

LEGEND

- EXISTING CONTOUR
- EXISTING CURB AND GUTTER
- EXISTING STORM DRAIN
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING GASLINE
- EXISTING FENCE
- EXISTING STREAM BANK
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- EXISTING TREELINE
- EXISTING TREES/LANDSCAPING
- LIMIT OF DISTURBANCE
- EXISTING WALL TO BE REMOVED
- EXISTING BUILDING TO BE REMOVED
- EXISTING PAVING TO BE REMOVED
- EXISTING CONCRETE TO BE REMOVED
- EX. 20" PUBLIC WATER EASEMENT L 524 F 649 PARTS 3 & 5-6 TO BE ABANDONED
- EX. 20" PUBLIC SEWER EASEMENT L 524 F 649 PARTS 2 & 4 TO BE ABANDONED AND PORTIONS OF PART 1 TO BE VACATED



AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

NAME: **16193** DATE: **6-12-24**

NO AS-BUILT INFORMATION ON THIS SHEET

EXISTING UTILITIES NOTE:
EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM EXISTING SITE DEVELOPMENT PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION ONLY.

CONTRACTOR SHALL TEST PIT TO VERIFY EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES, TO MAINTAIN UNINTERRUPTED SERVICE AND TO PROVIDE REQUIRED CLEARANCES FOR ALL PROPOSED UTILITIES. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINCOPIN CIRCLE
COLUMBIA, MD 21044
(410) 381-3554

OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 HOLLIS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

SITE DEVELOPMENT PLANS
EXISTING CONDITIONS & DEMOLITION PLAN

ROSLYN RISE
VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
COLUMBIA, MD 21044

TAX MAP 30 GRID 19
TAX MAP 36 GRID 1
5TH ELECTION DISTRICT

LOTS 7 & 8, ZONED: NT
LOT 5, PARCEL 81
HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
EXPIRATION DATE: 08-27-2022

DESIGN BY: RHW/ACS
DRAWN BY: ACS
CHECKED BY: RHW
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 41539

2 SHEET OF 27

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5/31/2022

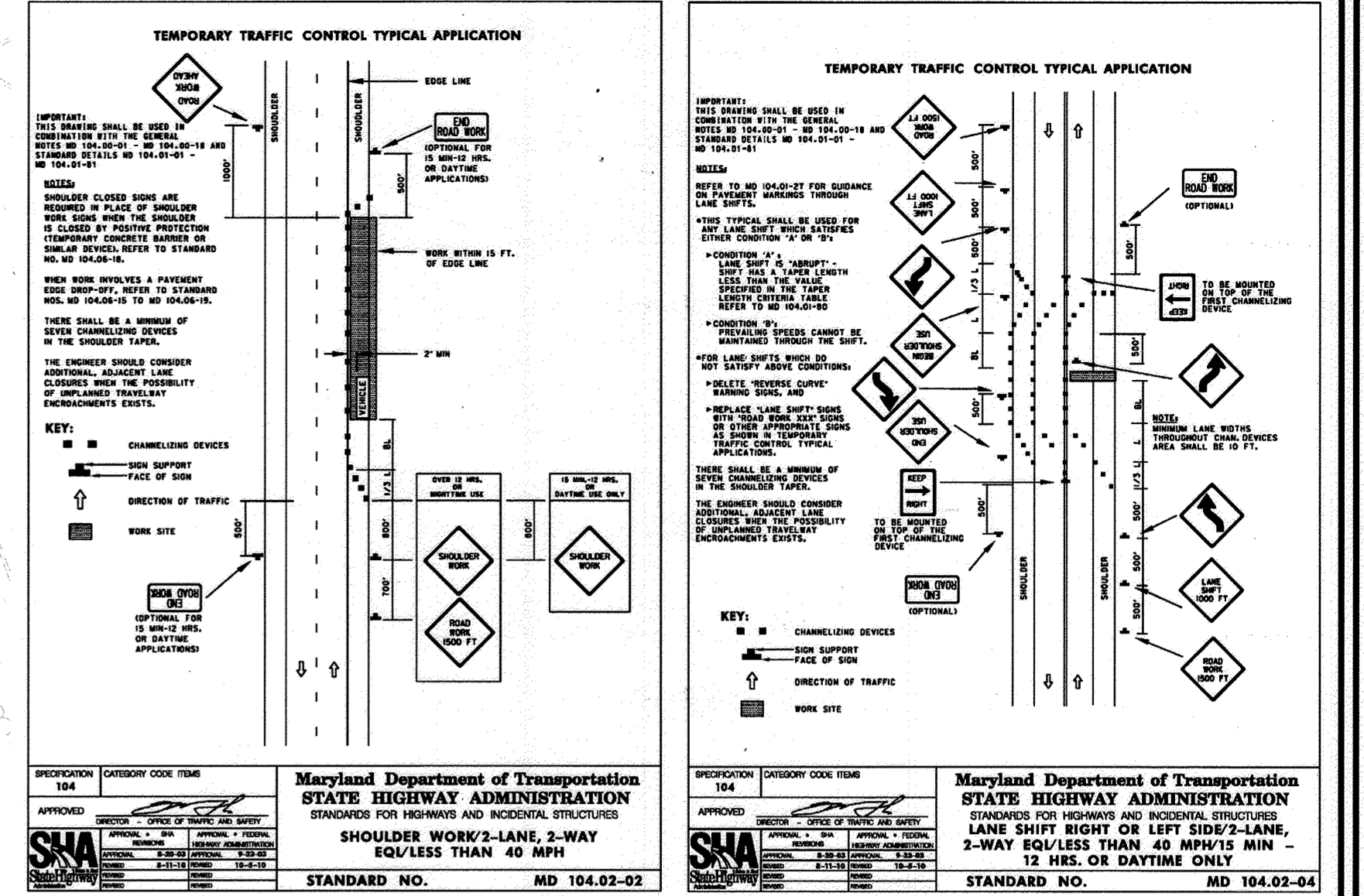
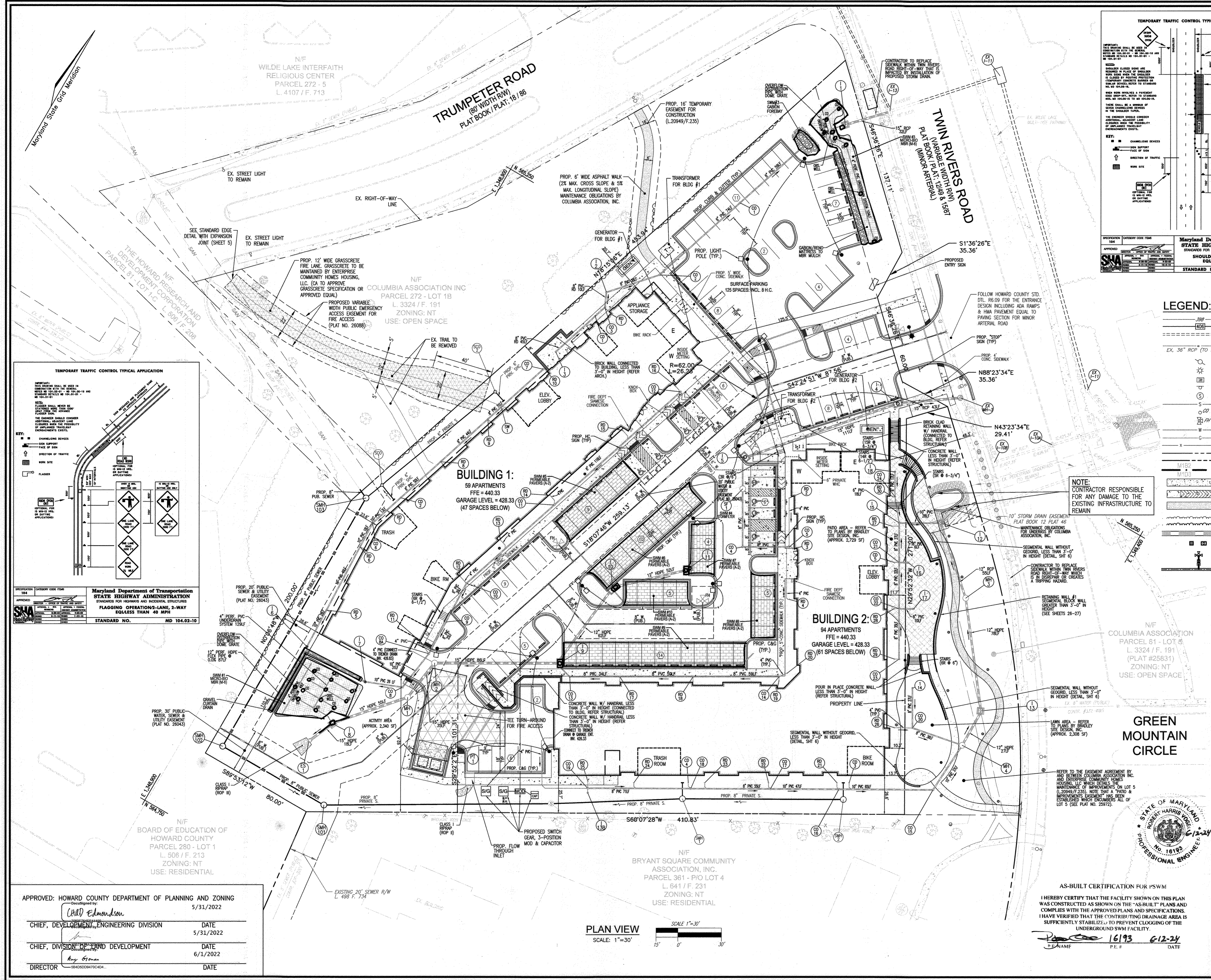
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 5/31/2022

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/1/2022

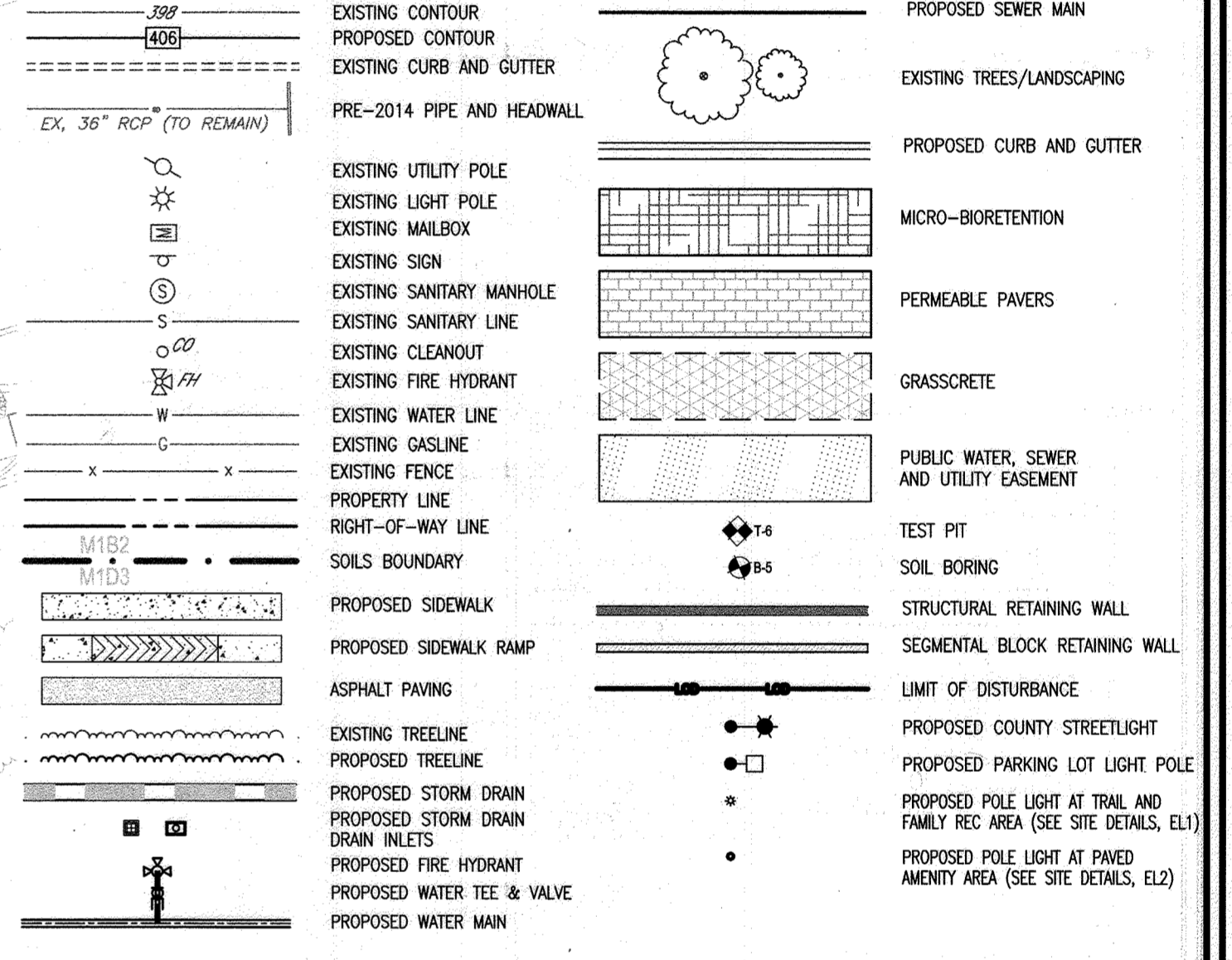
DIRECTOR DATE

PLAN VIEW
SCALE: 1"=30'

SCALE 1"=30'
15' 0' 30'



LEGEND:



NOTE: CONTRACTOR RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING INFRASTRUCTURE TO REMAIN

GREEN MOUNTAIN CIRCLE



AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

DATE: 5/26/2022

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5/31/2022

Chief, Development Engineering Division

Chief, Division of Land Development

Director

PLAN VIEW

SCALE: 1"=30'

OWNER: COLUMBIA ASSOCIATION INC. C/O ALBERT F. EDWARDS 10221 WINCOPIN CIRCLE COLUMBIA, MD 21044 (410) 381-3551

OWNER/DEVELOPER: ROSLYN RISE FOUR, LLC 94 UNIT BUILDING 2 (4%); ROSLYN RISE NINE, LLC 59 UNIT BUILDING 1 (9%); C/O MACKENZIE KIESEL 875 HOLLINS STREET, SUITE 202 BALTIMORE, MD 21201 (410) 230-2117

SITE DEVELOPMENT PLANS

SITE LAYOUT PLAN

ROSLYN RISE

VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8 COLUMBIA, MD 21044

TAX MAP 30 GRID 19

TAX MAP 36 GRID 1

5TH ELECTION DISTRICT

LOTS 7 & 8, ZONED: NT

LOT 5, PARCEL 81

HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

TIMMONS GROUP

3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043

P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE

DESIGN BY: RHW/ACS

DRAWN BY: ACS

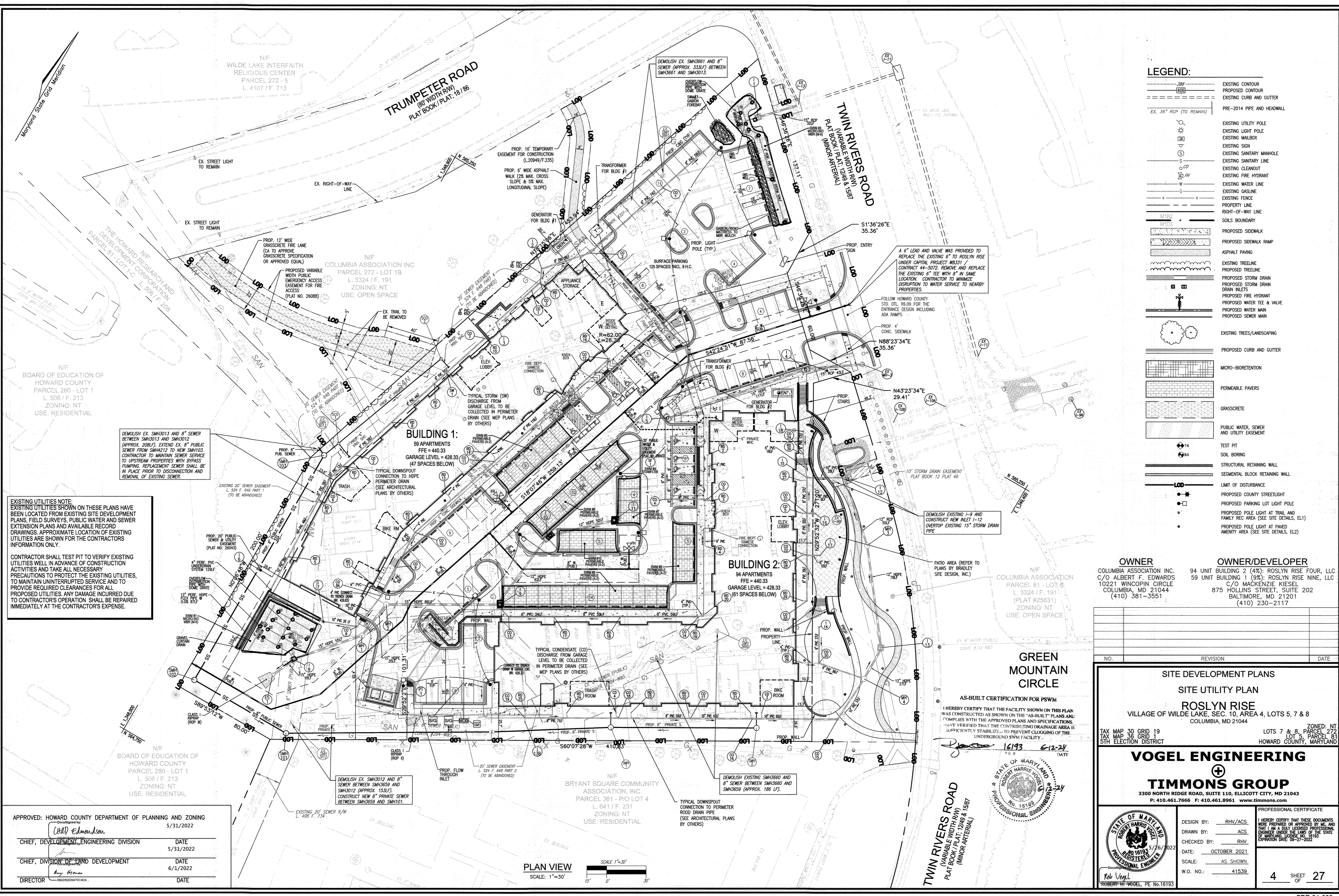
CHECKED BY: RHW

DATE: OCTOBER 2021

SCALE: AS SHOWN

W.O. NO.: 41539

3 SHEET OF 27



LEGEND:

	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING CURB AND GUTTER
	PRE-2014 PIPE AND HEADWALL
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING GASLINE
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	PROPOSED SIDEWALK
	PROPOSED SIDEWALK RAMP
	ASPHALT PAVING
	EXISTING TREELINE
	PROPOSED TREELINE
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLETS
	PROPOSED FIRE HYDRANT
	PROPOSED WATER TEE & VALVE
	PROPOSED WATER MAIN
	PROPOSED SEWER MAIN
	EXISTING TREES/LANDSCAPING
	PROPOSED CURB AND GUTTER
	MICRO-BIORETENTION
	PERMEABLE PAVERS
	GRASSCRETE
	PUBLIC WATER, SEWER AND UTILITY EASEMENT
	TEST PIT
	SOIL BORING
	STRUCTURAL RETAINING WALL
	SEGMENTAL BLOCK RETAINING WALL
	LIMIT OF DISTURBANCE
	PROPOSED COUNTY STREETLIGHT
	PROPOSED PARKING LOT LIGHT POLE
	PROPOSED POLE LIGHT AT TRAIL AND FAMILY REC AREA (SEE SITE DETAILS, EL1)
	PROPOSED POLE LIGHT AT PAVED AMENITY AREA (SEE SITE DETAILS, EL2)

OWNER
 COLUMBIA ASSOCIATION INC.
 C/O ALBERT F. EDWARDS
 10221 WINCOPIN CIRCLE
 COLUMBIA, MD 21044
 (410) 381-3551

OWNER/DEVELOPER
 94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
 59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
 C/O MACKENZIE KIESEL
 HOLLINS STREET, SUITE 202
 BALTIMORE, MD 21201
 (410) 230-2117

GREEN MOUNTAIN CIRCLE

AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

16193 6-12-24



TWIN RIVERS ROAD
 (VARIABLE WIDTH R/W)
 PLAT BOOK / PLAT: 1248 & 1587
 (MINOR ARTERIAL)

PLAN VIEW
 SCALE: 1"=30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSign by: *David Edmondson* 5/31/2022
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DocuSign by: *Angie Brown* 6/1/2022
 CHIEF, DIVISION OF LAND DEVELOPMENT

DocuSign by: *Angie Brown* 5/31/2022
 DIRECTOR

NO. REVISION DATE

SITE DEVELOPMENT PLANS
SITE UTILITY PLAN
ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044

TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT

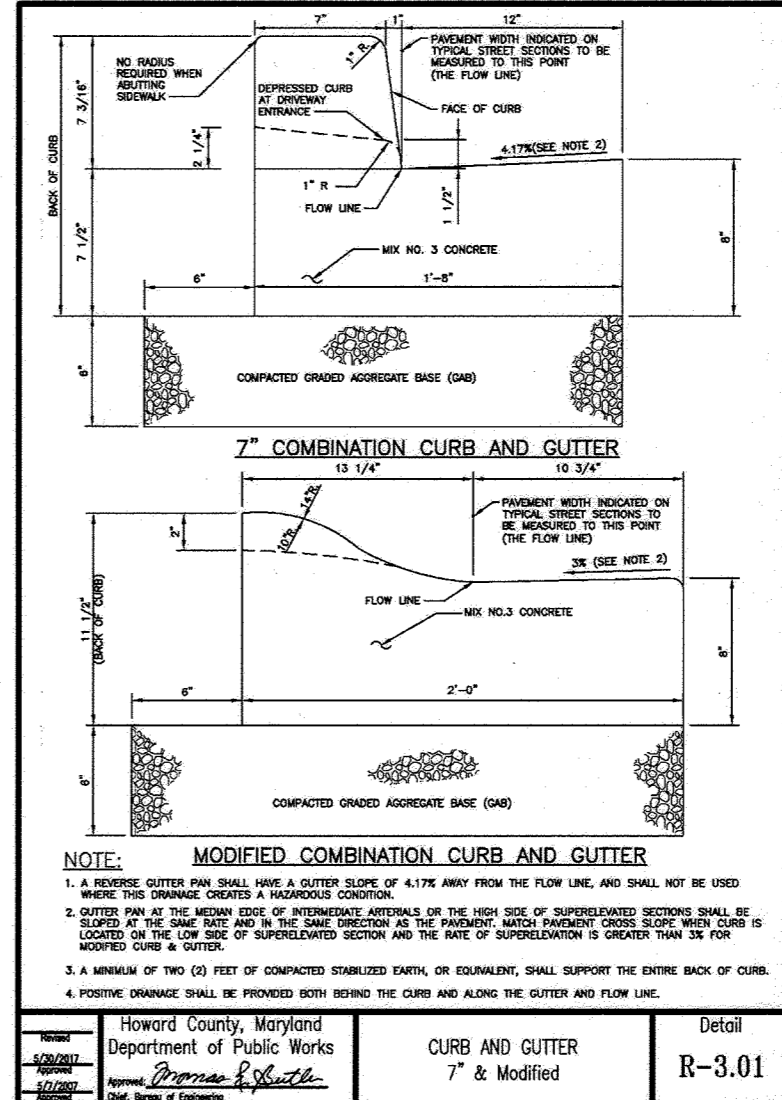
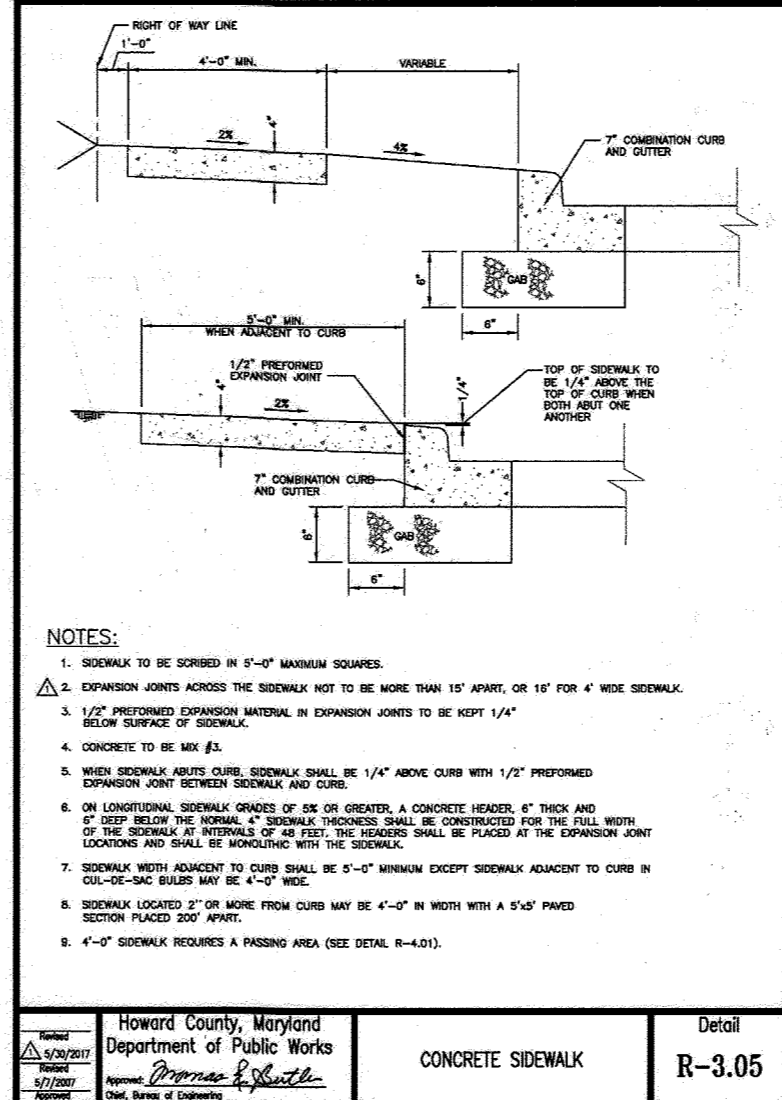
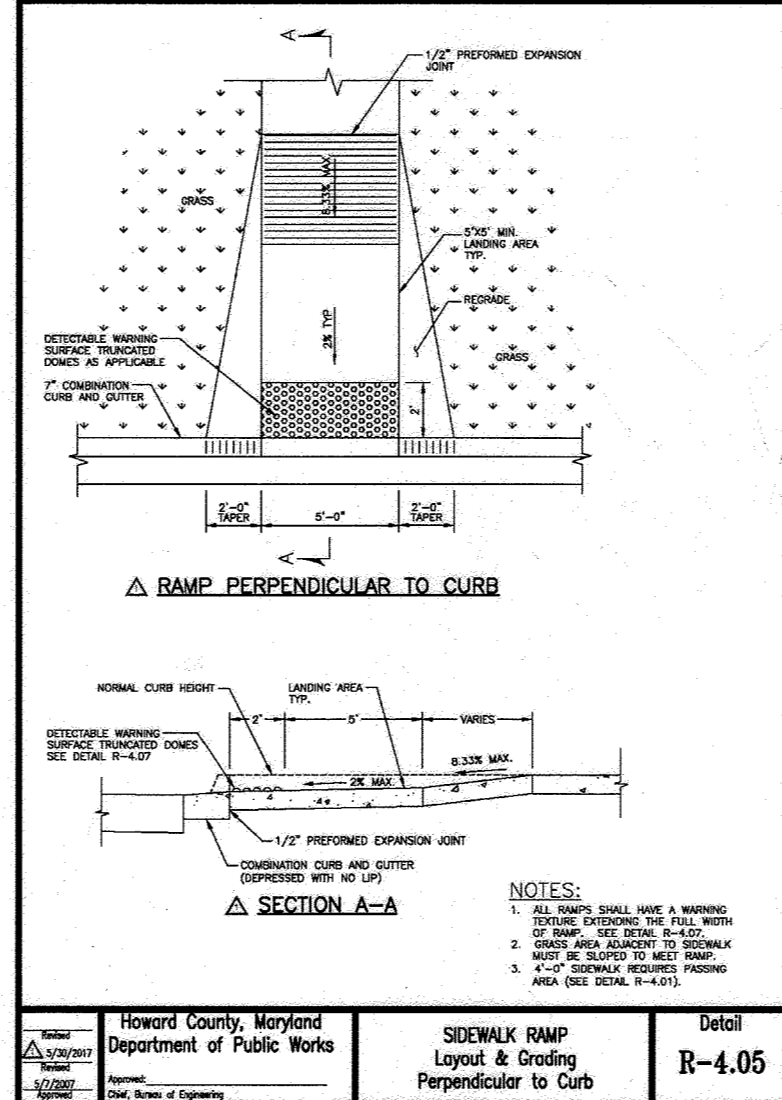
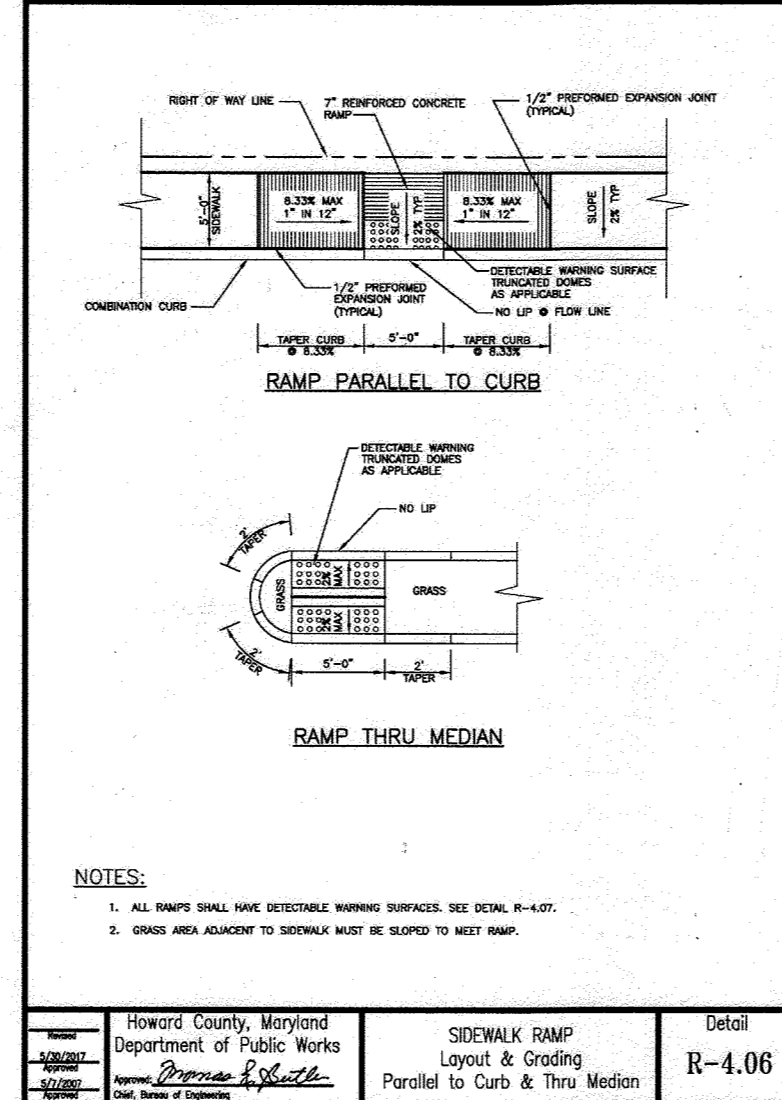
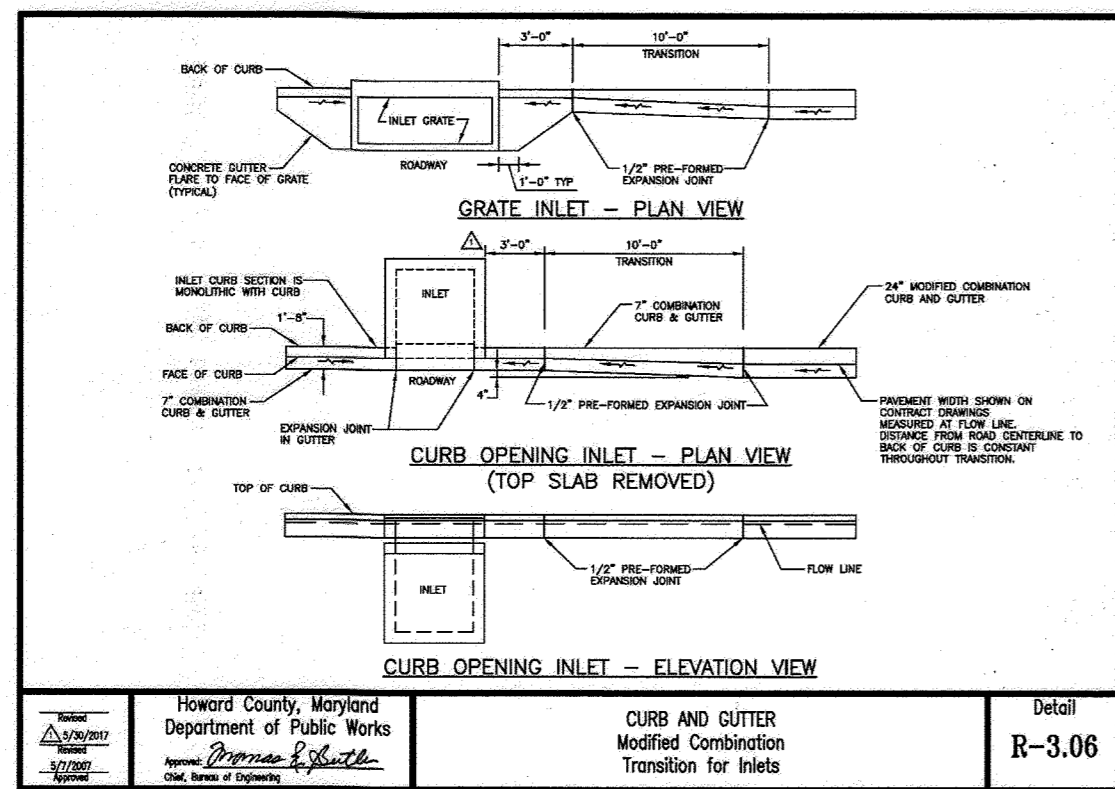
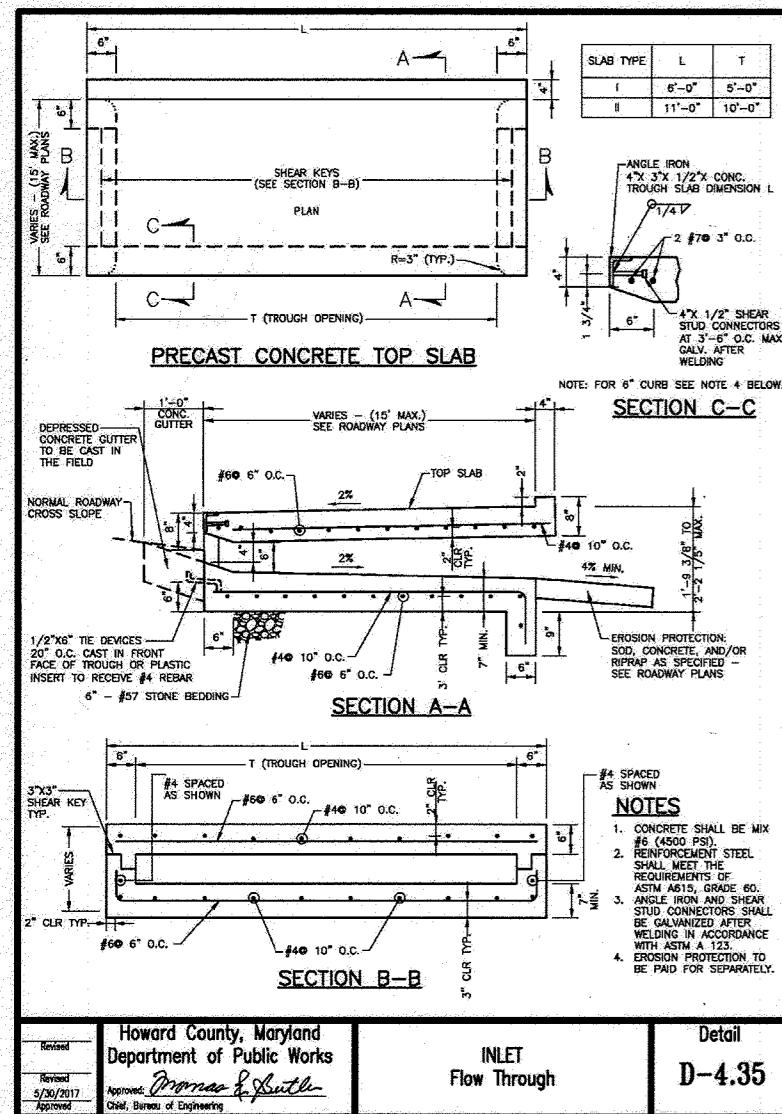
LOTS 7 & 8, ZONED: NT
 LOT 5, PARCEL 81
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
 +
TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 08-27-2025

