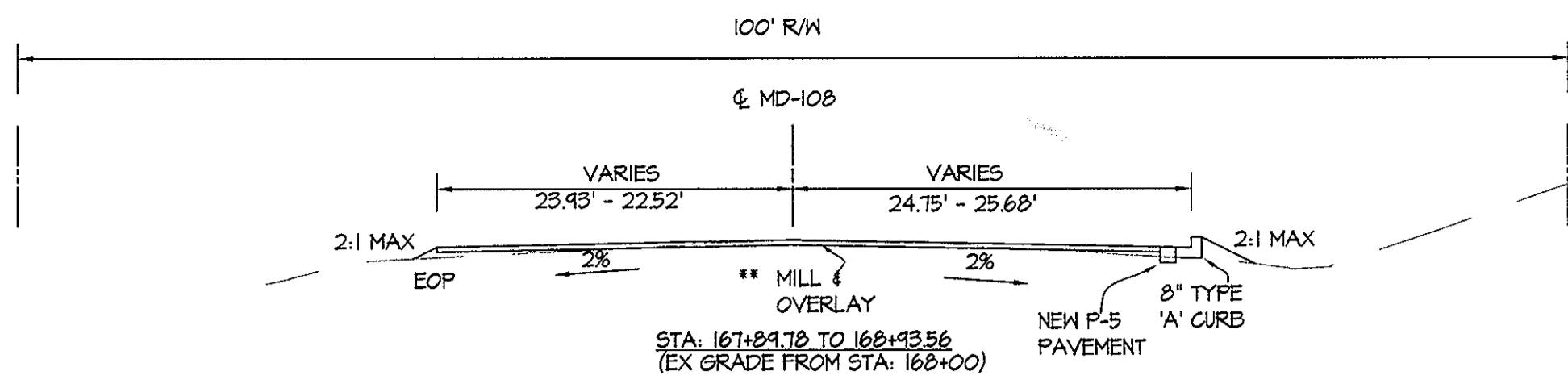
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NO.	DATE	REVISION	BY	APP'R.

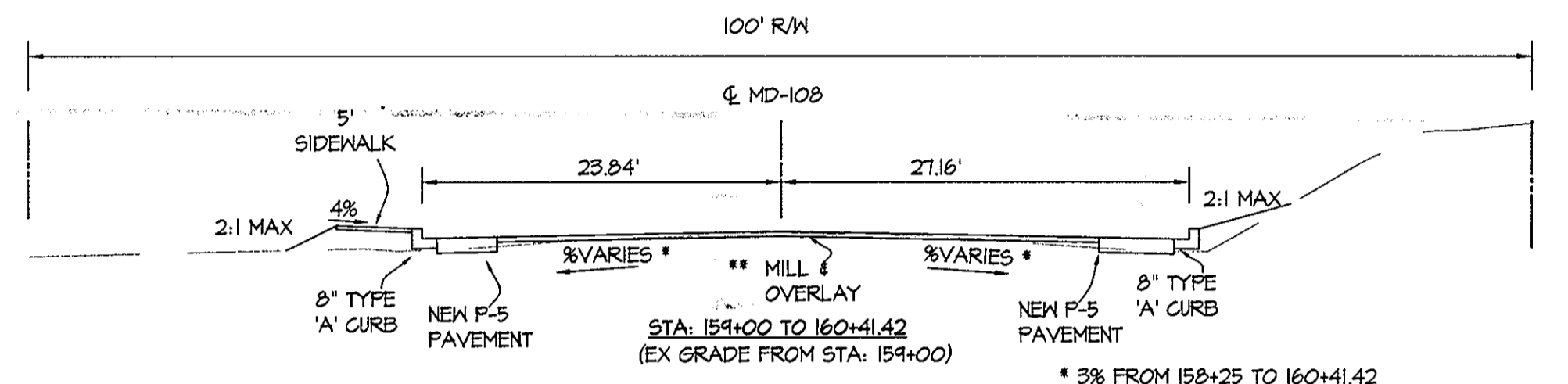
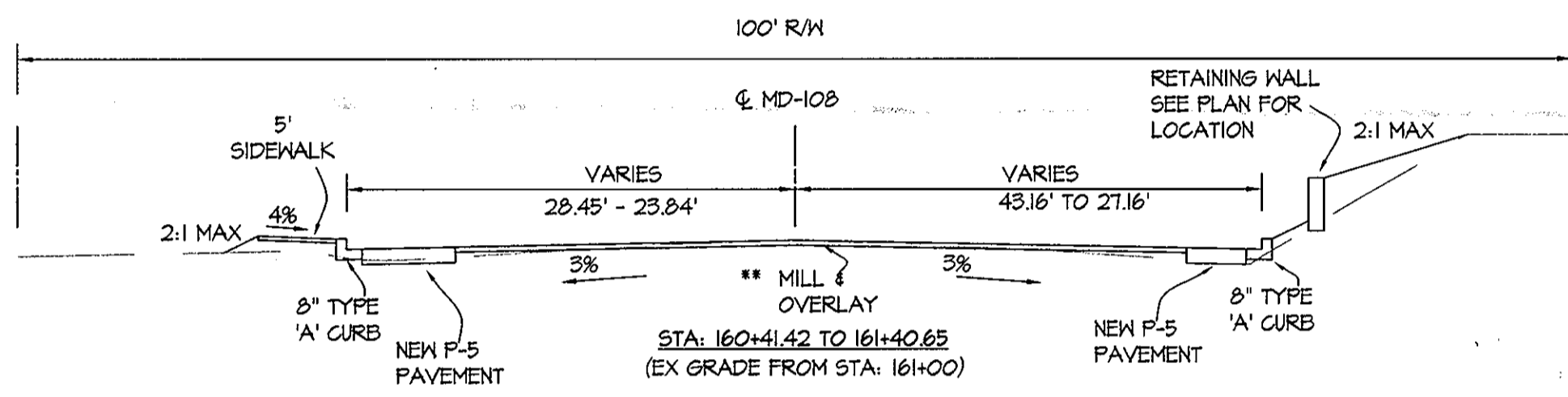
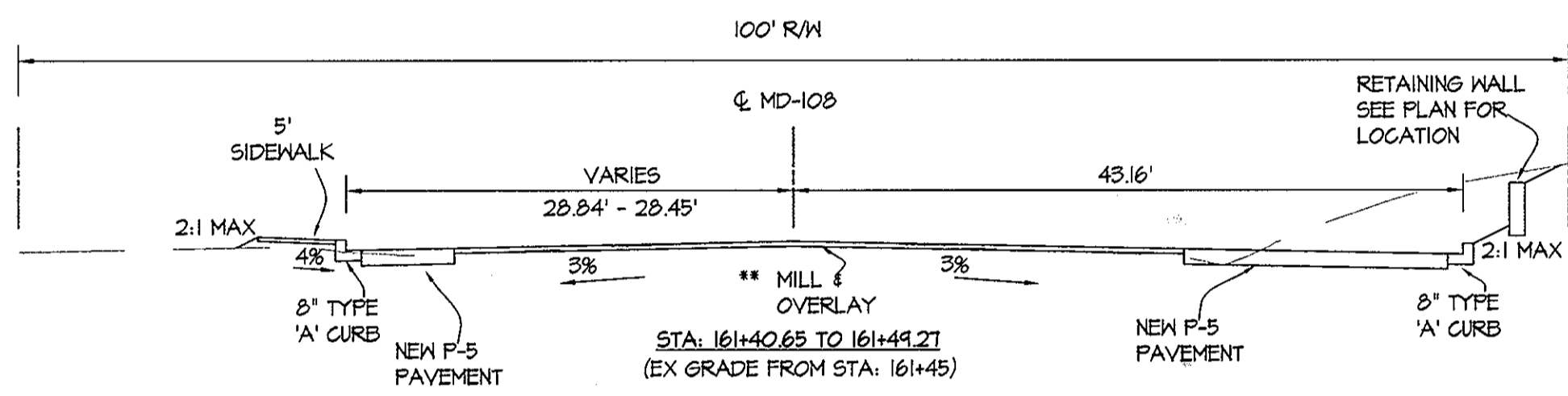
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MARYLAND ROUTE 108 IMPROVEMENTS PAVING & STRIPING
SHIPLEY'S GRANT
 PHASE I
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 COMMON OPEN SPACE LOTS C-66 THRU C-69 AND PARCELS 'A', 'B', C-70, C-71 AND C-72
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 HOWARD COUNTY, MARYLAND