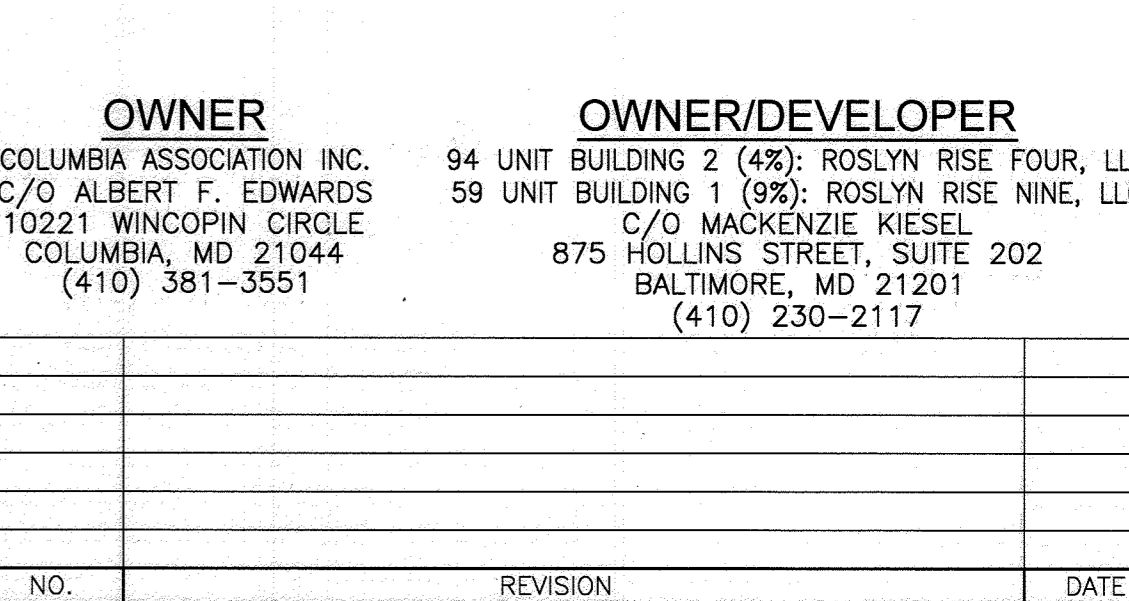
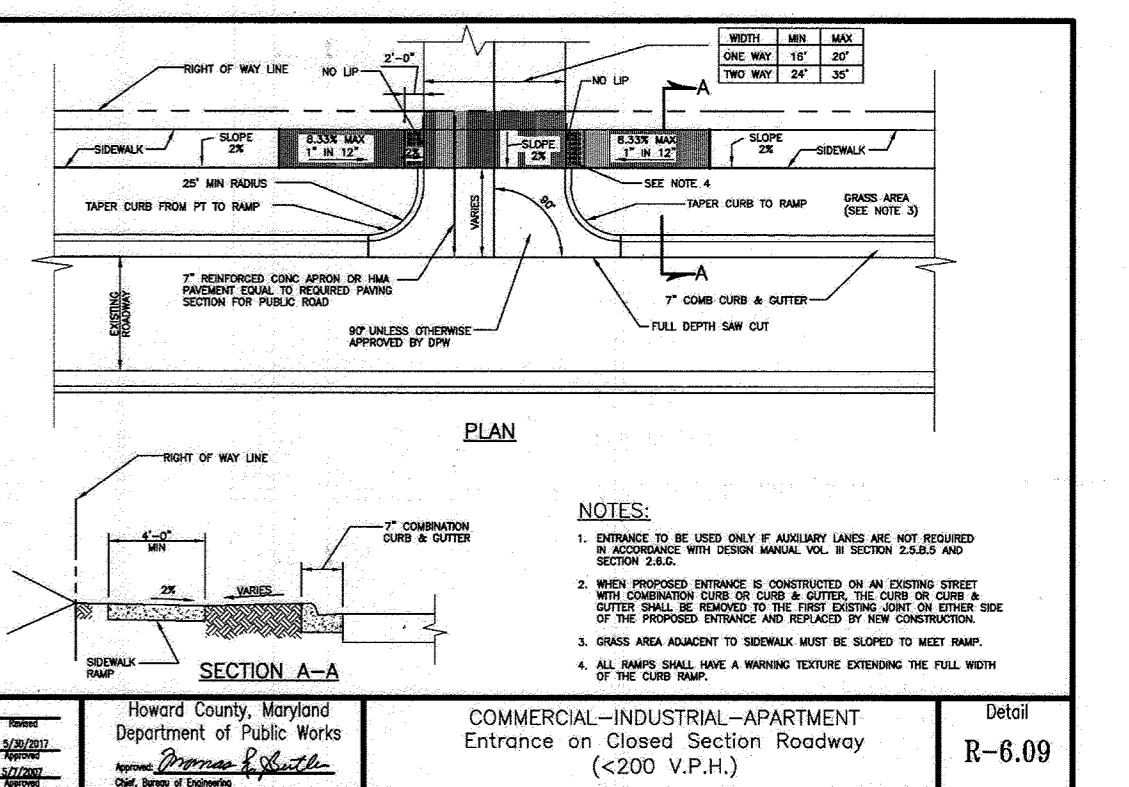
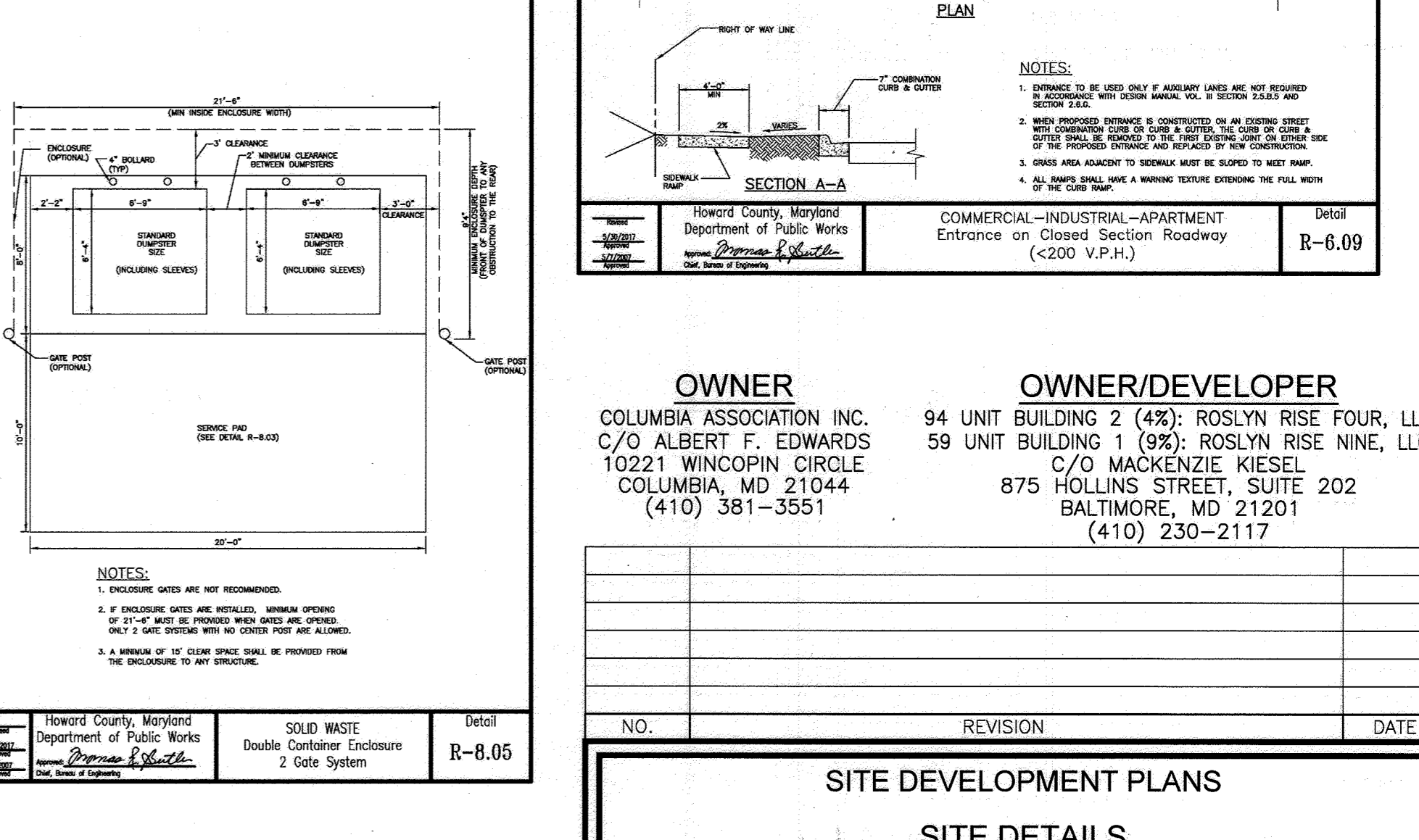
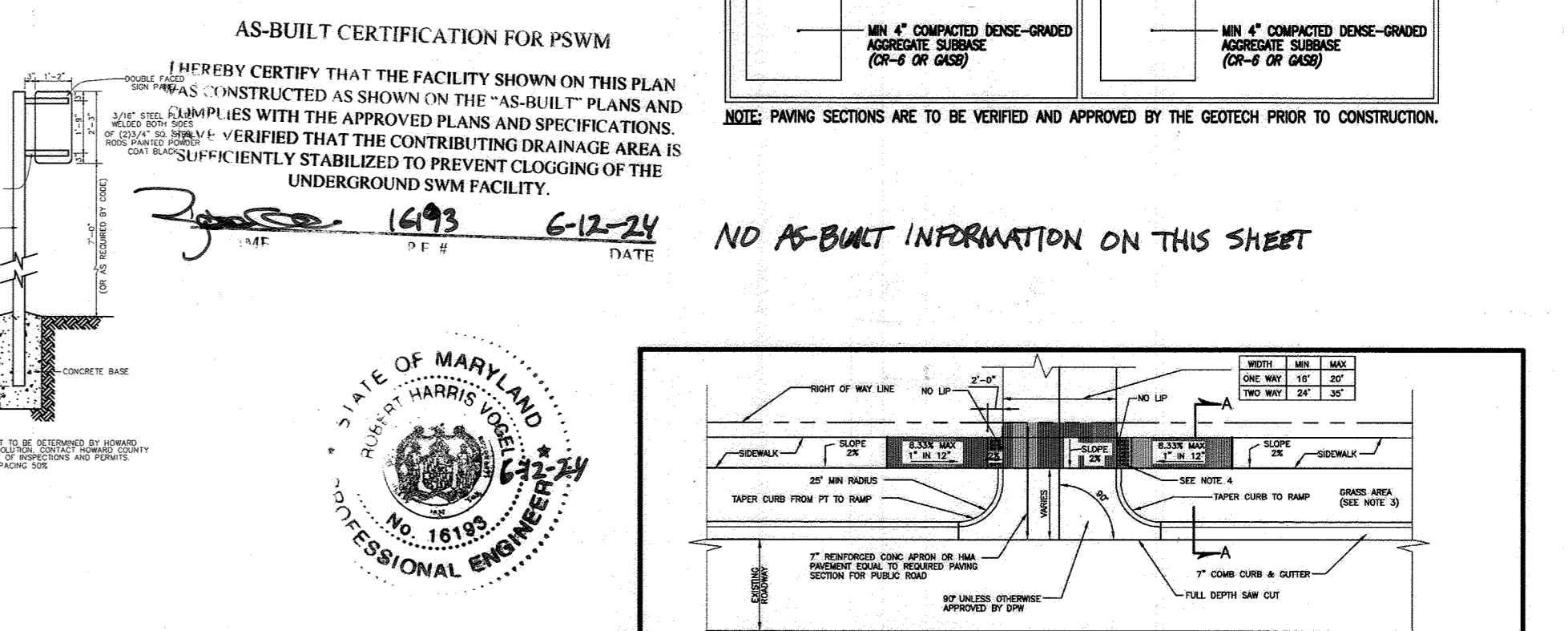
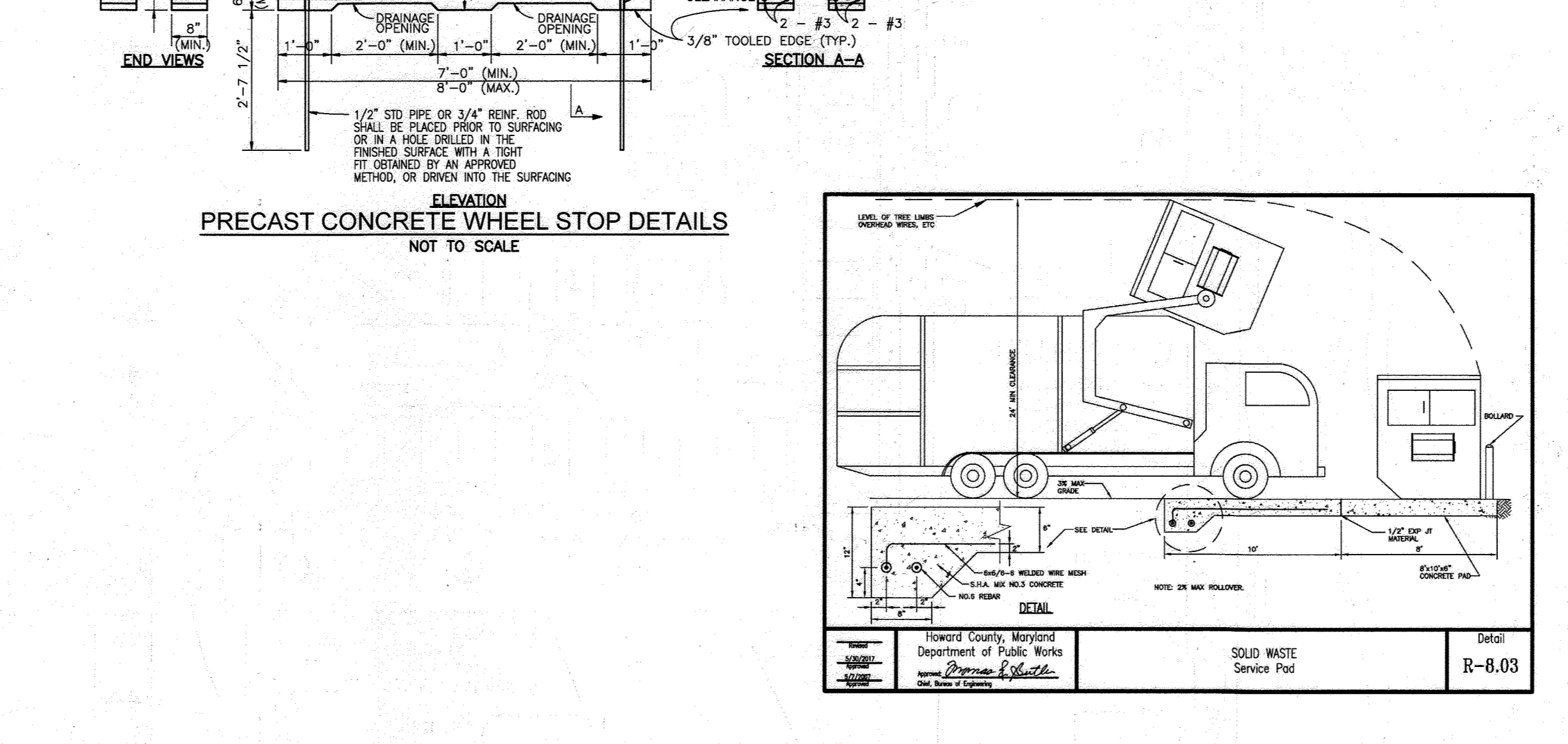
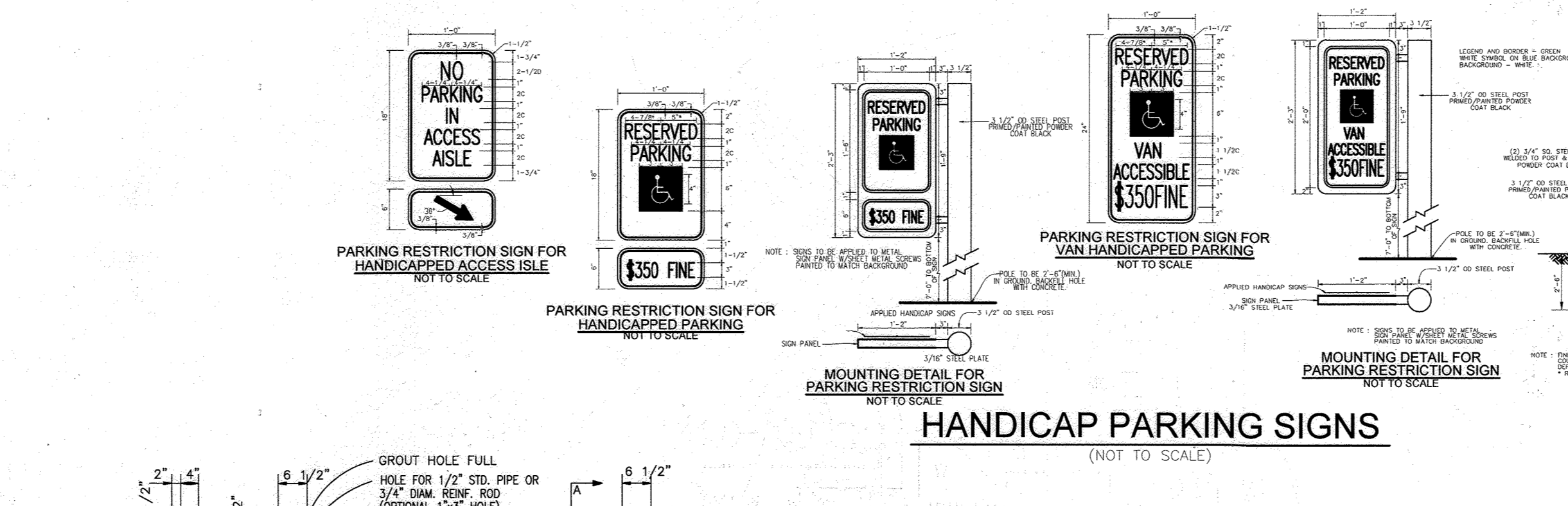
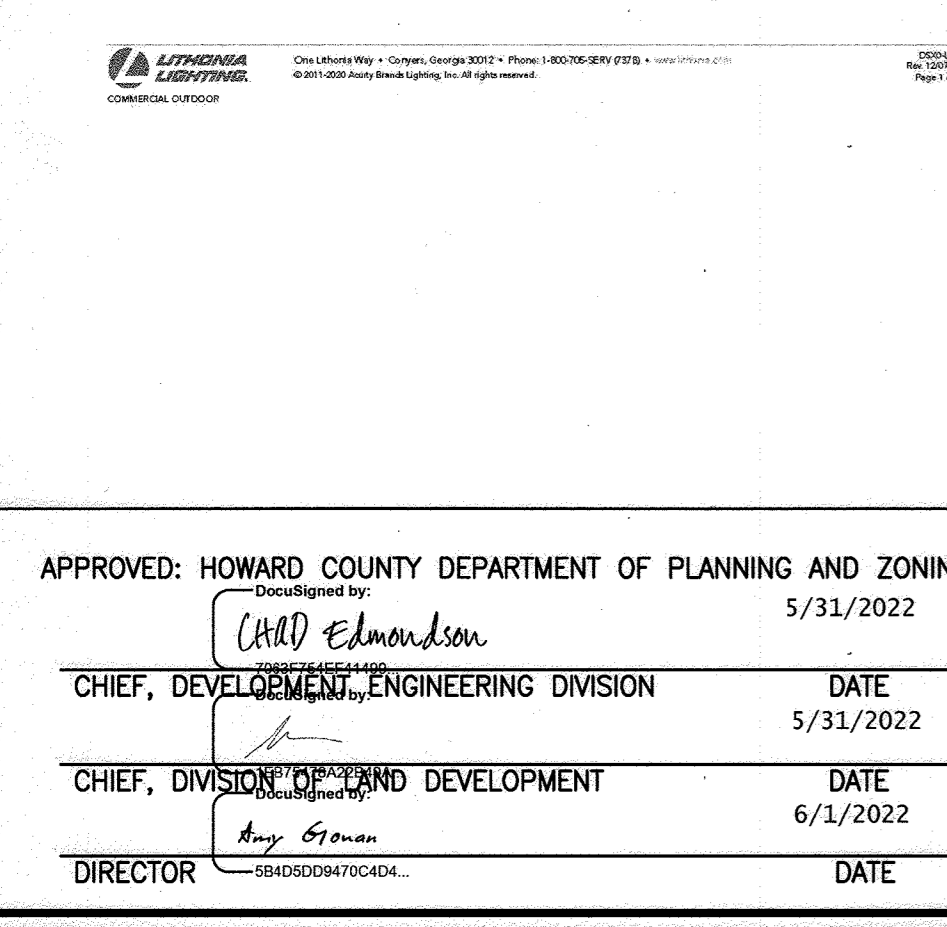
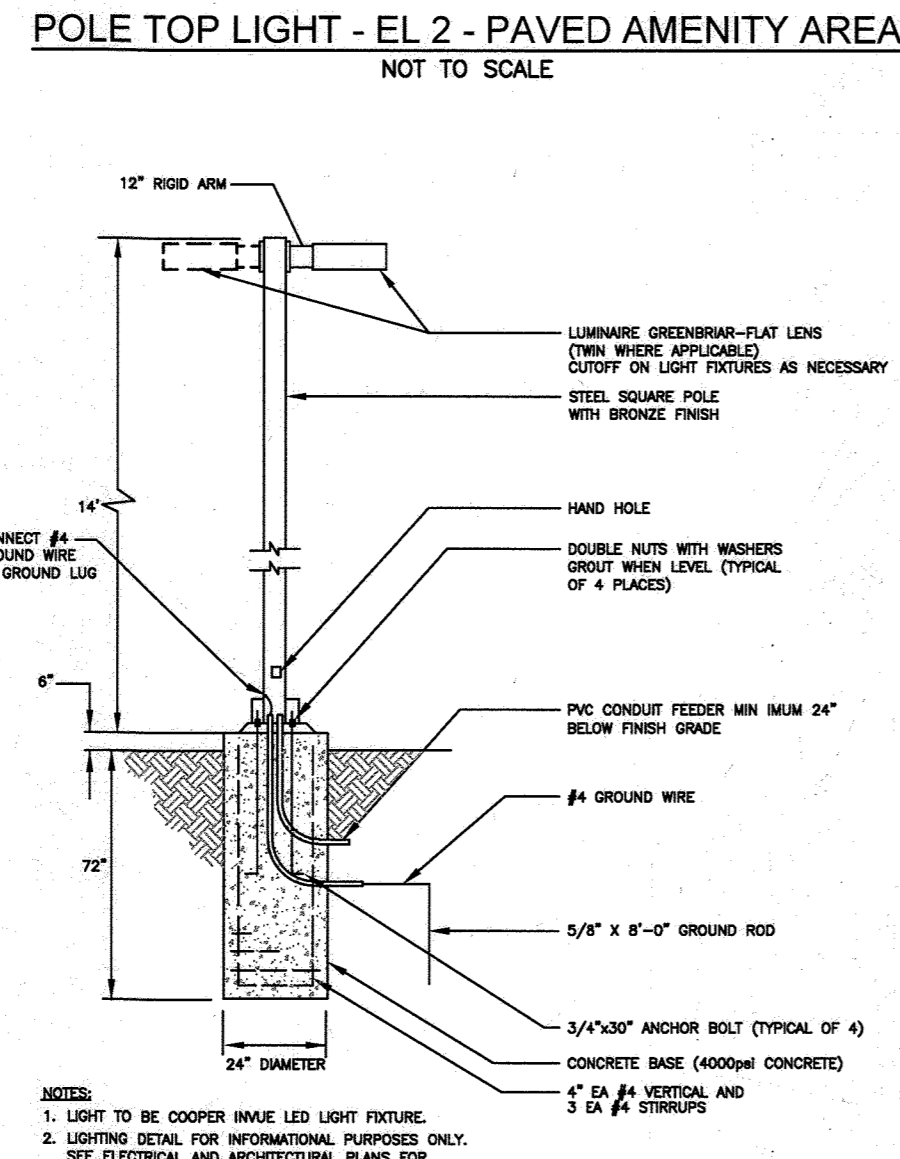
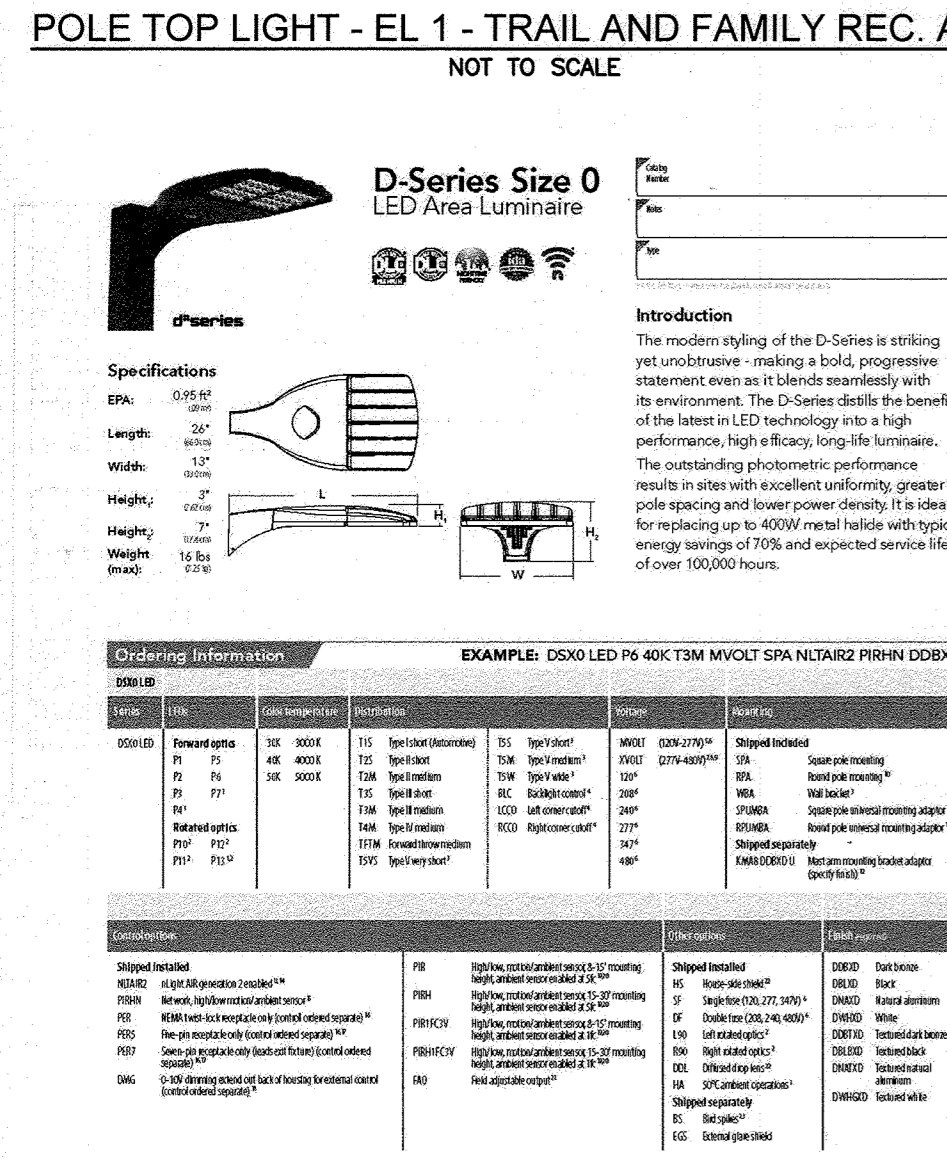
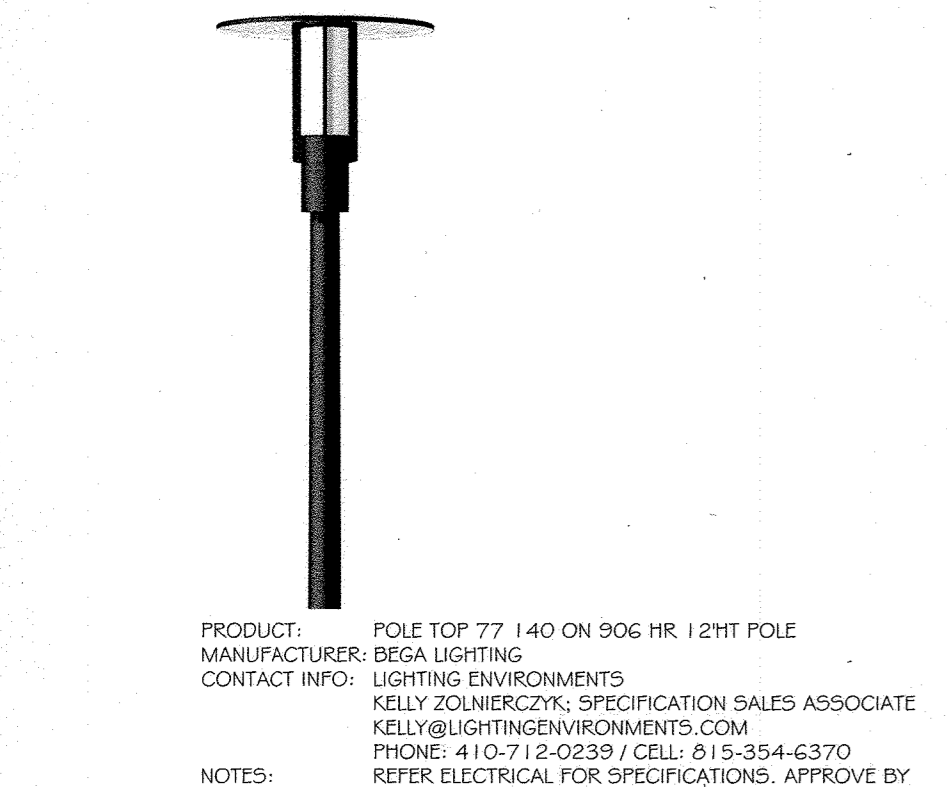
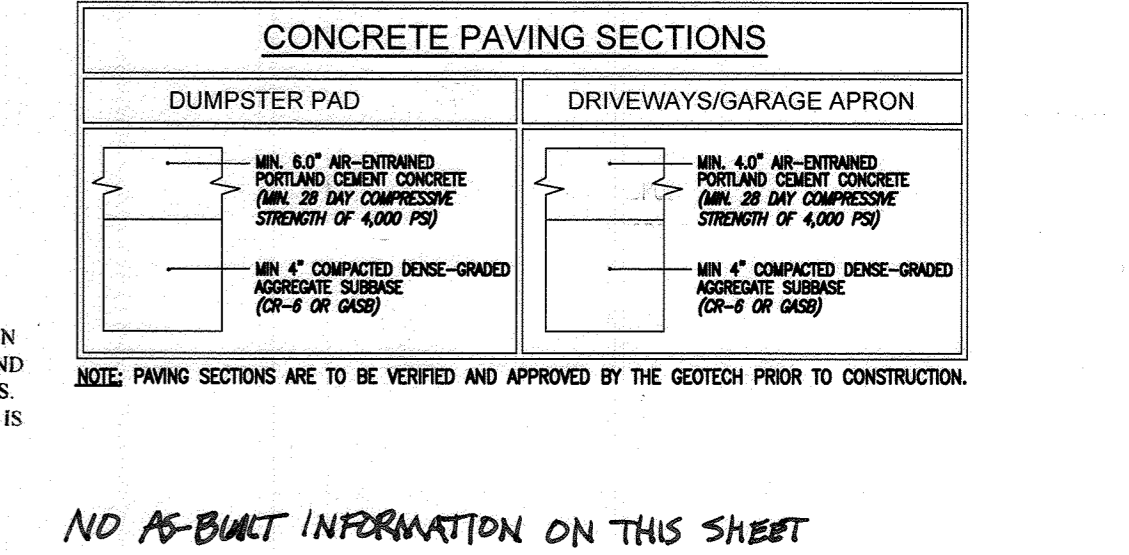
DESIGN BY: RHW/ACS
 DRAWN BY: ACS
 CHECKED BY: RHW
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 41539

4 SHEET OF 27



SECTION NUMBER	ROAD AND STREET CLASSIFICATION	COURTESY DRIVEWAYS (CWD)	PAVING SECTIONS WITH CURB				PAVING SECTIONS WITH CHANGING CURB
			1	2	3	4	
P-1	PARKING DRIVEWAY AND SIDEWALK/BIKEWAY WITH NO WALKWAY (12" WALKWAY WIDTH PER FOOT)	SPURSE DRIVEWAY WITH CURB	1.0	1.0	1.0	1.0	1.0
		SPURSE DRIVEWAY WITH CURB AND SIDEWALK	2.0	2.0	2.0	2.0	2.0
		SPURSE DRIVEWAY WITH CURB AND SIDEWALK (WITH CHANGING CURB)	3.0	3.0	3.0	3.0	3.0
P-2	PARKING DRIVEWAY WITH SIDEWALK/BIKEWAY WITH NO WALKWAY (12" WALKWAY WIDTH PER FOOT)	SPURSE DRIVEWAY WITH CURB	1.0	1.0	1.0	1.0	1.0
		SPURSE DRIVEWAY WITH CURB AND SIDEWALK	2.0	2.0	2.0	2.0	2.0
		SPURSE DRIVEWAY WITH CURB AND SIDEWALK (WITH CHANGING CURB)	3.0	3.0	3.0	3.0	3.0
P-3	PARKING DRIVEWAY WITH SIDEWALK/BIKEWAY WITH NO WALKWAY (12" WALKWAY WIDTH PER FOOT)	SPURSE DRIVEWAY WITH CURB	1.0	1.0	1.0	1.0	1.0
		SPURSE DRIVEWAY WITH CURB AND SIDEWALK	2.0	2.0	2.0	2.0	2.0
		SPURSE DRIVEWAY WITH CURB AND SIDEWALK (WITH CHANGING CURB)	3.0	3.0	3.0	3.0	3.0
P-4	PARKING DRIVEWAY WITH SIDEWALK/BIKEWAY WITH NO WALKWAY (12" WALKWAY WIDTH PER FOOT)	SPURSE DRIVEWAY WITH CURB	1.0	1.0	1.0	1.0	1.0
		SPURSE DRIVEWAY WITH CURB AND SIDEWALK	2.0	2.0	2.0	2.0	2.0
		SPURSE DRIVEWAY WITH CURB AND SIDEWALK (WITH CHANGING CURB)	3.0	3.0	3.0	3.0	3.0

NOTES:
 1. DRIVEWAYS ARE REFERRED TO AS THOSE WITH 12" OR MORE WALKWAY INCLUDING SIDEWALKS.
 2. DRIVEWAYS WITH 12" OR MORE WALKWAY INCLUDING SIDEWALKS SHALL BE CONSIDERED AS DRIVEWAYS WITH CHANGING CURB.
 3. DRIVEWAYS WITH 12" OR MORE WALKWAY INCLUDING SIDEWALKS SHALL BE CONSIDERED AS DRIVEWAYS WITH CHANGING CURB.
 4. DRIVEWAYS WITH 12" OR MORE WALKWAY INCLUDING SIDEWALKS SHALL BE CONSIDERED AS DRIVEWAYS WITH CHANGING CURB.
 5. DRIVEWAYS WITH 12" OR MORE WALKWAY INCLUDING SIDEWALKS SHALL BE CONSIDERED AS DRIVEWAYS WITH CHANGING CURB.
 6. DRIVEWAYS WITH 12" OR MORE WALKWAY INCLUDING SIDEWALKS SHALL BE CONSIDERED AS DRIVEWAYS WITH CHANGING CURB.



SITE DEVELOPMENT PLANS
SITE DETAILS
ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044

TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT

LOTS 7 & 8, PARCEL 272
 LOT 5, PARCEL 81
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 EXPIRATION DATE: 09-27-2022

DESIGN BY: RHW/ACS
 DRAWN BY: ACS
 CHECKED BY: RHW
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 41539

5 SHEET OF 27

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 5/31/2022
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

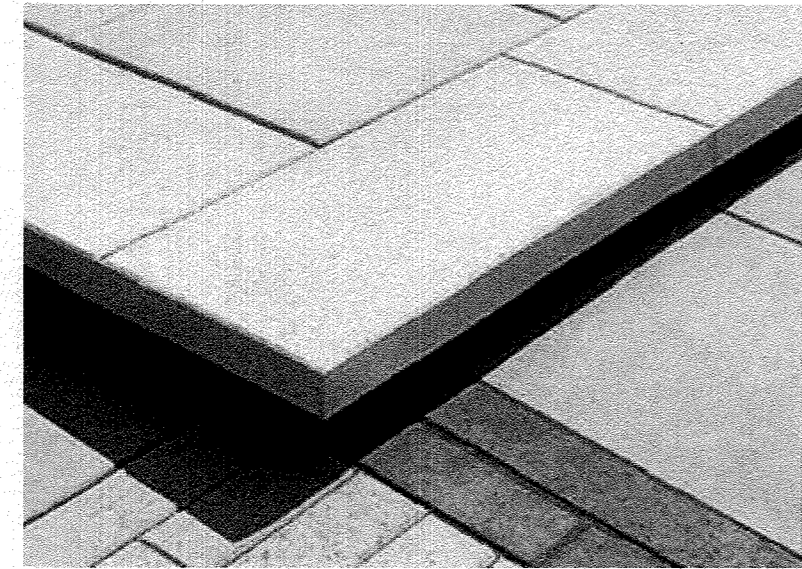
DATE: 5/31/2022
 DATE: 6/1/2022
 DATE:

NO.	REVISION	DATE



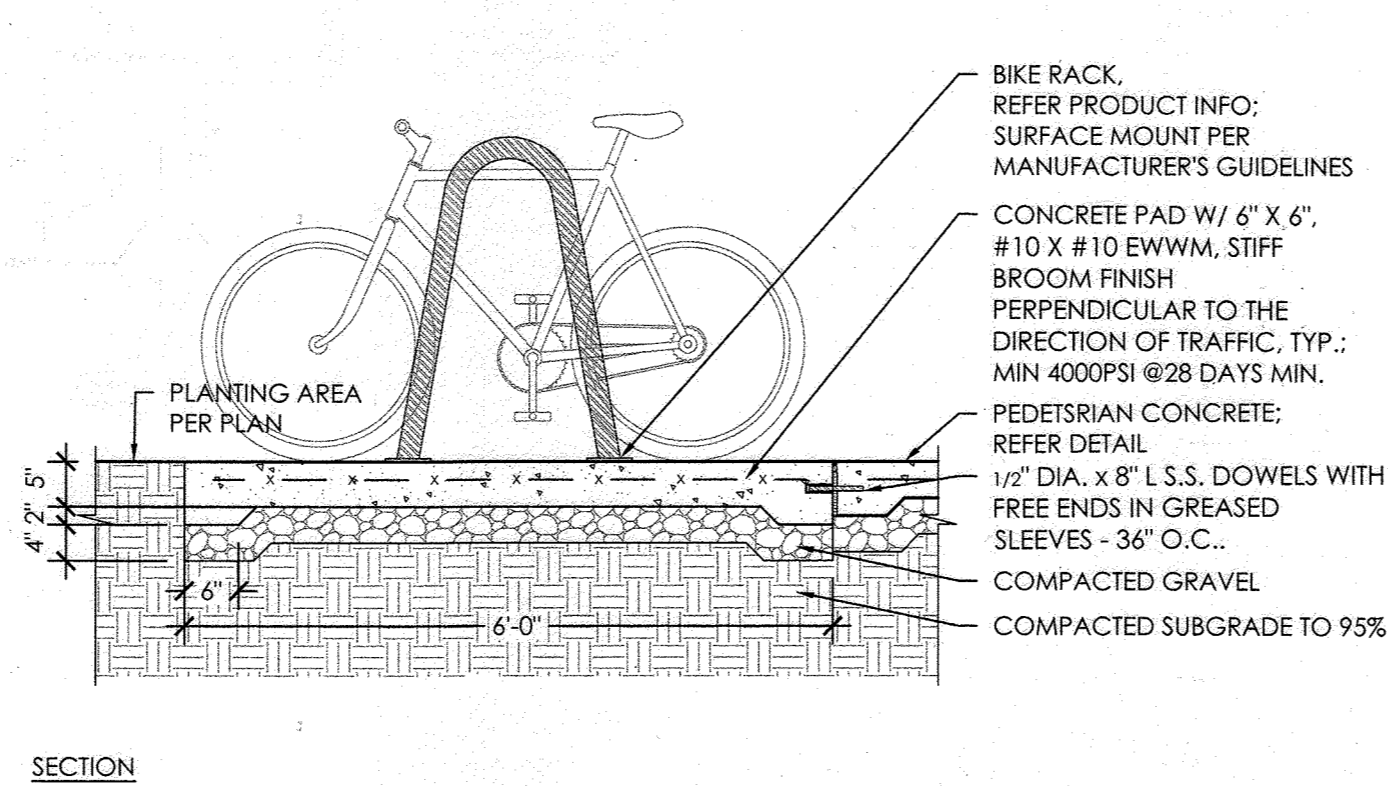
PRODUCT: G-FORCE BLOCK, CORNER PIECE, & GEOGRID REINFORCEMENT SYSTEM
 MANUFACTURER: TECO-BLOC
 CONTACT: <https://www.techo-bloc.com/>
 GEORGE OHLIN, SPECIFIER REPRESENTATIVE
 852 W PENNSYLVANIA AVE
 PEN ARGYL, PA., 18072
 EMAIL: GEORGE.OHLIN@TECHO-BLOC.COM
 PHONE: 571-317-5087
 DIMENSIONS: 8'1" x 18'1" x 12'D
 COLOR(S): TBD

SEGMENTAL WALL BLOCK
 NOT TO SCALE

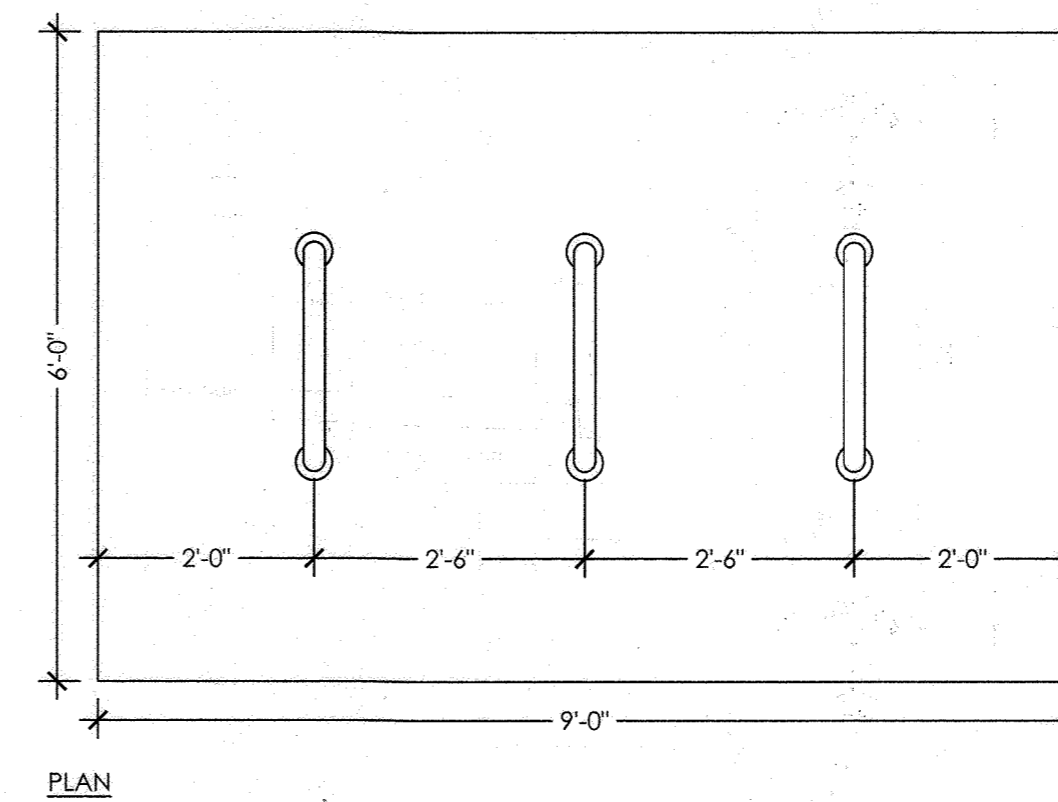


PRODUCT: RAFFINATO WALL CAP
 MANUFACTURER: TECO-BLOC
 CONTACT: <https://www.techo-bloc.com/>
 GEORGE OHLIN, SPECIFIER REPRESENTATIVE
 852 W PENNSYLVANIA AVE
 PEN ARGYL, PA., 18072
 EMAIL: GEORGE.OHLIN@TECHO-BLOC.COM
 PHONE: 571-317-5087
 DIMENSIONS: 60mm x 14" x 28"
 COLOR(S): TBD

SEGMENTAL WALL CAP
 NOT TO SCALE



SECTION



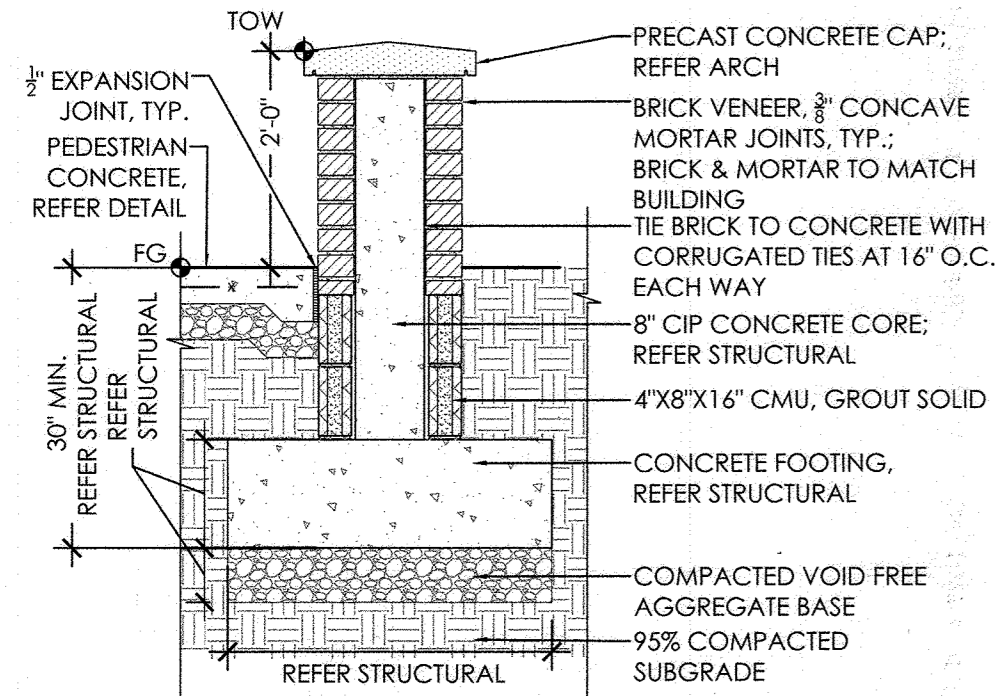
PLAN

BIKE RACK
 NOT TO SCALE

NOTES:
 1. DIMENSIONS SHOWN ARE MINIMUM CLEARANCES TO BE FREE OF OBSTRUCTION AND CIRCULATION PATHS.

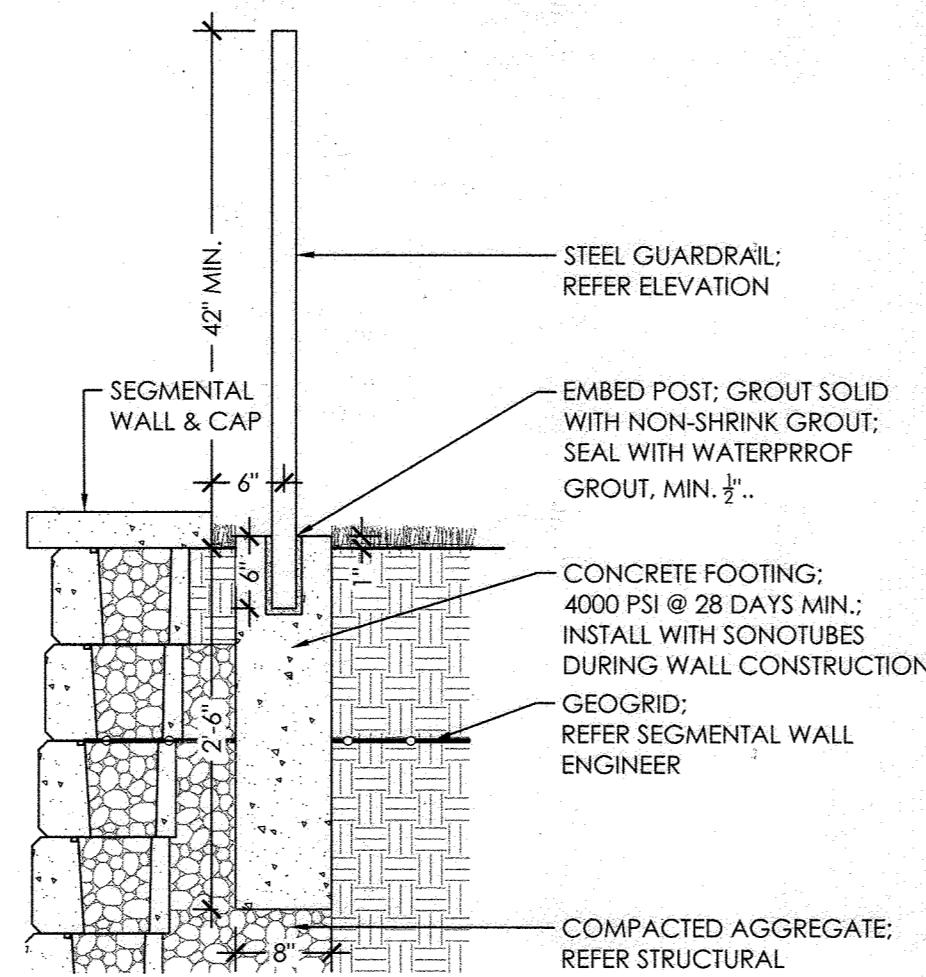
PRODUCT: BRWA-101 BIKE RACK, SURFACE MOUNT
 MANUFACTURER: VICTOR STANLEY
 P.O. DRAWER 330
 www.victorstanley.com
 GEORGE BLEVINS
 301.789.9227 • georgeb@victorstanley.com
 DIMENSIONS: 17'-3'-0\"/>

BIKE RACK - PRODUCT INFO



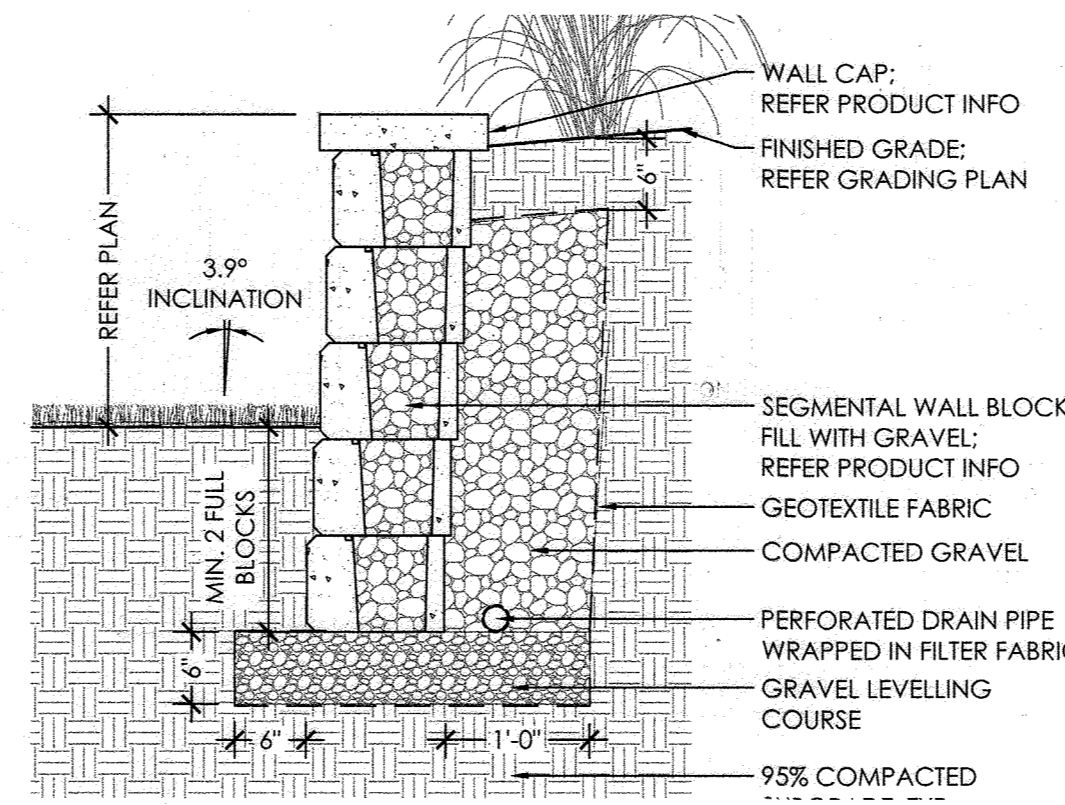
BRICK WALL
 NOT TO SCALE

NOTES:
 1. REFER STRUCTURAL FOR ALL STRUCTURAL MEMBERS AND DIMENSIONS.



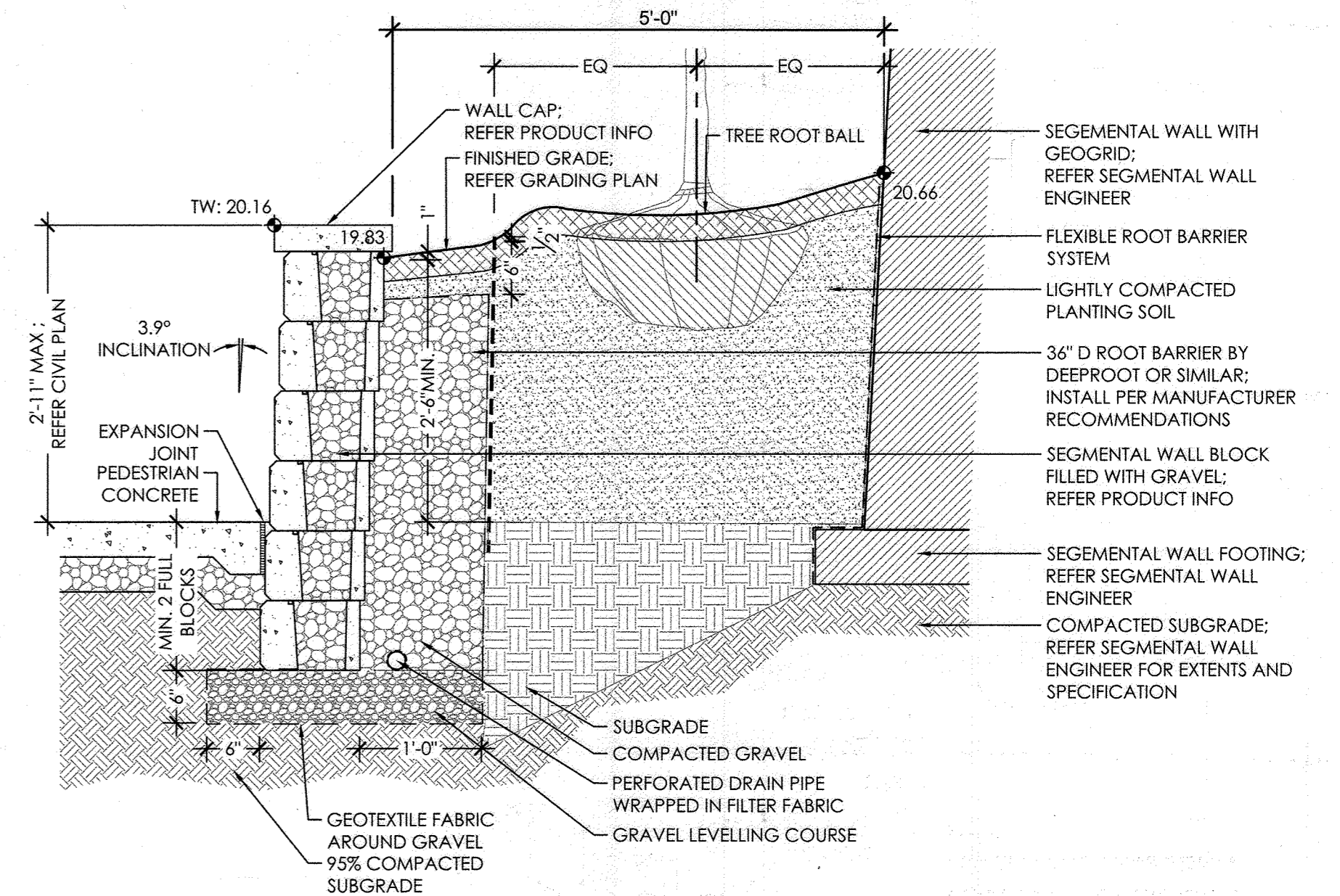
GUARDRAIL IN LANDSCAPE AT SEGMENTAL WALL
 NOT TO SCALE

NOTES:
 1. REFER SEGMENTAL WALL ENGINEER FOR WALL DETAILS.



SEGMENTAL WALL WITHOUT GEOGRID - LESS THAN 3FT 0IN HEIGHT
 NOT TO SCALE

NOTES:
 1. INSTALL PER MANUFACTURER

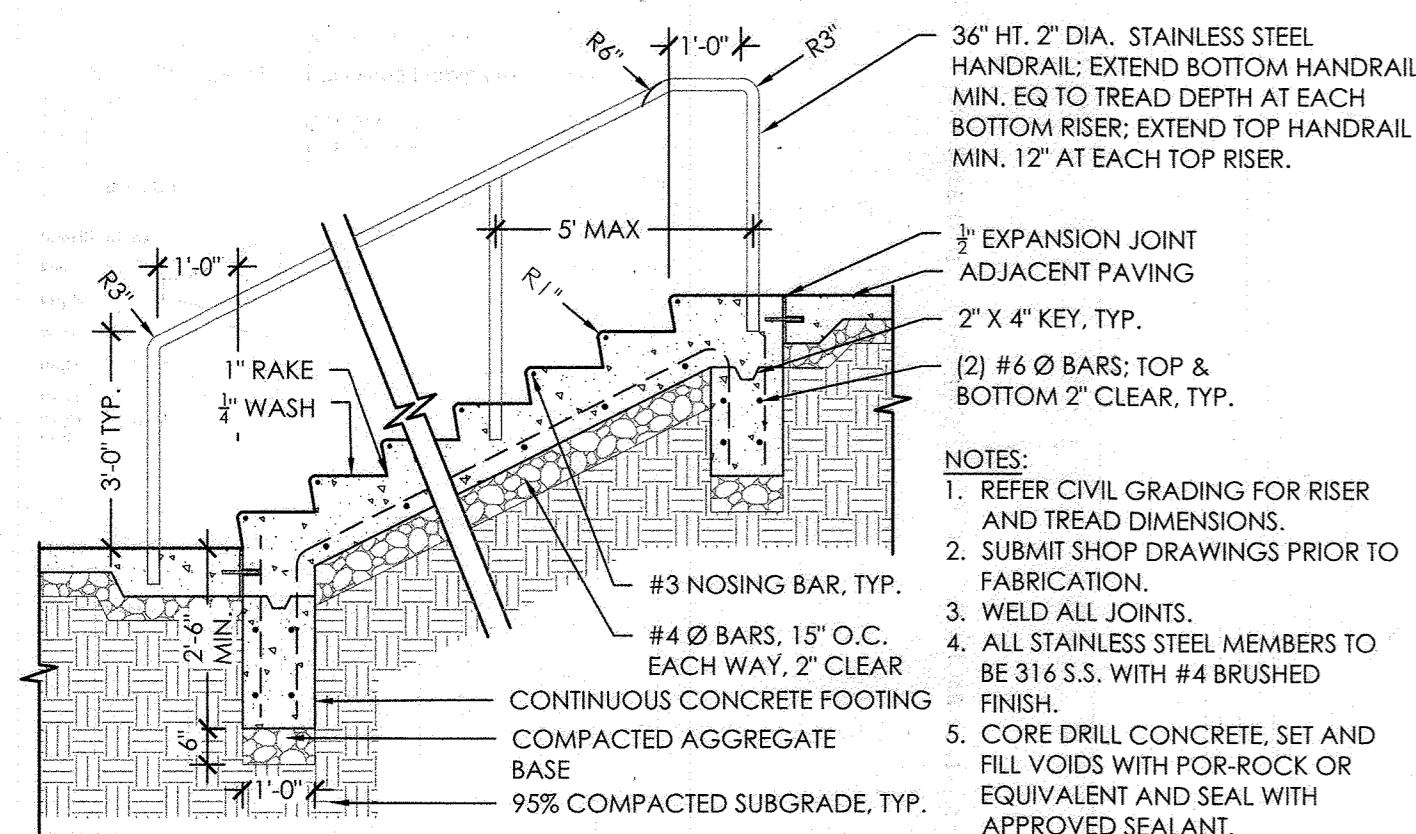


SEGMENTAL WALL WITHOUT GEOGRID - LESS THAN 3FT HT. AT TREE PLANTING
 NOT TO SCALE

NOTES:
 1. INSTALL PER MANUFACTURER RECOMMENDATIONS

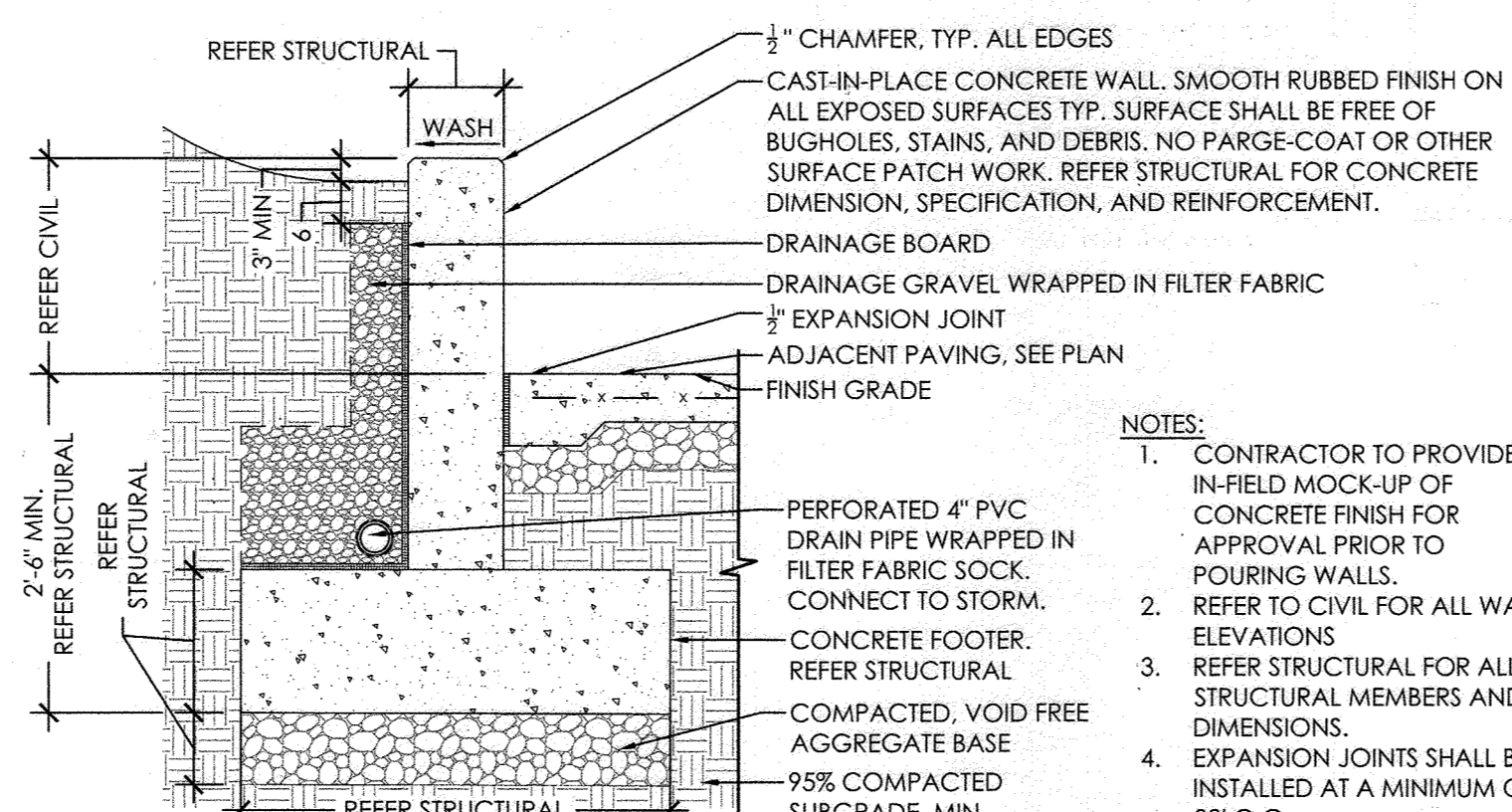
OWNER
 COLUMBIA ASSOCIATION INC.
 C/O ALBERT F. EDWARDS
 10221 WINGOPIN CIRCLE
 COLUMBIA, MD 21044
 (410) 381-3551

OWNER/DEVELOPER
 94 UNIT BUILDING 2 (4%); ROSLYN RISE FOUR, LLC
 59 UNIT BUILDING 1 (9%); ROSLYN RISE NINE, LLC
 C/O MACKENZIE KIESEL
 HOLLINS STREET, SUITE 202
 BALTIMORE, MD 21201
 (410) 230-2117



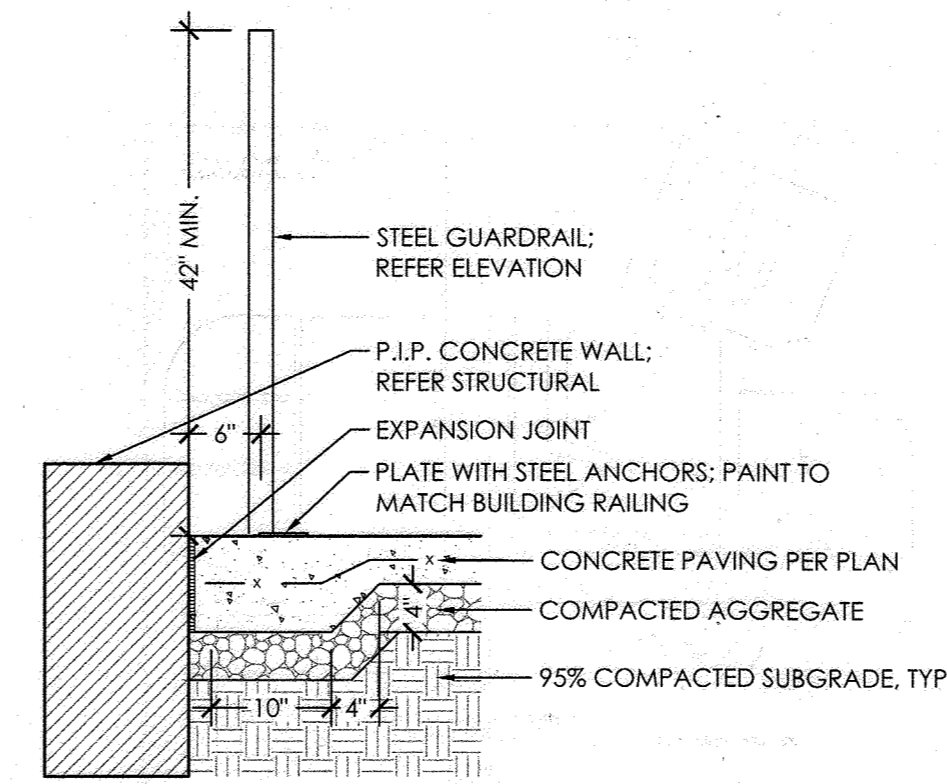
CONCRETE STAIRS WITH METAL RAILING
 NOT TO SCALE

NOTES:
 1. REFER CIVIL GRADING FOR RISER AND TREAD DIMENSIONS.
 2. SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION.
 3. WELD ALL JOINTS.
 4. ALL STAINLESS STEEL MEMBERS TO BE 316 S.S. WITH #4 BRUSHED FINISH.
 5. CORE DRILL CONCRETE, SET AND FILL VOIDS WITH POR-ROCK OR EQUIVALENT AND SEAL WITH APPROVED SEALANT.