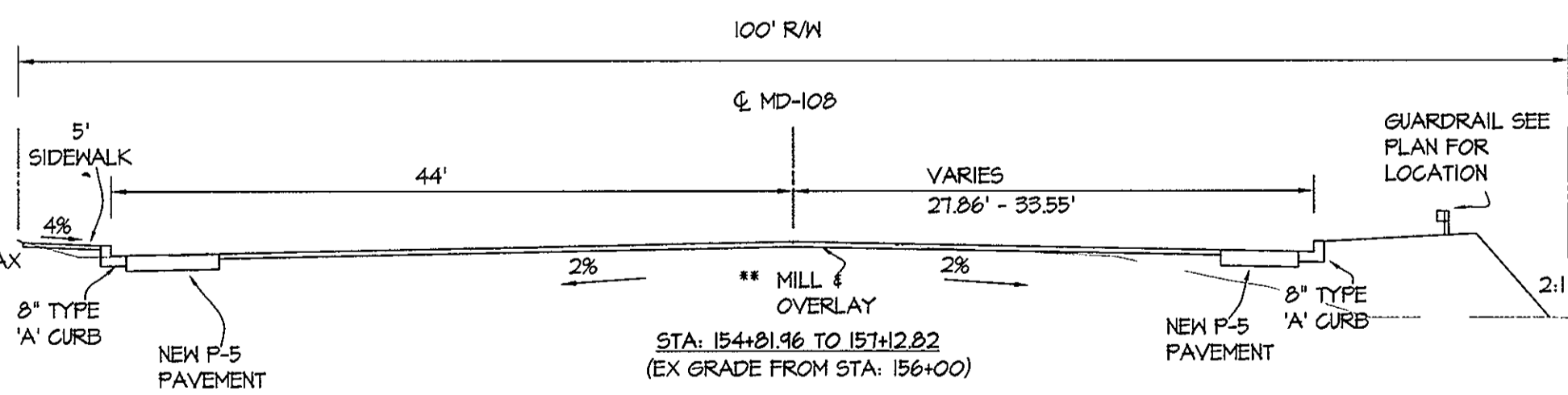
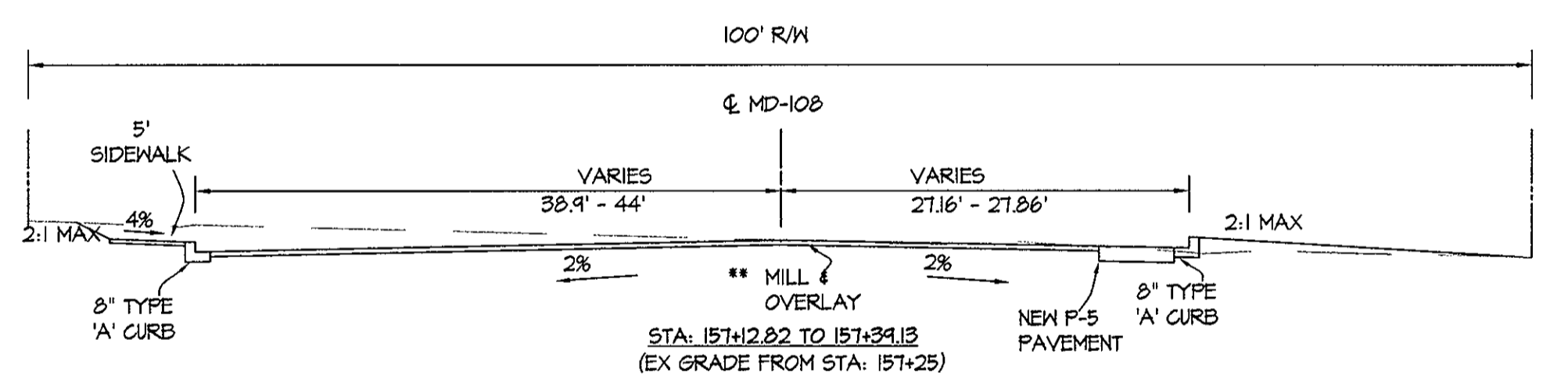
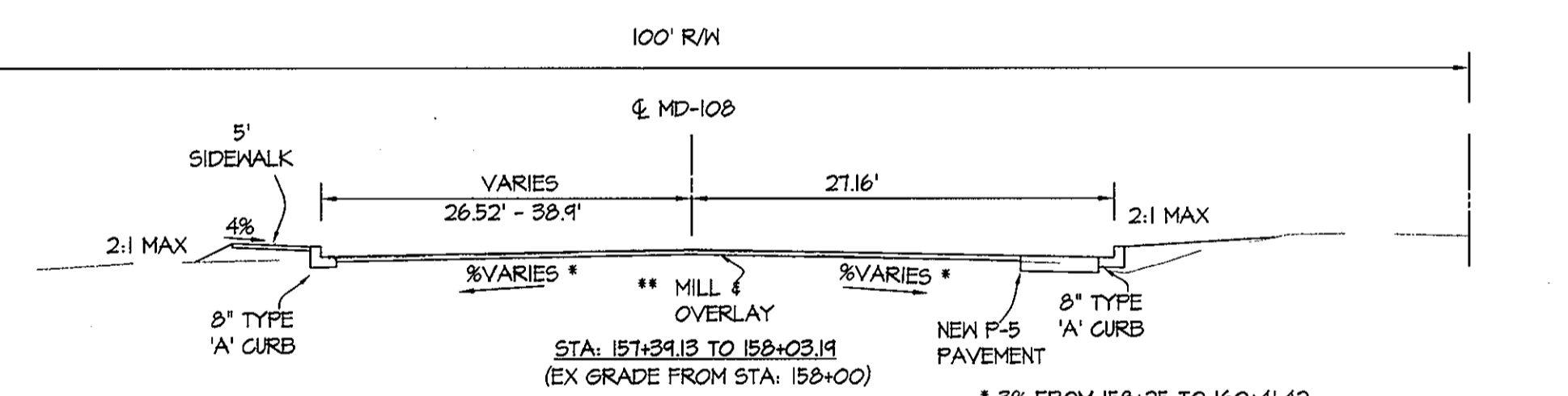
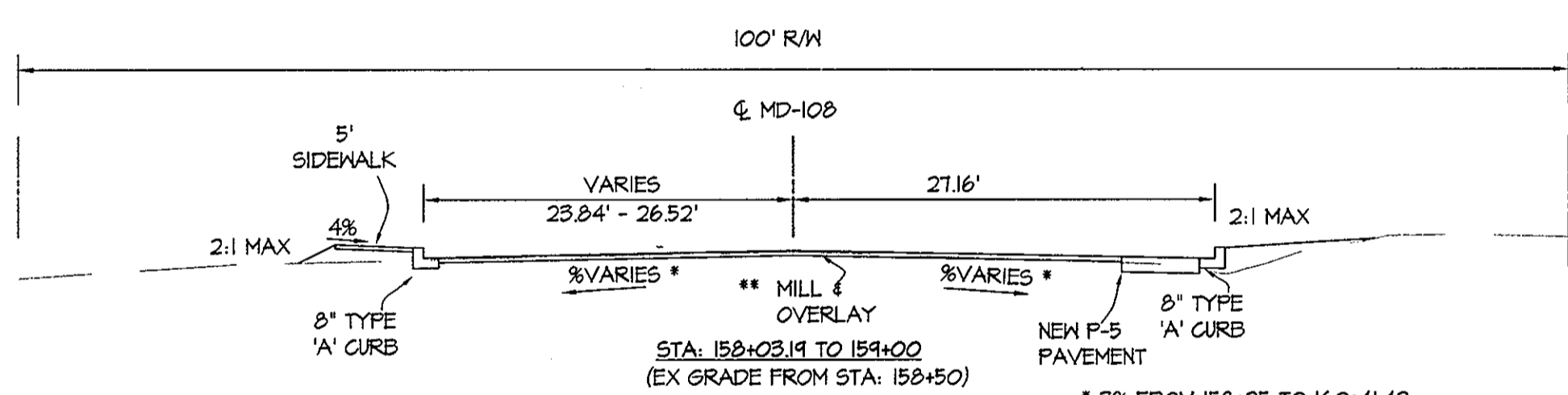
SCALE	ZONING	G. L. W. FILE NO.
1" = 30'	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
May, 2007	37-1&2	26 OF 27