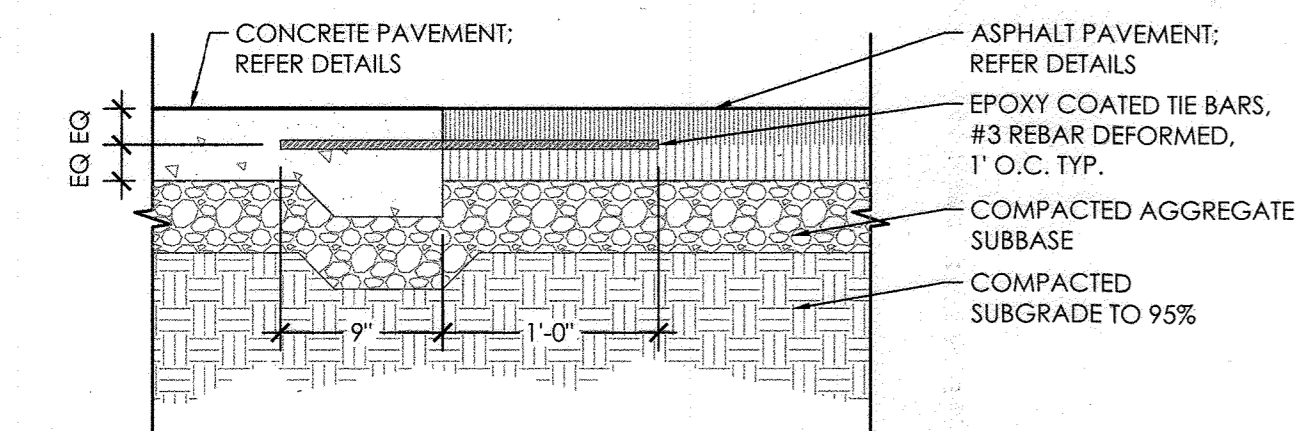
CONCRETE WALL
 NOT TO SCALE

NOTES:
 1. CONTRACTOR TO PROVIDE IN-FIELD MOCK-UP OF CONCRETE FINISH FOR APPROVAL PRIOR TO POURING WALLS.
 2. REFER TO CIVIL FOR ALL WALL ELEVATIONS
 3. REFER STRUCTURAL FOR ALL STRUCTURAL MEMBERS AND DIMENSIONS.
 4. EXPANSION JOINTS SHALL BE INSTALLED AT A MINIMUM OF 30' O.C.

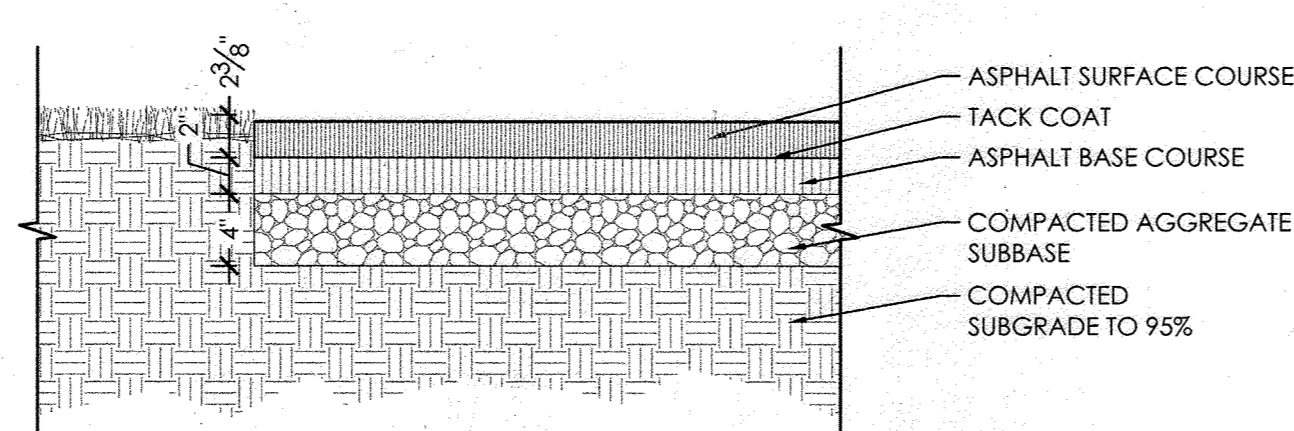


GUARDRAIL AT CONCRETE WALL
 NOT TO SCALE

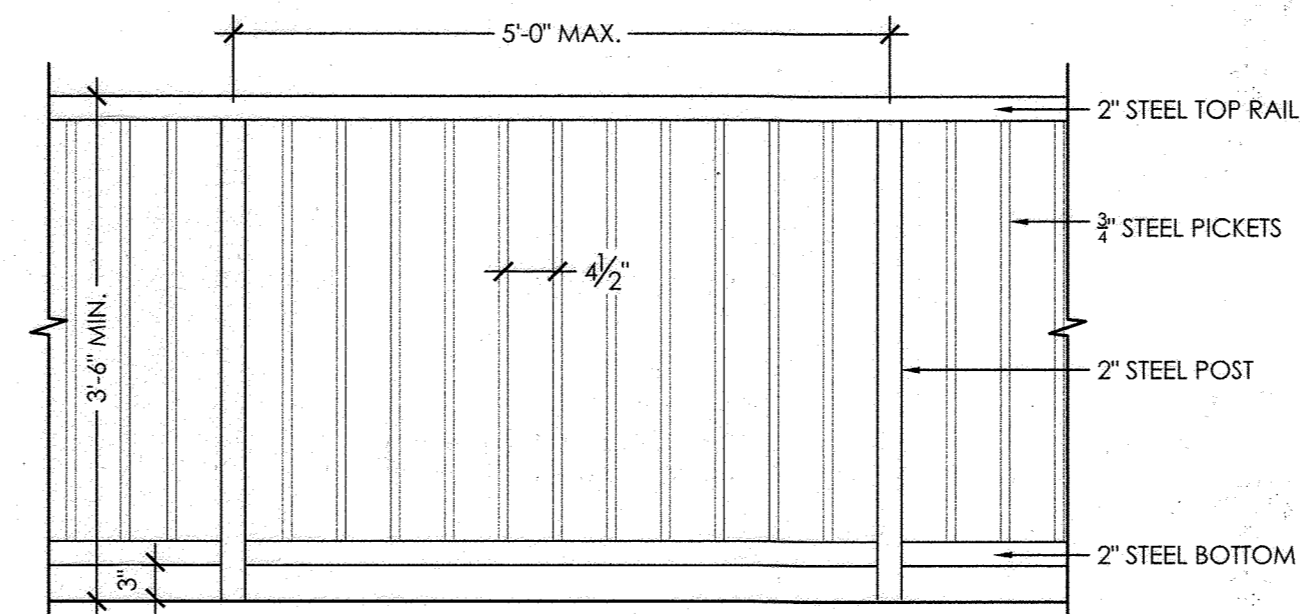
NOTES:
 1. REFER STRUCTURAL FOR WALL DETAILS



ASPHALT-CONCRETE CONNECTION
 NOT TO SCALE



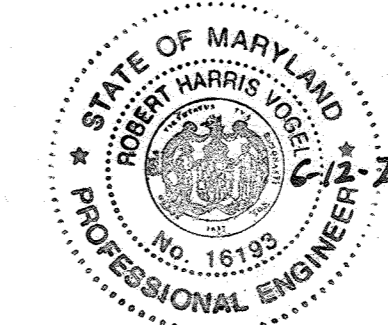
PEDESTRIAN ASPHALT TRAIL
 NOT TO SCALE



GUARDRAIL ELEVATION
 NOT TO SCALE

NOTES:
 1. ALL METAL MEMBERS TO BE PAINTED TO MATCH BUILDING RAILING.
 2. ALL GAPS TO BE LESS THAN 4\"/>

NO AS-BUILT INFORMATION ON THIS SHEET



AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

DATE: 6-12-24
 P.E. # 16193

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 5/31/2022
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

SITE DEVELOPMENT PLANS
 SITE DETAILS
 ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044

TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT

LOTS 7 & 8, PARCEL 272
 LOT 5, PARCEL 81
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
 TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: RHV/ACS
 DRAWN BY: ACS
 CHECKED BY: RHV
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 41539

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 EXPIRATION DATE: 08-27-2022

6 SHEET OF 27

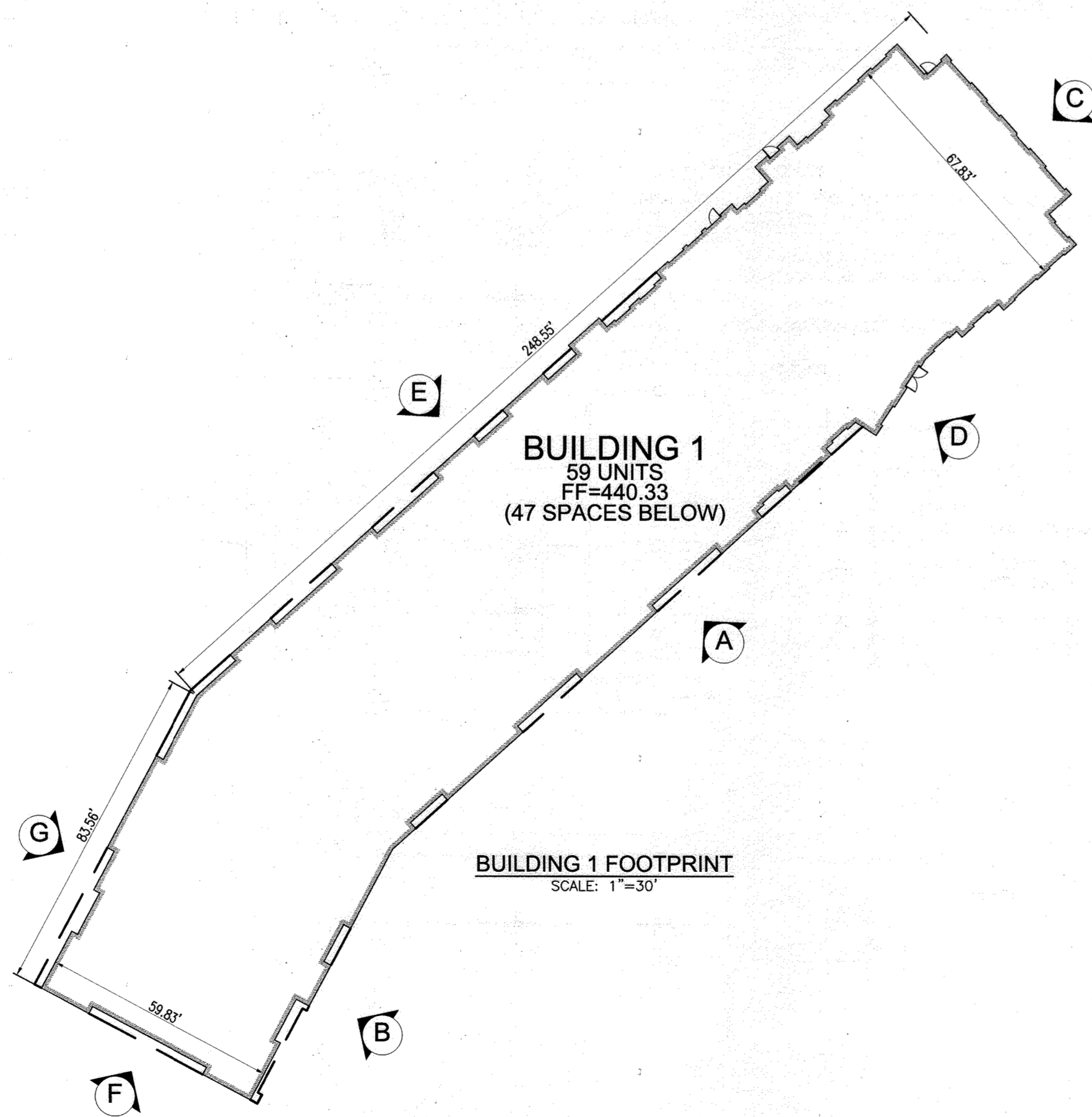
AS-BUILT APRIL 2024

SDP-21-030

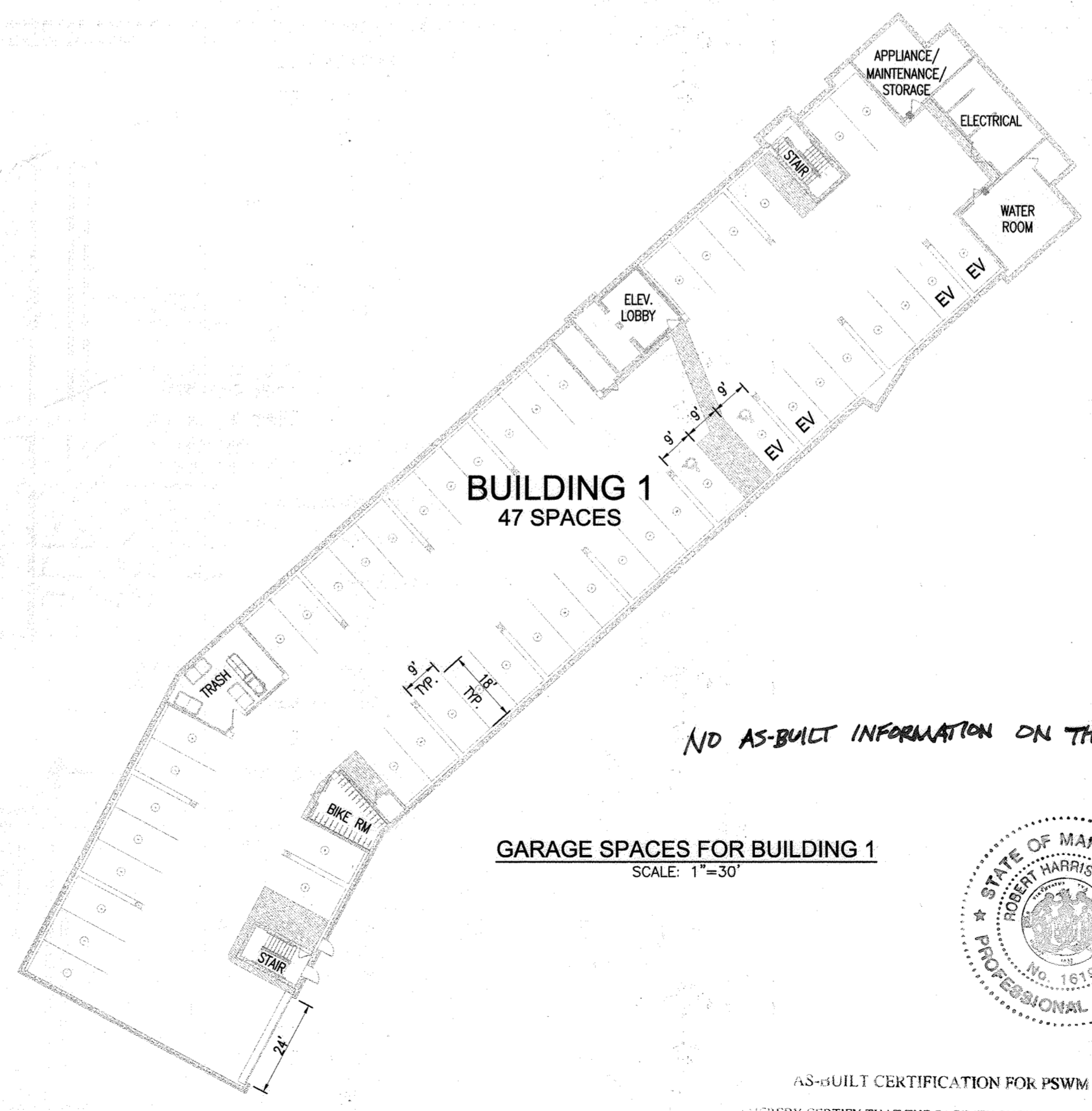


NOTE:
PARAPET HEIGHT IS 6'-0" FROM TRUSS BEARING LEVEL AT ALL LOCATIONS ASIDE FROM STAIR, TRASH, AND ELEVATOR TOWER OVERRUNS.

BUILDING 1 ELEVATIONS
SCALE: 1"=30'



BUILDING 1 FOOTPRINT
SCALE: 1"=30'



GARAGE SPACES FOR BUILDING 1
SCALE: 1"=30'

NO AS-BUILT INFORMATION ON THIS SHEET



AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
Robert H. Vogel
NAME: **16193** P.E.# DATE: **6-12-24**

OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINGOPIN CIRCLE
COLUMBIA, MD 21044
(410) 381-3551

OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 HOLLINS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

NO.	REVISION	DATE

SITE DEVELOPMENT PLANS
BUILDING 1 FOOTPRINT AND ELEVATIONS;
GARAGE PARKING PLAN
ROSLYN RISE
VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
COLUMBIA, MD 21044

TAX MAP 30 GRID 19
TAX MAP 36 GRID 1
5TH ELECTION DISTRICT

LOTS 7 & 8, PARCEL 272
LOT 5, PARCEL 81
HOWARD COUNTY, MARYLAND

ZONED: NT

VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16193 EXPIRATION DATE: 08-27-2022

DESIGN BY: RHV/ACS
DRAWN BY: ACS
CHECKED BY: RHV
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 41539

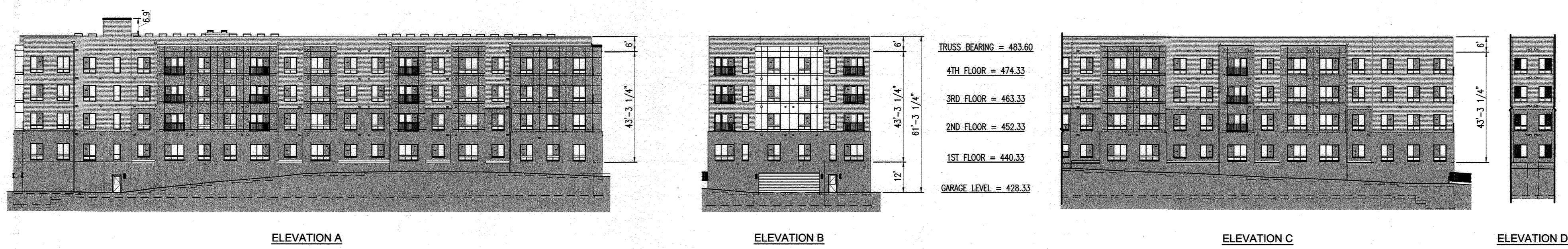
7 SHEET **27**
OF

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
5/31/2022

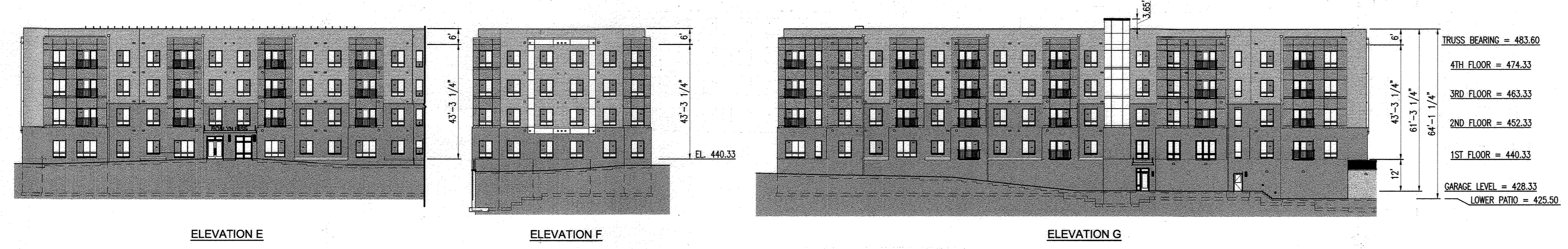
Chad Edmondson
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 5/31/2022

Angy Gomez
CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 6/1/2022

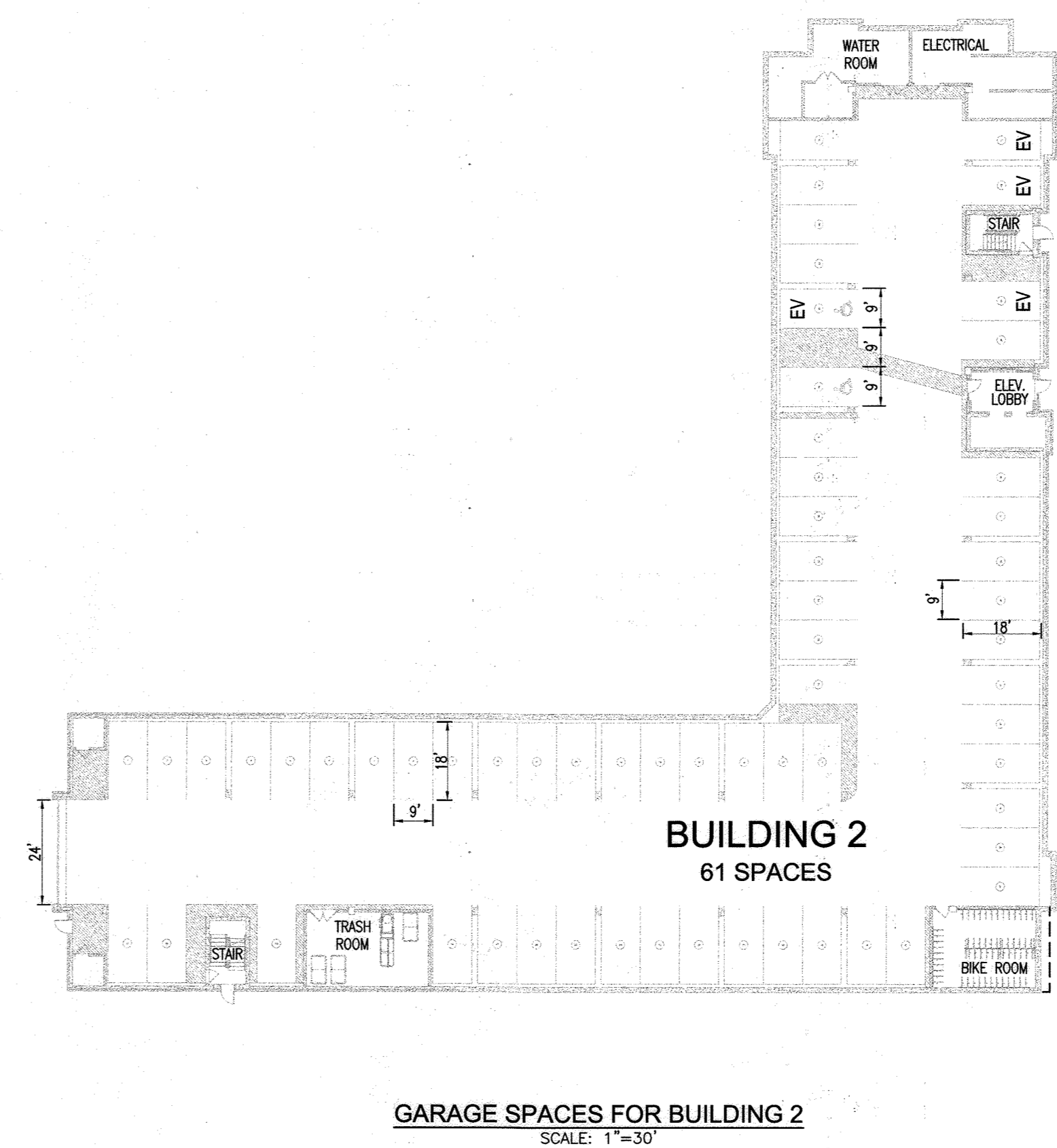
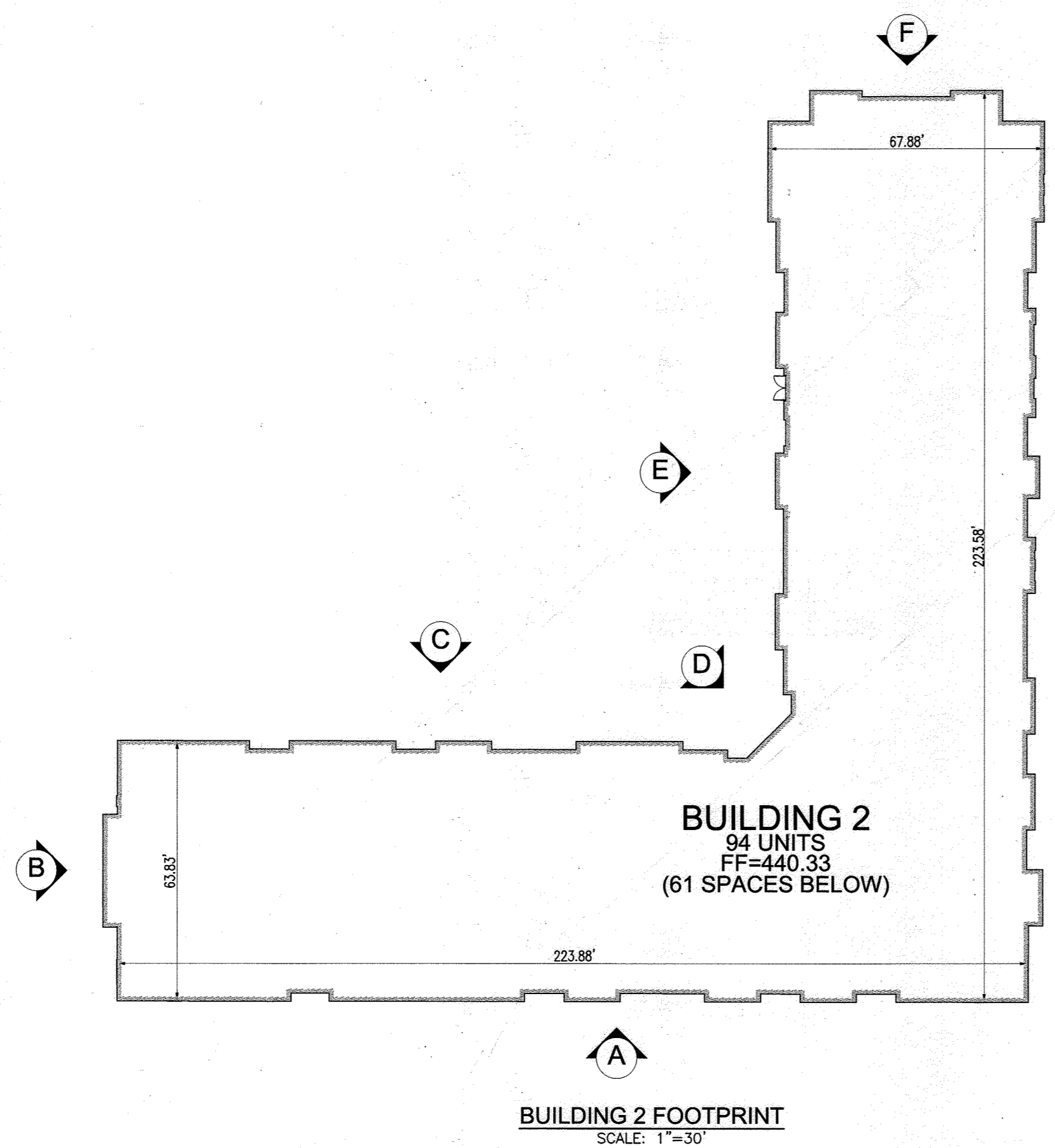
DIRECTOR DATE:



NOTE:
PARAPET HEIGHT IS 6'-0" FROM TRUSS BEARING LEVEL AT ALL LOCATIONS ASIDE FROM STAIR, TRASH, AND ELEVATOR TOWER OVERRUNS.



BUILDING 2 ELEVATIONS



OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINGOPIN CIRCLE
COLUMBIA, MD 21044
(410) 381-3551

OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 HOLLINS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

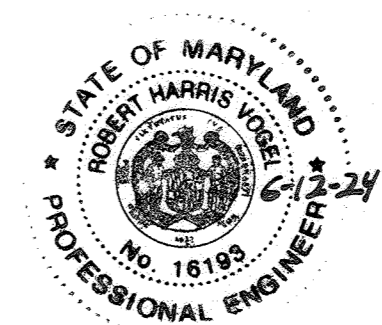
NO.	REVISION	DATE

SITE DEVELOPMENT PLANS
BUILDING 2 FOOTPRINT AND ELEVATIONS;
GARAGE PARKING PLAN
ROSLYN RISE
VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
COLUMBIA, MD 21044

TAX MAP 30 GRID 19
TAX MAP 36 GRID 1
5TH ELECTION DISTRICT

LOTS 7 & 8, PARCEL 272
LOT 5, PARCEL 81
HOWARD COUNTY, MARYLAND

ZONED: NT



VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A BONA FIDE LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2022

DESIGN BY: RHV/ACS
DRAWN BY: ACS
CHECKED BY: RHV
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 41539

8 SHEET OF 27

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5/31/2022

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

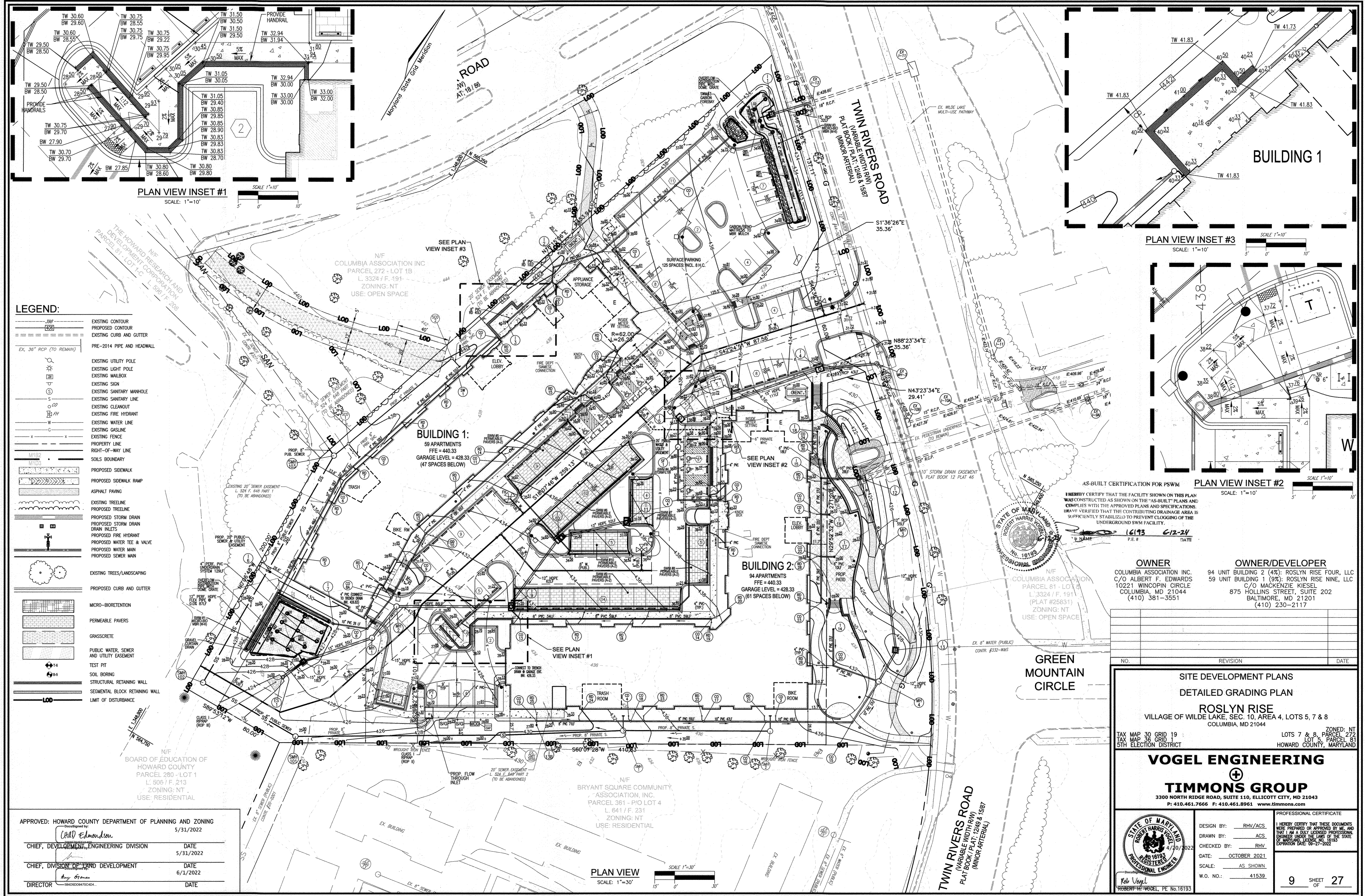
DIRECTOR

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

16193 6-12-24

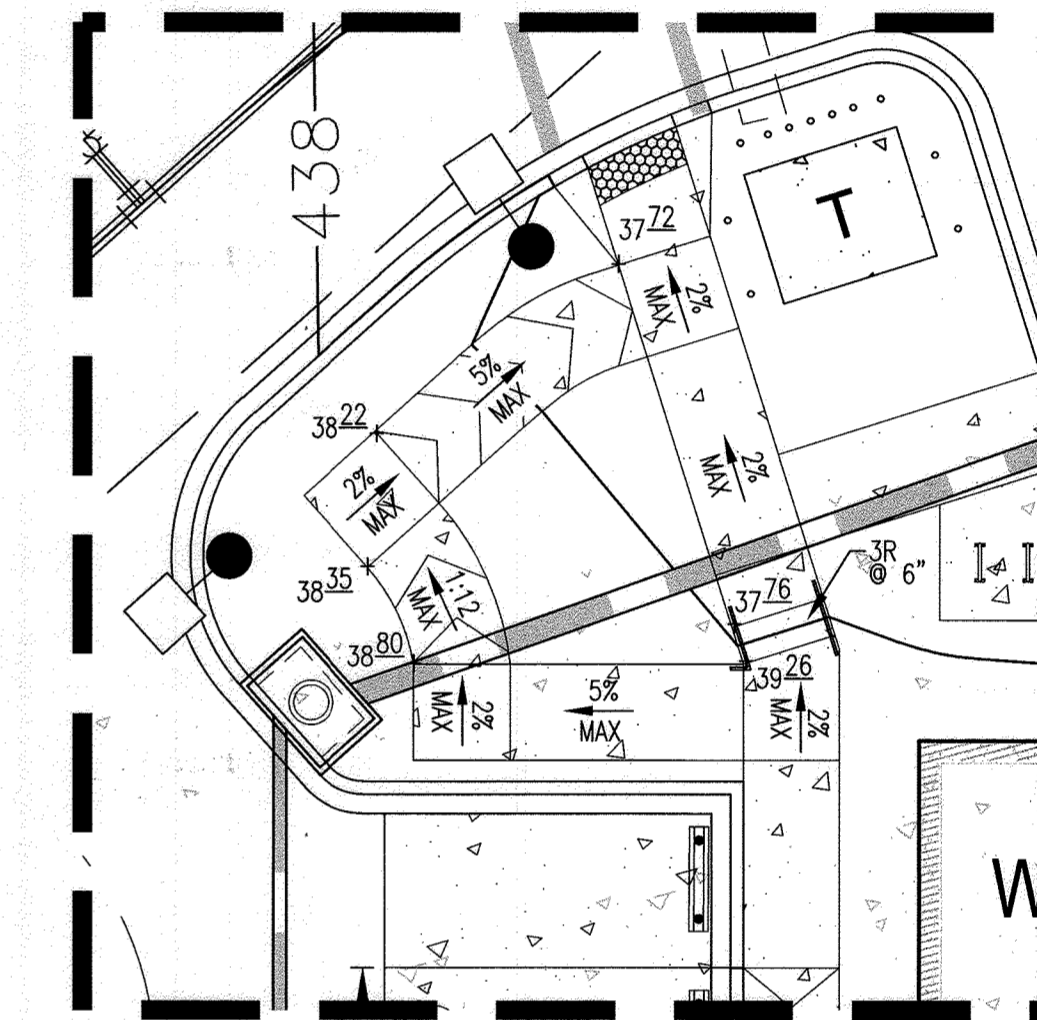
NO AS-BUILT INFORMATION ON THIS SHEET



- LEGEND:**
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - EXISTING CURB AND GUTTER
 - PRE-2014 PIPE AND HEADWALL
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING GASLINE
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - SOILS BOUNDARY
 - PROPOSED SIDEWALK
 - PROPOSED SIDEWALK RAMP
 - ASPHALT PAVING
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN INLET
 - PROPOSED FIRE HYDRANT
 - PROPOSED WATER TEE & VALVE
 - PROPOSED WATER MAIN
 - PROPOSED SEWER MAIN
 - EXISTING TREES/LANDSCAPING
 - PROPOSED CURB AND GUTTER
 - MICRO-BIORETENTATION
 - PERMEABLE PAVERS
 - GRASSCRETE
 - PUBLIC WATER, SEWER AND UTILITY EASEMENT
 - TEST PIT
 - SOIL BORING
 - STRUCTURAL RETAINING WALL
 - SEGMENTAL BLOCK RETAINING WALL
 - LIMIT OF DISTURBANCE

PLAN VIEW INSET #1
SCALE: 1"=10'

PLAN VIEW INSET #3
SCALE: 1"=10'



PLAN VIEW INSET #2
SCALE: 1"=10'

AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

16193 C-12-24
P.E. # DATE



OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINCOPIN CIRCLE
COLUMBIA, MD 21044
(410) 381-3554

OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 WASHINGTON STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

NO.	REVISION	DATE

SITE DEVELOPMENT PLANS
DETAILED GRADING PLAN
ROSLYN RISE
VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
COLUMBIA, MD 21044

TAX MAP 30 GRID 19
TAX MAP 36 GRID 1
5TH ELECTION DISTRICT

LOTS 7 & 8, ZONED: NT
LOT 5, PARCEL 81
HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. MY LICENSE NO. IS 16193 AND MY EXPIRATION DATE IS 09-27-2022.

DESIGN BY: RHW/ACS
DRAWN BY: ACS
CHECKED BY: RHW
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 41539

9 SHEET OF 27

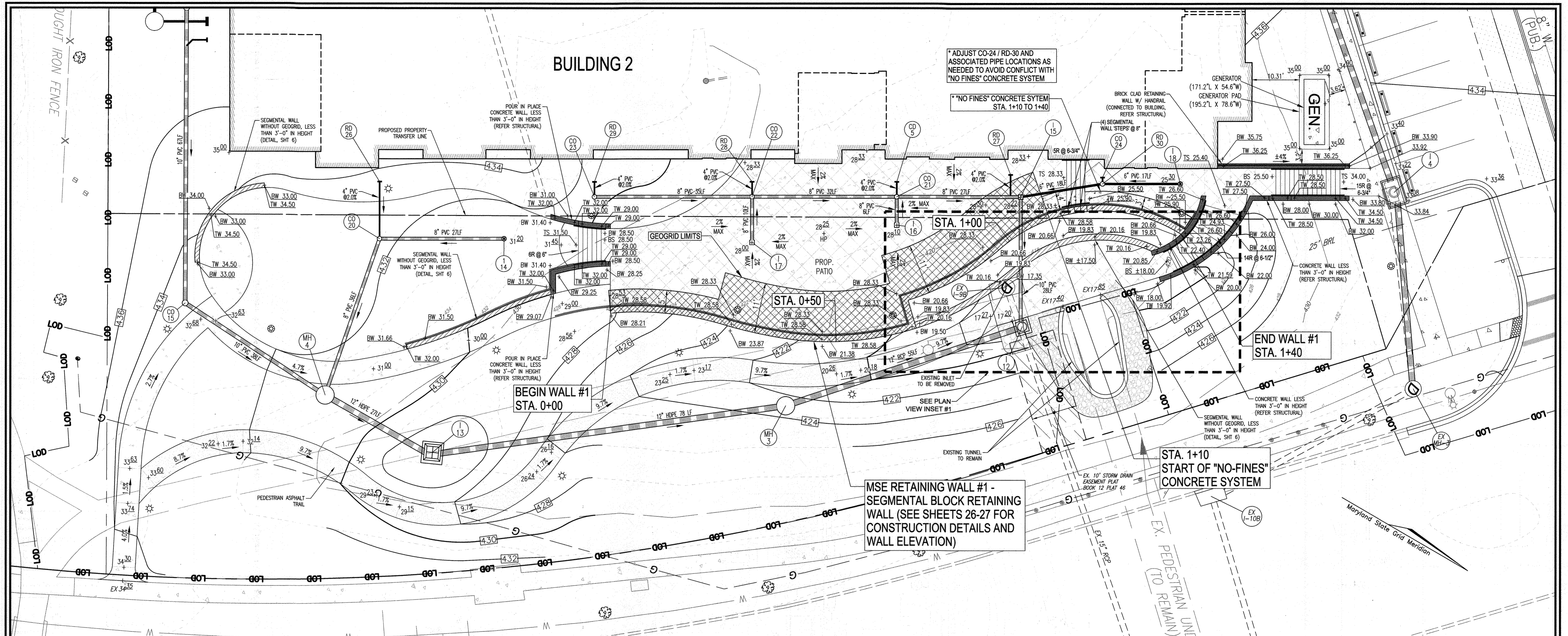
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
5/31/2022

Chief, Development Engineering Division
Date: 5/31/2022

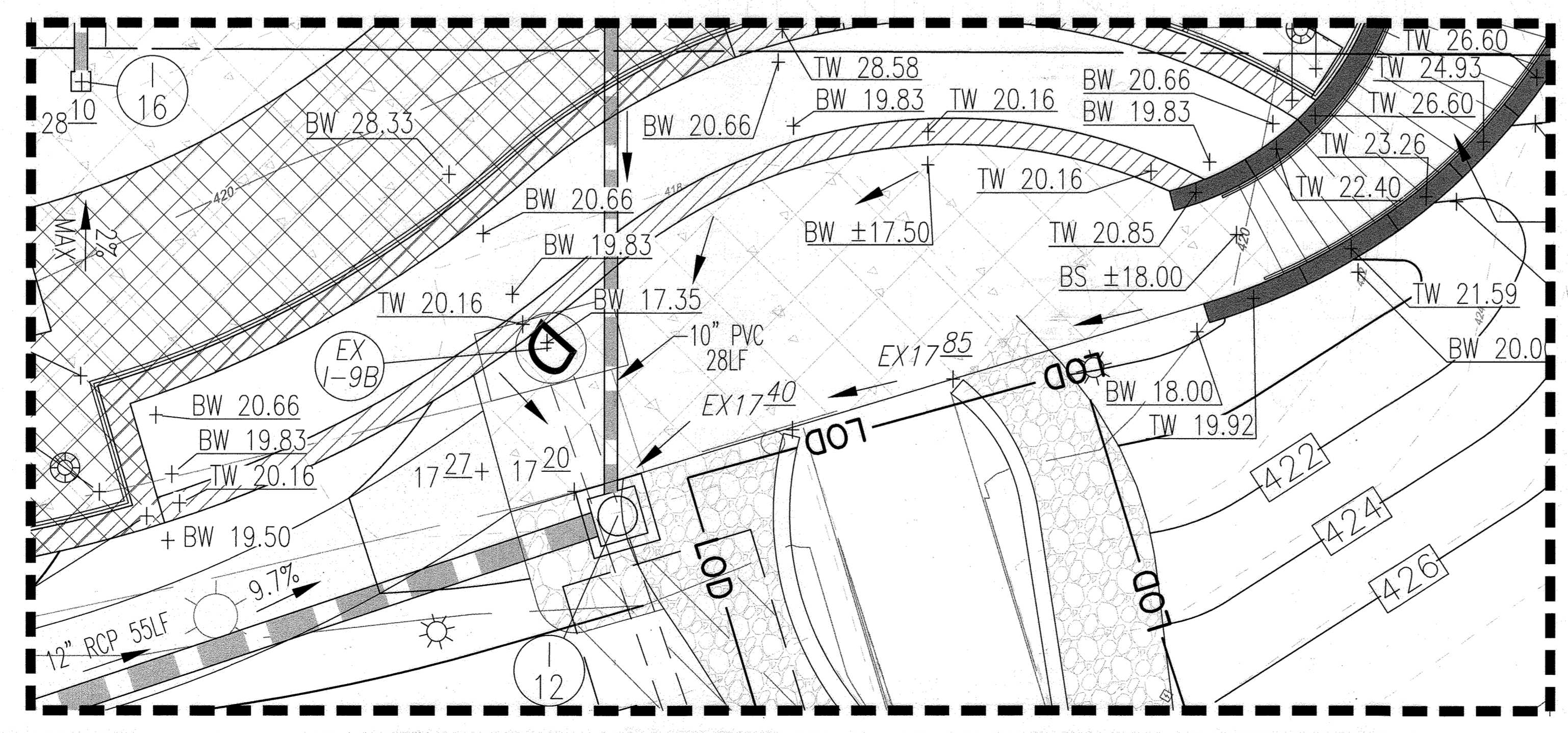
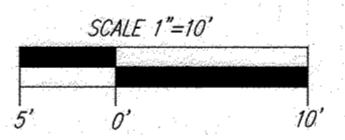
Chief, Division of Land Development
Date: 6/1/2022

Director
Date:

PLAN VIEW
SCALE: 1"=30'



DETAILED GRADING (PATIO AREA) & WALL LOCATION PLAN
SCALE: 1"=10'

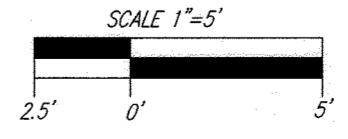


NO AS-BUILT INFORMATION ON THIS SHEET



AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT FLOODING OF THE UNDERGROUND SWM FACILITY.
R.H.V. 16193 6-12-24
P.E. # DATE

PLAN VIEW INSET #1
SCALE: 1"=5'



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
5/31/2022
Chief, Development Engineering Division
Chief, Division of Land Development
Director

OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINGOPIN CIRCLE
COLUMBIA, MD 21044
(410) 381-3551

OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 HOLLINS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

NO.	REVISION	DATE

SITE DEVELOPMENT PLANS
DETAILED GRADING (PATIO AREA) & WALL LOCATION PLAN
ROSLYN RISE
VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
COLUMBIA, MD 21044

VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
DESIGN BY: RHV/ACS
DRAWN BY: ACS
CHECKED BY: RHV
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 41539

10 SHEET OF 27

- SEQUENCE OF CONSTRUCTION**
- OBTAIN GRADING PERMIT (1 DAY)
 - DEVELOPER/CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR PRIOR TO ANY LAND DISTURBANCE. (1 DAY)
 - NOTIFY HOWARD COUNTY BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION (410-313-1880) AT LEAST 24 HRS BEFORE STARTING WORK. (1 DAY)
 - STAKEOUT LIMITS OF DISTURBANCE. (2 DAYS)
 - INSTALL STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM. (2 DAY)
 - CLEAR AND GRUB FOR THE INSTALLATION OF ALL PERMETER CONTROLS. (2 DAYS)
 - INSTALL PERMETER CONTROLS INCLUDING SILT FENCE, SUPER SILT FENCE AND INLET PROTECTION ON EXISTING INLETS. (3 DAYS)
 - WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB REMAINDER OF SITE TO LOD. (1 WEEK)
 - BEGIN SITE GRADING AND UTILITY CONSTRUCTION. (8 WEEKS)
 - BEGUN CONSTRUCTION ON BOTH BUILDINGS 1 & 2. (1.25 YEARS)
 - CONTINUE GRADING AND INSTALLATION OF STORM DRAIN. (6 WEEKS)
 - AFTER ROAD IS BROUGHT TO PROPOSED GRADE, AND WITH INSPECTOR'S APPROVAL, BEGIN INSTALLATION OF ROAD BASE PAVING AND CURB. COMPLETE STORM DRAIN INSTALLATION. FINE GRADE AS REQUIRED TO DIRECT RUNOFF TO INLETS AND PROVIDE INLET PROTECTION AS SHOWN. INSTALL TEMPORARY ASPHALT BERM AND EARTH DIKE TO LIMIT DRAINAGE AREA TO FLOW THROUGH INLET CURB INLET PROTECTION TO LESS THAN 1/4 ACRE. (4 WEEKS)
 - MICRO-BIORETENTION CONSTRUCTION:
CONSTRUCT STORM DRAIN SYSTEM INCLUDING MICRO-BIORETENTION UNDERDRAINS AND #57 STONE. COVER STONE WITH POLY SHEET PLASTIC TO PREVENT CONTAMINATION, AND TEMPORARILY BACKFILL.
 - PERMEABLE PAVEMENT CONSTRUCTION:
CONSTRUCT STORM DRAIN SYSTEM INCLUDING PERMEABLE PAVEMENT UNDERDRAINS/ OVERDRAINS, AND STONE COVER STONE WITH POLY SHEET PLASTIC TO PREVENT CONTAMINATION AND SEDIMENT LAZEN RUNOFF UNTIL ITS DRAINAGE AREA IS STABILIZED.
 - COMPLETE ALL BASE COURSE PAVING AND CURB AND GUTTER CONSTRUCTION. (1 WEEK)
 - UPON COMPLETION OF BUILDINGS, INSTALL PAVING SURFACE COURSE. (1 WEEK)
 - INSTALL SIDEWALKS. (2 WEEKS)

- SEQUENCE OF CONSTRUCTION (CONT'D.)**
- WITH INSPECTOR'S APPROVAL, FINE GRADE AND STABILIZE ALL AREAS OF PARCEL INCLUDING ANY EXPOSED EARTH AREAS OUTSIDE THE LOD. REMOVE ALL TRASH JUNK AND DEBRIS FROM THE LIMIT OF DISTURBANCE. (2 WEEKS)
 - COMPLETE INSTALLATION OF MICRO-BIORETENTION FACILITY. (2 WEEKS)
A. MICRO-BIORETENTION:
WITH SITE CONSTRUCTION COMPLETE, REMOVE TEMPORARY FILL IN MICRO-BIORETENTION FACILITY AND CAREFULLY REMOVE POLY SHEET PLASTIC AND INSTALL FILTER FABRIC (SIDES ONLY), PEA GRAVEL AND PLANTING SOIL. CONTRACTOR TO PROVIDE PLANTING SOIL CERTIFICATION IMMEDIATELY PROTECT FACILITY WITH SILT FENCE.
 - REMOVE SEDIMENT CONTROLS AFTER RECEIVING APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR.
 - FLUSH STORM DRAIN SYSTEM AND REMOVE SEDIMENT CONTROLS AFTER RECEIVING APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR.
 - AFTER PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR REMOVE ANY REMAINING CONTROLS AND STABILIZE ALL REMAINING DISTURBED AREAS WITH PERMANENT SEEDING MIXTURE AND STRAW AND MULCH (1 WEEK).
- NOTES:**
- CURING GRADING AND AFTER EACH RAINFALL, CONTRACTOR WILL INSPECT AND PROVIDE NECESSARY MAINTENANCE TO THE SEDIMENT CONTROL MEASURES ON THIS PLAN.
 - FOLLOWING INITIAL SOIL DISTURBANCES OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERMETER DICES, SWALES, DITCHES, PERMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
B. SEVEN (7) CALENDAR DAYS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
 - ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.