* 2% FROM 162+25 - 162+74.87
 2-3% TRANSITION FROM 162+00 TO 162+25
 3% FROM 161+44.21 TO 162+00



* 3% FROM 158+25 TO 160+41.42
 3-2% TRANSITION FROM 158+00 TO 158+25
 2% FROM 157+34.13 TO 158+00

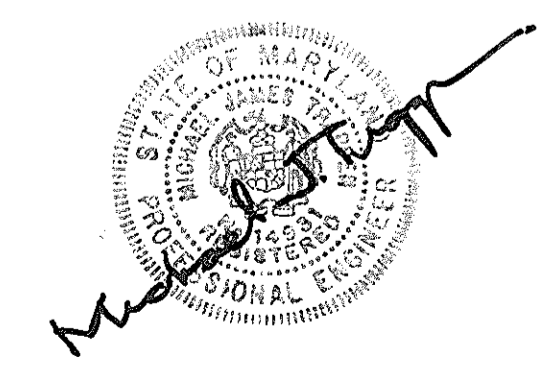


APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William T. ... 5-29-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Cinda ... 6/1/07
 Chief, Division of Land Development Date
... 5/21/07
 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: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

NO.	DATE	REVISION	BY	APPR.

PREPARED FOR AND OWNER PARCEL 'C':
 BA WATERLOO TOWNHOMES, LLC
 c/o BOZZUTO HOMES, INC.
 7850 WALKER DRIVE SUITE 400
 GREENBELT, MARYLAND 20770
 ATTN: DUNCAN SLIDELL
 301-623-1525

MARYLAND ROUTE 108 IMPROVEMENTS TYPICAL SECTIONS
SHIPLEY'S GRANT
 PHASE I
 LOTS C-1 THRU C-62, OPEN SPACE LOTS C-63, C-64, C-65
 COMMON OPEN SPACE LOTS C-66 THRU C-69 and PARCELS 'A', 'B', C-70, C-71 and C-72
 A RESUBDIVISION OF PARCEL 'C' PLAT Nos. 18429, 18430, AND 18735 - 18738
 HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT No. 1

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	R-A-15 B-1	05030
DATE	TAX MAP - GRID	SHEET
May, 2007	37-1&2	27 OF 27

OWNER PARCEL 'A'
 SHIPLEY'S GRANT RETAIL, LLC
 1966 GREENSPRING DRIVE SUITE 508
 LUTHERVILLE, MD 21093
 OWNER PARCEL 'B'
 DEEP RUN PROPERTY MANAGEMENT, INC.
 191 MILLER HOLLOW LANE
 LAKE CITY, TENNESSEE 37769