SEDIMENT CONTROL NOTES:

- SEDIMENT CONTROLS INTERRUPTED BY THE INSTALLATION OF STORM DRAINS ARE TO BE REPAIRED IMMEDIATELY.
- A DOUBLE ROW OF "SUPER" SILT FENCE IS TO BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.
- SILT FENCE SHALL BE CURLED UPHILL AT 30 FT. INTERVALS WHEREVER IT RUNS DOWNHILL.
- EITHER TEMPORARY OR PERMANENT SEEDING AND STABILIZATION IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS PROVIDED IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, WHICHEVER IS MORE STRINGENT.

TRUMPETER ROAD
(80' WIDTH ROW)
PLAT BOOK / PLAT: 18 / 86

TWINNERS ROAD
(NARROW PLAT: 1048 & 1548)
PLAT BOOK: 12 / 148

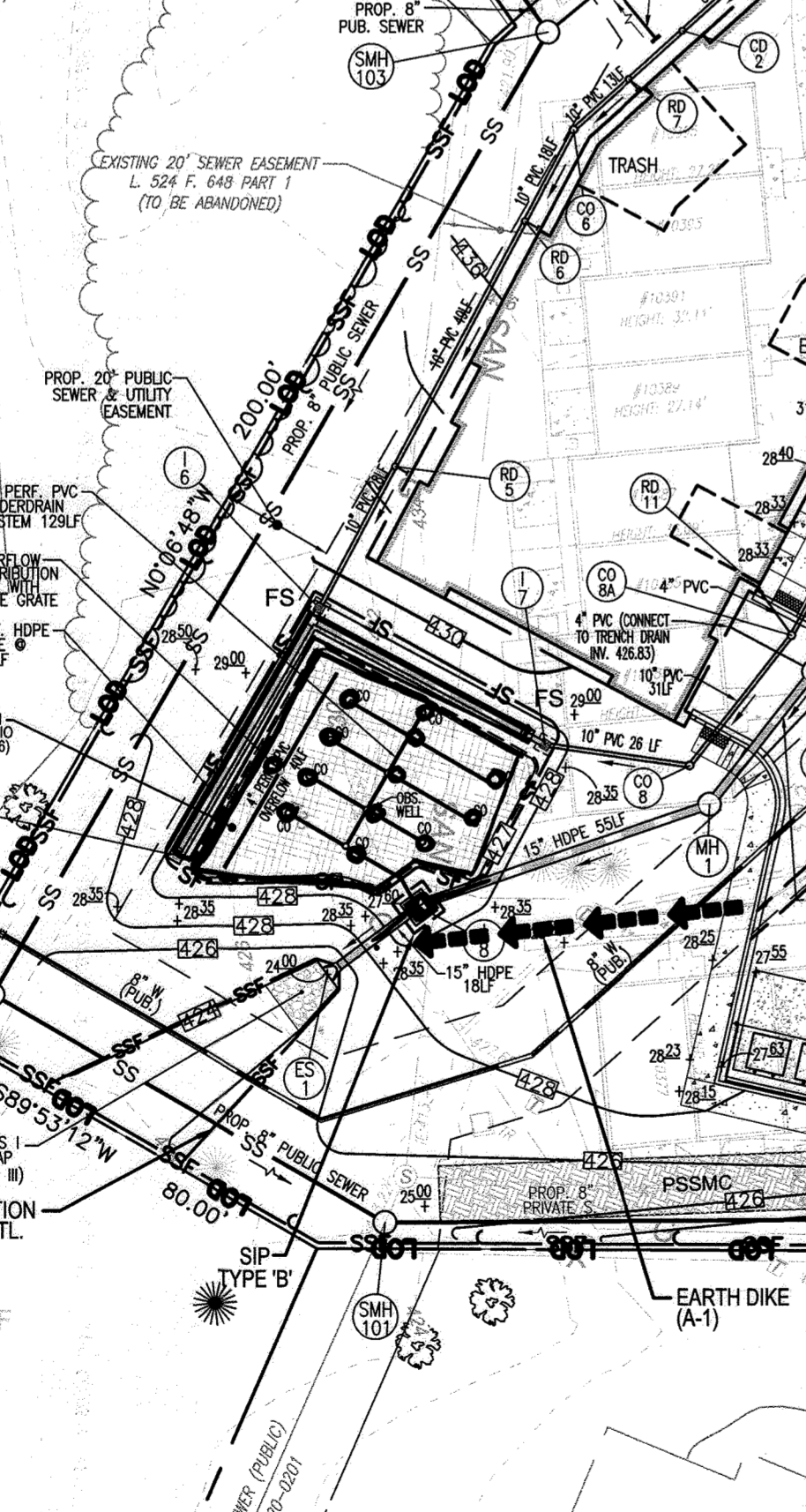
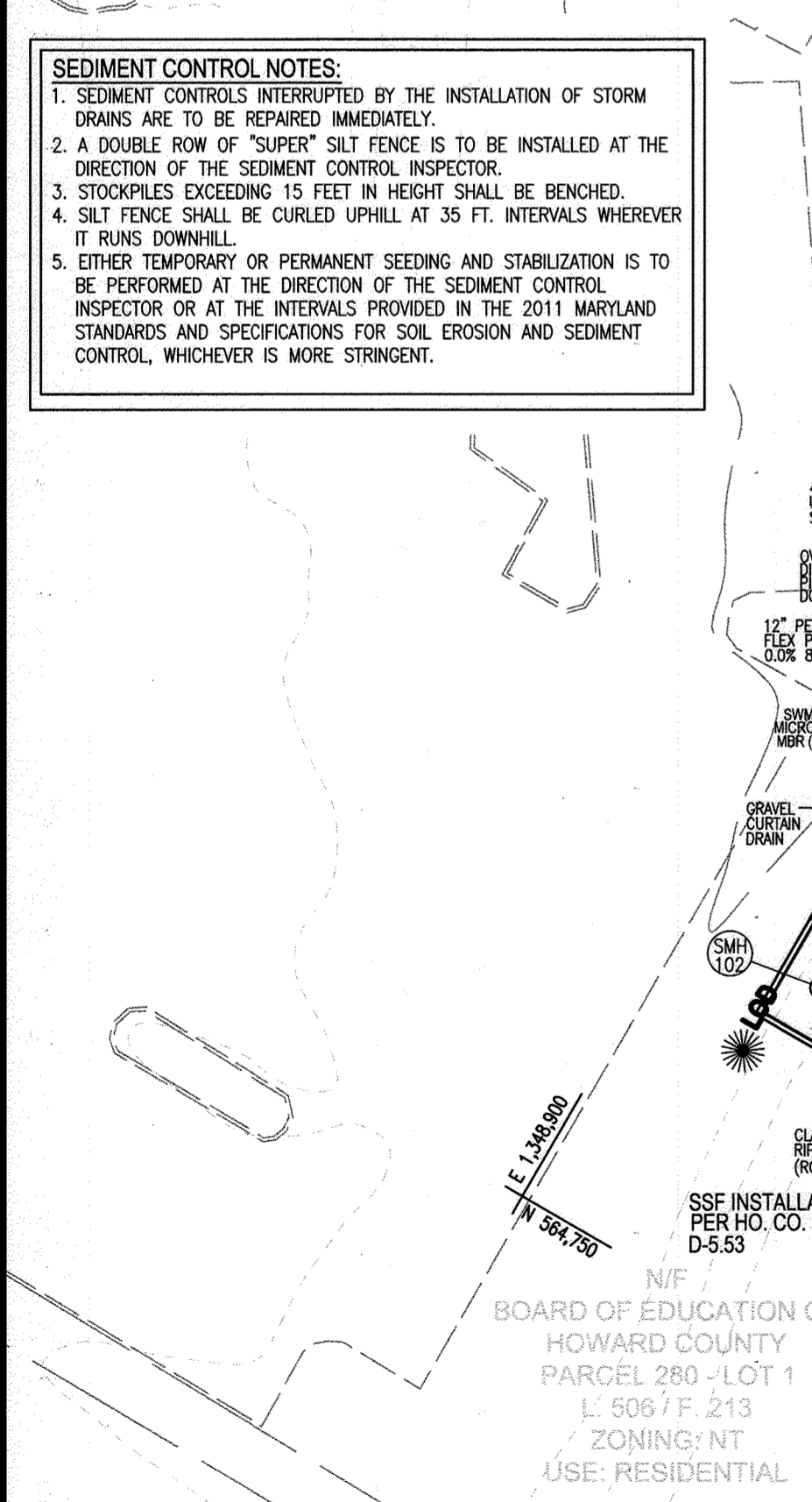
GREEN MOUNTAIN CIRCLE

BOARD OF EDUCATION OF HOWARD COUNTY
PARCEL 280 - LOT 1
L: 506 / F: 213
ZONING: NT
USE: RESIDENTIAL

COLUMBIA ASSOCIATION INC
PARCEL 272 - LOT 1B
L: 3324 / F: 191
ZONING: NT
USE: OPEN SPACE

PARCEL 81 - LOT 8
L: 3324 / F: 191
ZONING: NT
USE: OPEN SPACE

PARCEL 361 - P/O LOT 4
L: 641 / F: 231
ZONING: NT



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5/31/2022

5/31/2022

6/1/2022

DATE

OWNER/DEVELOPER CERTIFICATION:

I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENTATION PRIOR TO BEGINNING THE PROJECT. I CERTIFY THAT THE ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

4/13/2022

DATE

DESIGN CERTIFICATION:

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

6/1/2022

DATE

PLAN VIEW

SCALE: 1"=30'

15' 0' 30'

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

6/1/2022

DATE

EXISTING UTILITIES NOTE:

EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM EXISTING SITE DEVELOPMENT PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION ONLY.

CONTRACTOR SHALL TEST PIT TO VERIFY EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES. TO MAINTAIN UNINTERRUPTED SERVICE AND TO PROVIDE REQUIRED CLEARANCES FOR ALL PROPOSED UTILITIES. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

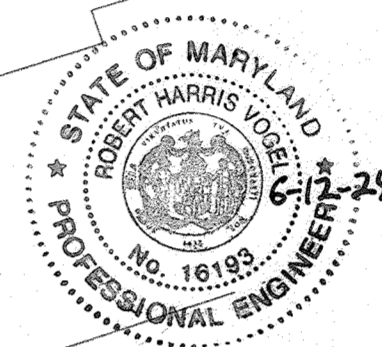
- LEGEND:**
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - EXISTING CURB AND GUTTER
 - PRE-2014 PIPE AND HEADWALL
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEAFOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING GASLINE
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - SOILS BOUNDARY
 - PROPOSED SIDEWALK
 - PROPOSED SIDEWALK RAMP
 - ASPHALT PAVING
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN INLETS
 - PROPOSED FIRE HYDRANT
 - PROPOSED WATER TEE & VALVE
 - PROPOSED WATER MAIN
 - PROPOSED SEWER MAIN
 - EXISTING TREES/LANDSCAPING
 - PROPOSED CURB AND GUTTER
 - MICRO-BIORETENTION
 - PERMEABLE PAVERS
 - GRASSCRETE
 - PUBLIC WATER, SEWER AND UTILITY EASEMENT
 - TEST PIT
 - SOIL BORING
 - STRUCTURAL RETAINING WALL
 - SEGMENTAL BLOCK RETAINING WALL
 - SILT FENCE
 - SUPER SILT FENCE
 - LIMIT OF DISTURBANCE
 - CURB INLET PROTECTION
 - STANDARD INLET PROTECTION
 - "FLEXSTORM CATCHIT" (NYLOFAST INLET PROTECTION)
 - STABILIZED CONSTRUCTION ENTRANCE
 - PERMANENT SOIL STABILIZATION MATING CHANNEL APPLICATION
 - EARTH DIKE (A-1)
 - TEMPORARY ASPHALT BERM

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND SPECIFICATIONS WITH THE CONTRIBUTING DRAINAGE AREA IS CURRENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

16193 6-12-24

DATE



OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINCOPIN CIRCLE
COLUMBIA, MD 21044
(410) 381-3551

OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KISTEL
875 HOLLINGS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

SITE DEVELOPMENT PLANS

SEDIMENT & EROSION CONTROL PLAN

ROSLYN RISE

VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
COLUMBIA, MD 21044

TAX MAP 30 GRID 19
TAX MAP 36 GRID 1
5TH ELECTION DISTRICT

LOTS 7 & 8, ZONED: NT
LOT 5, PARCEL 81
HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

TIMMONS GROUP

3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 08-27-2022

DESIGN BY: RHW/ACS
DRAWN BY: ACS
CHECKED BY: RHW
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 41539

11 SHEET OF 27

B-4.2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

DEFINITION: THE PREPARATION OF SOIL TO ESTABLISH VEGETATION. PURPOSE: TO PREPARE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. CRITERIA: 1. SOIL PREPARATION... 2. SOIL AMENDMENTS... 3. SOIL TESTS... 4. APPLICATION...

B-4.3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER. PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION. CRITERIA: 1. SEEDING... 2. MULCHING... 3. APPLICATION...

B-4.5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION. PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER. CRITERIA: 1. SEEDING... 2. MULCHING... 3. APPLICATION...

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS... 2. EROSION CONTROL MEASURES MUST BE INSTALLED IMMEDIATELY... 3. SEDIMENTATION BASINS MUST BE MAINTAINED... 4. SLOPE STABILIZATION MUST BE COMPLETED...

B-4.4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS. PURPOSE: TO PREVENT VEGETATION THAT PROMOTES COVER ON DISTURBED SOILS. CRITERIA: 1. SEEDING... 2. MULCHING... 3. APPLICATION...

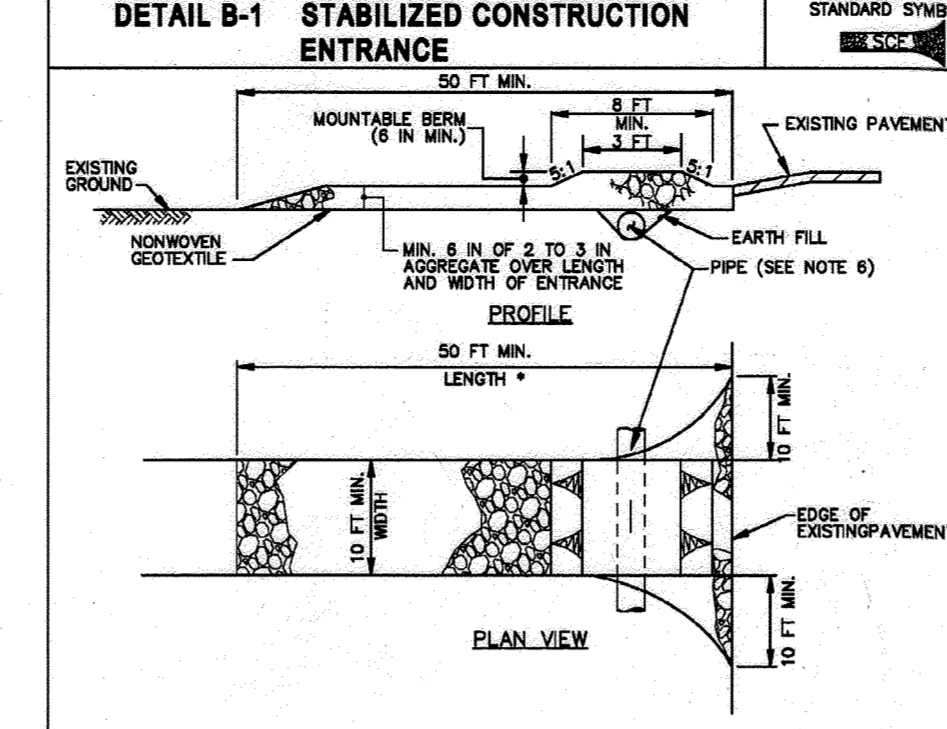
Table B.1: Temporary Seeding for Site Stabilization

Table with columns: Plant Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, Fertilizer (lb/1000 ft²), and Lime Rate (tons/acre).

NOTES: 1. Seeding rates for the warm-season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity...

B-4.6 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

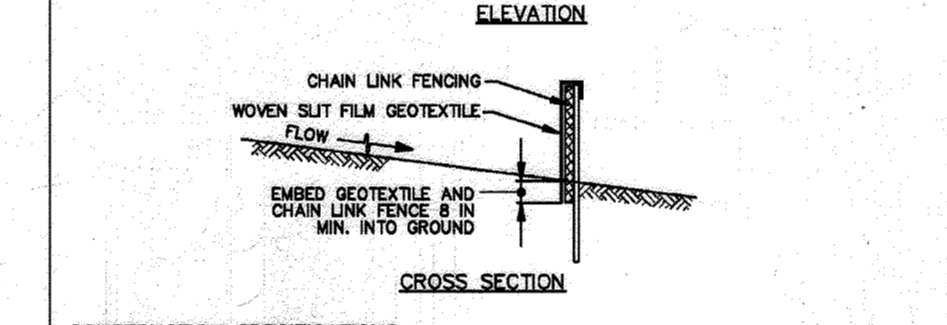
DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION. PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER. CRITERIA: 1. SEEDING... 2. MULCHING... 3. APPLICATION...



CONSTRUCTION SPECIFICATIONS: 1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN... 2. MAINTAIN ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SIDE UNDER THE ENTRANCE... 3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE...

PERMANENT SEEDING SUMMARY

Table with columns: Hardness Zone, Seed Mixture, Application Rate, Seeding Dates, Seeding Depths, Fertilizer, and Lime Rate.

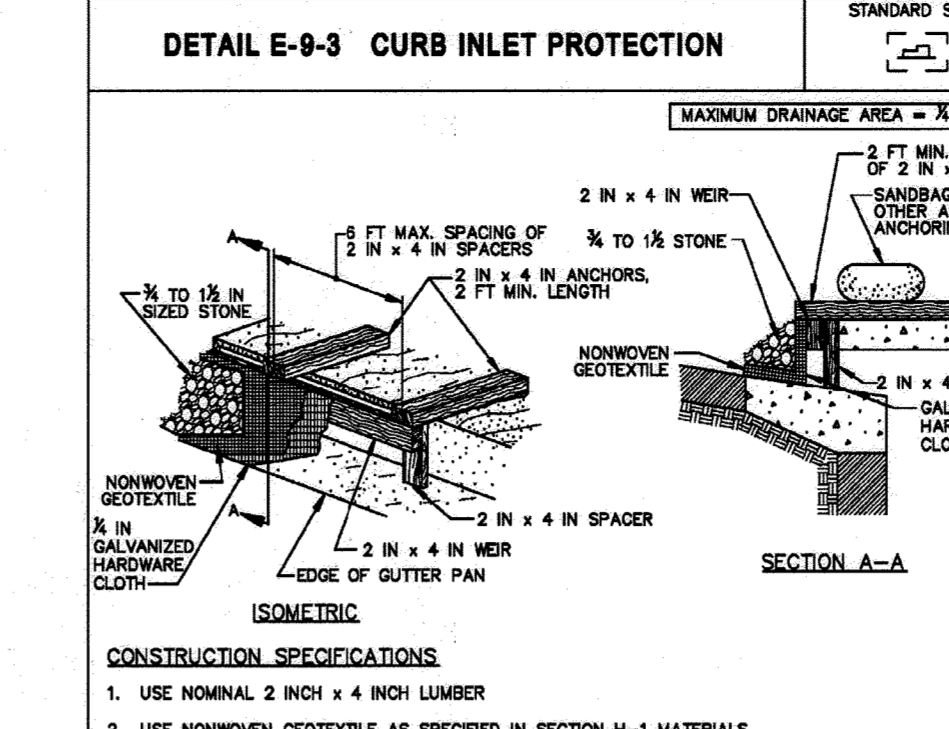


CONSTRUCTION SPECIFICATIONS: 1. INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS... 2. FASTEN 8 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE... 3. FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS...

B-4.8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

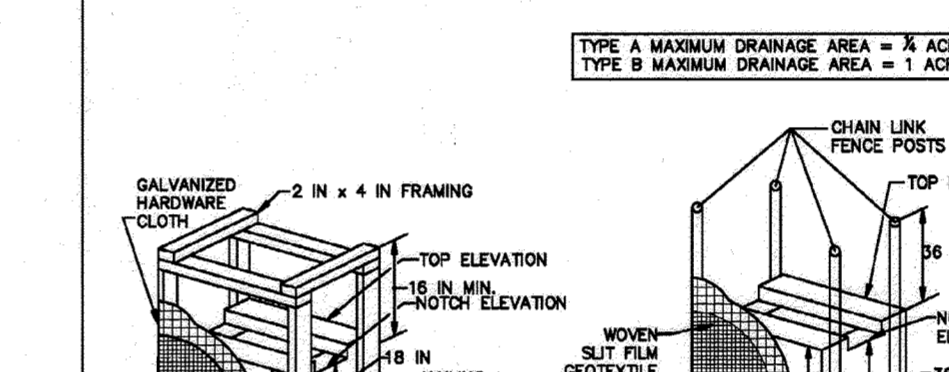
DEFINITION: A HOUSE OR PILE OF SOIL PROTECTION BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES. PURPOSE: TO PROTECT A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION...

STANDARDS AND SPECIFICATIONS FOR DUST CONTROL: 1. PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES... 2. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED...



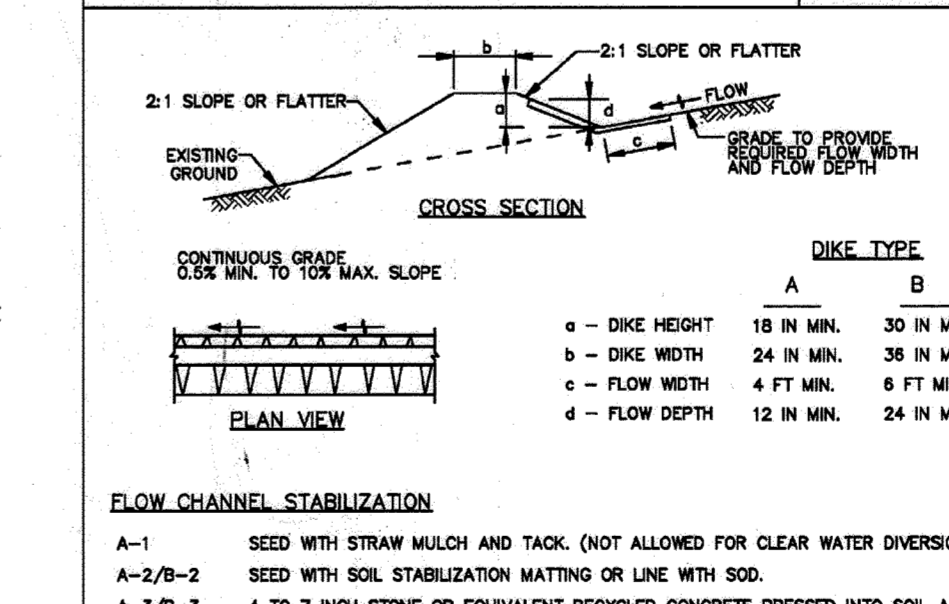
CONSTRUCTION SPECIFICATIONS: 1. USE NOMINAL 2 INCH x 4 INCH LUMBER... 2. NAIL THE 2x4 WOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS... 3. ATTACH A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE...

STANDARD SYMBOL

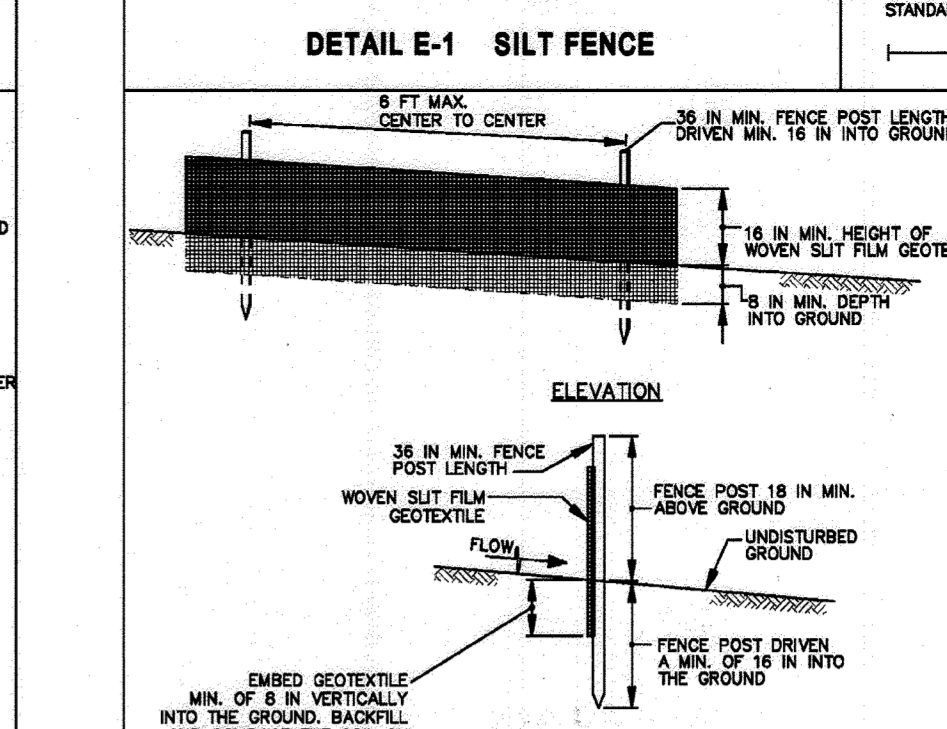


CONSTRUCTION SPECIFICATIONS: 1. USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS... 2. USE 38 INCH MINIMUM POSTS DRIVEN 18 INCH INTO GROUND... 3. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPORE...

DETAIL C-1 EARTH DIKE

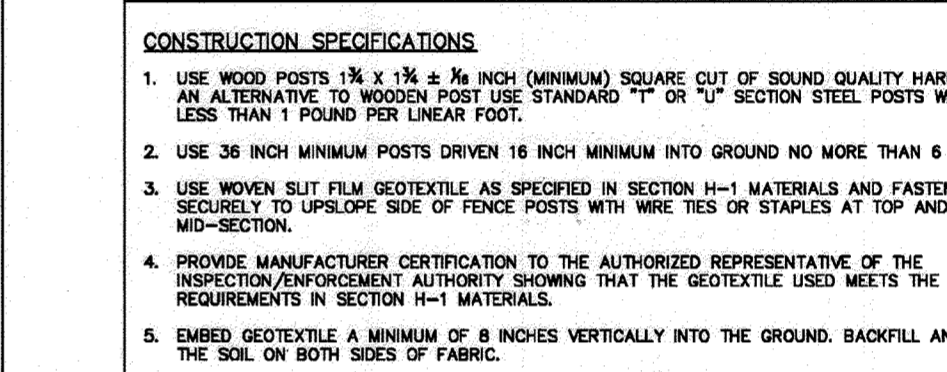


CONSTRUCTION SPECIFICATIONS: 1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBSTRUCTIONAL MATERIAL... 2. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED... 3. COMPACT FILL...



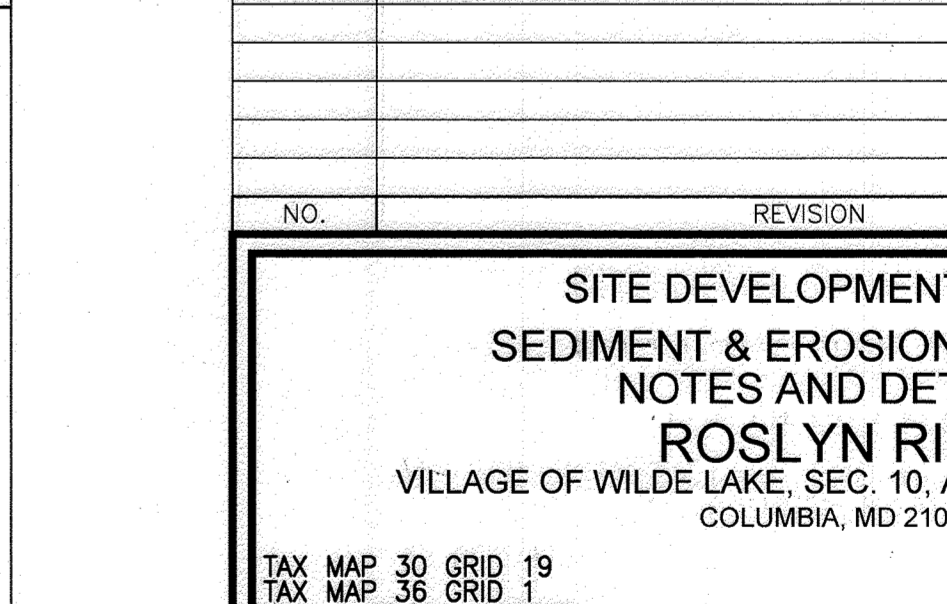
CONSTRUCTION SPECIFICATIONS: 1. USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS... 2. USE 38 INCH MINIMUM POSTS DRIVEN 18 INCH INTO GROUND... 3. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPORE...

STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS: 1. USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS... 2. USE 38 INCH MINIMUM POSTS DRIVEN 18 INCH INTO GROUND... 3. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPORE...

DETAIL E-1 SILT FENCE



CONSTRUCTION SPECIFICATIONS: 1. USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS... 2. USE 38 INCH MINIMUM POSTS DRIVEN 18 INCH INTO GROUND... 3. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPORE...

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Chief, Development Engineering Division: 5/31/2022. Chief, Division of Land Development: 6/1/2022. Director: 6/1/2022.

OWNER/DEVELOPER CERTIFICATION: I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT HOWARD COUNTY EROSION AND SEDIMENT CONTROL STANDARDS... Designer: Alexander Bratich, 5/27/2022.

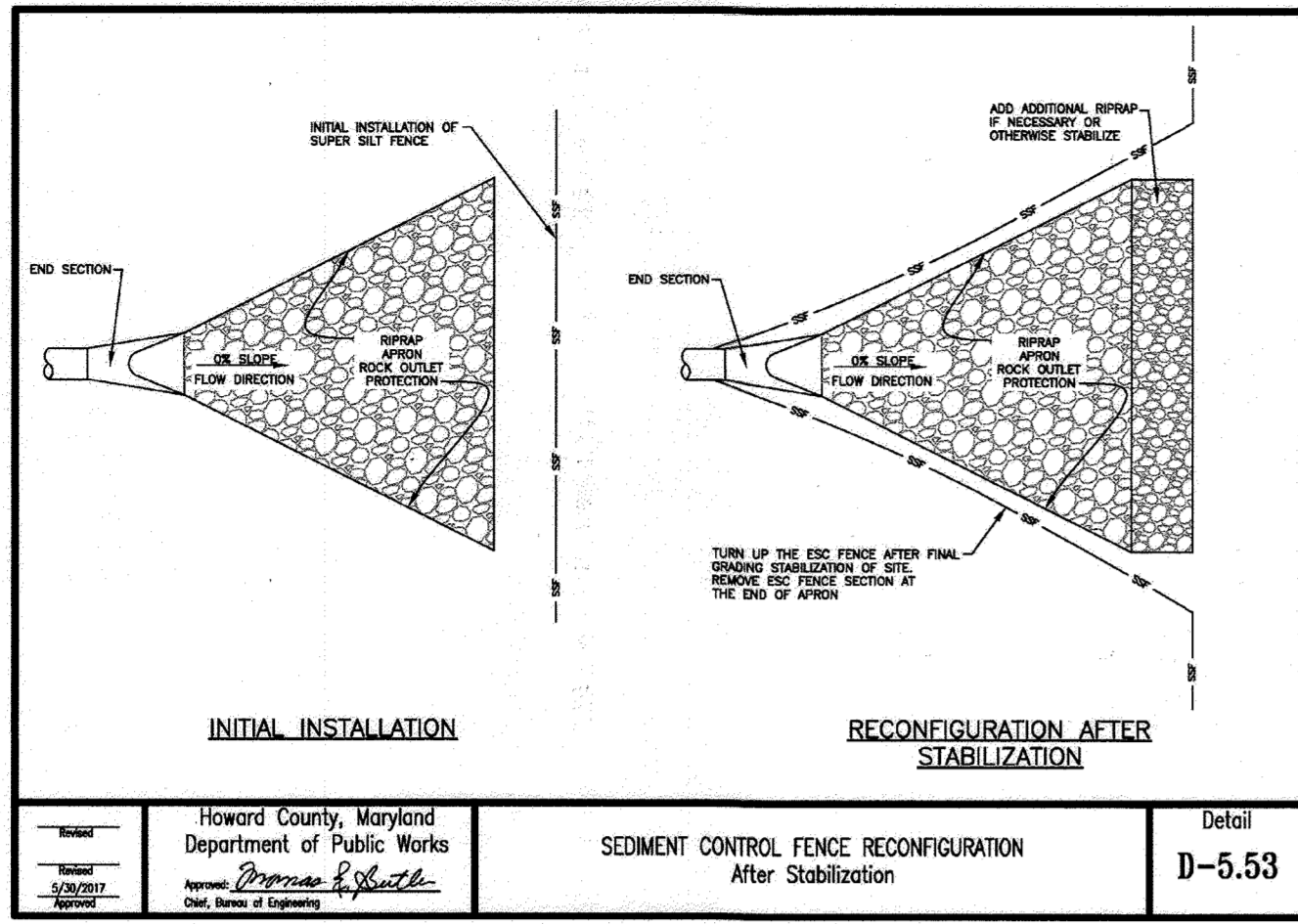
DESIGNER CERTIFICATION: I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT HOWARD COUNTY EROSION AND SEDIMENT CONTROL STANDARDS... Designer: Robert H. Vogel, 6/1/2022.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. Designer: Alexander Bratich, 5/27/2022.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Chief, Development Engineering Division: 5/31/2022. Chief, Division of Land Development: 6/1/2022. Director: 6/1/2022.

AS-BUILT CERTIFICATION FOR PSWM. I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE 'AS-BUILT' PLANS AND SPECIFICATIONS... Designer: Robert H. Vogel, PE No. 16193, 6/12/24.

Professional Engineer seal for Robert H. Vogel, No. 16193, State of Maryland. Includes site development plans, notes and details for Roslyn Rise Village of Wilde Lake, and contact information for Vogel Engineering and Timmons Group.



NPOES Phase II Accessories

FLEXFORM™ CATCH-IT™ Reusable Inlet Protection

State DOTs and Municipalities across the country now have a universal structure BMP to address the issue of storm sewer inlet protection: FLEXFORM™ CATCH-IT™ inlet filter—the temporary and reusable solution.

The FLEXFORM™ CATCH-IT™ system is the preferred choice for temporary inlet protection and storm water runoff control. FLEXFORM™ CATCH-IT™ inlet filters will fit any drainage structure and are equipped with high-efficiency filter bags. Whether you're the specifier or the user, it's clear to see how FLEXFORM™ CATCH-IT™ inlet filters outperform the competition.

Applications:

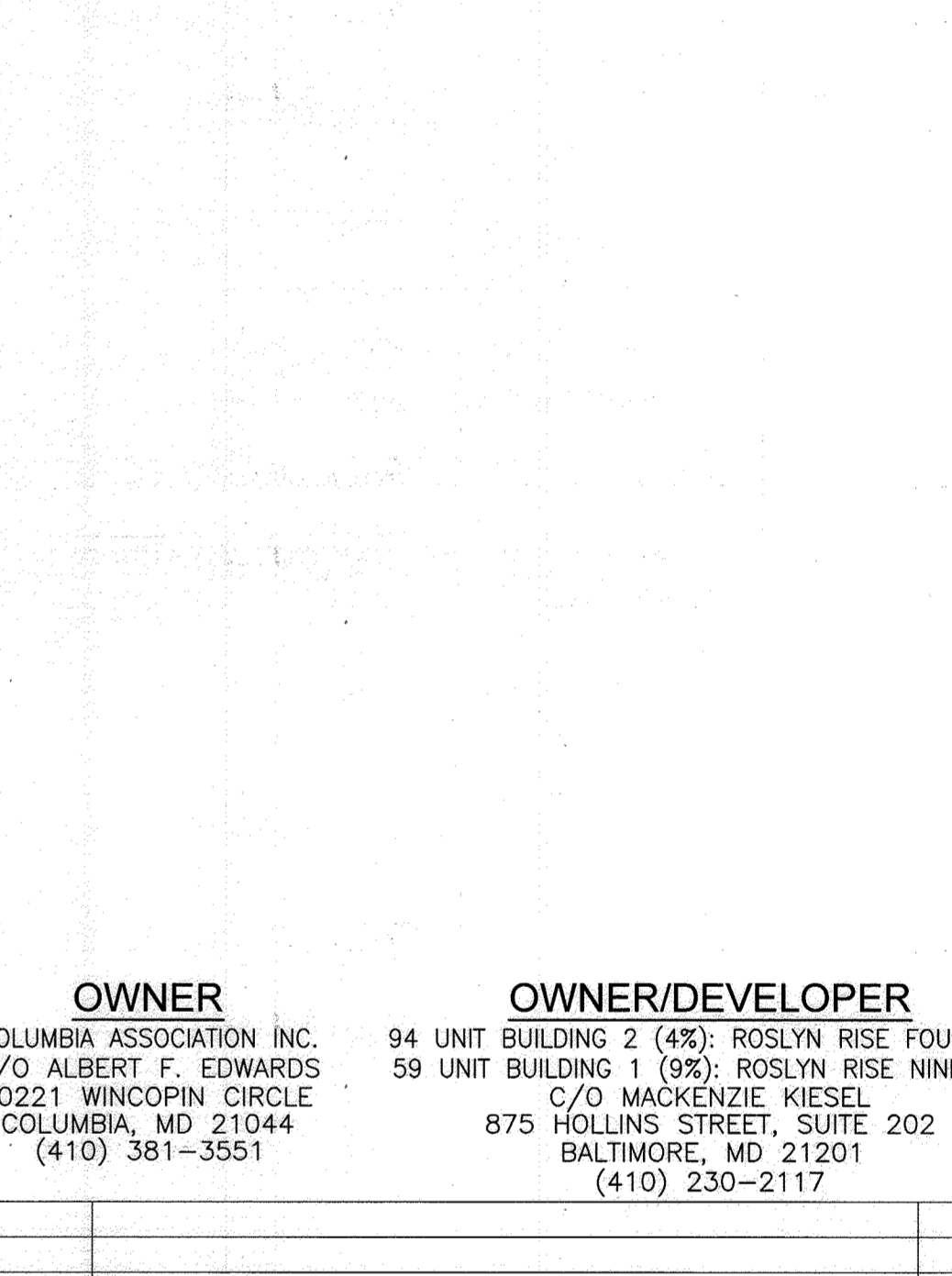
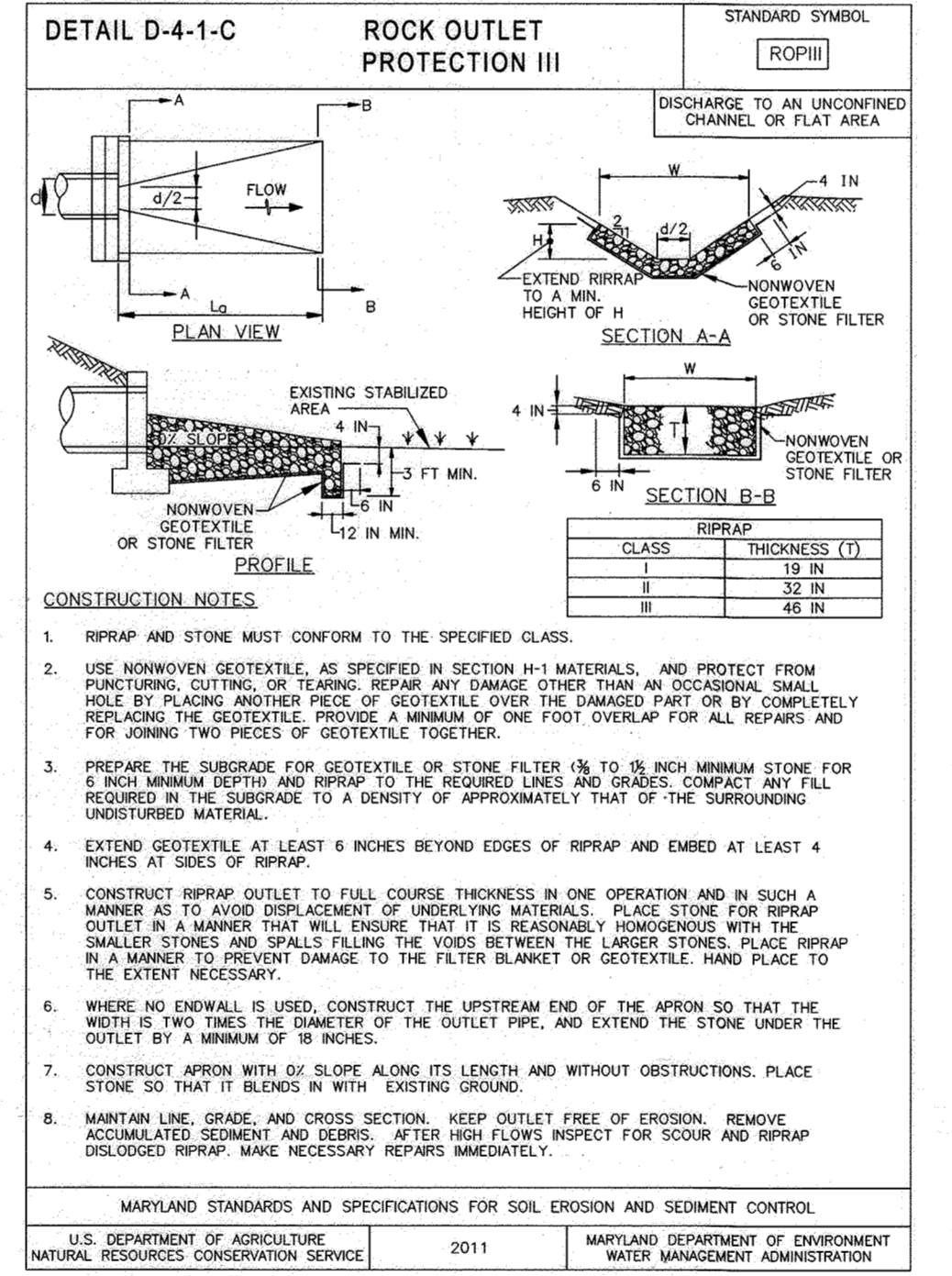
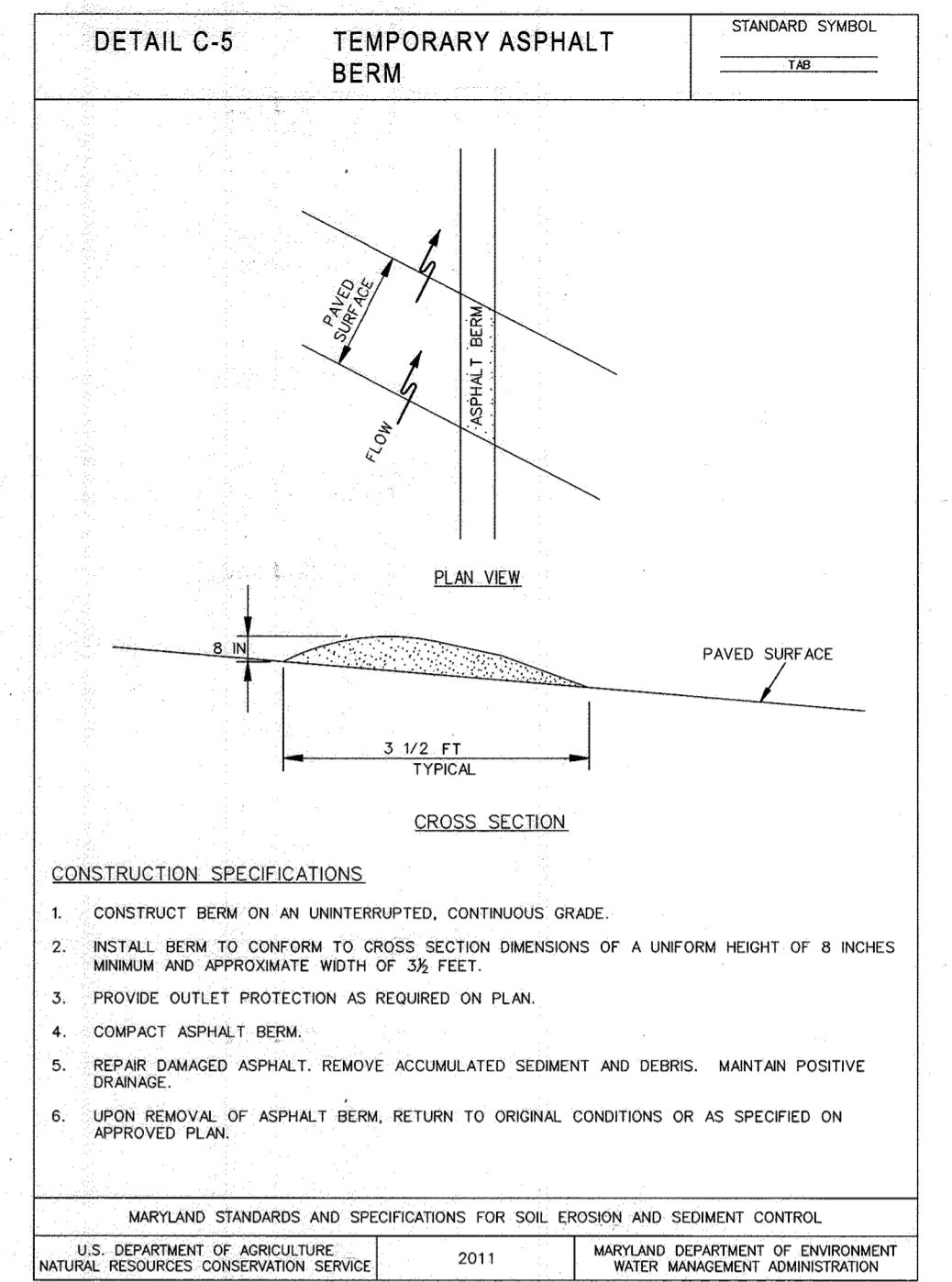
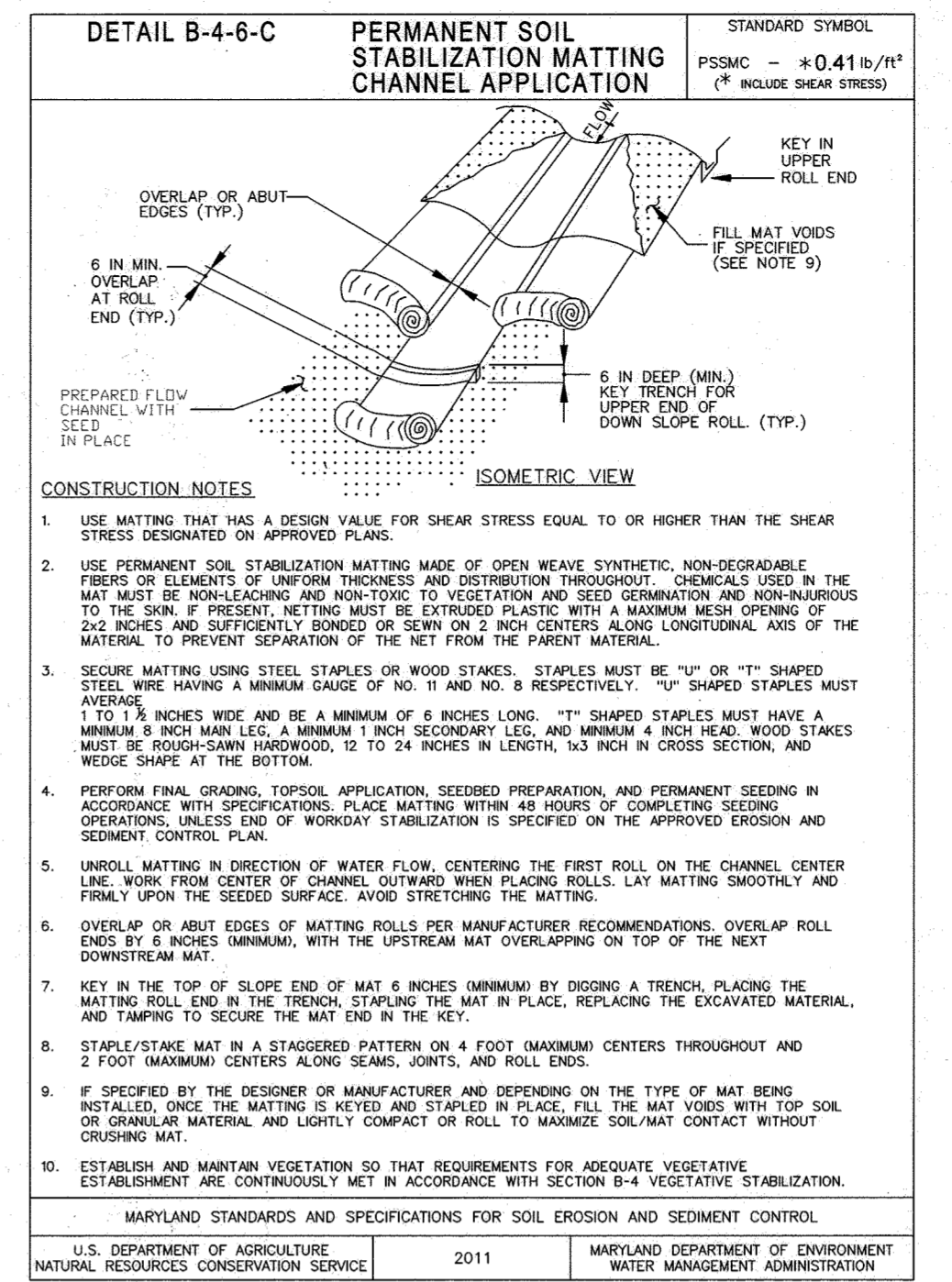
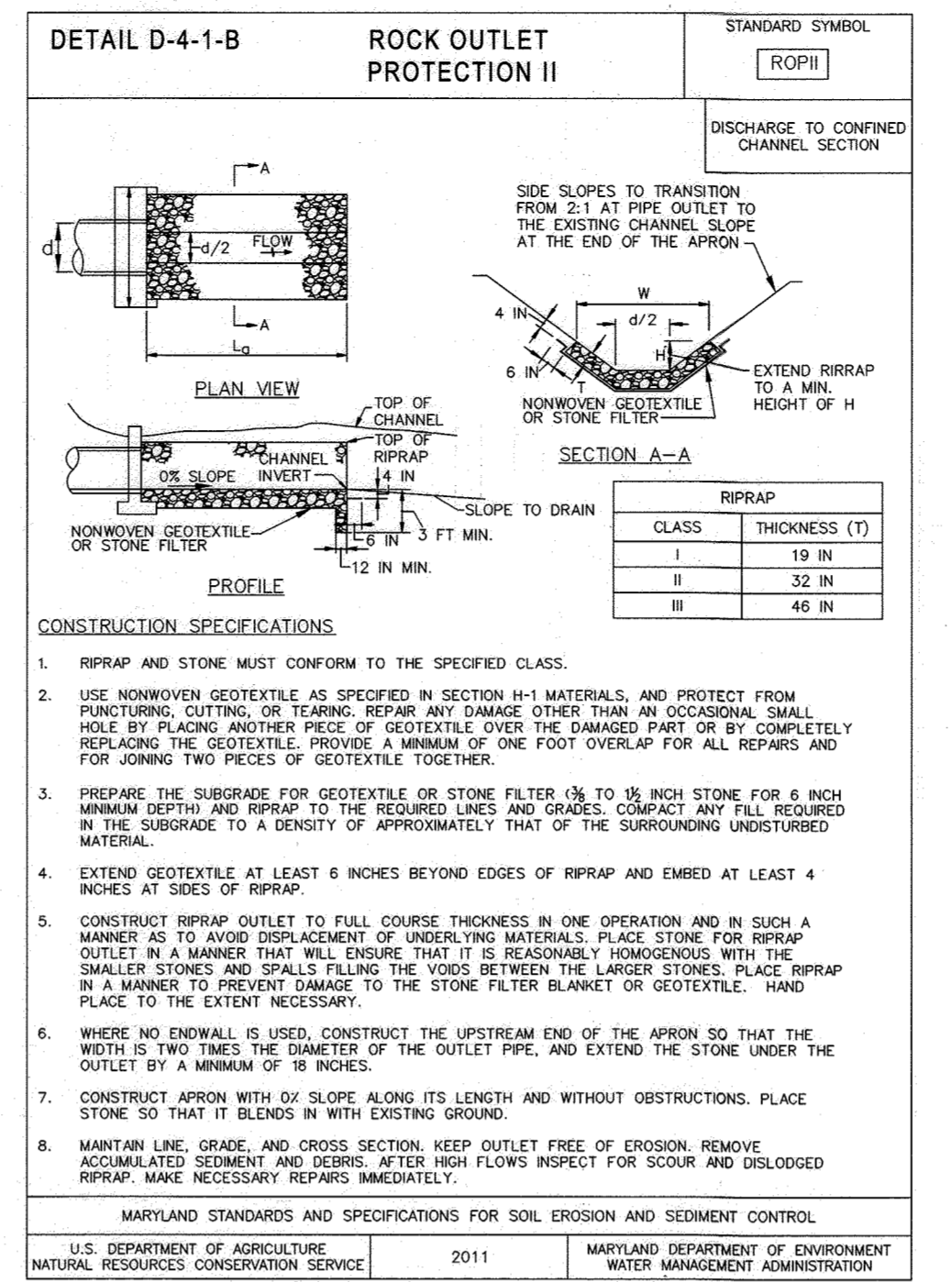
- Road Construction
- Commercial
- Industrial
- Residential Developments

Features:

- Configurable: steel frames configured and gasketed to fit ANY storm drainage structure.
- Adjustable: although shipped to fit your inlet, rectangular framing may be field-adjusted by 10" increments if necessary.
- Reusable: galvanized framing will last year after year in harsh conditions, while geotextile filter bags are easily replaced after several years of use.
- Effective: works below grade, overflow features allow sheets to drain with fast bag filter parting (results of the 15 filter bag error-free).
- Affordable: low per-unit cost; installs in seconds; easily maintained with Universal Removal Tool (no machinery required).

Benefits:

- Reduce job-site flooding and keep projects rain-free
- Minimize residential complaints with cleaner dryer streets during all construction phases
- Prevent hazardous road slip conditions by eliminating ponding at curb-sides
- Significantly reduce cleanup costs
- Prevent siltation and pollution of rivers, lakes, and ponds
- Help prevent fines: NPOES PHASE II Compliant
- Lowest cost alternative for the highest level of inlet protection
- Available through 5,000 ADD distributors nationwide
- Ship within 48 hours



NO AS-BUILT INFORMATION ON THIS SHEET



AS-BUILT CERTIFICATION FOR PSMW

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

Robert H. Vogel 16193 6/12/24
P.E. NAME P.E.# DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5/31/2022

Chief, Development Engineering Division

5/31/2022

Chief, Division of Land Development

6/1/2022

Director

OWNER/DEVELOPER CERTIFICATION:

I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

Mackenzie Kiesel 5/27/2022

OWNER/DEVELOPER SIGNATURE DATE

Mackenzie Kiesel

PRINTED NAME & TITLE

DESIGN CERTIFICATION:

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DocuSigned by:
Rob Vogel 5/27/2022

DESIGNER'S SIGNATURE DATE

ROBERT H. VOGEL 16193 MD REGISTRATION NO. 16193

PRINTED NAME (P.E., R.L.S., OR R.L.A. (circle one))

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

DocuSigned by:
Alexander Bratevich 6/1/2022

DESIGNER'S SIGNATURE DATE

Alexander Bratevich

PRINTED NAME DATE

HOWARD S.C.D.

NO.	REVISION	DATE

SITE DEVELOPMENT PLANS
SEDIMENT & EROSION CONTROL
NOTES AND DETAILS

ROSLYN RISE
VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
COLUMBIA, MD 21044

TAX MAP 30 GRID 19
TAX MAP 36 GRID 1
5TH ELECTION DISTRICT

LOTS 7 & 8, PARCEL 272
LOT 5, PARCEL 81
HOWARD COUNTY, MARYLAND

ZONED: NT

VOGEL ENGINEERING

TIMMONS GROUP

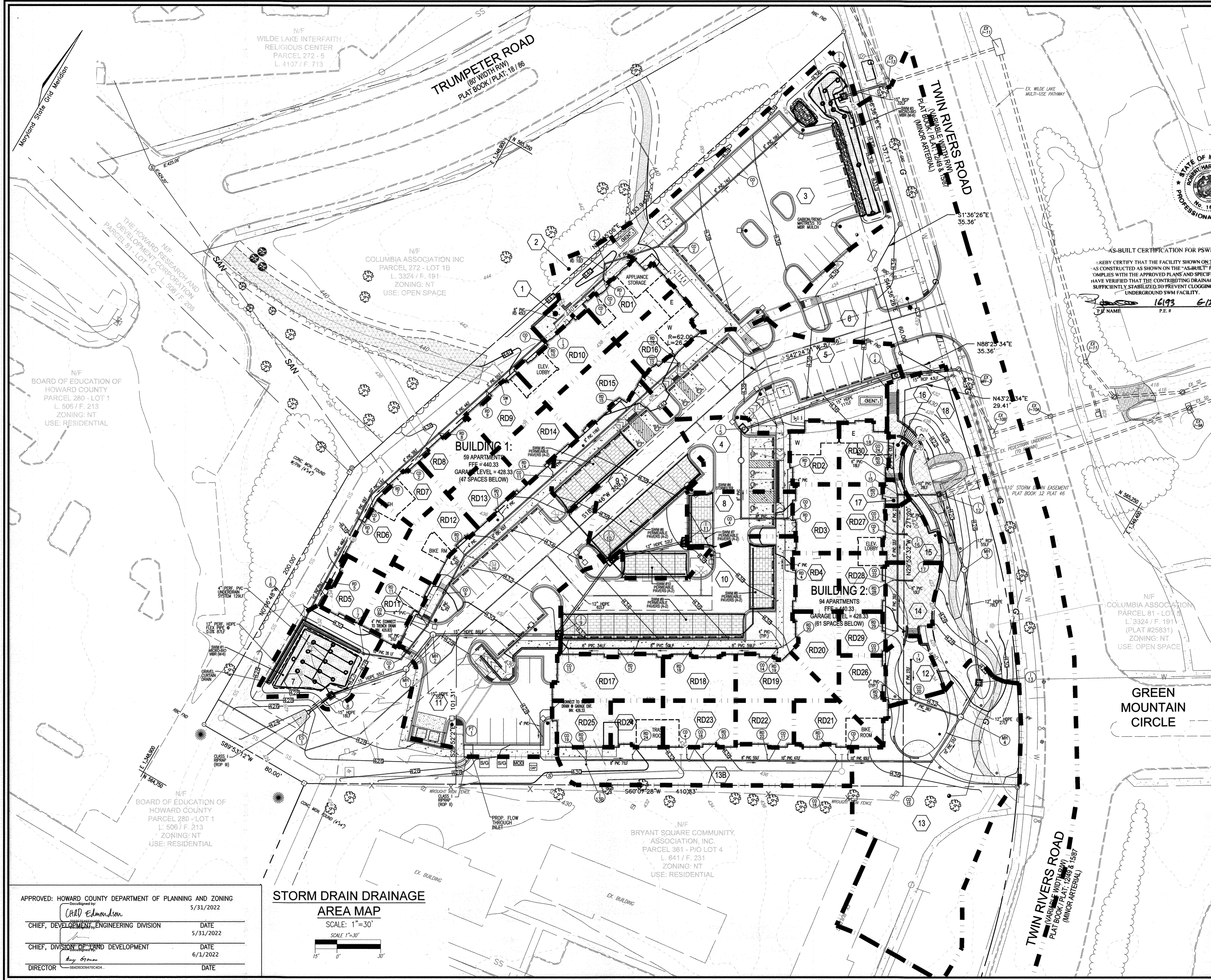
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. MY LICENSE NO. IS 16193. EXPIRATION DATE: 09-27-2022

DESIGN BY: RHW/ACS
DRAWN BY: ACS
CHECKED BY: RHW
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 41539

13 SHEET OF 27



- LEGEND:**
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - EXISTING CURB AND GUTTER
 - PRE-2014 PIPE AND HEADWALL
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING GASLINE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - SOILS BOUNDARY
 - PROPOSED SIDEWALK
 - PROPOSED SIDEWALK RAMP
 - ASPHALT PAVING
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN INLET
 - PROPOSED FIRE HYDRANT
 - PROPOSED WATER TEE & VALVE
 - PROPOSED WATER MAIN
 - PROPOSED SEWER MAIN
 - EXISTING TREES/LANDSCAPING
 - PROPOSED CURB AND GUTTER
 - MICRO-BIORETENTION
 - PERMEABLE PAVERS
 - GRASSCRETE
 - PUBLIC WATER, SEWER AND UTILITY EASEMENT
 - TEST PIT
 - SOIL BORING
 - STRUCTURAL RETAINING WALL
 - SEGMENTAL BLOCK RETAINING WALL
 - LIMIT OF DISTURBANCE
 - PROPOSED COUNTY STREETLIGHT
 - PROPOSED PARKING LOT LIGHT POLE
 - PROPOSED POLE LIGHT AT TRAIL AND FAMILY REC AREA (SEE SITE DETAILS, EL1)
 - PROPOSED POLE LIGHT AT PAVED AMENITY AREA (SEE SITE DETAILS, EL2)
 - DRAINAGE AREA
 - DRAINAGE AREA LABEL



AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN AS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
 P.E. NAME: **16193** P.E. # **6-12-24** DATE

OWNER
 COLUMBIA ASSOCIATION INC.
 C/O ALBERT F. EDWARDS
 10221 WINGCOPIN CIRCLE
 COLUMBIA, MD 21044
 (410) 381-3551

OWNER/DEVELOPER
 94 UNIT BUILDING 2 (4%); ROSLYN RISE FOUR, LLC
 59 UNIT BUILDING 1 (9%); ROSLYN RISE NINE, LLC
 C/O MACKENZIE KIESEL
 875 HOLLINS STREET, SUITE 202
 BALTIMORE, MD 21201
 (410) 230-2117

NO.	REVISION	DATE

SITE DEVELOPMENT PLANS
STORM DRAIN DRAINAGE AREA MAP
ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044

TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT

LOTS 7 & 8, ZONED: NT
 LOT 5, PARCEL 81
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
 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.
 EXPIRATION DATE: 09-27-2022

DESIGN BY: RHV/ACS
 DRAWN BY: ACS
 CHECKED BY: RHV
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.D. NO.: 41539

14 SHEET OF **27**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 5/31/2022

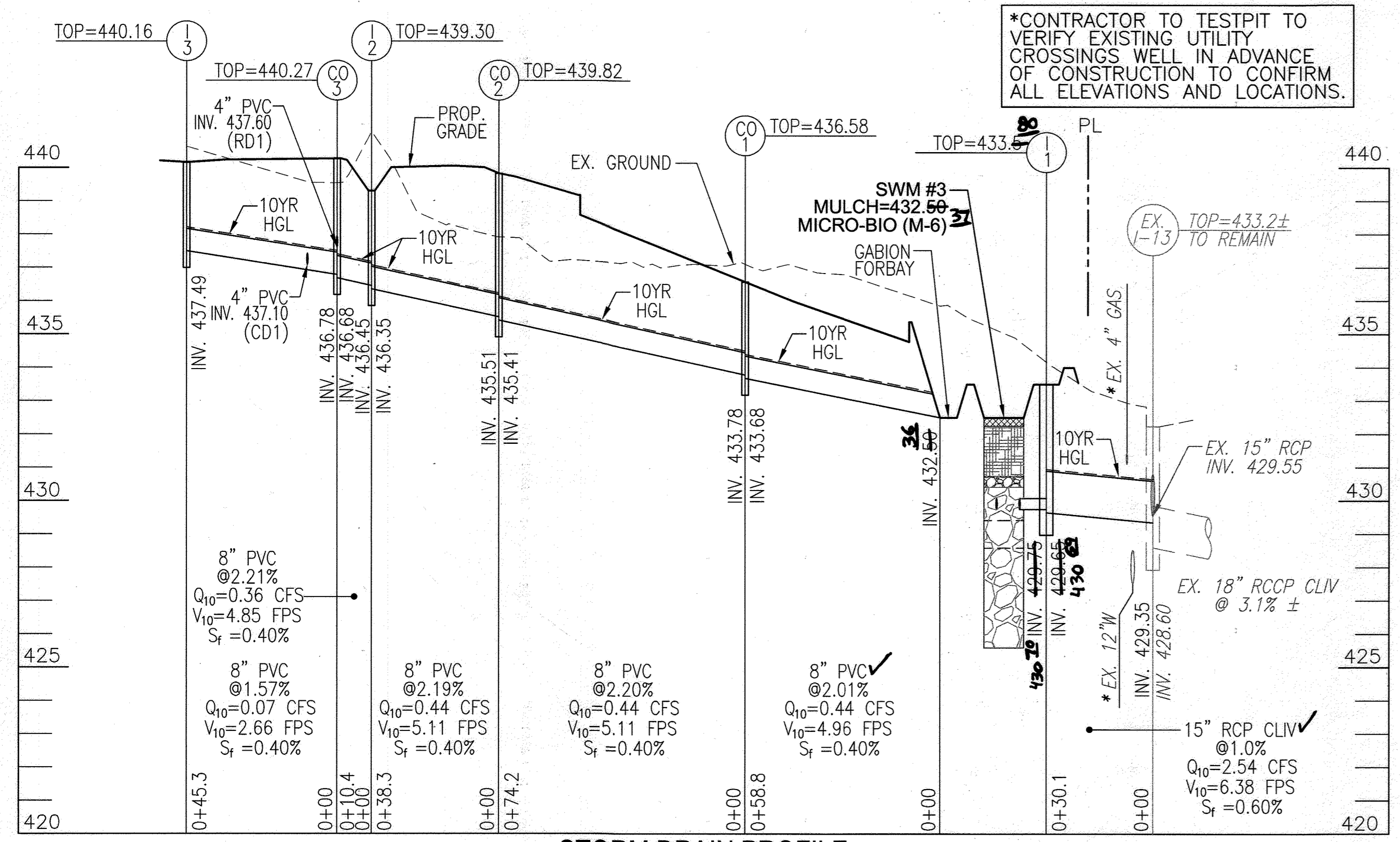
Carl Edmondson
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5/31/2022

Ray Brown
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 6/1/2022

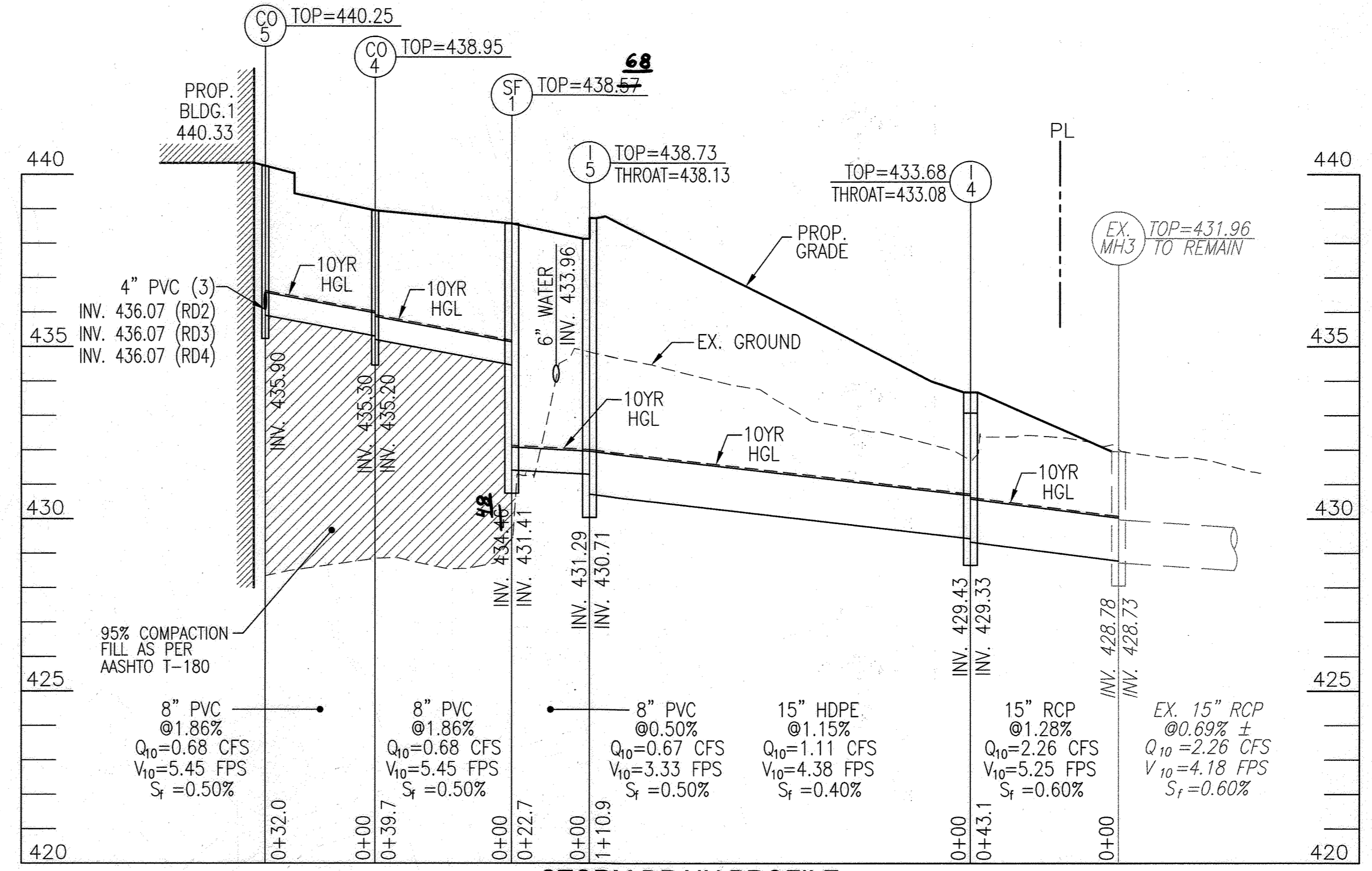
DIRECTOR
 DATE:

STORM DRAIN DRAINAGE AREA MAP
 SCALE: 1"=30'

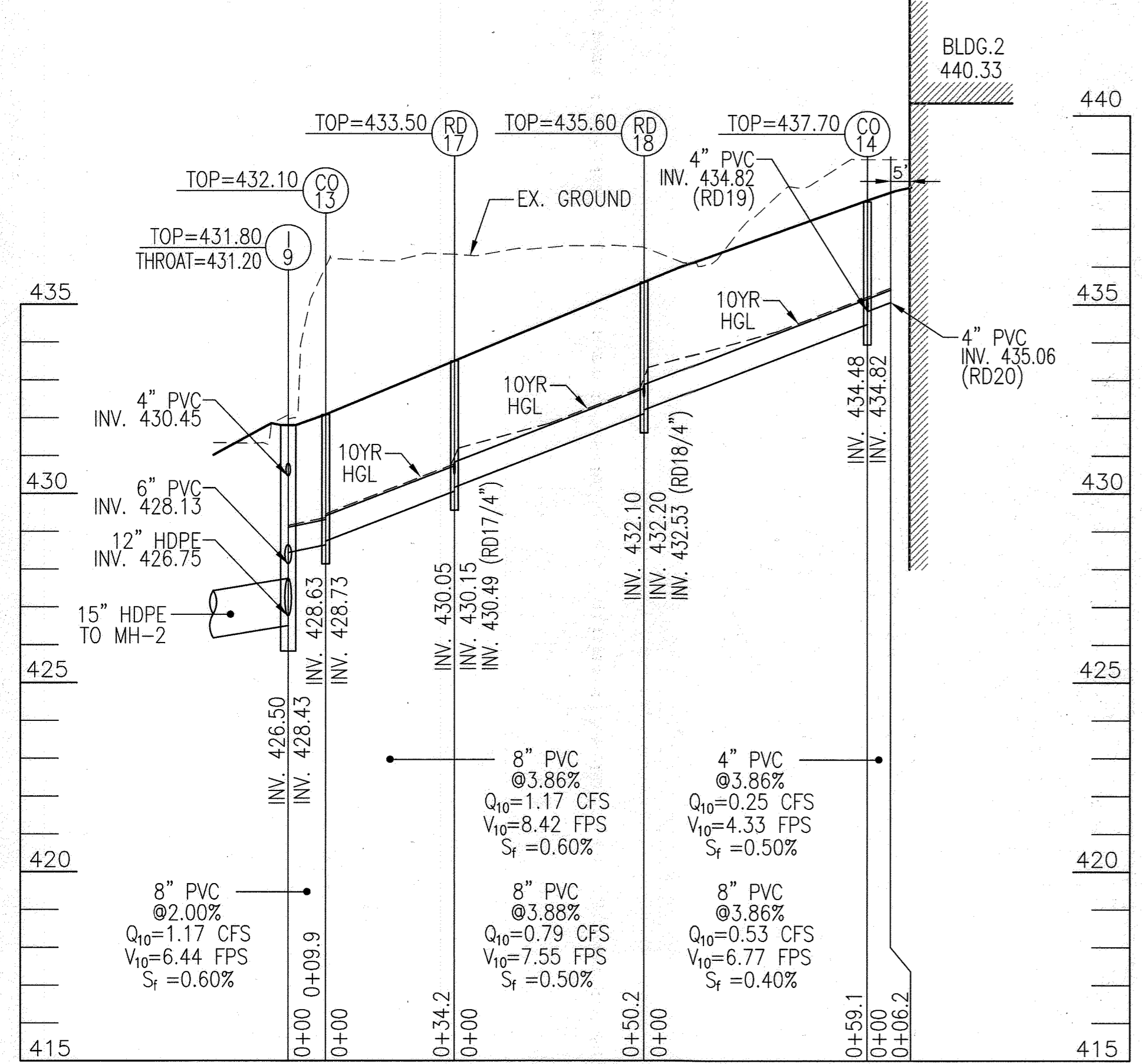
*CONTRACTOR TO TESTPIT TO VERIFY EXISTING UTILITY CROSSINGS WELL IN ADVANCE OF CONSTRUCTION TO CONFIRM ALL ELEVATIONS AND LOCATIONS.



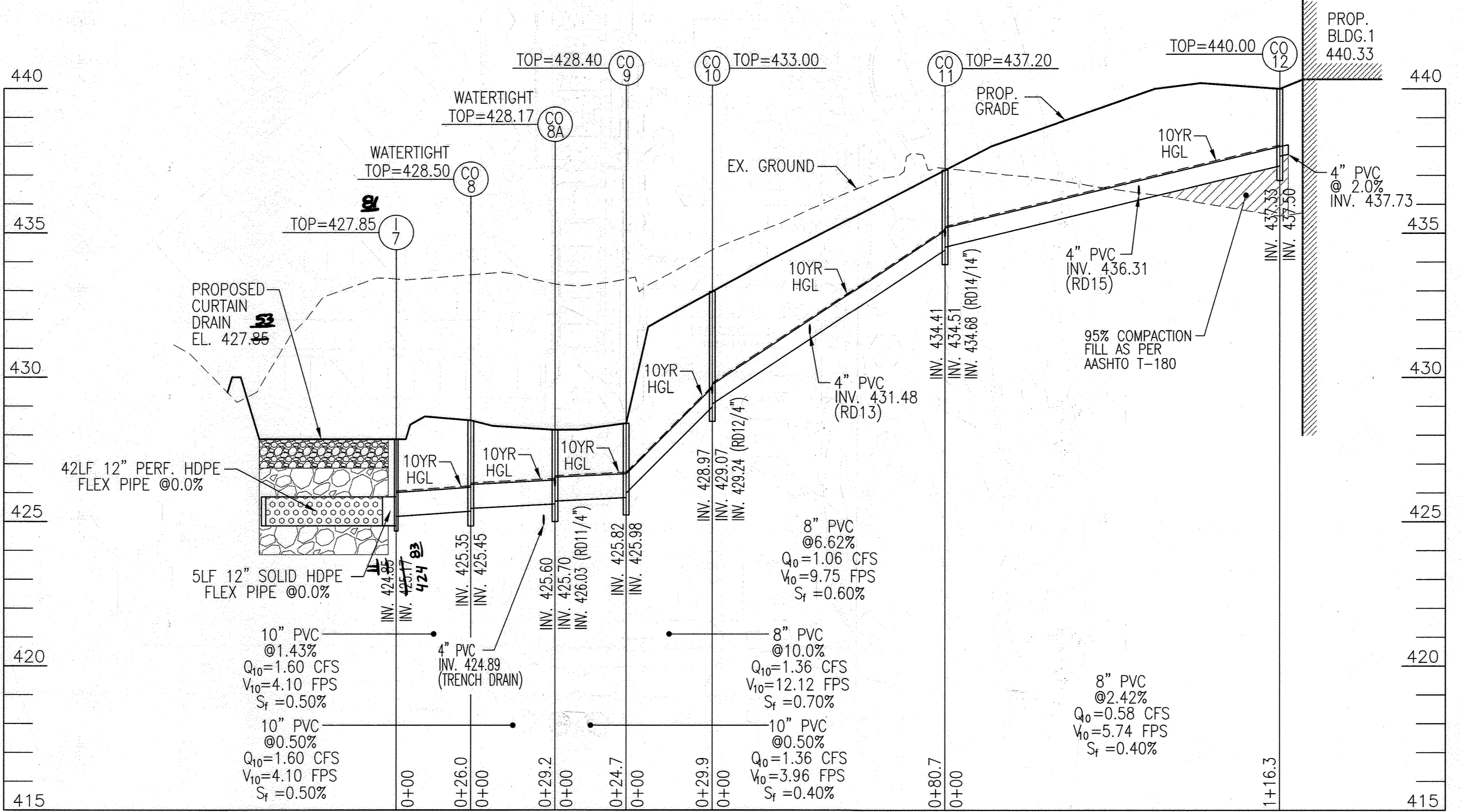
STORM DRAIN PROFILE
SCALE : HORIZONTAL - 1"=30'
VERTICAL - 1"=3'



STORM DRAIN PROFILE
SCALE : HORIZONTAL - 1"=30'
VERTICAL - 1"=3'



STORM DRAIN PROFILE
SCALE : HORIZONTAL - 1"=30'
VERTICAL - 1"=3'



STORM DRAIN PROFILE
SCALE : HORIZONTAL - 1"=30'
VERTICAL - 1"=3'

OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINCOPIN CIRCLE
COLUMBIA, MD 21044
(410) 381-3551

OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 HOLLINS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

NO.	REVISION	DATE

SITE DEVELOPMENT PLANS
STORM DRAIN PROFILES
ROSLYN RISE
VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
COLUMBIA, MD 21044

TAX MAP 30 GRID 19
TAX MAP 36 GRID 11
5TH ELECTION DISTRICT

LOTS 7 & 8, ZONED: NT
LOT 5, PARCEL 81
HOWARD COUNTY, MARYLAND

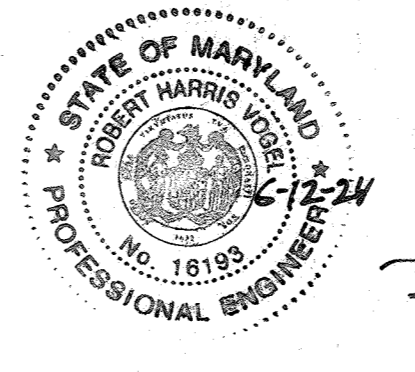
VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7656 F: 410.461.8961 www.timmons.com

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
5/31/2022

CHIEF, DEVELOPMENT ENGINEERING DIVISION
5/31/2022

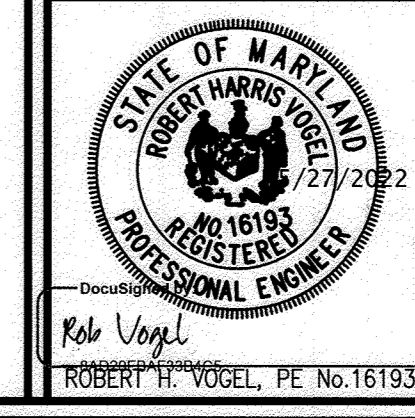
CHIEF, DIVISION OF LAND DEVELOPMENT
6/1/2022

DIRECTOR
DATE



AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

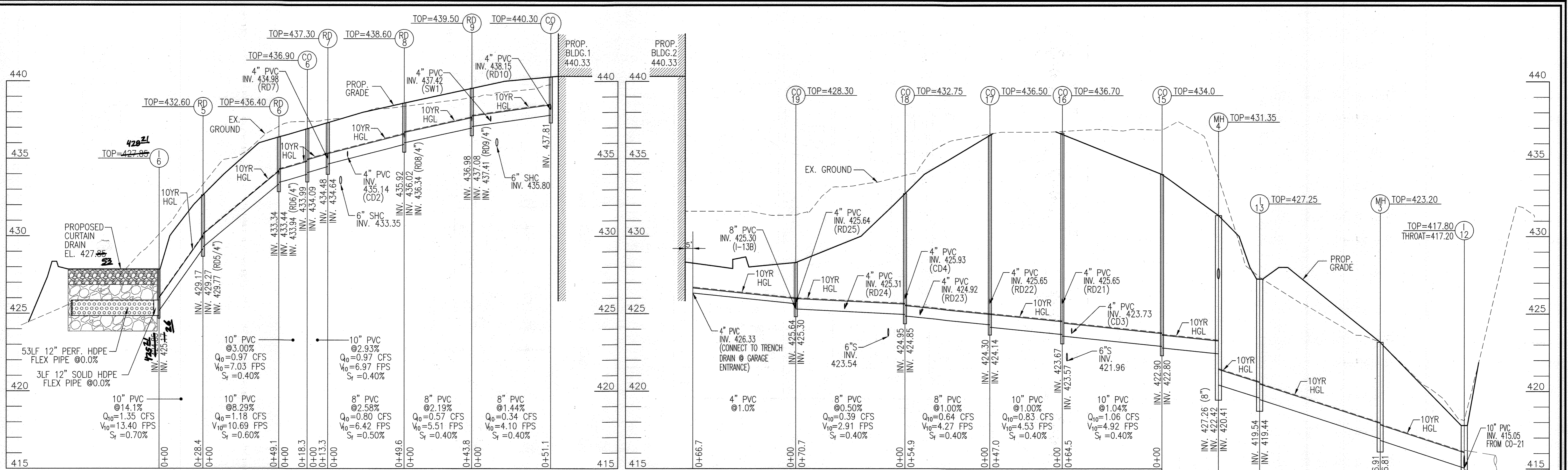
Rob Vogel
16193
6-12-24
P.E. # DATE



PROFESSIONAL CERTIFICATE
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. 16193, EXPIRATION DATE: 09-27-2022

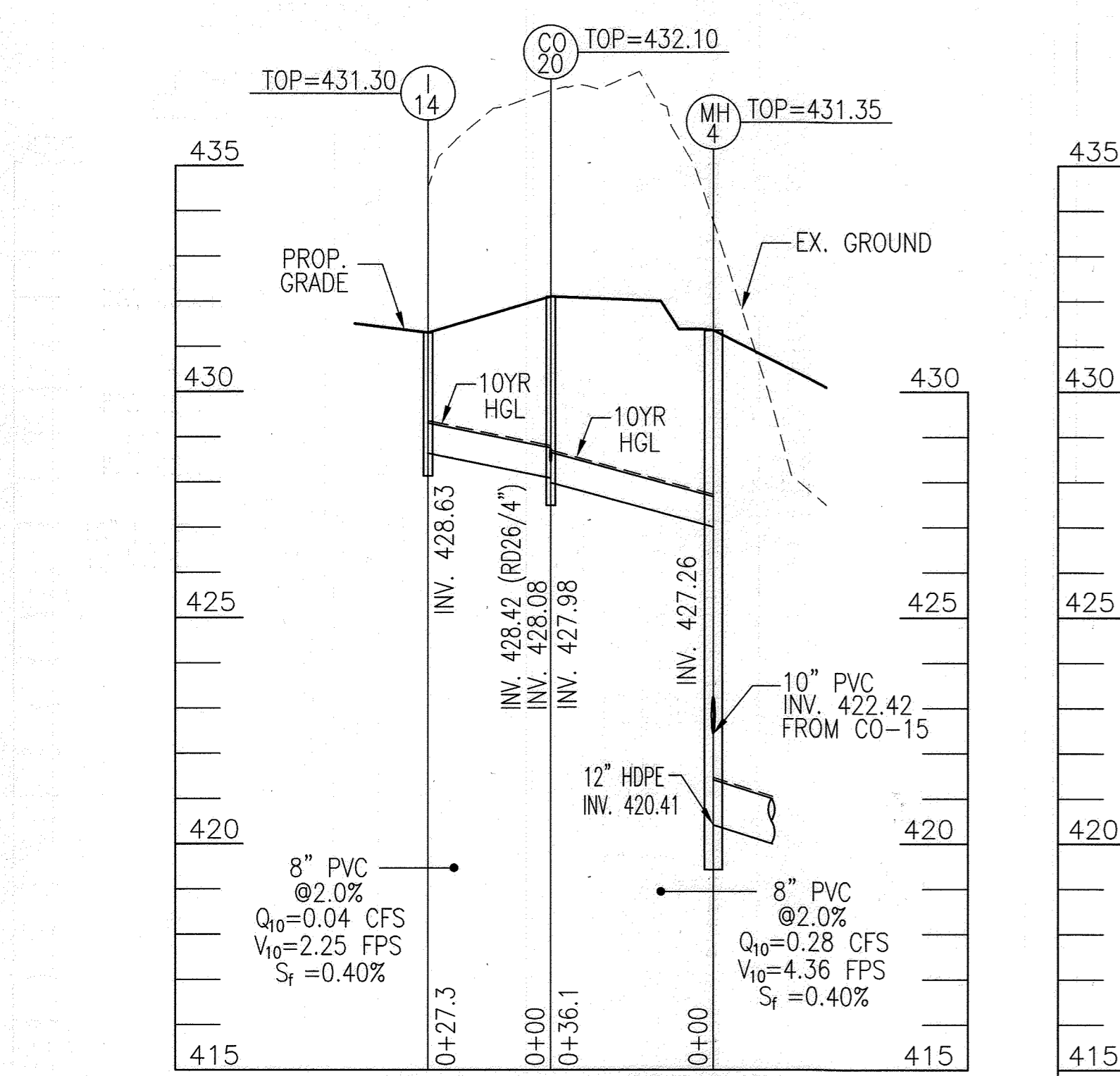
DESIGN BY: RHW/ACS
DRAWN BY: ACS
CHECKED BY: RHW
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 41539

15 SHEET OF 27

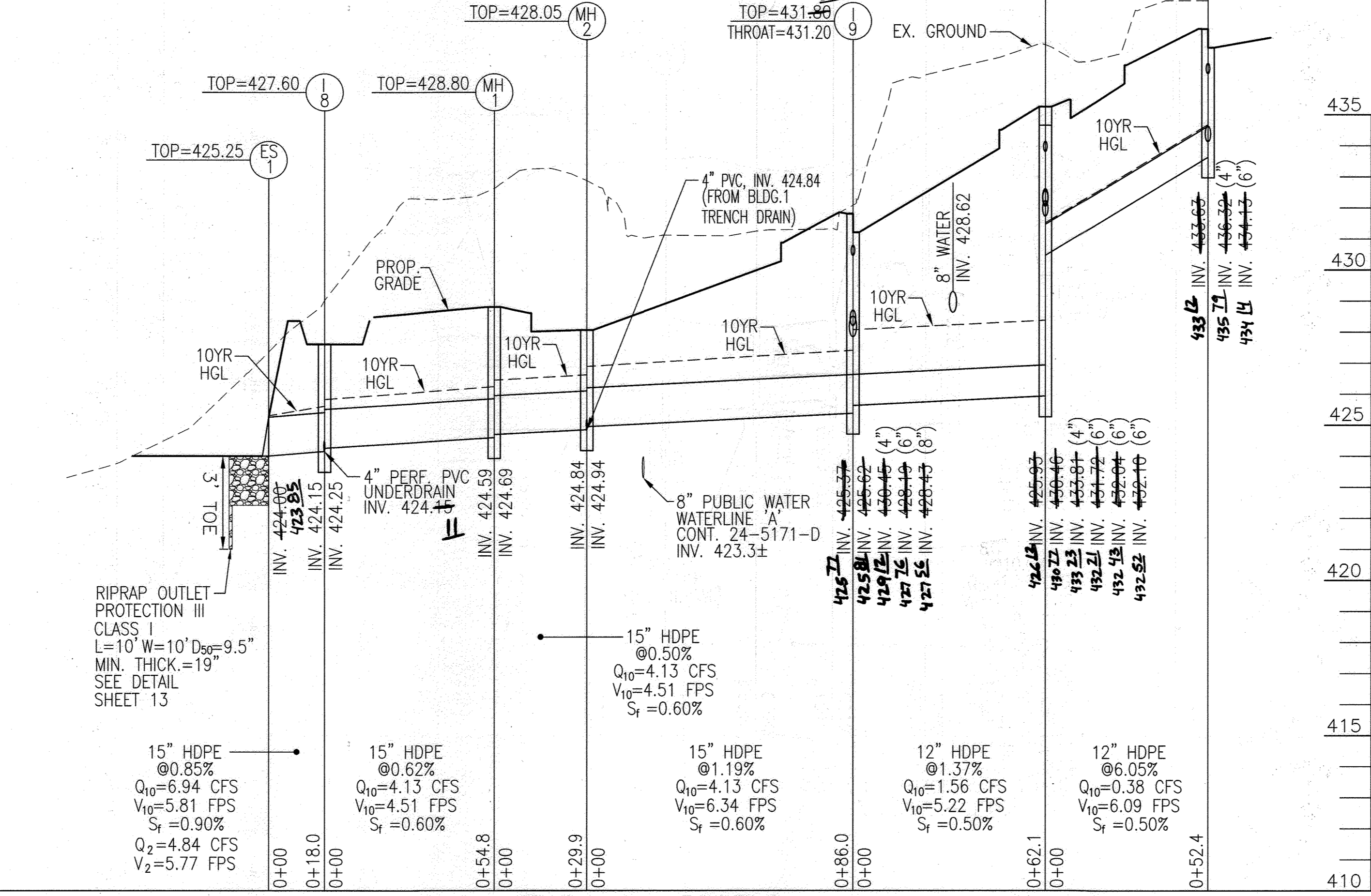


STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=30'
VERTICAL - 1"=3'

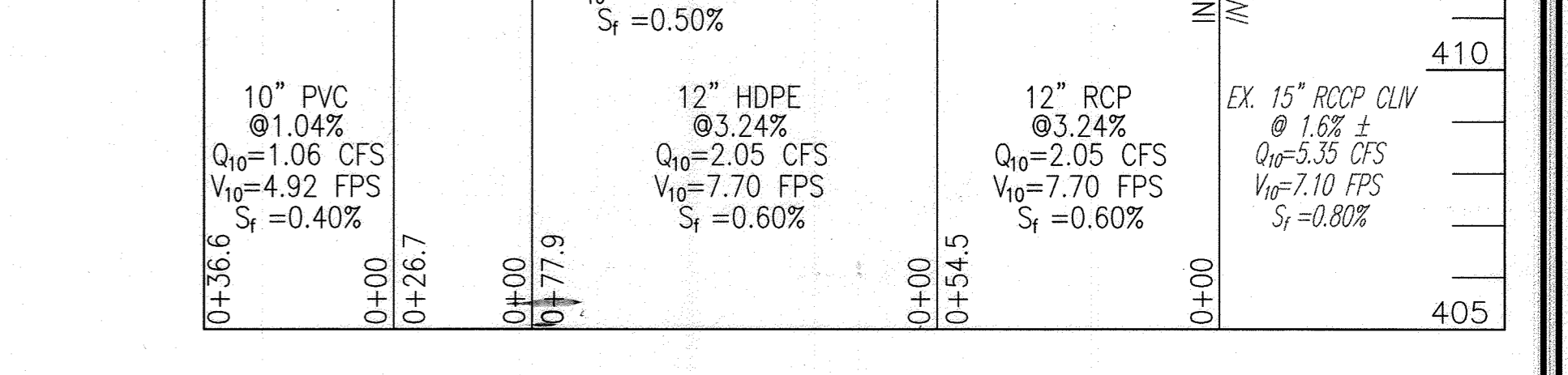
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=30'
VERTICAL - 1"=3'



STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=30'
VERTICAL - 1"=3'



STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=30'
VERTICAL - 1"=3'



OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINGOPIN CIRCLE
COLUMBIA, MD 21044
(410) 381-3551

OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 HOLLINGS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
5/31/2022
Chief, Development Engineering Division
Chief, Division of Land Development
Director

AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

16193 61224
P.E. # DATE

NO. REVISION DATE

SITE DEVELOPMENT PLANS
STORM DRAIN PROFILES
ROSLYN RISE
VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
COLUMBIA, MD 21044

TAX MAP 30 GRID 19
TAX MAP 36 GRID 1
5TH ELECTION DISTRICT

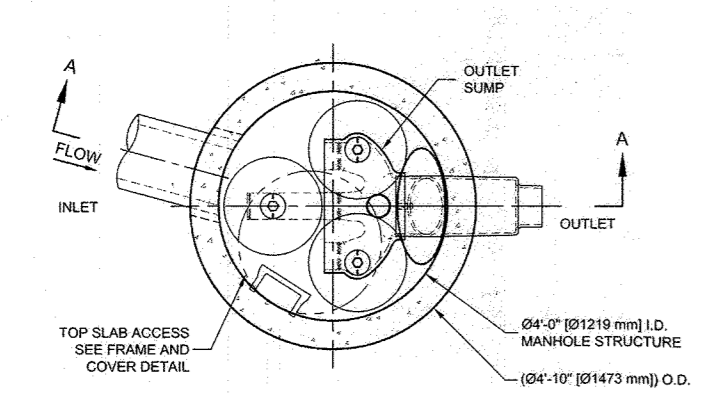
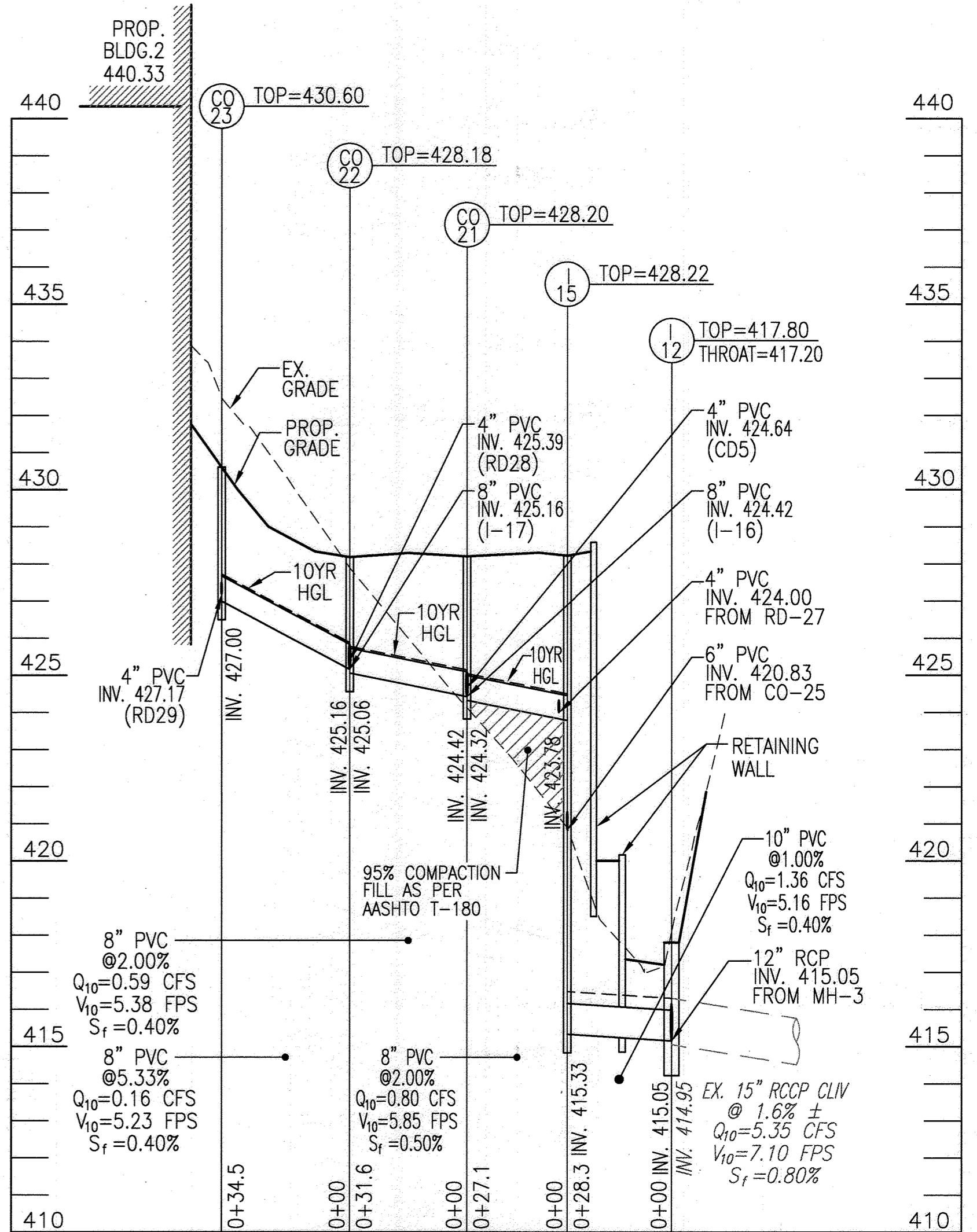
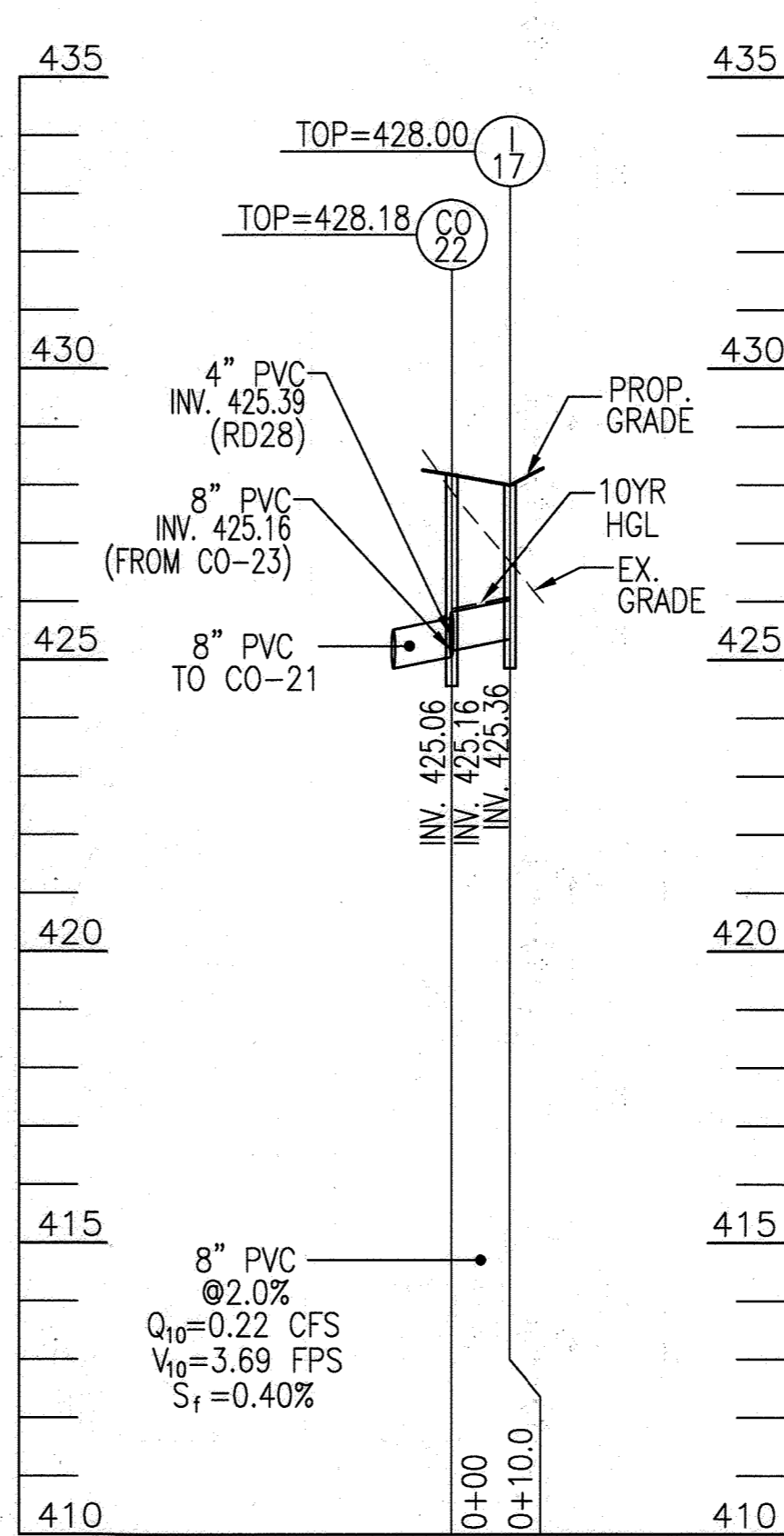
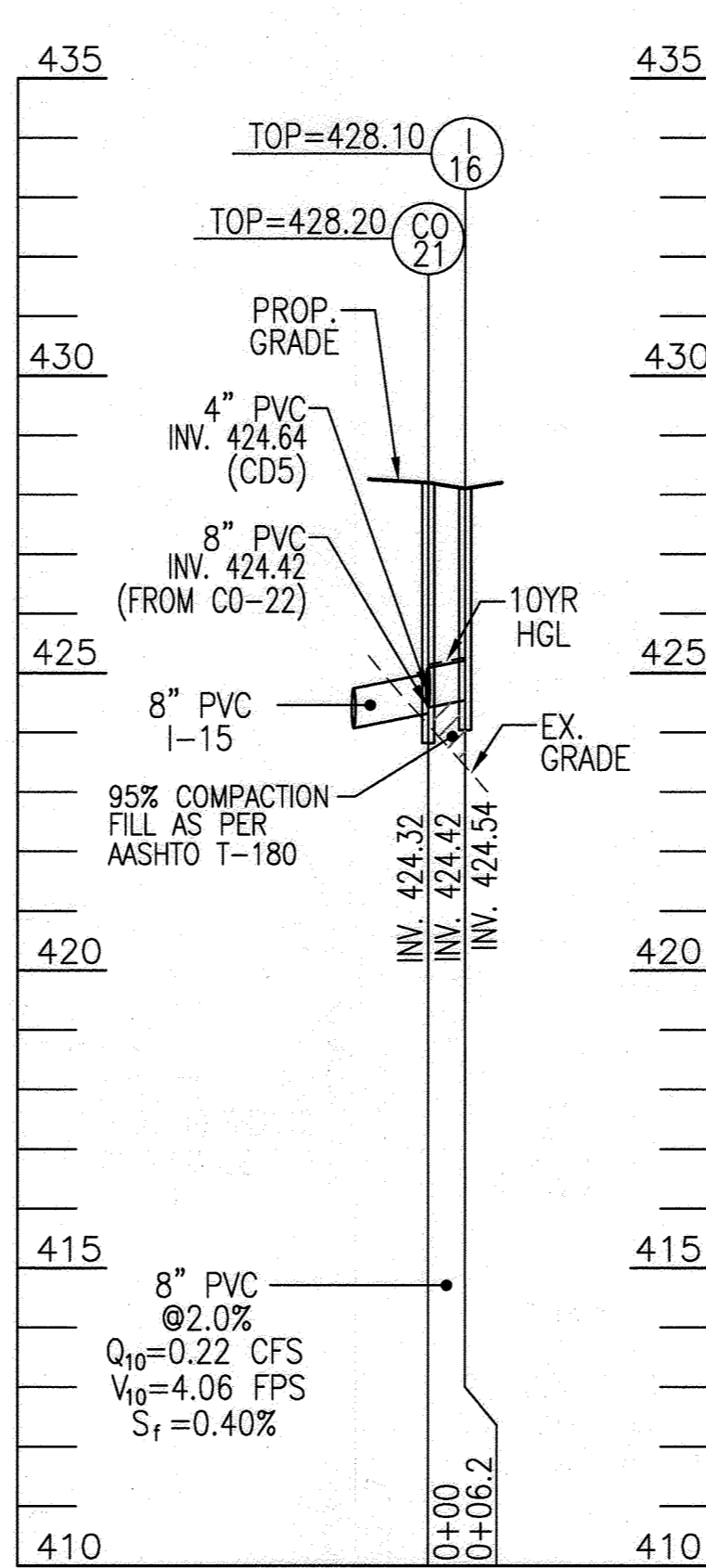
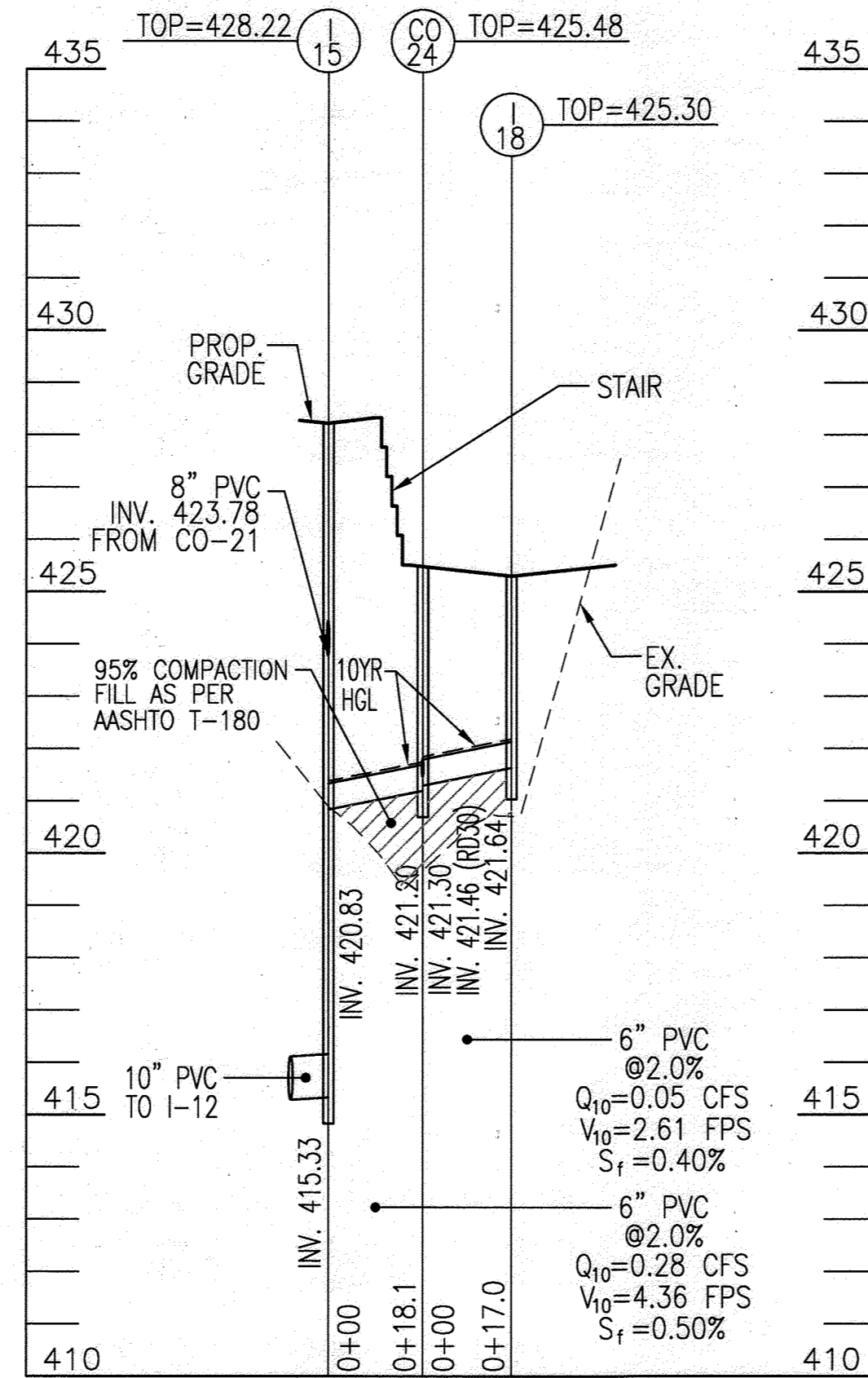
LOTS 7 & 8, ZONED: NT
LOT 5, PARCEL 81
HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: RHW/ACS
DRAWN BY: ACS
CHECKED BY: RHW
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 41539

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 08-27-2022

16 SHEET OF 27



STORMFILTER DESIGN NOTES

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (3). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 3 CARTRIDGES. IN 10' DEEP MANHOLE STRUCTURE PERMANENT HYDRAULIC CAPACITY IS 9.0 GPM (2.3 L/S). IF THE SITE CONDITIONS EXCEED 1.0 CFS (2.3 L/S) AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE HEIGHT	2" (50mm)	1 1/2" (38mm)	1" (25mm)	LOW DROP
RECOMMENDED HYDRAULIC DROP (ft)	1.00 (300mm)	2.00 (600mm)	3.00 (900mm)	1.00 (300mm)
SPECIFIC FLOW RATE (gpm/ft²)	211.30 (11.07 L/min/ft²)	110.66	73.77 (3.52 L/min/ft²)	211.30 (11.07 L/min/ft²)
CARTRIDGE FLOW RATE (gpm)	22.21 (1.05 L/min)	11.11 (0.53 L/min)	7.38 (0.35 L/min)	22.21 (1.05 L/min)

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE # _____ SE-1
 WATER QUALITY FLOW RATE (gpm) _____ 0.13
 PEAK FLOW RATE (gpm) _____ 0.08
 RETURN PERIOD OF PEAK FLOW (yr) _____ 10
 CARTRIDGE HEIGHT (SEE TABLE ABOVE) _____ 2"
 NUMBER OF CARTRIDGES REQUIRED _____ 3
 CARTRIDGE FLOW RATE _____ 11.25
 MEDIA TYPE (PERMITS, EPS, PEWDS) _____
 NOTES/SPECIAL REQUIREMENTS _____
 TO BE PROVIDED BY CONTECH

GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH * ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERING SOLUTIONS LLC REPRESENTATIVE. WWW.CONTECH.COM
- STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO H-20.80 (1993) DESIGN LOAD WITH COVER OF 2'-0" (610mm) AND SHOULDER/TERRAIN ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M295 AND BE COATED WITH THE CORRECT LOG.
- FILTER CARTRIDGES SHALL BE MEDIA FILLED, PASSIVE, SPONGE ACTIVATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 18 INCHES (457mm). FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 30 SECONDS.
- SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm/ft²) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft/ft²).
- STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-79 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES

- ANY SUB-BASE BACKFILL DEPTH AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
- CONTRACTOR TO INSTALL ANTI-FLOTATION BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLY STRUCTURE.
- CONTRACTOR TO PROVIDE INSTALL AND GROUT INLET PRESS.
- CONTRACTOR TO PROVIDE AND INSTALL CONNECTION TO THE OUTLET RISER STUD. STORMFILTER EQUIPPED WITH A DUAL DIAMETER OUTLET OUTLET STUD AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES (200mm), CONTRACTOR TO REMOVE THE 8 INCH (200mm) OUTLET STUD AT MANHOLE IN OUTLINE, COVER AND BY PASS OR EQUAL, AND PROVIDED BY CONTRACTOR.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED DROSS/RUNOFF.

CONTECH ENGINEERING SOLUTIONS LLC
 9533 Center Road, Columbia, MD 21043
 410.338.1122 • 410.338.2000 • 410.338.2001 FAX

SFMH48 STORMFILTER STANDARD DETAIL

STR #	TYPE	INV. IN	INV. OUT	TOP ELEV	DETAIL	LOCATION	REMARKS
EX-MH-2	EX. 4" MANHOLE	428.33	428.13	433.20	E=	1349094.32	N= 565402.95
EX-MH-3	EX. 4" MANHOLE	428.73	428.73	431.96	E=	1349245.57	N= 565269.65
MH-1	4" MANHOLE	424.69	424.59	428.80	G5.12	E= 1349020.58	N= 564901.71
MH-2	4" MANHOLE	424.84	424.84	428.05	G5.12	E= 1349024.78	N= 564931.29
MH-3	4" MANHOLE	416.91	416.81	423.20	G5.12	E= 1349117.89	N= 565152.85
MH-4	4" MANHOLE	422.42 / 427.28	422.41	431.35	G5.12	E= 1349285.23	N= 565084.81
I-1	8"	430.10	430.10	432.00	D-4.24	E= 1349063.57	N= 565381.57
I-2	10" NYLOPLAST DRAIN BASIN W/ DOME GRATE	436.45	436.35	438.30	-	E= 1349899.26	N= 565210.06
I-3	8" NYLOPLAST DRAIN BASIN W/ BRONZE GRATE	437.49	440.16	-	-	E= 1348869.64	N= 565157.48
I-4	A-5	429.43	429.33	433.88	D-4.02	E= 1349210.80	N= 565244.51
I-5	A-5	431.73	431.73	437.73	-	E= 1349138.37	N= 565163.11
I-6	12" ADS INLINE INLET W/ 12" CAST IRON GRATE	425.17	425.17	427.46	E=	1349943.30	N= 564985.92
I-7	12" ADS INLINE INLET W/ 12" CAST IRON GRATE	425.17	425.17	427.46	E=	1348960.06	N= 564985.94
I-8	8"	424.25 / 424.25	424.15	427.00	D-4.24	E= 1349077.82	N= 564949.00
I-9	A-5	425.44 / 431.00	425.44	431.00	D-4.02	E= 1349026.20	N= 564714.44
I-10	A-5	430.46 / 430.46	430.46	432.10	D-4.02	E= 1349105.11	N= 565038.25
I-11	A-5	433.46 / 437.46	433.46	437.46	D-4.02	E= 1349142.35	N= 565073.07
I-12	12"	415.05 / 415.05	414.95	417.80	D-4.10	E= 1349278.76	N= 565188.89
I-13	A-5	419.54	419.44	427.25	D-4.24	E= 1349085.27	N= 565091.14
I-13B	8" NYLOPLAST DRAIN BASIN W/ DOME GRATE	425.33	425.33	427.80	-	E= 1349160.28	N= 564907.33
I-14	8" NYLOPLAST DRAIN BASIN W/ DOME GRATE	428.63	431.30	-	-	E= 1349117.08	N= 565081.25
I-15	10" NYLOPLAST DRAIN BASIN W/ BRONZE GRATE	423.78 / 420.83	415.33	428.22	-	E= 1349252.48	N= 565174.39
I-16	8" NYLOPLAST DRAIN BASIN W/ BRONZE GRATE	424.54	428.10	-	-	E= 1349271.40	N= 565154.04
I-17	8" NYLOPLAST DRAIN BASIN W/ BRONZE GRATE	425.36	428.00	-	-	E= 1349295.54	N= 565128.57
I-18	8" NYLOPLAST DRAIN BASIN W/ BRONZE GRATE	421.64	428.30	-	-	E= 1349232.48	N= 565203.15
ES-1	15" HOPE END SECTION	425.25	425.25	425.25	E=	1349071.15	N= 564932.76
PT-1	PASS THRU INLET	428.70	428.20	427.30	D-4.35	E= 1349083.85	N= 564878.07
SF-1	STORMFILTER	434.46	431.41	438.46	E=	1349147.87	N= 565140.85
CO-1	CLEANOUT	433.78	433.88	438.58	-	E= 1349047.92	N= 565309.07
CO-2	CLEANOUT	435.51	435.41	439.82	-	E= 1349024.78	N= 565238.60
CO-3	CLEANOUT	436.78 / 437.80	436.88	440.27	-	E= 1349003.53	N= 565200.55
CO-4	CLEANOUT	436.07 / 438.07 / 438.07	435.90	440.25	-	E= 1349195.48	N= 565122.32
CO-5	CLEANOUT	435.30	435.20	438.95	-	E= 1349167.81	N= 565106.27
CO-6	CLEANOUT	434.09	436.78	442.90	-	E= 1348939.82	N= 564942.21
CO-7	CLEANOUT	438.15	437.81	440.30	-	E= 1349295.22	N= 565142.84
CO-8	CLEANOUT	428.45	428.35	428.50	-	E= 1349014.11	N= 564905.93
CO-8A	CLEANOUT	425.70 / 428.03	425.60	428.17	-	E= 1349018.21	N= 564934.86
CO-9	CLEANOUT	425.98	425.82	428.40	-	E= 1349017.41	N= 564956.57
CO-10	CLEANOUT	429.07 / 429.24	428.97	433.00	-	E= 1349016.29	N= 564989.44
CO-11	CLEANOUT	434.51 / 434.58	434.41	437.20	-	E= 1349041.41	N= 565068.17
CO-12	CLEANOUT	437.50 / 437.73	437.33	440.00	-	E= 1349077.80	N= 565176.88
CO-13	CLEANOUT	428.73	428.63	432.10	-	E= 1349103.89	N= 565059.78
CO-14	CLEANOUT	434.82 / 434.82	434.48	437.70	-	E= 1349234.11	N= 565041.87
CO-15	CLEANOUT	422.90	422.80	434.00	-	E= 1349364.28	N= 565227.99
CO-16	CLEANOUT	423.67 / 425.65	423.57	436.70	-	E= 1348939.82	N= 564942.21
CO-17	CLEANOUT	424.30 / 425.65	424.14	436.50	-	E= 1349297.65	N= 564972.47
CO-18	CLEANOUT	424.95 / 425.93	424.85	432.75	-	E= 1349220.06	N= 564945.15
CO-19	CLEANOUT	425.83	425.68	428.30	-	E= 1349158.75	N= 564909.92
CO-20	CLEANOUT	428.08 / 428.42	427.98	432.10	-	E= 1349330.78	N= 565057.87
CO-21	CLEANOUT	424.42 / 424.42 / 424.64	424.32	428.20	-	E= 1349266.05	N= 565150.94
CO-22	CLEANOUT	425.18 / 425.18 / 425.39	425.08	428.18	-	E= 1349281.92	N= 565123.58
CO-23	CLEANOUT	427.17	427.00	430.80	-	E= 1349299.22	N= 565093.73
CO-24	CLEANOUT	421.30 / 421.48	421.20	425.48	-	E= 1349241.01	N= 565158.44
RD-5	CLEANOUT	428.27 / 428.77	428.17	432.80	-	E= 1348942.34	N= 564925.33
RD-6	CLEANOUT	433.44 / 433.94	433.34	438.40	-	E= 1348940.51	N= 564974.39
RD-7	CLEANOUT	434.04 / 434.98	434.48	437.30	-	E= 1348943.90	N= 565005.37
RD-8	CLEANOUT	436.02 / 436.34	435.92	438.60	-	E= 1348955.14	N= 565052.96
RD-9	CLEANOUT	437.08 / 437.41	436.98	439.50	-	E= 1349072.54	N= 565094.20
RD-17	CLEANOUT	430.15 / 430.49	430.05	433.50	-	E= 1349139.50	N= 564987.01
RD-18	CLEANOUT	432.20 / 432.53	432.10	435.80	-	E= 1349182.96	N= 565012.21
CO-P1	CLEANOUT	434.71 / 433.12	433.02	438.88	-	E= 1349062.20	N= 565053.56
CO-P2	CLEANOUT	434.66 / 435.09	434.56	437.39	-	E= 1349055.27	N= 565057.95
CO-P3	CLEANOUT	433.46	433.36	436.50	-	E= 1349208.35	N= 565037.73
CO-P4	CLEANOUT	432.32 / 432.44 / 432.44	432.22	434.74	-	E= 1349118.18	N= 565033.40

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5/31/2022

Chief, Development Engineering Division

Chief, Division of Land Development

Director

OWNER
 COLUMBIA ASSOCIATION INC.
 C/O ALBERT F. EDWARDS
 10221 WINGOPIN CIRCLE
 COLUMBIA, MD 21044
 (410) 381-3551

OWNER/DEVELOPER
 ROSLYN RISE FOUR, LLC
 59 UNIT BUILDING 1 (9%)
 C/O MACKENZIE KIESEL
 HOLLINS STREET, SUITE 202
 BALTIMORE, MD 21201
 (410) 230-2117

NO.	REVISION	DATE

STORM DEVELOPMENT PLANS

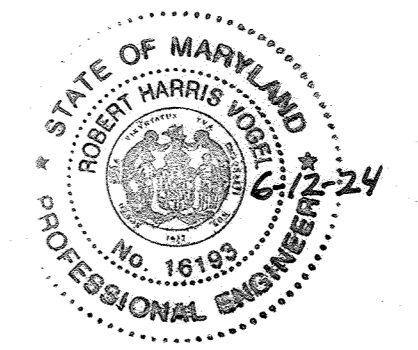
STORM DRAIN PROFILES

ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044

TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT

ZONED: NT
 LOTS 7 & 8, PARCEL 775
 LOT 5, PARCEL 81
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com



AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND "AS-BUILT" PLANS AND SPECIFICATIONS.

I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

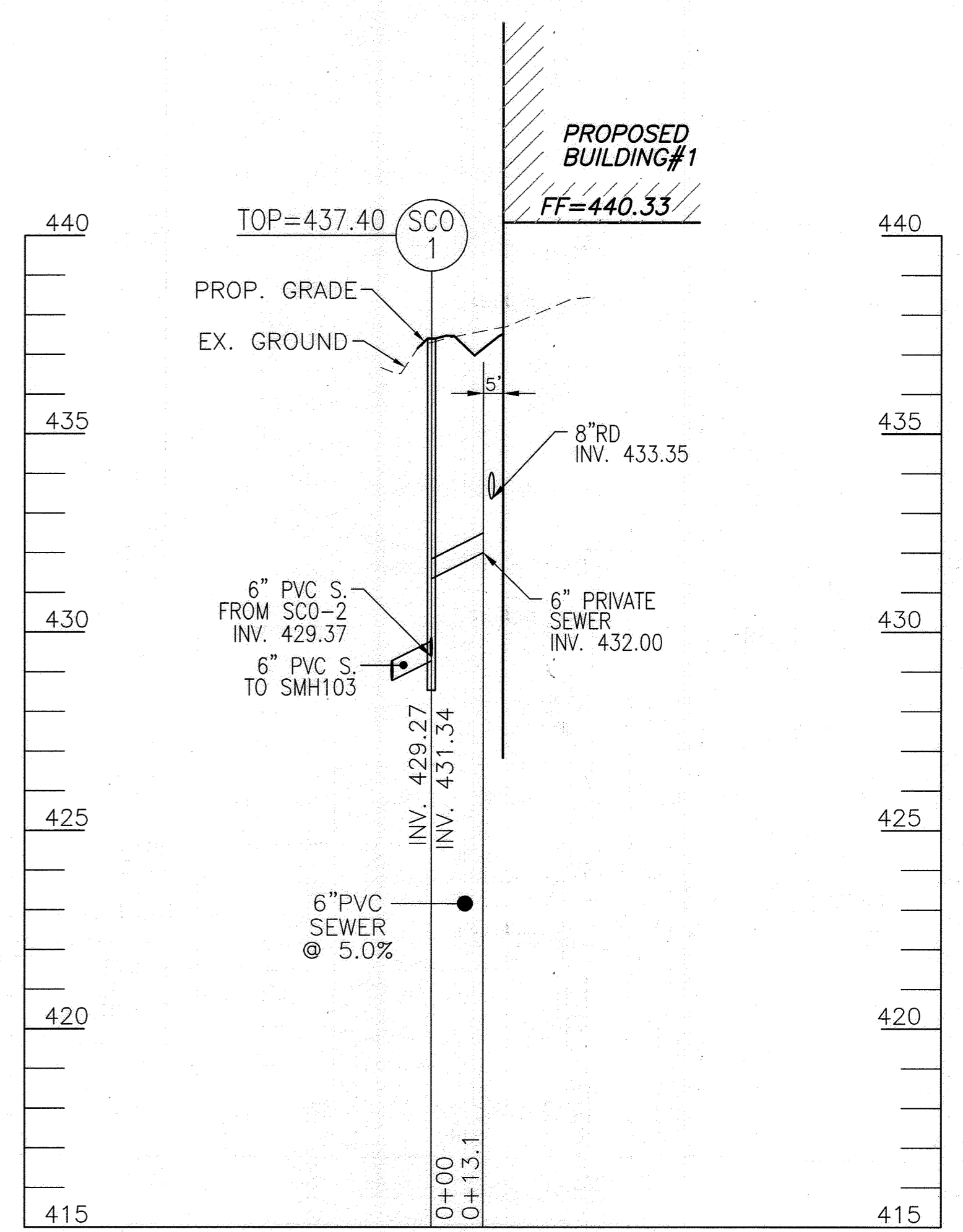
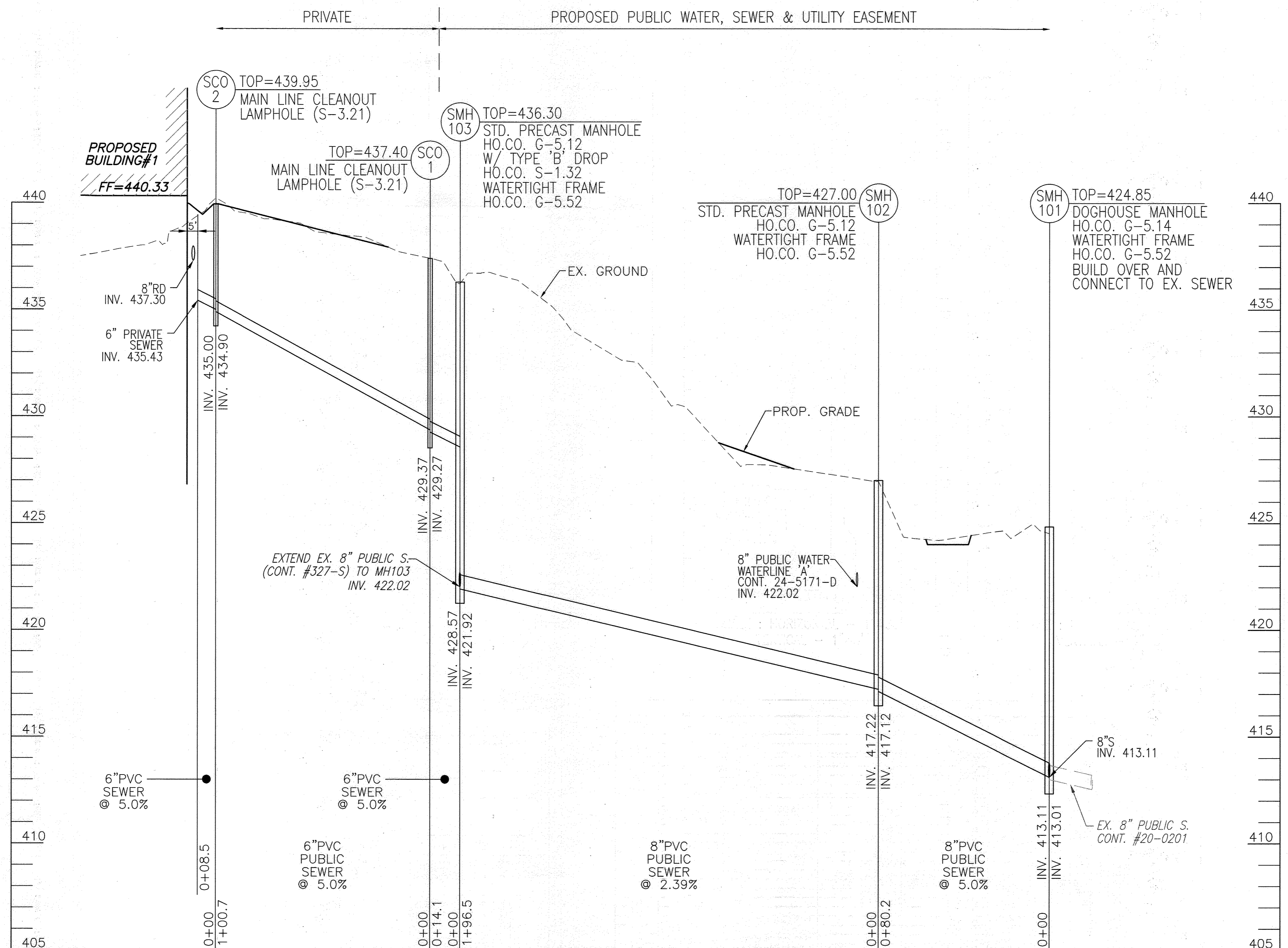
DATE: 6/2-24
 P.E. #

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

DESIGN BY: RHW/ACS
 DRAWN BY: ACS
 CHECKED BY: RHW
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 41539

17 SHEET OF 27



OWNER
 COLUMBIA ASSOCIATION INC.
 C/O ALBERT F. EDWARDS
 10221 WINGOPIN CIRCLE
 COLUMBIA, MD 21044
 (410) 381-3551

OWNER/DEVELOPER
 94 UNIT BUILDING 2 (4%); ROSLYN RISE FOUR, LLC
 59 UNIT BUILDING 1 (9%); ROSLYN RISE NINE, LLC
 C/O MACKENZIE KIESEL
 875 HOLLINS STREET, SUITE 202
 BALTIMORE, MD 21201
 (410) 230-2117

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 5/31/2022

Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

NO AS-BUILT INFORMATION ON THIS SHEET



AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

Robert Harris Vogel
 No. 16193
 6/2/24

NO.	REVISION	DATE

SITE DEVELOPMENT PLANS
UTILITY PROFILES
ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044

TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT

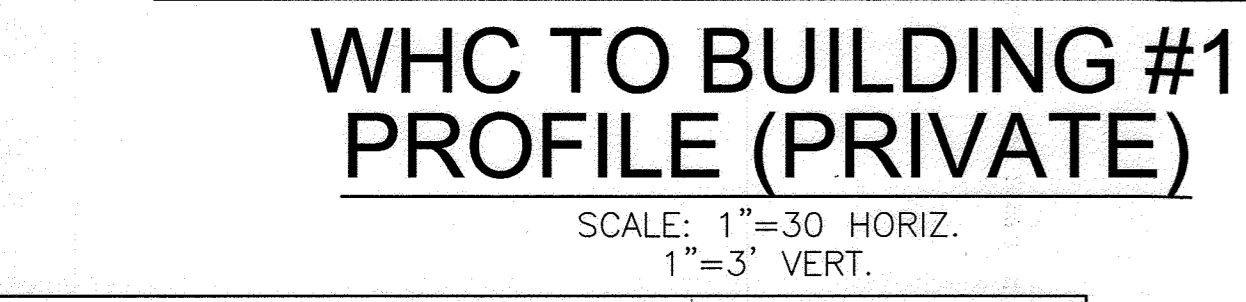
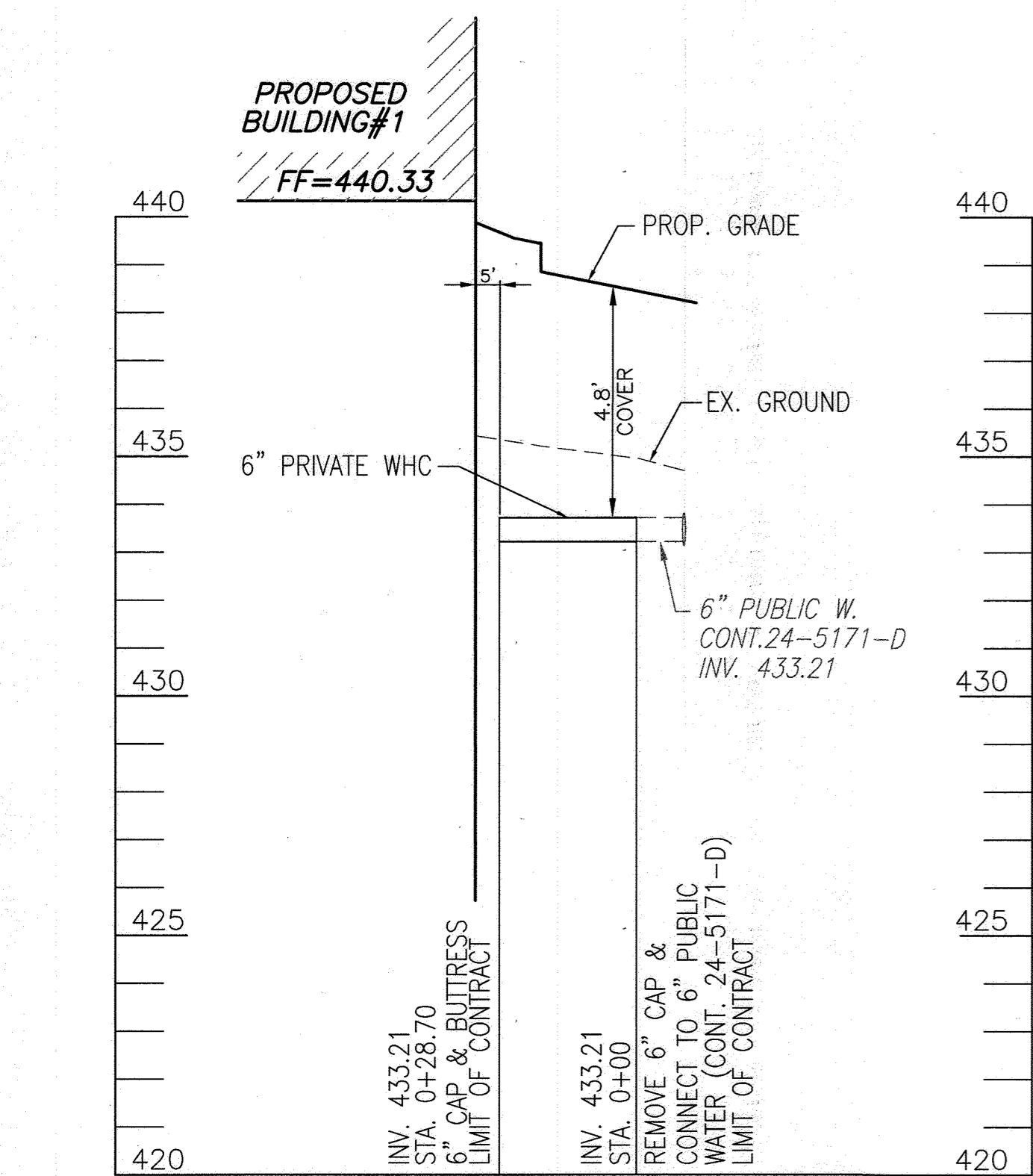
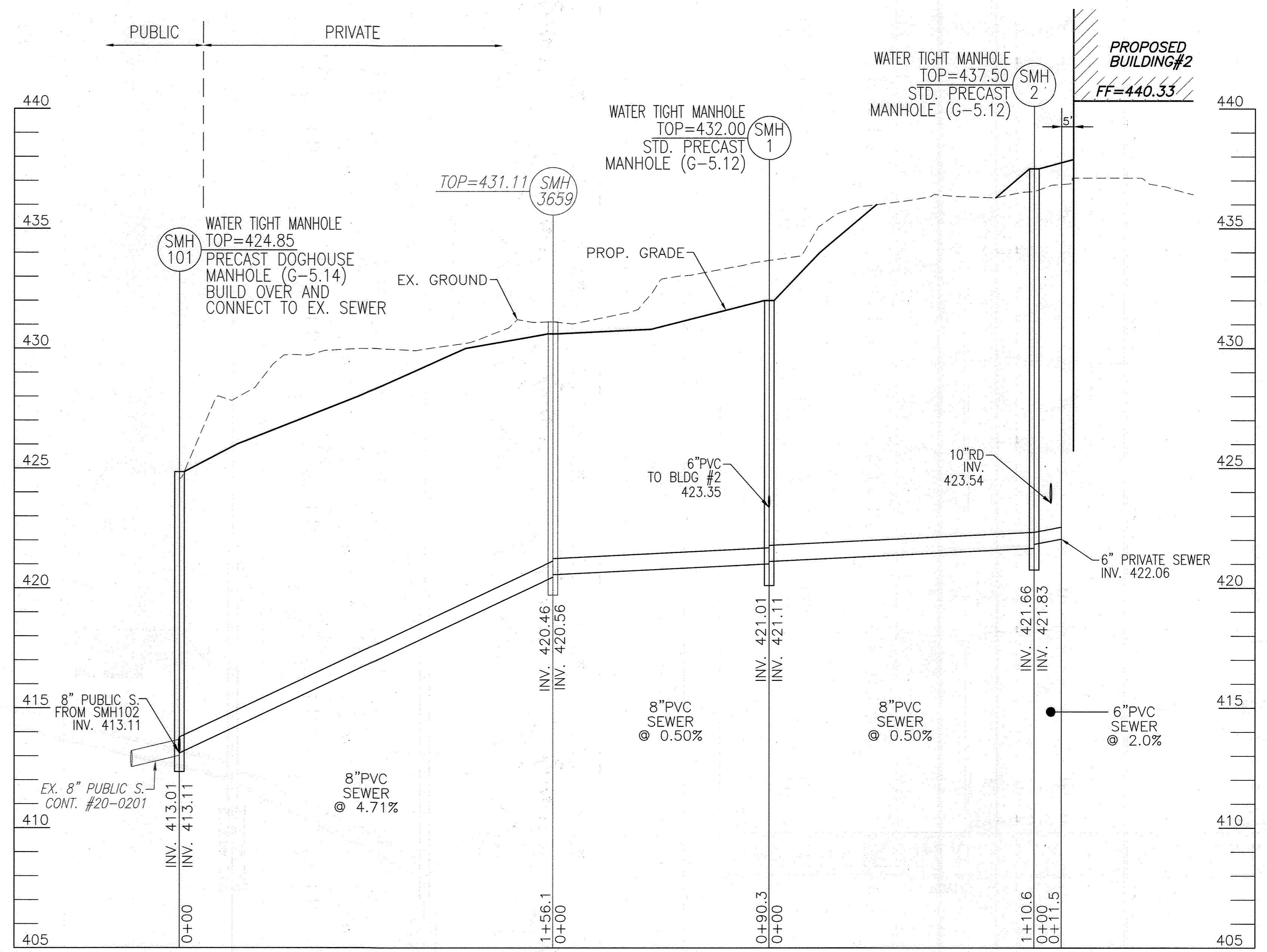
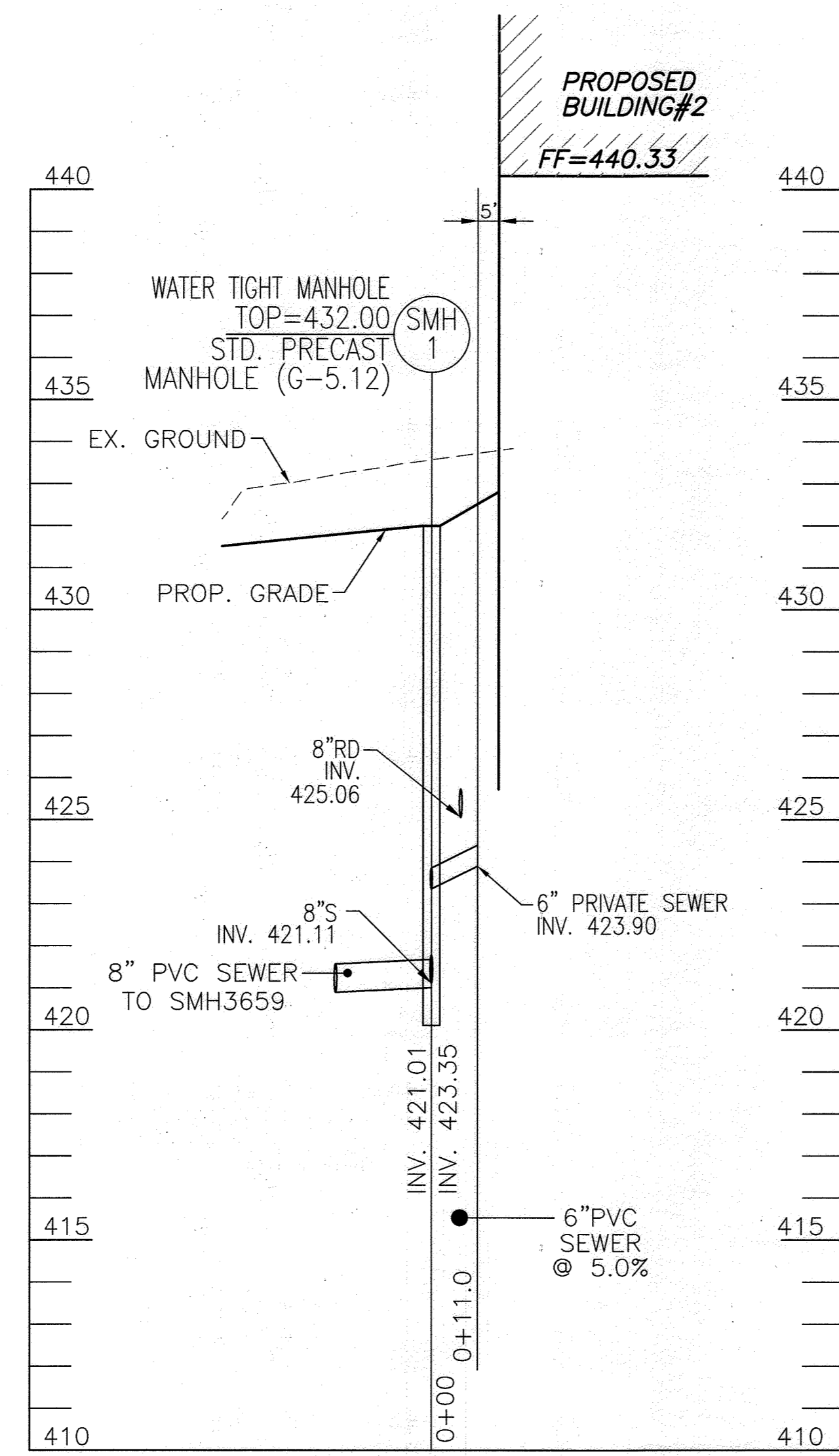
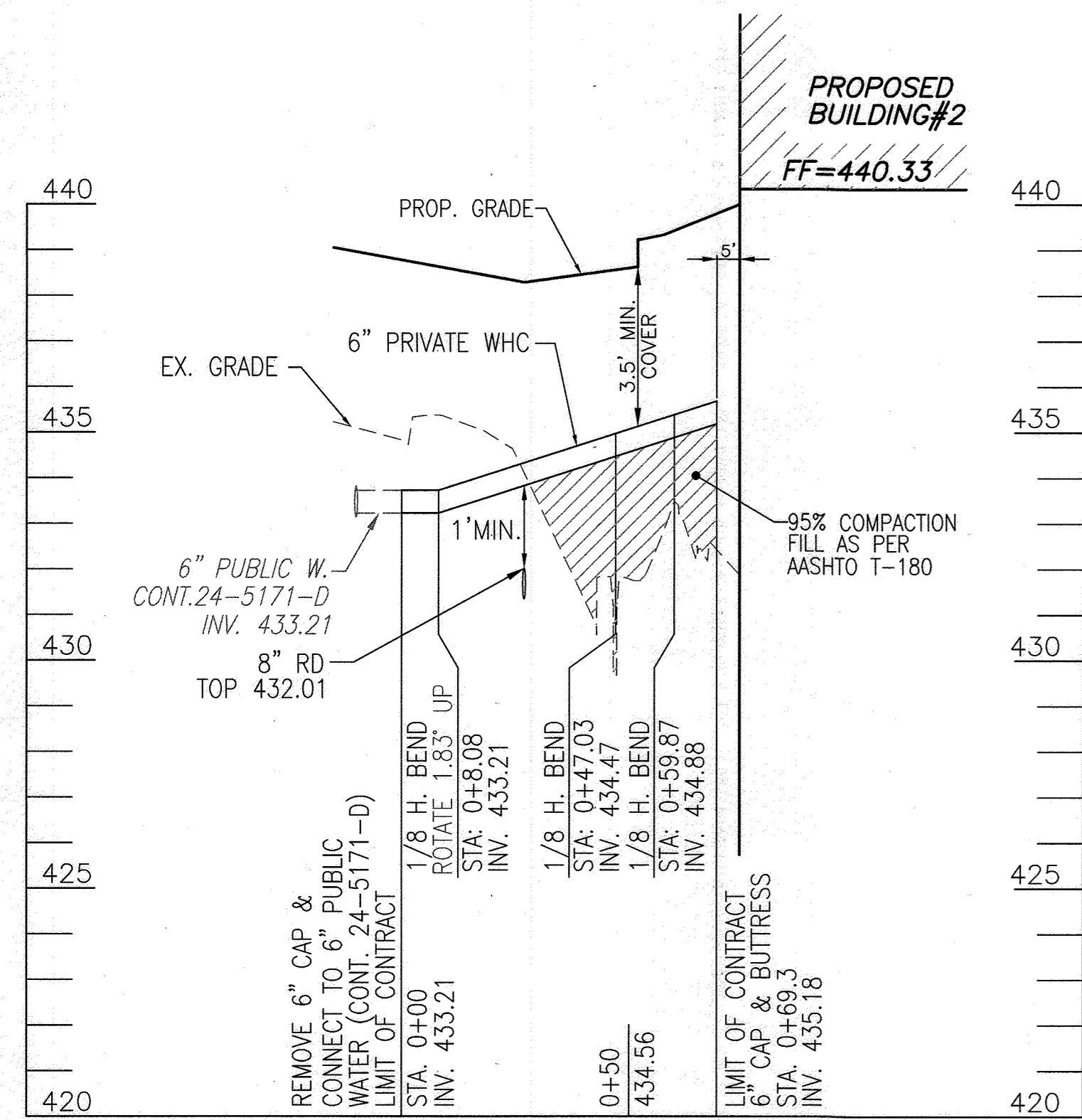
LOTS 7 & 8, ZONED: NT
 LOT 5, PARCEL 81
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
 TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16193 EXPIRATION DATE: 08-27-2022

DESIGN BY: RHW/ACS
 DRAWN BY: ACS
 CHECKED BY: RHW
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 41539

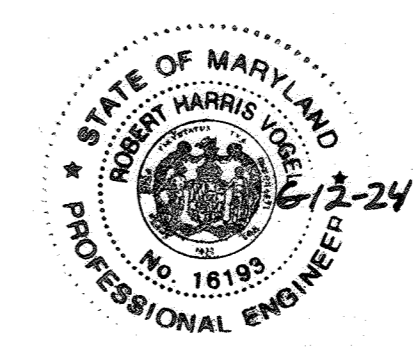
18 SHEET OF 27



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5/31/2022	5/31/2022
5/31/2022	6/1/2022

NO AS-BUILT INFORMATION ON THIS SHEET



AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

16193 6-12-24
 P.E.# DATE

NO.	REVISION	DATE

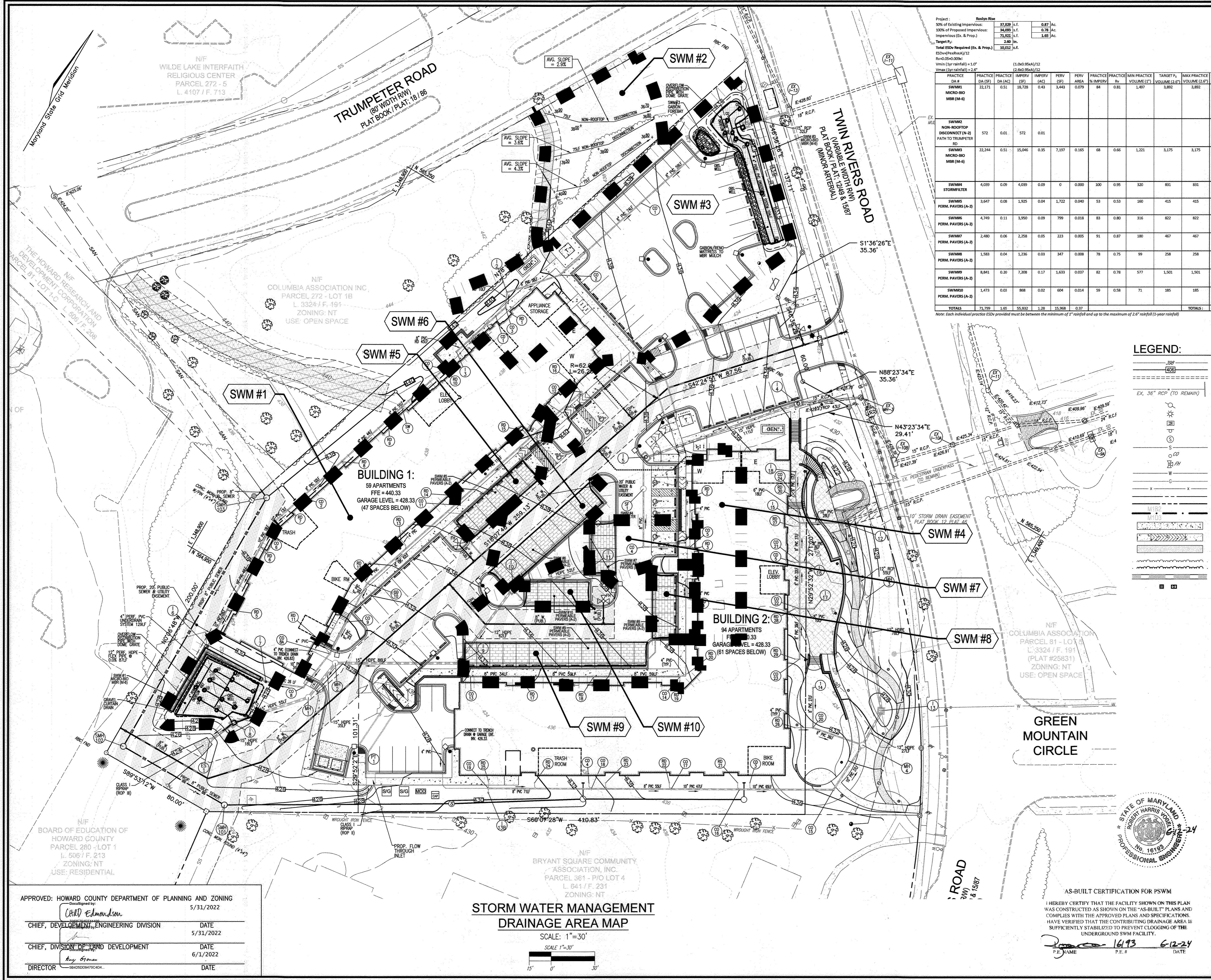
SITE DEVELOPMENT PLANS
UTILITY PROFILES
ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044

TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT

LOTS 7 & 8, PARCEL 272
 LOT 5, PARCEL 81
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
 TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: RHW/ACS	PROFESSIONAL CERTIFICATE 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. 16193 EXPIRATION DATE: 06-27-2022
DRAWN BY: ACS	
CHECKED BY: RHW	
DATE: OCTOBER 2021	
SCALE: AS SHOWN	19 SHEET OF 27
W.O. NO.: 41539	



Project: Roslyn Rise

50% of Existing Impervious:	37,829	s.f.	0.87	Ac.
100% of Proposed Impervious:	34,029	s.f.	0.79	Ac.
Impervious (Ex. & Prop.):	71,858	s.f.	1.66	Ac.
Target P _i :	2.60	in.		
Total ESDV Required (Ex. & Prop.):	10,032	s.f.		

ESDV (Per 1.0") = 1.07
 Vmin (1-yr rainfall) = 1.07
 (1.06) 95%/12
 (1.60) 95%/12

DA #	DA (AC)	IMPV (SF)	PERV (SF)	PERV AREA	IMPV (%)	PERV (%)	MIN PRACTICE VOLUME (1.0")	TARGET P _i VOLUME (2.0")	MAX PRACTICE VOLUME (2.0")	TOTAL ESDV VOLUME PROVIDED	CF	SF	REMARKS	depth	porosity
SWM#1 MICRO-BIO MBR (M-6)	22,175	0.51	18,728	0.48	3,443	0.079	94	0.81	1,497	3,982	3,982	3,790	MICROSCALE MICRO-BIO RETENTION (M-6)		
													Surface Area of MBR @ 1.0 ponding (75% above)		
													Stone Below Underdrain (25%)	0.83	x 0.4
													Additional Stone (Below)	3.00	x 0.3
													Additional Stone (2.5' W x 9' L - Curtain Drain)	4.00	x 0.3
SWM#2 NON-ROOFTOP DISCONNECT (N-2) PATH TO TRUMPETER RD	572	0.01	572	0.01								45	NON-STRUCTURAL PRACTICE		
													Imp. Ratio = 1.00		
													Per. Ratio = 0.08		
													DA S.F. = 572		
													IMP S.F. = 572		
													IMP AC = 0.05		
SWM#3 MICRO-BIO MBR (M-6)	22,244	0.51	15,046	0.55	7,197	0.160	68	0.66	1,221	3,175	3,175	2,363	MICROSCALE MICRO-BIO RETENTION (M-6)		
													Surface Area of MBR @ 1.0 ponding (75% above)		
													Stone Below Underdrain (25%)	0.83	x 0.4
													Additional Stone (Below)	3.00	x 0.3
													Additional Stone (Below)	3.00	x 0.3
SWM#4 STORMFILTER	4,039	0.09	4,039	0.09	0	0.000	100	0.95	320	831	831	320	STORMFILTER (CHAPTER 3 DEVICE)		
													Design Water Quality Volume		
SWM#5 PERM. PAVERS (A-2)	3,647	0.08	1,925	0.04	1,722	0.040	53	0.53	160	415	415	404	PERM. PAVERS (A-2)		
													Surface Area	0.2069	x
													Additional Stone Below	0.50	x
SWM#6 PERM. PAVERS (A-2)	4,749	0.11	3,950	0.09	799	0.018	83	0.80	316	822	822	820	PERM. PAVERS (A-2)		
													Surface Area	0.2069	x
													Additional Stone Below	1.00	x
SWM#7 PERM. PAVERS (A-2)	2,480	0.06	2,258	0.05	223	0.005	91	0.87	180	467	467	458	PERM. PAVERS (A-2)		
													Surface Area	0.2069	x
													Additional Stone Below	1.67	x
SWM#8 PERM. PAVERS (A-2)	1,583	0.04	1,236	0.03	347	0.008	78	0.75	99	258	258	247	PERM. PAVERS (A-2)		
													Surface Area	0.2069	x
													Additional Stone Below	0.33	x
SWM#9 PERM. PAVERS (A-2)	8,841	0.20	7,208	0.17	1,633	0.037	82	0.78	577	1,501	1,501	1,488	PERM. PAVERS (A-2)		
													Surface Area	0.2069	x
													Additional Stone Below	1.50	x
SWM#10 PERM. PAVERS (A-2)	1,473	0.03	968	0.02	604	0.014	59	0.58	71	185	185	167	PERM. PAVERS (A-2)		
													Surface Area	0.2069	x
													Additional Stone Below	0.00	x
TOTALS	71,799	1.65	55,832	1.28	15,968	0.37							TOTALS		

Note: Each individual practice ESDV provided must be between the minimum of 1" rainfall and up to the maximum of 2.6" rainfall (1-year rainfall)

LEGEND:

	EXISTING CONTOUR		PROPOSED CONTOUR		EXISTING CURB AND GUTTER		PRE-2014 PIPE AND HEADWALL		EXISTING UTILITY POLE		EXISTING LIGHT POLE		EXISTING MAILBOX		EXISTING SIGN		EXISTING SANITARY MANHOLE		EXISTING SANITARY LINE		EXISTING CLEANOUT		EXISTING FIRE HYDRANT		EXISTING WATER LINE		EXISTING GAS LINE		EXISTING FENCE		PROPERTY LINE		RIGHT-OF-WAY LINE		SOILS BOUNDARY		PROPOSED SIDEWALK		PROPOSED SIDEWALK RAMP		ASPHALT PAVING		EXISTING TREELINE		PROPOSED TREELINE		PROPOSED STORM DRAIN		PROPOSED STORM DRAIN INLETS		PROPOSED FIRE HYDRANT		PROPOSED WATER TEE & VALVE		PROPOSED WATER MAIN		PROPOSED SEWER MAIN		EXISTING TREES/LANDSCAPING		PROPOSED CURB AND GUTTER		MICRO-BIORETENTION		PERMEABLE PAVERS		GRASSCRETE		PUBLIC WATER, SEWER AND UTILITY EASEMENT		TEST PIT		SOIL BORING		STRUCTURAL RETAINING WALL		SEGMENTAL BLOCK RETAINING WALL		LIMIT OF DISTURBANCE		DRAINAGE AREA		DRAINAGE AREA LABEL
--	------------------	--	------------------	--	--------------------------	--	----------------------------	--	-----------------------	--	---------------------	--	------------------	--	---------------	--	---------------------------	--	------------------------	--	-------------------	--	-----------------------	--	---------------------	--	-------------------	--	----------------	--	---------------	--	-------------------	--	----------------	--	-------------------	--	------------------------	--	----------------	--	-------------------	--	-------------------	--	----------------------	--	-----------------------------	--	-----------------------	--	----------------------------	--	---------------------	--	---------------------	--	----------------------------	--	--------------------------	--	--------------------	--	------------------	--	------------	--	--	--	----------	--	-------------	--	---------------------------	--	--------------------------------	--	----------------------	--	---------------	--	---------------------

OWNER
 COLUMBIA ASSOCIATION INC.
 C/O ALBERT F. EDWARDS
 10221 WINCOPIN CIRCLE
 COLUMBIA, MD 21044
 (410) 381-3551

OWNER/DEVELOPER
 94 UNIT BUILDING 2 (4%); ROSLYN RISE FOUR, LLC
 59 UNIT BUILDING 1 (9%); ROSLYN RISE NINE, LLC
 C/O MACKENZIE KIESEL
 875 HOLLINS STREET, SUITE 202
 BALTIMORE, MD 21201
 (410) 230-2117

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Designed by: 5/31/2022
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

STORM WATER MANAGEMENT DRAINAGE AREA MAP
 SCALE: 1"=30'
 SCALE: 1"=30'

AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
 P.E. NAME: 16193 P.E.# 6-12-24 DATE

NO. REVISION DATE

SITE DEVELOPMENT PLANS
STORMWATER MANAGEMENT DRAINAGE AREA MAP
ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044

TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT

LOTS 7 & 8, ZONED: NT
 LOT 5, PARCEL 81
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410-461.7666 F: 410-461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
 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. MY LICENSE NO. IS 16193. EXPIRATION DATE: 09-27-2022

DESIGN BY: RHV/ACS
 DRAWN BY: ACS
 CHECKED BY: RHV
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 41539

20 SHEET OF 27

APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

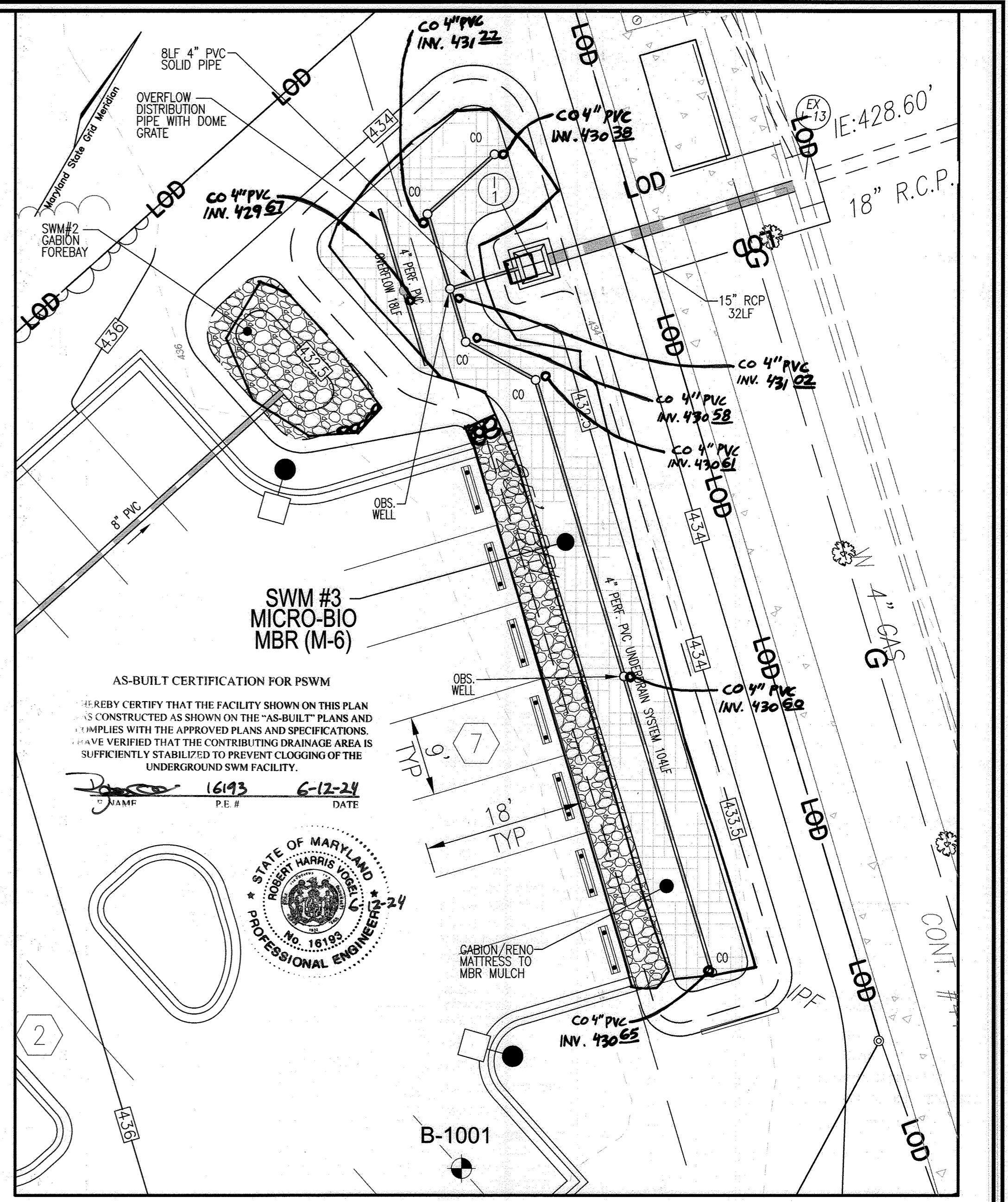
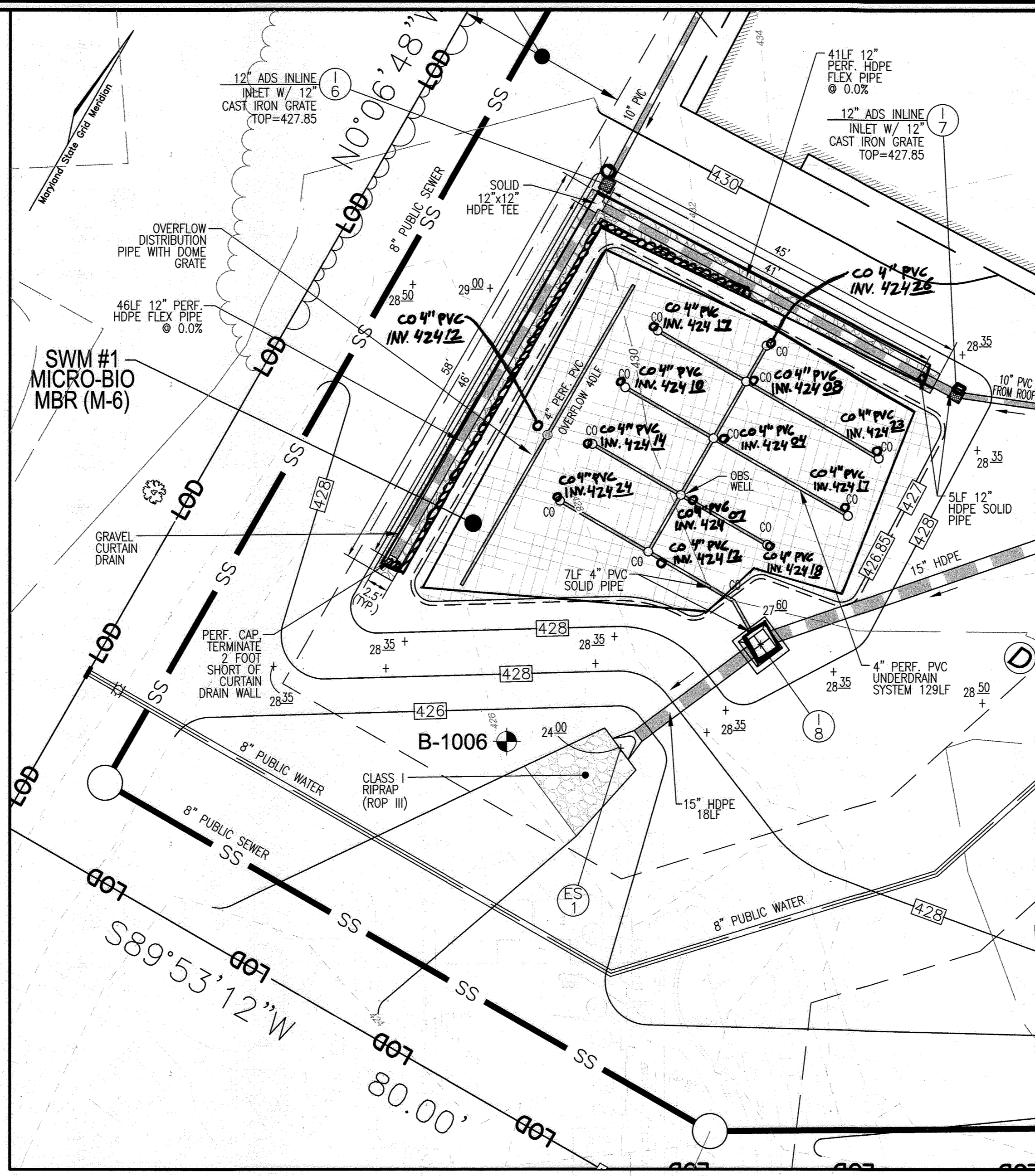
- MATERIAL SPECIFICATIONS**
THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.
- FILTERING MEDIA OR PLANTING SOIL**
THE SOIL SHALL BE A UNIFORM MIX OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES, NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OF PLANTINGS. CHUCKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.06.01.05, THE PLANTING SOIL SHALL MEET THE FOLLOWING CRITERIA:
 - SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
 - ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
 - CLAY CONTENT - TO THE MAXIMUM ALLOWABLE PERCENTAGE OF LESS THAN 5%.
 - PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.
 THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.
- COMPACTION**
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF THE BIORETENTION FACILITY AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TIRE TRUCKS. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.
COMPACTION CAN BE AVOIDED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.
ROTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING THE BASE. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE. WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOILS IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO PREPARE SOILS AND SAND. GRADE BEHAVIOR MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.
- PLANT MATERIAL**
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.
- PLANT INSTALLATION**
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTABLE. SHREDDED MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL ACED (6 TO 12 MONTHS) BEFORE PLANTING SPECIFICATIONS.
ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.
GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.
THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFERS, OR AT A MINIMUM, IMPEDS THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.
- UNDERDRAINS**
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
 - PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HDPE).
 - PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4x4) GALVANIZED HARDWARE CLOTH.
 - GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
 - THE MAIN COLLECTOR PIPES SHALL BE AT A MINIMUM 0.5% SLOPE TO THE PERFORATED PIPE.
 - A RIGID MONITORING OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
 - A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".
 THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).
- MISCELLANEOUS**
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

MBR Facility Number	Ponding Depth (ft)	Ponding Elevation ELEV. A	Top of Mulch ELEV. B	Bottom of Mulch ELEV. C	Depth of Plant Mix ELEV. D	Bottom of Plant Mix ELEV. E	Bottom of Pea Gravel ELEV. F	Depth of Underdrain (ft)	Invert of Underdrain ELEV. G	Bottom of Stone ELEV. H	Depth of REV Stone ELEV. I	Bottom of Additional Stone ELEV. J	Bottom of Add'l Stone ELEV. K	Invert of Outfall Pipe ELEV. L
SWM#1 (M-6)	0.75	427.60	426.85	426.60	1.50	425.15	424.77	1.00	424.15	423.77	0.83	422.94	3.00	419.94
SWM#2 (M-6)	1.00	433.50	432.40	432.25	1.50	430.95	430.42	1.00	429.75	429.42	0.83	428.59	3.00	425.59

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil (2" to 4" deep)	loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type I nonwovens
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underflow pipes. Perforated pipe shall be wrapped with 1/2-inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f'c = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved Stone or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.8(R); vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonate or dolomite sand substitutions are acceptable. No "rock dust" can be used for sand.

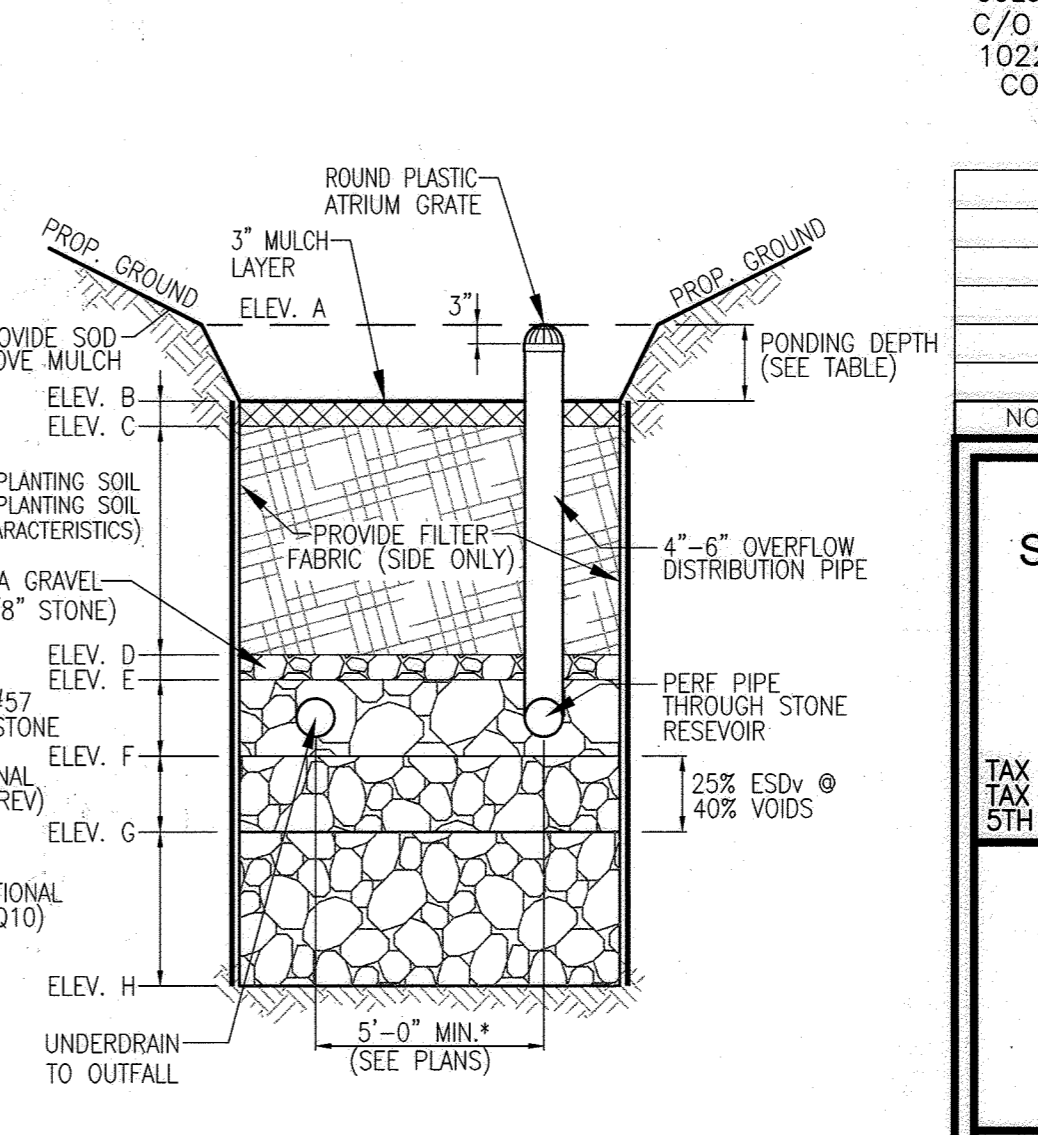
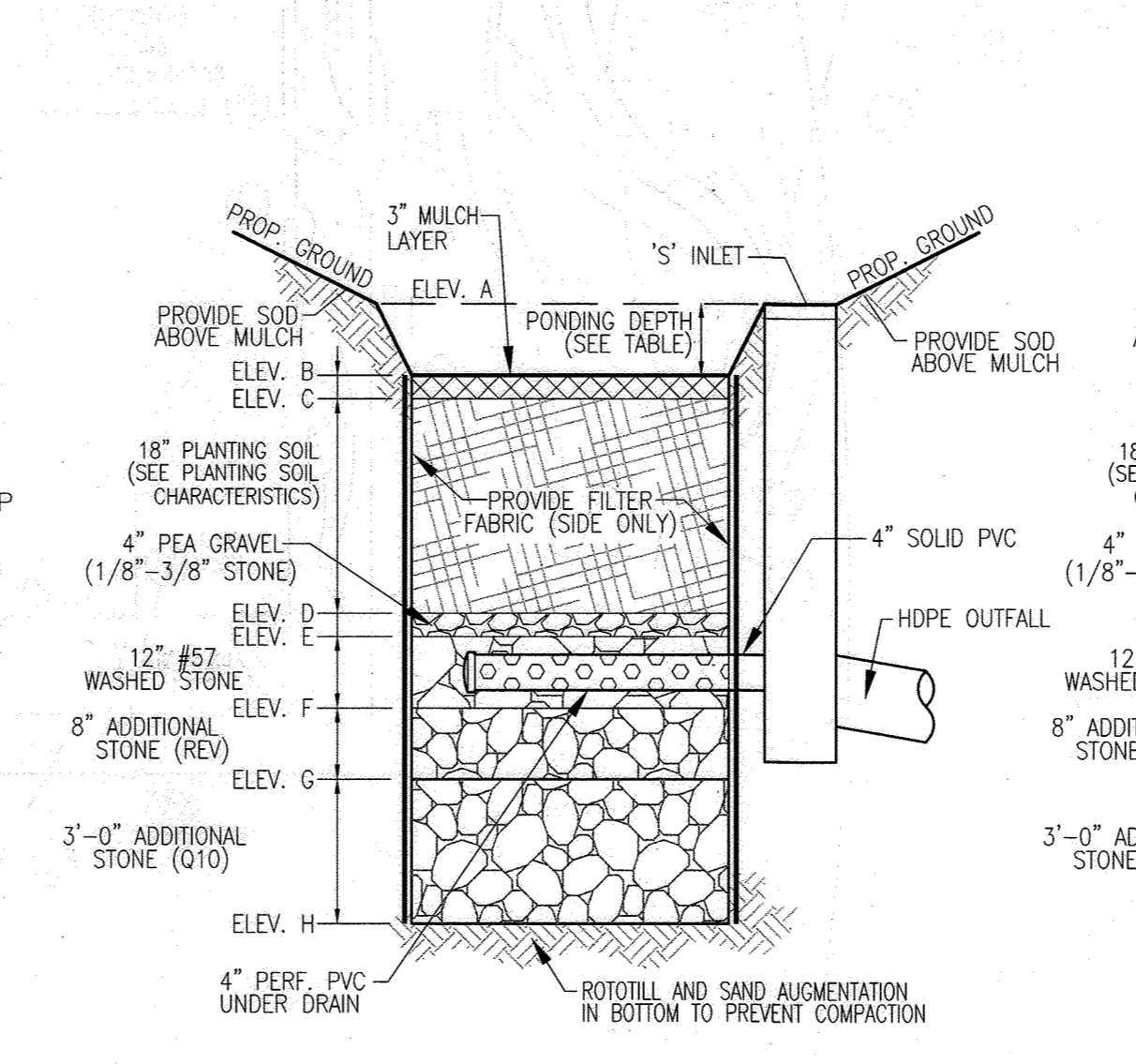
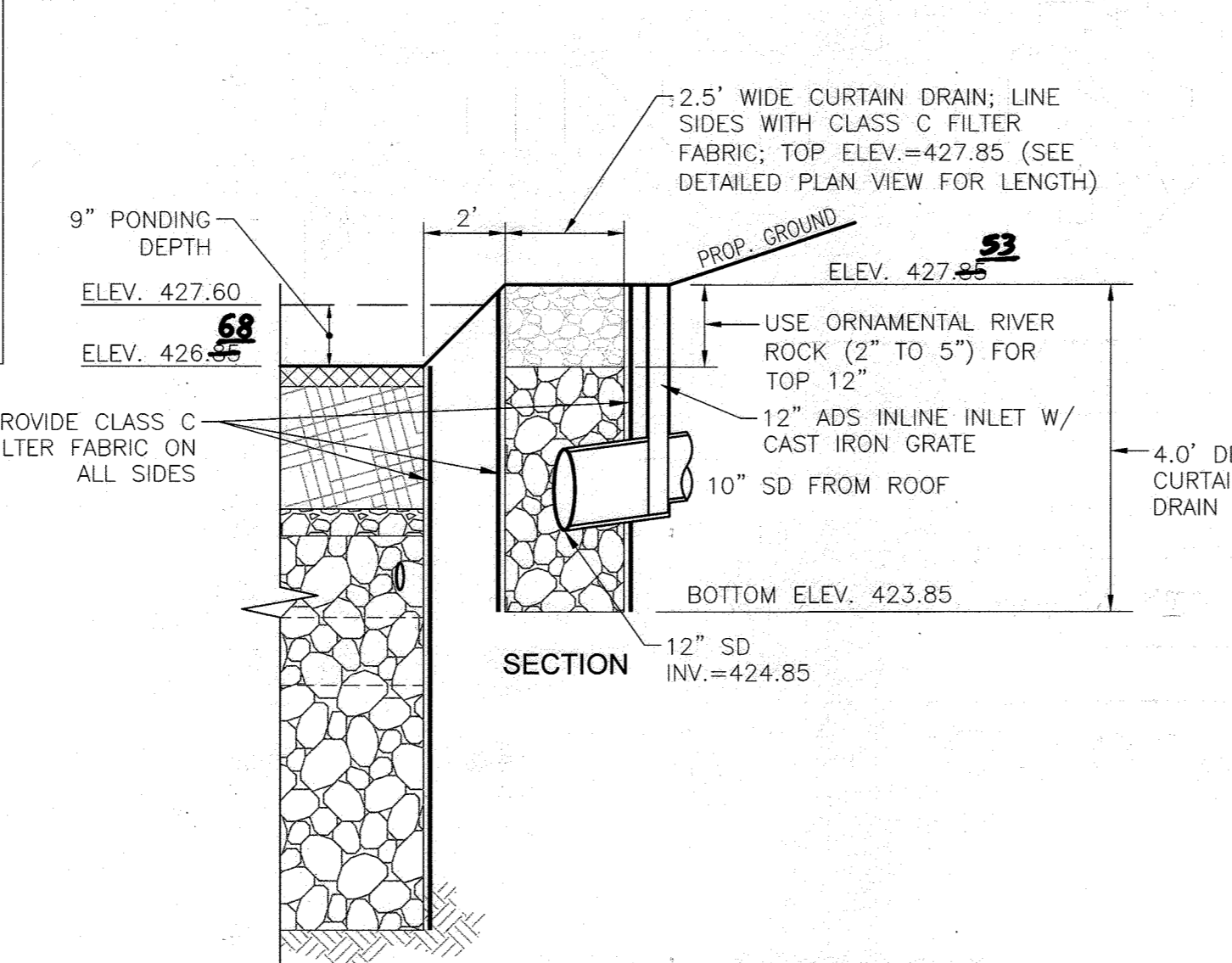
OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT AND TO REPLACING MULCH. MAINTENANCE OF PLANTINGS SHALL BE DONE AS FOLLOWS:
 - WATERING: DURING SEASONAL REPLACEMENT PLANT MATERIALS IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER REPLACEMENT MANUAL, VOLUME II, TABLE 2.4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION. CONSIDER BEYOND TRIMMED PLANT MATERIALS WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL. TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.



SCALE: 1"=10'
PLAN VIEW
SCALE: 1"=10'

SCALE: 1"=10'
PLAN VIEW
SCALE: 1"=10'



MICRO-BIORETENTION
CURTAIN DRAIN DISTRIBUTION PIPE DETAIL
NOT TO SCALE

MICRO-BIORETENTION (UNDERDRAIN)
NOT TO SCALE

MICRO-BIORETENTION (OVERFLOW)
NOT TO SCALE

NOTE:
1. THIS DETAIL IS FOR THE CURTAIN DRAINS WITHIN MICRO-BIORETENTION AREA SWM#1 ONLY

MICRO-BIORETENTION NOTES:
1. ONLY THE SIDES OF MICROBIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICROBIORETENTION WILL CAUSE THE MBR TO FAIL AND THEREFORE SHALL NOT BE INSTALLED.
2. WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH.
3. PROVIDE 5" MINIMUM SPACING BETWEEN UNDERDRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLANS)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 5/31/2022
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE 5/31/2022
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE 6/1/2022
 DIRECTOR

OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINGPIN CIRCLE
COLUMBIA, MD 21044
(410) 381-3551

OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KESSEL
875 HOLLINS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

NO.	REVISION	DATE

SITE DEVELOPMENT PLANS
STORMWATER MANAGEMENT NOTES AND DETAILS
MICRO-BIORETENTION
ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044

TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT

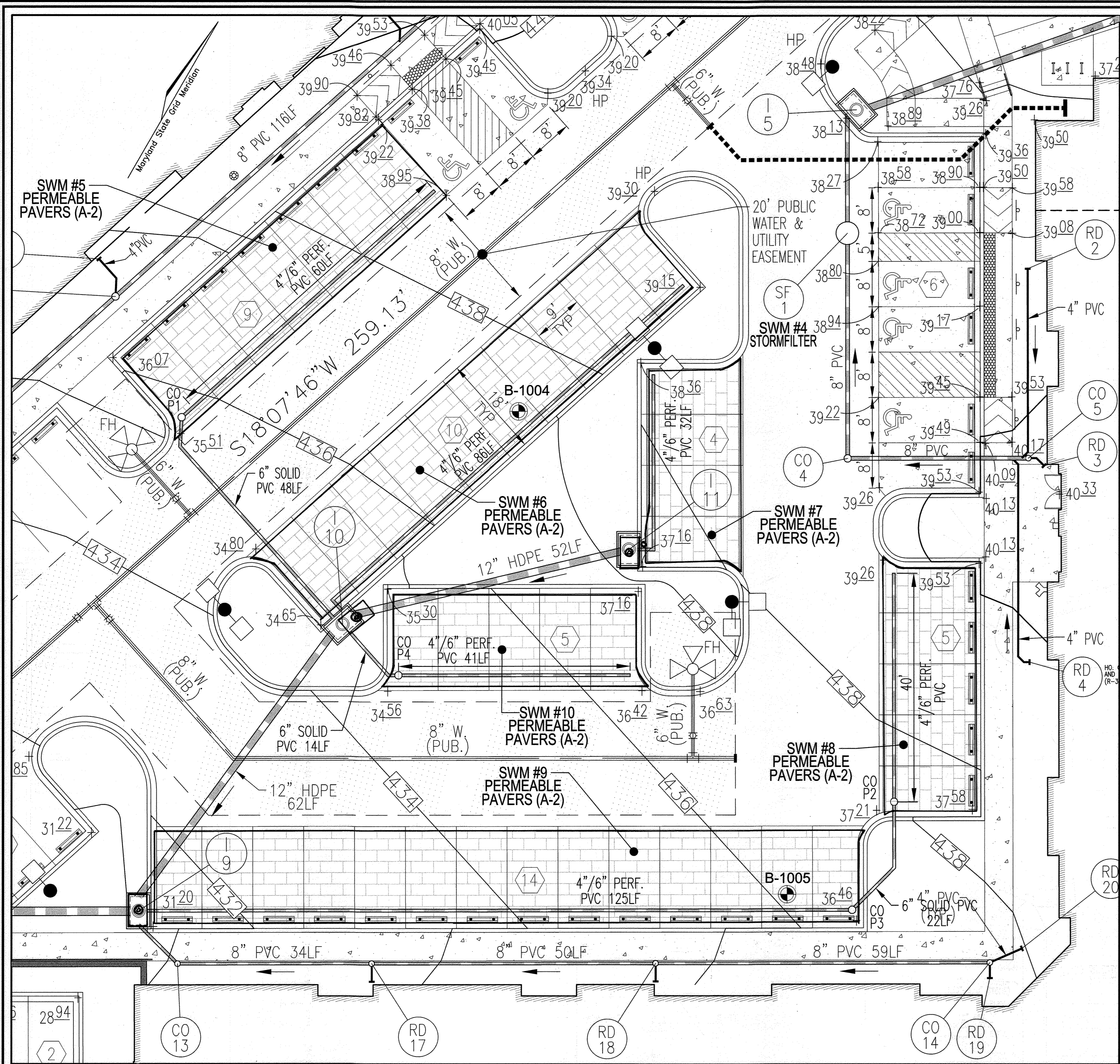
LOTS 7 & 8, PARCEL 272
 LOT 5, PARCEL 81
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
 +
TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

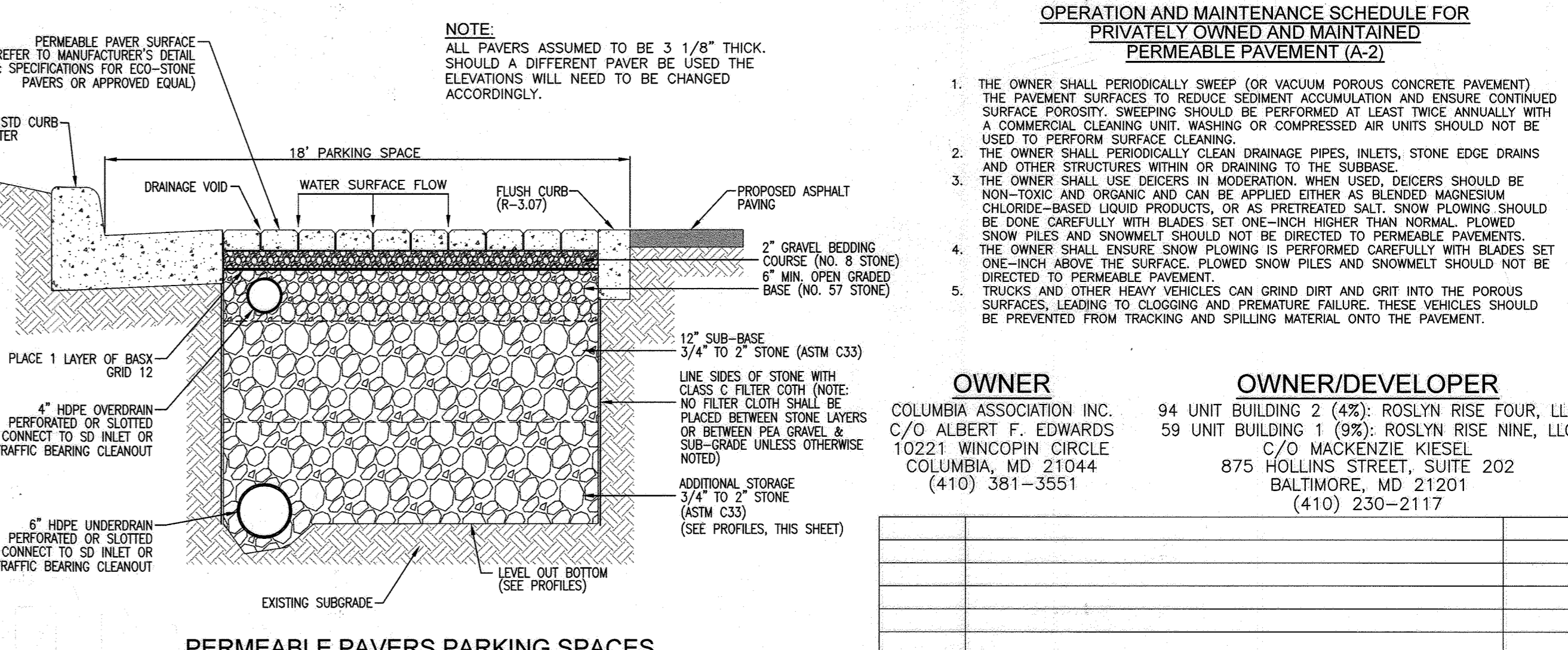
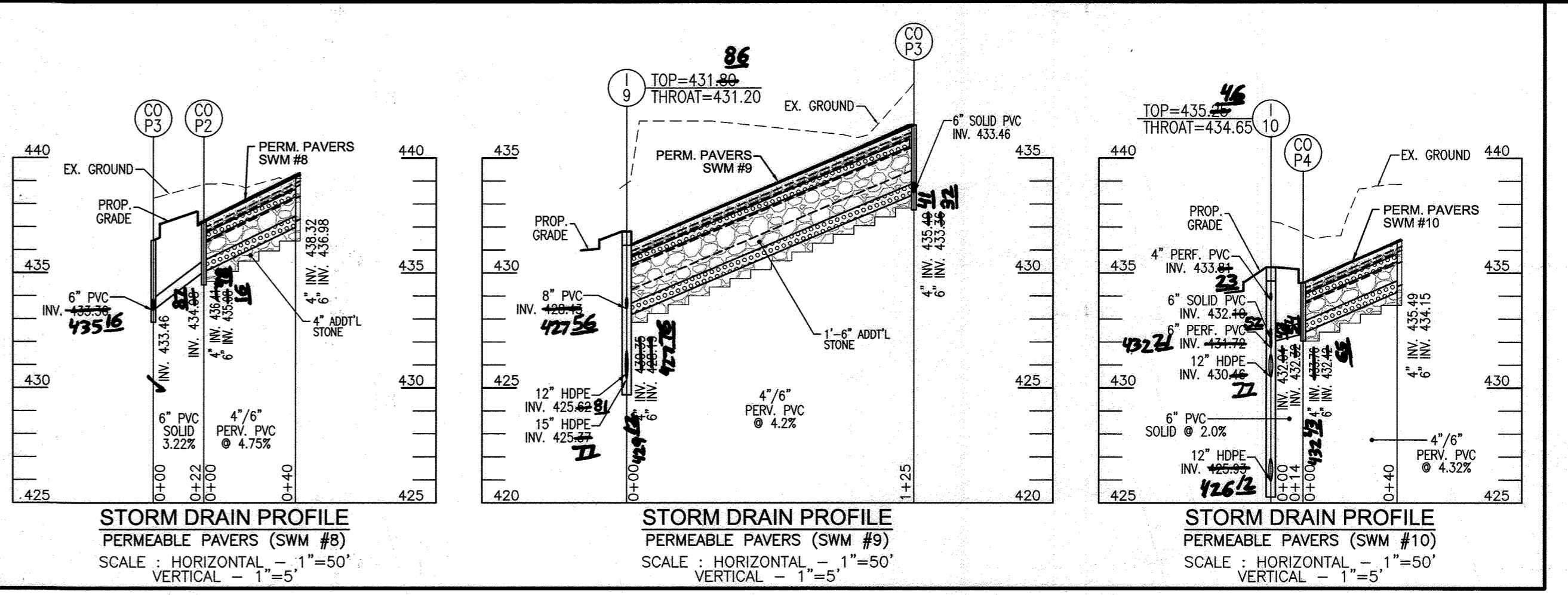
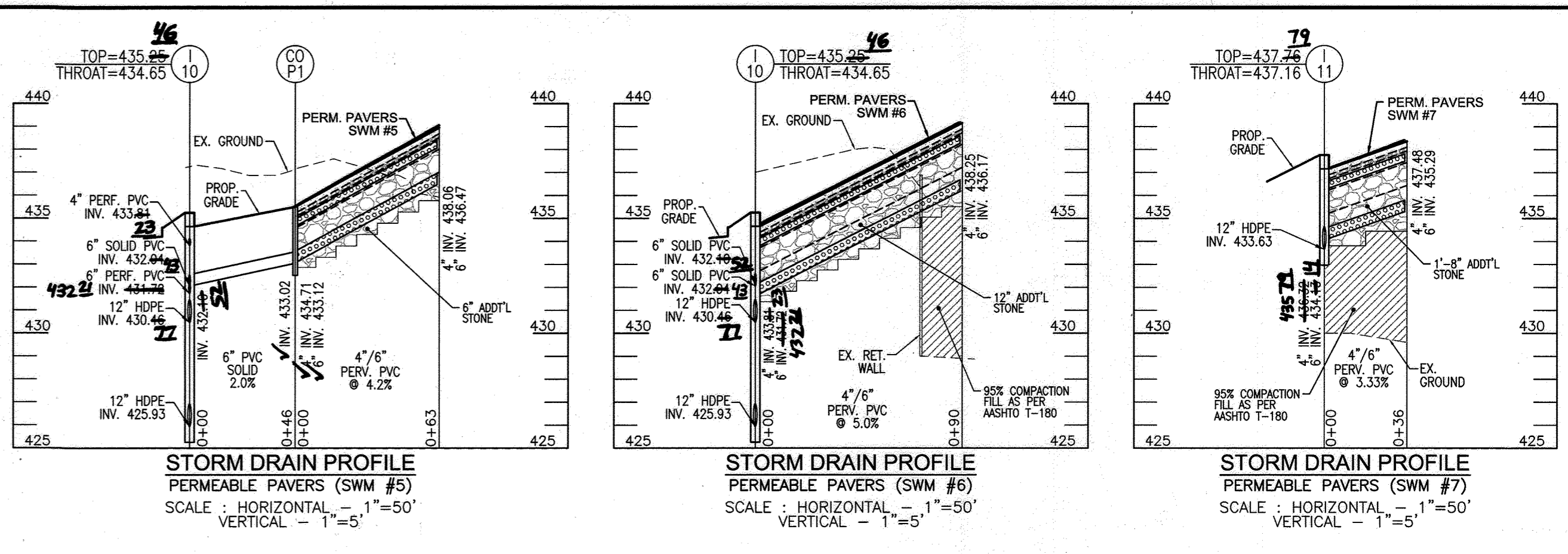
PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 EXPIRATION DATE: 08-27-2025

DESIGN BY: RHW/ACS
 DRAWN BY: ACS
 CHECKED BY: RHW
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 41539

21 SHEET OF 27



PLAN VIEW
SCALE: 1"=10'
SCALE 1"=10'



PERMEABLE PAVERS PARKING SPACES
(FOR ELEVATIONS AND INVERTS, SEE PROFILES)

PERMEABLE PAVERS NOTES:

1. PAVEMENT CROSS-SECTION TO BE CONFIRMED BY GEOTECHNICAL ENGINEER
2. PERMEABLE PAVERS SECTION TO CONFORM TO APPENDIX B.4.B (SPECIFICATIONS FOR PERMEABLE PAVEMENTS) AND DESIGNED BY THE PROJECT GEOTECHNICAL ENGINEER.
3. UNDERDRAINS/OVERDRAINS SHALL CONNECT INTO A TRAFFIC BEARING CLEANOUT OR INLET AS SHOWN ON THE PLANS.
4. PROVIDE FILTER FABRIC ALONG SIDES OF PERVIOUS CONCRETE (NOT BOTTOM).

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

1. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING OR COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
2. THE OWNER SHALL PERIODICALLY CLEAN DRAINAGE PIPES, INLETS, STONE EDGE DRAINS AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE.
3. THE OWNER SHALL USE DEICERS IN MODERATION. WHEN USED, DEICERS SHOULD BE NON-TOXIC AND ORGANIC AND CAN BE APPLIED EITHER AS BLENDED MAGNESIUM CHLORIDE-BASED LIQUID PRODUCTS, OR AS PRETREATED SALT. SNOW FLOWING SHOULD BE DONE CAREFULLY WITH BLADES SET ONE-INCH HIGHER THAN NORMAL. FLOWED SNOW PILES AND SNOWMELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENTS.
4. THE OWNER SHALL ENSURE SNOW FLOWING IS PERFORMED CAREFULLY WITH BLADES SET ONE-INCH ABOVE THE SURFACE. FLOWED SNOW PILES AND SNOWMELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.
5. TRUCKS AND OTHER HEAVY VEHICLES CAN GRIND DIRT AND GRIT INTO THE POROUS SURFACES, LEADING TO CLOGGING AND PREMATURE FAILURE. THESE VEHICLES SHOULD BE PREVENTED FROM TRACKING AND SPILLING MATERIAL ONTO THE PAVEMENT.

OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINCOPIN CIRCLE
COLUMBIA, MD 21044
(410) 381-3551

OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 HOLLIS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSign by: *Chad Edmondson* 5/31/2022

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 5/31/2022

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/1/2022

DIRECTOR DATE

APPENDIX B.4.B SPECIFICATIONS FOR PERMEABLE PAVEMENTS
THESE SPECIFICATIONS INCLUDE INFORMATION ON ACCEPTABLE MATERIALS FOR TYPICAL APPLICATIONS AND ARE NOT EXCLUSIVE OR LIMITING.

PERMEABLE INTERLOCKING CONCRETE PAVEMENTS (PICP) SPECIFICATIONS
PAVER BLOCKS - BLOCKS SHOULD BE EITHER 3-1/8 IN. OR 4 IN. THICK, AND MEET ASTM C 936 OR CSA A231.2 REQUIREMENTS. APPLICATIONS SHOULD HAVE 20% OR MORE (40% PREFERRED) OF THE SURFACE AREA OPEN. INSTALLATION SHOULD FOLLOW MANUFACTURER'S INSTRUCTIONS, EXCEPT THAT INFILL AND BASE COURSE MATERIALS AND DIMENSIONS SPECIFIED IN THIS APPENDIX SHALL BE FOLLOWED.

INFILL MATERIALS AND LEVELING COURSE - OPENINGS SHALL BE FILLED WITH ASTM C-33 GRADED SAND OR SANDY LOAM. PICP BLOCKS SHALL BE PLACED ON A ONE-INCH THICK LEVELING COURSE OF ASTM C-33 SAND.

BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN OPEN PORE SPACE OF 30% (m=0.30).

INSPECTION
REGULAR INSPECTIONS SHALL BE MADE DURING THE FOLLOWING STAGES OF CONSTRUCTION:

- DURING EXCAVATION TO SUBGRADE
- DURING PLACEMENT AND BACKFILL OF ANY DRAINAGE OR DISTRIBUTION SYSTEMS.
- DURING PLACEMENT OF THE SURFACE MATERIAL.
- DURING PLACEMENT OF THE PERMEABLE PAVEMENT.
- UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

6-12-24
PROFESSIONAL ENGINEER
Rob Vogel
P.E. # 16113
6-12-24 DATE

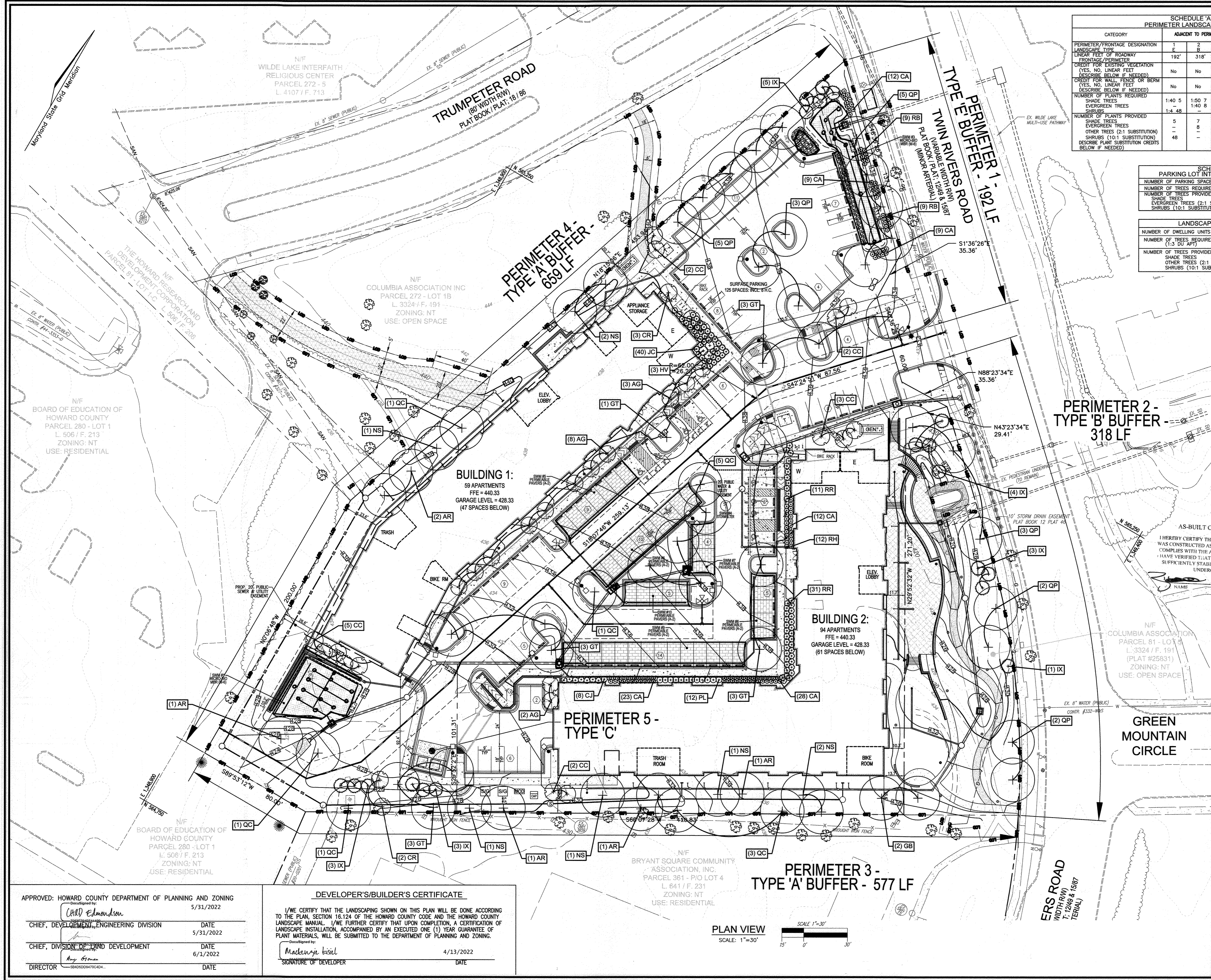
VOGEL ENGINEERING
TIMMONS GROUP

3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: RHW/ACS
DRAWN BY: ACS
CHECKED BY: RHW
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 41539

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
EXPIRATION DATE: 08-27-2027

22 SHEET OF 27



SCHEDULE 'A' PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER AND ROADWAY	1	2	3	4	5	DUMPSTERS	TOTAL
PERIMETER/FRONTAGE DESIGNATION	E	B	A	A	C			
LINEAR FEET OF ROADWAY	192'	318'	577'	659'	43'			
FRONTAGE/PERIMETER								
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	No	No	No	No	No			
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	No	No	No	No	No			
NUMBER OF PLANTS REQUIRED								
SHADE TREES	1:40	5	7	1:60	11	1:40	2	35
EVERGREEN TREES	1:48	8			3	1:20	3	11
NUMBER OF PLANTS PROVIDED								
SHADE TREES	5	7	10	11	2	3	2	35
EVERGREEN TREES		8			3	3	3	11
OTHER TREES (2:1 SUBSTITUTION)								
SHRUBS (10:1 SUBSTITUTION)	48							48
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED								

SCHEDULE 'B' PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	125
NUMBER OF TREES PROVIDED	13
SHADE TREES	13
EVERGREEN TREES (2:1 SUBSTITUTION)	
SHRUBS (10:1 SUBSTITUTION)	

LANDSCAPE SCHEDULE 'C'

NUMBER OF DWELLING UNITS	153 APT
NUMBER OF TREES REQUIRED (1:3 DU APT)	51
NUMBER OF TREES PROVIDED	
SHADE TREES	13
OTHER TREES (2:1 SUBSTITUTION)	40
SHRUBS (10:1 SUBSTITUTION)	180

- LEGEND:**
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - EXISTING CURB AND GUTTER
 - PRE-2014 PIPE AND HEADWALL
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING GASLINE
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - SOILS BOUNDARY
 - PROPOSED SIDEWALK
 - PROPOSED SIDEWALK RAMP
 - ASPHALT PAVING
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN INLETS
 - PROPOSED FIRE HYDRANT
 - PROPOSED WATER TEE & VALVE
 - PROPOSED WATER MAIN
 - PROPOSED SEWER MAIN
 - EXISTING TREES/LANDSCAPING
 - PROPOSED CURB AND GUTTER
 - MICRO-BIORETENTION
 - PERMEABLE PAVERS
 - GRASSCRETE
 - PUBLIC WATER, SEWER AND UTILITY EASEMENT
 - STRUCTURAL RETAINING WALL
 - SEGMENTAL BLOCK RETAINING WALL
 - LIMIT OF DISTURBANCE
 - PROPOSED COUNTY STREETLIGHT
 - PROPOSED PARKING LOT LIGHT POLE
 - PROPOSED POLE LIGHT AT TRAIL AND FAMILY REC AREA (SEE SITE DETAILS, E1)
 - PROPOSED POLE LIGHT AT PAVED AMENITY AREA (SEE SITE DETAILS, E2)
 - PROPOSED DECIDUOUS SHADE TREE
 - PROPOSED FLOWERING TREE
 - PROPOSED EVERGREEN TREE
 - PROPOSED SHRUB



AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

NAME: 16193
P.E.#: 6-12-24
DATE:

OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINCOPIN CIRCLE
COLUMBIA, MD 21044
(410) 381-3551

OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 HOLLINS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

SITE DEVELOPMENT PLANS
LANDSCAPE PLAN
ROSLYN RISE
VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
COLUMBIA, MD 21044

TAX MAP 30 GRID 19
TAX MAP 36 GRID 1
5TH ELECTION DISTRICT

LOTS 7 & 8, ZONED: NT
LOT 5, PARCEL 61
HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. MY LICENSE NUMBER IS 16193 AND MY EXPIRATION DATE IS 08-27-2022.

DESIGN BY: RHW/ACS
DRAWN BY: ACS
CHECKED BY: RHW
DATE: OCTOBER 2021
SCALE: AS SHOWN
W.O. NO.: 41539

23 SHEET OF 27

SDP-21-030

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
5/31/2022

Chief, Development Engineering Division
5/31/2022

Chief, Division of Land Development
6/1/2022

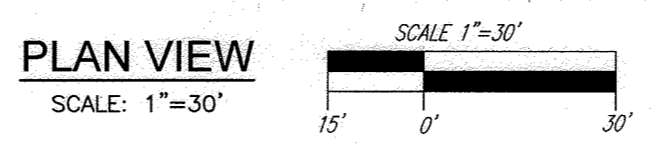
Director

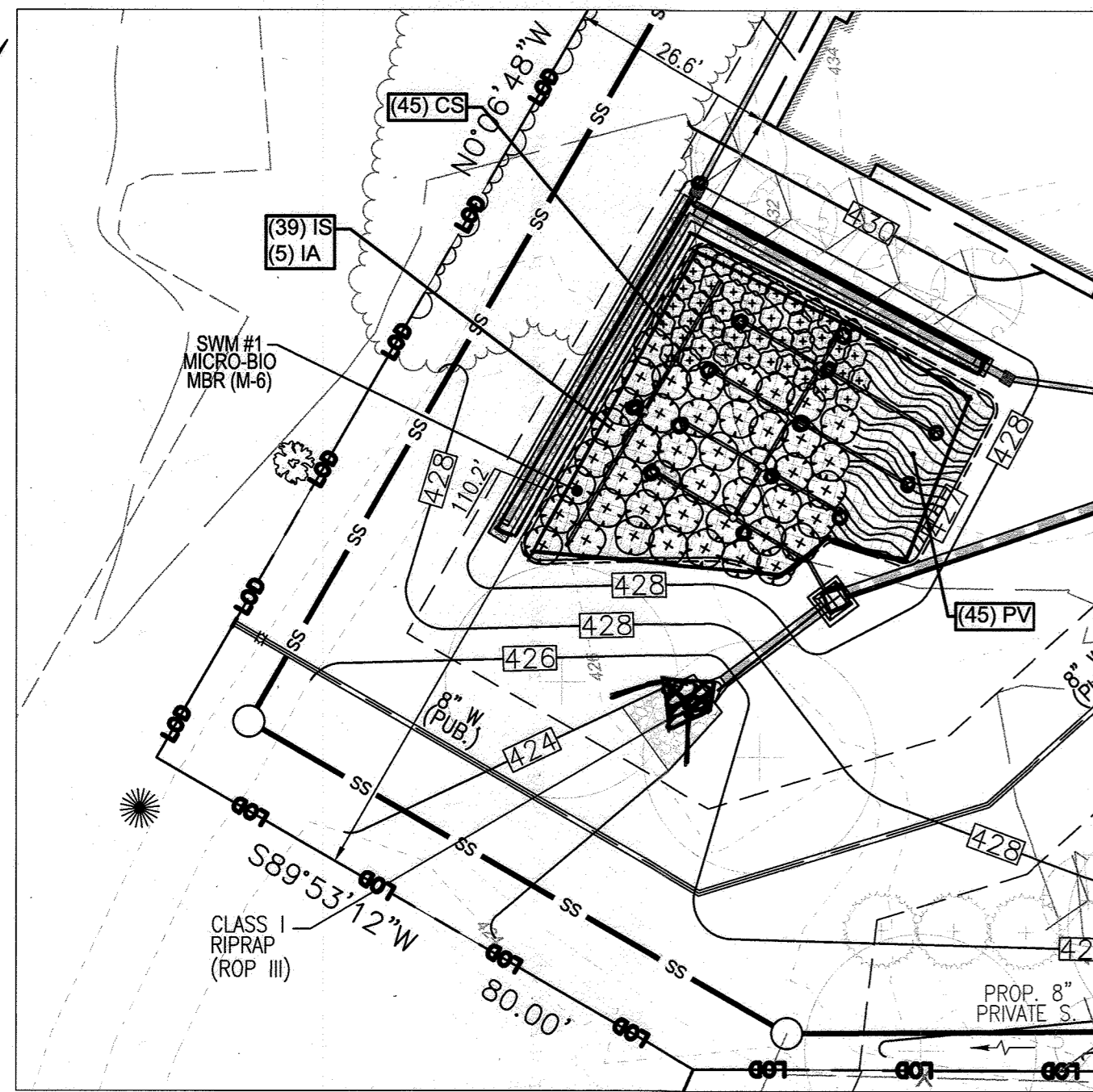
DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

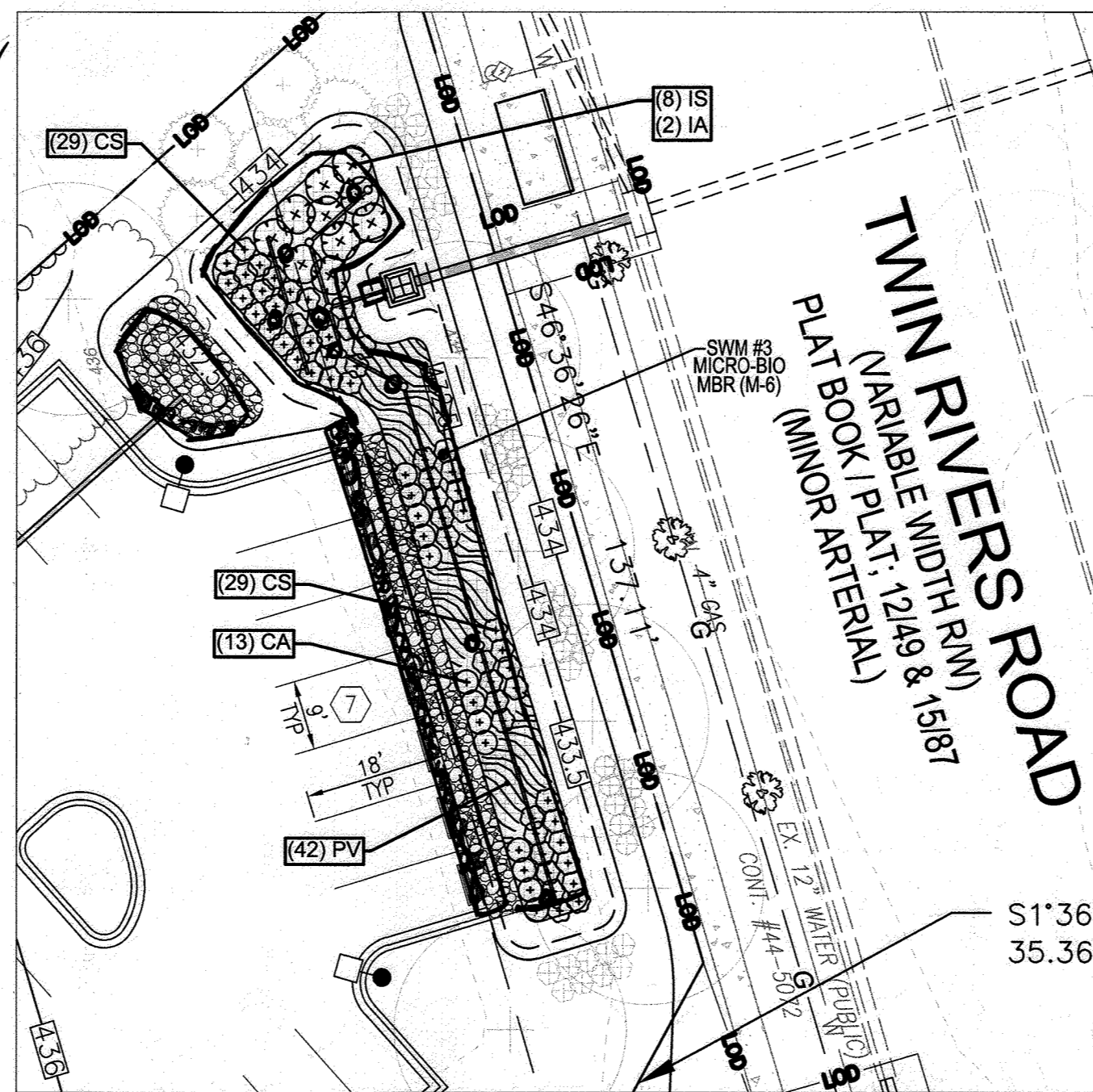
Developed by: Madensje Bisel
4/13/2022

SIGNATURE OF DEVELOPER





PLAN VIEW
SCALE: 1"=20'



PLAN VIEW
SCALE: 1"=20'

LANDSCAPE SCHEDULE - REQUIRED PLANTINGS					
DECIDUOUS TREES	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
6	AR	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3" CAL.	STRONG SINGLE LEADER/SPECIMEN
2	GB	GINKGO BILOBA 'AUTUMN GOLD' TM	AUTUMN GOLD MAIDENHAIR TREE	2.5" CAL.	
13	GT	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER'	SHADEMASTER LOCUST	3" CAL.	STRONG SINGLE LEADER/SPECIMEN
8	NS	NYSSA SYLVATICA	SOUR GUM	3" CAL.	STRONG SINGLE LEADER/SPECIMEN
12	QC	QUERCUS COCCINEA	SCARLET OAK	3" CAL.	STRONG SINGLE LEADER/SPECIMEN
20	QP	QUERCUS PHELLOS	WILLOW OAK	3" CAL.	STRONG SINGLE LEADER/SPECIMEN

LANDSCAPE SCHEDULE - MICRO-BIORETENTION PLANTINGS					
EVERGREEN TREES	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
19	IX	ILEX X 'NELLIE R. STEVENS'	NELLIE R. STEVENS HOLLY	12' HT.	SINGLE STRONG LEADER/SPECIMEN

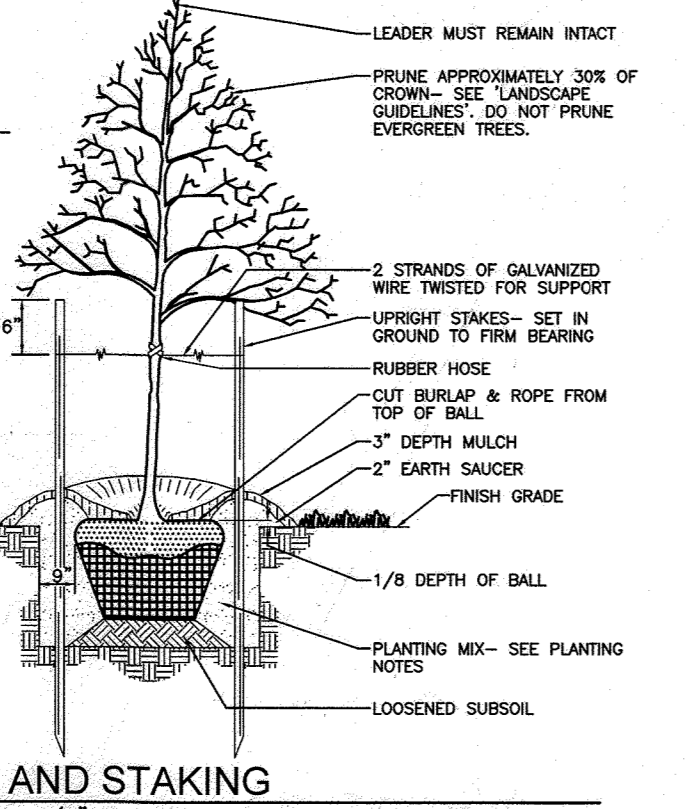
LANDSCAPE SCHEDULE - MICRO-BIORETENTION PLANTINGS					
ORNAMENTAL TREES	KEY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
13	AG	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	14' HT	MULSTEMMED SPECIMEN
14	CC	CERCIS CANADENSIS 'FOREST PANSY'	FOREST PANSY REDBUD	10' HT.	SPECIMEN
5	CR	CORNUS X RUTGERSSENSIS 'RUTGAN' TM	STELLAR PINK DOGWOOD	1.75" CAL.	SINGLE STRONG LEADER/SPECIMEN

LANDSCAPE SCHEDULE - MICRO-BIORETENTION PLANTINGS						
SHRUBS	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
93	CA	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	SUMMERSWEET	2' HT.	36" o.c.	MIN. 4 CANES
12	PL	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	OTTO LUYKEN LAUREL	3' HT.	48" o.c.	MIN. 5 CANES
18	RB	RHODODENDRON X 'BLAAUW'S PINK'	BLAAUW'S PINK AZALEA	2' HT.	36" o.c.	MIN. 4 CANES
42	RR	ROSA 'RADRAZ' KNOCK OUT	SHRUB ROSE	2' HT.	30" o.c.	MIN. 5 CANES
8	CJ	CAMELLIA JAPONICA 'APRIL REMEMBERED' TM	APRIL REMEMBERED ICE ANGELS CAMELLIA	3' HT.	48" o.c.	MIN. 5 CANES
12	RH	RHODODENDRON X 'HINO-CRIMSON'	HINO-CRIMSON KURUME AZALEA	1.5' HT.	36" o.c.	MIN. 4 CANES
3	HV	HAMAMELIS VERNALIS 'SANDRA'	SANDRA OZARK WITCHHAZEL	4' HT.	72" o.c.	MIN. 5 CANES
40	JC	JUNIPERUS CHINENSIS 'SARGENTII'	SARGENT JUNIPER	2' HT.	48" o.c.	MIN. 4 CANES

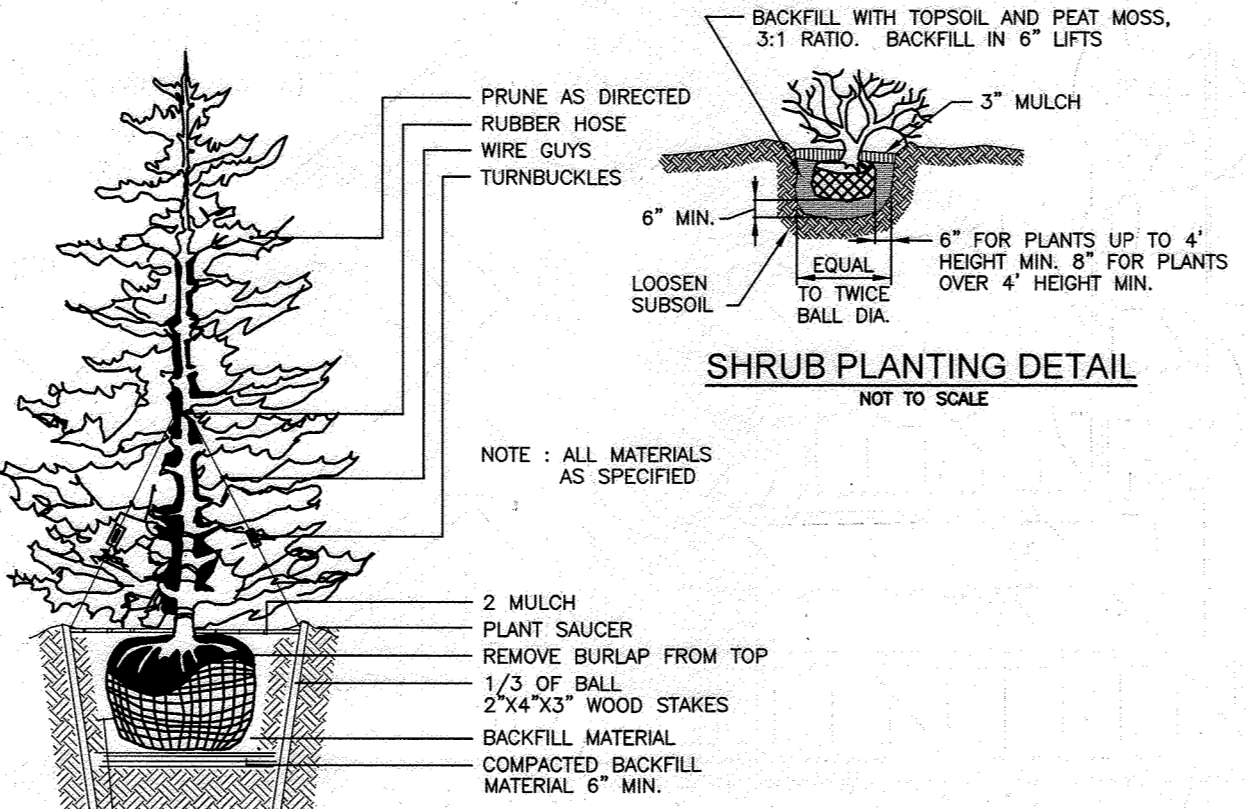
LANDSCAPE SCHEDULE - MICRO-BIORETENTION PLANTINGS						
PERENNIALS	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
87	PV	PANICUM VIRGATUM 'PRAIRE FIRE'	RED SWITCH GRASS	#1	36" o.c.	

NOTES

- SEE "LANDSCAPE SPECIFICATION GUIDELINES" FOR BALTIMORE-WASHINGTON METROPOLITAN DISTRICT FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
- SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWER EASEMENT.



TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE
TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

LANDSCAPE SCHEDULE NOTES:

- AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENTS, BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
- 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.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

GENERAL NOTES:

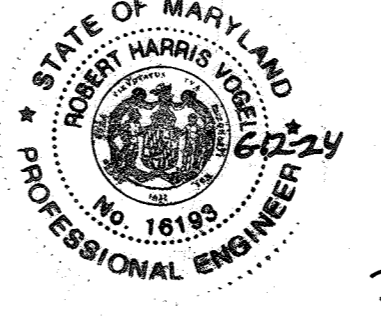
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THIS SITE DEVELOPMENT PLAN IN THE AMOUNT OF \$32,790.00 FOR THE REQUIRED 61 SHADE TREES, 51 EVERGREEN & FLOWERING TREES, AND 228 SHRUBS. THE DEVELOPER IS THE RESPONSIBLE PARTY FOR THE LANDSCAPING ON BOTH LOTS.
- THE WILDE LAKE RESIDENT ARCHITECTURAL COMMITTEE RECOMMENDED THAT THE APPLICATION TO REDEVELOP ROSLYN RISE BE APPROVED AS SUBMITTED ON APRIL 20, 2021.

OWNER
COLUMBIA ASSOCIATION INC.
C/O ALBERT F. EDWARDS
10221 WINGOPIAN CIRCLE
COLUMBIA, MD 21044
(410) 381-3551

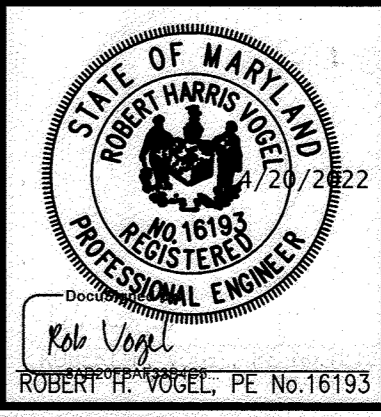
OWNER/DEVELOPER
94 UNIT BUILDING 2 (4%); ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%); ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 HOLLINS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 (Signature) 5/31/2022
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 (Signature) 5/31/2022
 CHIEF, DIVISION OF LAND DEVELOPMENT
 (Signature) 6/1/2022
 DIRECTOR

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 (Signature) 4/13/2022
 SIGNATURE OF DEVELOPER



AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
 (Signature) 1493 6-12-24
 NAME P.E.# DATE

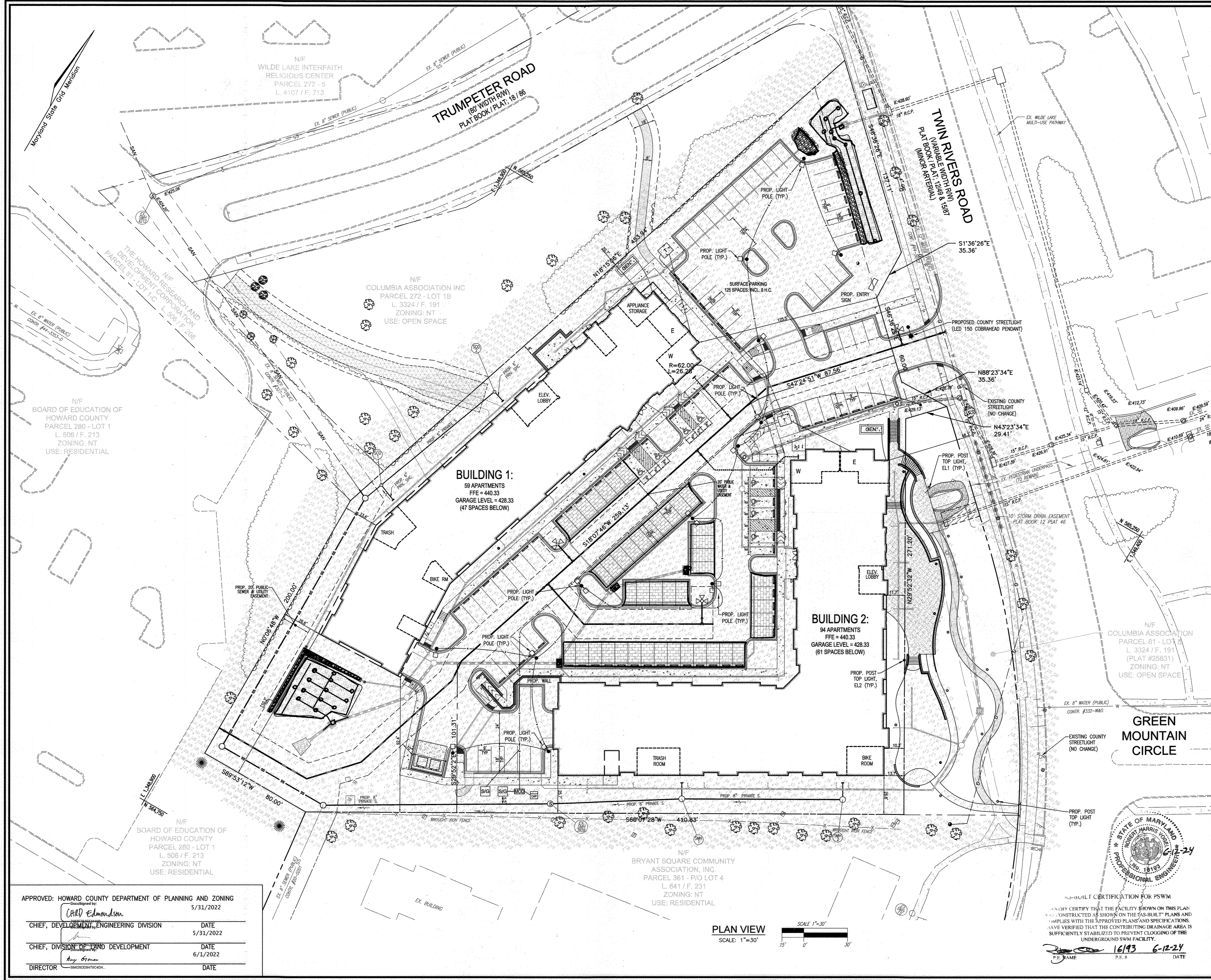


PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. MY LICENSE NO. IS 16193. EXPIRATION DATE: 08-29-2022.
 DESIGN BY: RHW/ACS
 DRAWN BY: ACS
 CHECKED BY: RHW
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 41539
 24 SHEET OF 27

NO.	REVISION	DATE

SITE DEVELOPMENT PLANS
 LANDSCAPE PLAN NOTES & DETAILS
 ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044
 TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT
 ZONED: NT
 LOTS 7 & 8, PARCEL 272
 LOT 5, PARCEL 61
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING
 TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com



- LEGEND:**
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - EXISTING CURB AND GUTTER
 - PRE-2014 PIPE AND HEADWALL
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING GASLINE
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - SOILS BOUNDARY
 - PROPOSED SIDEWALK
 - PROPOSED SIDEWALK RAMP
 - ASPHALT PAVING
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN INLETS
 - PROPOSED FIRE HYDRANT
 - PROPOSED WATER TEE & VALVE
 - PROPOSED WATER MAIN
 - PROPOSED SEWER MAIN
 - EXISTING TREES/LANDSCAPING
 - PROPOSED CURB AND GUTTER
 - MICRO-BIORETENTION
 - PERMEABLE PAVERS
 - GRASSCRETE
 - PUBLIC WATER, SEWER AND UTILITY EASEMENT
 - TEST PIT
 - SOIL BORING
 - STRUCTURAL RETAINING WALL
 - SEGMENTAL BLOCK RETAINING WALL
 - LIMIT OF DISTURBANCE
 - PROPOSED COUNTY STREETLIGHT
 - PROPOSED PARKING LOT LIGHT POLE
 - PROPOSED POLE LIGHT AT TRAIL AND FAMILY REC AREA (SEE SITE DETAILS, EL1)
 - PROPOSED POLE LIGHT AT PAVED AMENITY AREA (SEE SITE DETAILS, EL2)

OWNER
 COLUMBIA ASSOCIATION INC.
 C/O ALBERT F. EDWARDS
 10221 WINGOPIN CIRCLE
 COLUMBIA, MD 21044
 (410) 381-3551

OWNER/DEVELOPER
 94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
 59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
 C/O MACKENZIE KIESEL
 875 HOLLINGS STREET, SUITE 202
 BALTIMORE, MD 21201
 (410) 230-2117

NO.	REVISION	DATE

SITE DEVELOPMENT PLANS
SITE LIGHTING PLAN
ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044

TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT

LOTS 7 & 8, ZONED: NT
 LOT 5, PARCEL 81
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
 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. MY LICENSE NO. IS 16193 AND MY EXPIRATION DATE IS 08-21-2022.

DESIGN BY: RHW/ACS
 DRAWN BY: ACS
 CHECKED BY: RHW
 DATE: OCTOBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 41539

25 SHEET **27**
 OF

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 5/31/2022

DocuSign by: *Chad Edmondson*
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 5/31/2022

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/1/2022

DIRECTOR DATE

PLAN VIEW
 SCALE: 1"=30'

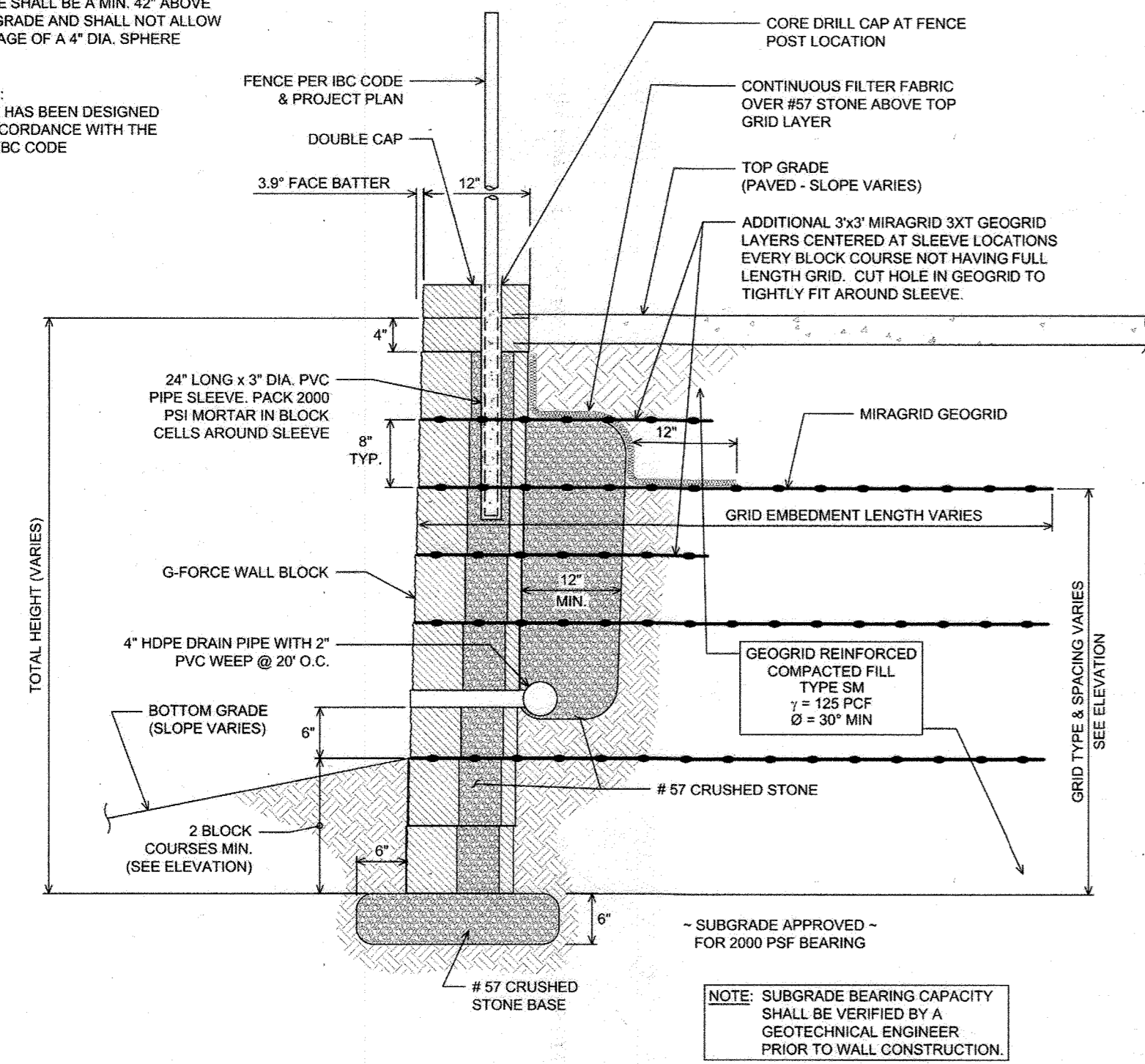
AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

Robert H. Vogel 16193 6-12-24
 P.E. NAME P.E. # DATE



NOTE: FENCE SHALL BE A MIN. 42" ABOVE TOP GRADE AND SHALL NOT ALLOW PASSAGE OF A 4" DIA. SPHERE

NOTE: WALL HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2015 IBC CODE



TYPICAL WALL SECTION N.T.S.

- NOTES: 1. NO TREES SHALL BE PLANTED WITHIN 10 FEET OF THE TOP OF THE RETAINING WALL. 2. RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, WACEL, OR EQUIV.) CERTIFIED SOILS TECHNICIAN. 3. ONE SOIL BORING SHALL BE REQUIRED EVERY ONE HUNDRED FEET ALONG THE ENTIRE LENGTH OF THE WALL. COPIES OF ALL BORING REPORTS SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION. 4. THE REQUIRED BEARING PRESSURE BENEATH THE WALL SYSTEM SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION MUST BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO START OF CONSTRUCTION. THE REQUIRED BEARING TEST SHALL BE THE DYNAMIC CONE PENETROMETER TEST ASTM STP-399. 5. THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ON-SITE SOILS TECHNICIAN. EACH 8" LIFT MUST BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF CONSTRUCTION. 6. WALLS SHALL NOT BE CONSTRUCTED ON UNCERTIFIED FILL MATERIALS. 7. WALLS SHALL NOT BE CONSTRUCTED WITHIN A HOWARD CO. RIGHT-OF-WAY OR EASEMENT.

SPECIFICATIONS SEGMENTAL CONCRETE BLOCK RETAINING WALL

PART 1: GENERAL 1.01 DESCRIPTION

- A. WORK SHALL CONSIST OF FURNISHING AND CONSTRUCTION OF A SEGMENTAL RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN, AND DIMENSIONS SHOWN ON THE PLANS. B. WORK INCLUDES PREPARING FOUNDATION SOIL, FURNISHING AND INSTALLING LEVELING PAD, UNIT FACING SYSTEM, UNIT DRAINAGE FILL AND REINFORCED BACKFILL TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. C. WORK INCLUDES FURNISHING AND INSTALLING GEOGRID SOIL REINFORCEMENT OF THE TYPE, SIZE, LOCATION, AND LENGTHS DESIGNATED ON THE CONSTRUCTION DRAWINGS.

1.02 DELIVERY, STORAGE AND HANDLING

- A. CONTRACTOR SHALL CHECK ALL MATERIALS UPON DELIVERY TO ASSURE THAT THE PROPER TYPE, GRADE, COLOR, AND CERTIFICATION HAS BEEN RECEIVED. B. CONTRACTOR SHALL PROTECT ALL MATERIALS FROM DAMAGE DUE TO JOB SITE CONDITIONS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. DAMAGED MATERIALS SHALL NOT BE INCORPORATED INTO THE WORK.

PART 2: PRODUCTS

2.01 SEGMENTAL CONCRETE RETAINING WALL UNITS

- A. SEGMENTAL CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING ARCHITECTURAL REQUIREMENTS: FACE COLOR - COLOR MAY BE SPECIFIED BY THE OWNER. FACE FINISH - COLOR MAY BE SPECIFIED BY THE OWNER. BOND CONFIGURATION - RUNNING WITH BONDS NORMALLY LOCATED AT MIDPOINT IN VERTICALLY ADJACENT UNITS, IN BOTH STRAIGHT AND CURVED ALIGNMENTS. EXPOSED SURFACES OF UNITS SHALL BE FREE OF CHIPS, CRACKS OR OTHER IMPERFECTIONS WHEN VIEWED FROM A DISTANCE OF 20 FEET UNDER DIFFUSED LIGHTING.

Table with columns: SIEVE SIZE, PERCENT PASSING. Rows include 1/2 INCH, 3/4 INCH, NO. 40, NO. 200, PLASTICITY INDEX (PI) <15 AND LIQUID LIMIT <40, PER ASTM D4318.

- B. SEGMENTAL CONCRETE UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1372 - STANDARD SPECIFICATIONS FOR SEGMENTAL RETAINING WALL UNITS. C. SEGMENTAL CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING STRUCTURAL AND GEOMETRIC REQUIREMENTS MEASURED IN ACCORDANCE WITH ASTM C140 SAMPLING & TESTING CONCRETE MASONRY UNITS.

COMPRESSIVE STRENGTH = 3000 PSI MINIMUM; ABSORPTION = 8% MAXIMUM (8% MAXIMUM IN NORTHERN STATES) FOR STANDARD WEIGHT AGGREGATES; DIMENSIONAL TOLERANCES = +/-1/8" FROM NOMINAL UNIT DIMENSIONS NOT INCLUDING ROUGH SPLIT FACE +/- FROM NOMINAL UNIT HEIGHT. UNIT SIZE - 8" (H) X 16" (W) X 11 7/16" (D) MINIMUM FOR G-FORCE UNITS; 8" (H) X 16" (W) X 12" (D) MINIMUM FOR COMPACT III UNITS; UNIT SIZE - 8" (H) X 16" (W) X 16" (D) MINIMUM FOR STANDARD UNITS.

INTER-UNIT SHEAR STRENGTH = 1000 PLF MINIMUM AT 2 PSI NORMAL PRESSURE; AT 2 PSI NORMAL FORCE. [GEOGRID UNIT PEAK CONNECTION STRENGTH = 1000 PLF MINIMUM.]

2.06 GEOGRID SOIL REINFORCEMENT

- A. GEOSYNTHETIC REINFORCEMENT SHALL CONSIST OF GEOGRIDS MANUFACTURED SPECIFICALLY FOR SOIL REINFORCEMENT APPLICATIONS AND SHALL BE MANUFACTURED FROM HIGH TENACITY POLYESTER (PET) YARN.

2.07 DRAINAGE PIPE

- A. THE DRAINAGE PIPE SHALL BE PERFORATED CORRUGATED HDPE PIPE MANUFACTURED IN ACCORDANCE WITH ASTM

D1248.

2.08 GEOTEXTILE FILTER FABRIC

- A. WHEN REQUIRED, FILTER FABRIC SHALL BE A NEEDLE-PUNCHED NONWOVEN FABRIC MEETING REQUIREMENTS OF AASHTO M288.

PART 3: EXECUTION

3.01 EXCAVATION

- A. CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. OWNERS REPRESENTATIVE SHALL BE RESPONSIBLE FOR INSPECTING AND APPROVING THE SUBGRADE PRIOR TO PLACEMENT OF LEVELING MATERIAL OR FILL SOILS.

3.02 BASE LEVELING PAD

- A. LEVELING PAD MATERIAL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. TO A MINIMUM THICKNESS OF 6 INCHES AND EXTEND LATERALLY A MINIMUM OF 6" IN FRONT AND BEHIND THE SEGMENTAL WALL UNIT. B. LEVELING PAD SHALL BE PREPARED TO INSURE FULL CONTACT TO THE BASE SURFACE OF THE CONCRETE UNITS. C. COMPACT TO MINIMUM 95% OF STANDARD PROCTOR DENSITY PER ASTM D698.

3.03 SEGMENTAL UNIT INSTALLATION

- A. FIRST COURSE OF UNITS SHALL BE PLACED ON THE LEVELING PAD AT THE APPROPRIATE LINE AND GRADE. ALIGNMENT AND LEVEL SHALL BE CHECKED IN ALL DIRECTIONS AND INSURE THAT ALL UNITS ARE IN FULL CONTACT WITH THE BASE AND PROPERLY SEATED. B. PLACE THE FRONT OF UNITS SIDE-BY-SIDE. DO NOT LEAVE GAPS BETWEEN ADJACENT UNITS. LAYOUT OF CORNERS AND CURVES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

- C. INSTALL SHEARCONNECTING DEVICES PER MANUFACTURER'S RECOMMENDATIONS. D. PLACE AND COMPACT DRAINAGE FILL WITHIN AND BEHIND WALL UNITS. NOT LESS THAN 1.3 CU. FT. OF DRAINAGE FILL SHALL BE USED FOR EACH SQ. FT. OF WALL FACE, UNLESS NOTED OTHERWISE.

- E. PLACE AND COMPACT REINFORCED BACKFILL SOIL BEHIND DRAINAGE FILL. FOLLOW WALL ERECTION AND DRAINAGE FILL CLOSELY WITH BACKFILL.

- F. MAXIMUM STACKED VERTICAL HEIGHT OF WALL UNITS, PRIOR TO UNIT DRAINAGE FILL AND BACKFILL PLACEMENT AND COMPACTION, SHALL NOT EXCEED TWO COURSES.

3.04 STRUCTURAL GEOGRID INSTALLATION

- A. GEOGRID SHALL BE ORIENTED WITH THE HIGHEST STRENGTH AXIS PERPENDICULAR TO THE WALL ALIGNMENT. B. GEOGRID REINFORCEMENT SHALL BE PLACED AT THE STRENGTHS, LENGTHS, AND ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE ENGINEER.

- C. THE GEOGRID SHALL BE LAID HORIZONTALLY ON COMPACTED BACKFILL AND ATTACHED TO THE SEGMENTAL WALL UNIT PINS AND WITHIN 1 INCH OF THE FACE OF THE UNITS. PLACE THE NEXT COURSE OF SEGMENTAL CONCRETE UNITS OVER THE GEOGRID. THE GEOGRID SHALL BE PULLED TAUT, AND ANCHORED PRIOR TO BACKFILL PLACEMENT ON THE GEOGRID.

- D. GEOGRID REINFORCEMENTS SHALL BE CONTINUOUS THROUGHOUT THEIR EMBEDMENT LENGTHS AND PLACED SIDE-BY-SIDE TO PROVIDE 100% COVERAGE AT EACH LEVEL. SPREAD CONNECTIONS BETWEEN SHORTER PIECES OF GEOGRID OR GAPS GREATER THAN 2 INCHES BETWEEN ADJACENT PIECES OF GEOGRID ARE NOT PERMITTED.

3.05 REINFORCED BACKFILL PLACEMENT

- A. REINFORCED BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT MINIMIZES THE DEVELOPMENT OF SLACK IN THE GEOGRID AND INSTALLATION DAMAGE TO GEOGRID. B. REINFORCED BACKFILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES WHERE HAND OPERATED COMPACTION EQUIPMENT IS USED, OR 8-10 INCHES WHERE HEAVY COMPACTION EQUIPMENT IS USED. LIFT THICKNESS SHALL BE DECREASED TO ACHIEVE THE REQUIRED DENSITY AS REQUIRED.

- C. REINFORCED BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698. THE MOISTURE CONTENT OF THE BACKFILL MATERIAL PRIOR TO AND DURING COMPACTION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT EACH LAYER AND SHALL BE +/- 0% TO -3% OF OPTIMUM.

- D. ONLY LIGHTWEIGHT HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE BACK OF THE SEGMENTAL CONCRETE UNIT.

- E. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY UPON THE GEOGRID REINFORCEMENT. A MINIMUM FILL THICKNESS OF 6 INCHES IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOGRID. TRACKING DEVICES SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING OR DISPLACING THE SEGMENTAL CONCRETE UNITS OR GEOGRID.

- F. RUBBER Tired EQUIPMENT MAY PASS OVER GEOGRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRACING AND TURNING SHALL BE AVOIDED.

- G. AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LIFT OF REINFORCED BACKFILL AWAY FROM THE WALL UNITS TO DIRECT RUNOFF AWAY FROM WALL FACE. THE CONTRACTOR SHALL NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE WALL CONSTRUCTION SITE.

- H. PRIOR TO PLACEMENT OF CAP UNITS, THE UPPER SURFACE OF THE TOP COURSE WALL UNITS SHALL BE CLEANED OF SOIL AND ANY OTHER MATERIAL.

- I. CAP UNITS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ALL-WEATHER EXTERIOR CONSTRUCTION ADHESIVE RECOMMENDED BY THE MANUFACTURER.

- J. FIELD QUALITY CONTROL

- A. THE OWNER SHALL ENGAGE INSPECTION AND TESTING SERVICES, INCLUDING INDEPENDENT LABORATORIES, TO PROVIDE QUALITY ASSURANCE AND TESTING SERVICES DURING CONSTRUCTION.

- B. AS A MINIMUM QUALITY ASSURANCE TESTING SHOULD INCLUDE FOUNDATION SOIL INSPECTION, RETAINED SOIL AND BACKFILL TESTING, VERIFICATION OF DESIGN PARAMETERS, AND OBSERVATION OF CONSTRUCTION FOR GENERAL COMPLIANCE WITH DESIGN DRAWINGS AND SPECIFICATIONS.

TYPICAL CONCRETE GRAVITY WALL NOTES

"NO-FINES" CONCRETE SPECIFICATION

"NO-FINES" CONCRETE IS A PERMEABLE CONCRETE MASS THAT IS MADE BY ELIMINATING THE FINE AGGREGATE COMPONENT IN CONCRETE WHICH CREATES A SIGNIFICANT VOID STRUCTURE WITHIN THE CONCRETE. THE MATERIAL IS PLACED IN A SEMI-LIQUID STATE AND ALLOWED TO HARDEN IN PLACE WITH MINIMAL COMPACTION AND PLACEMENT WORK AS REQUIRED TO LEVEL MATERIAL AND FILL ALL VOIDS.

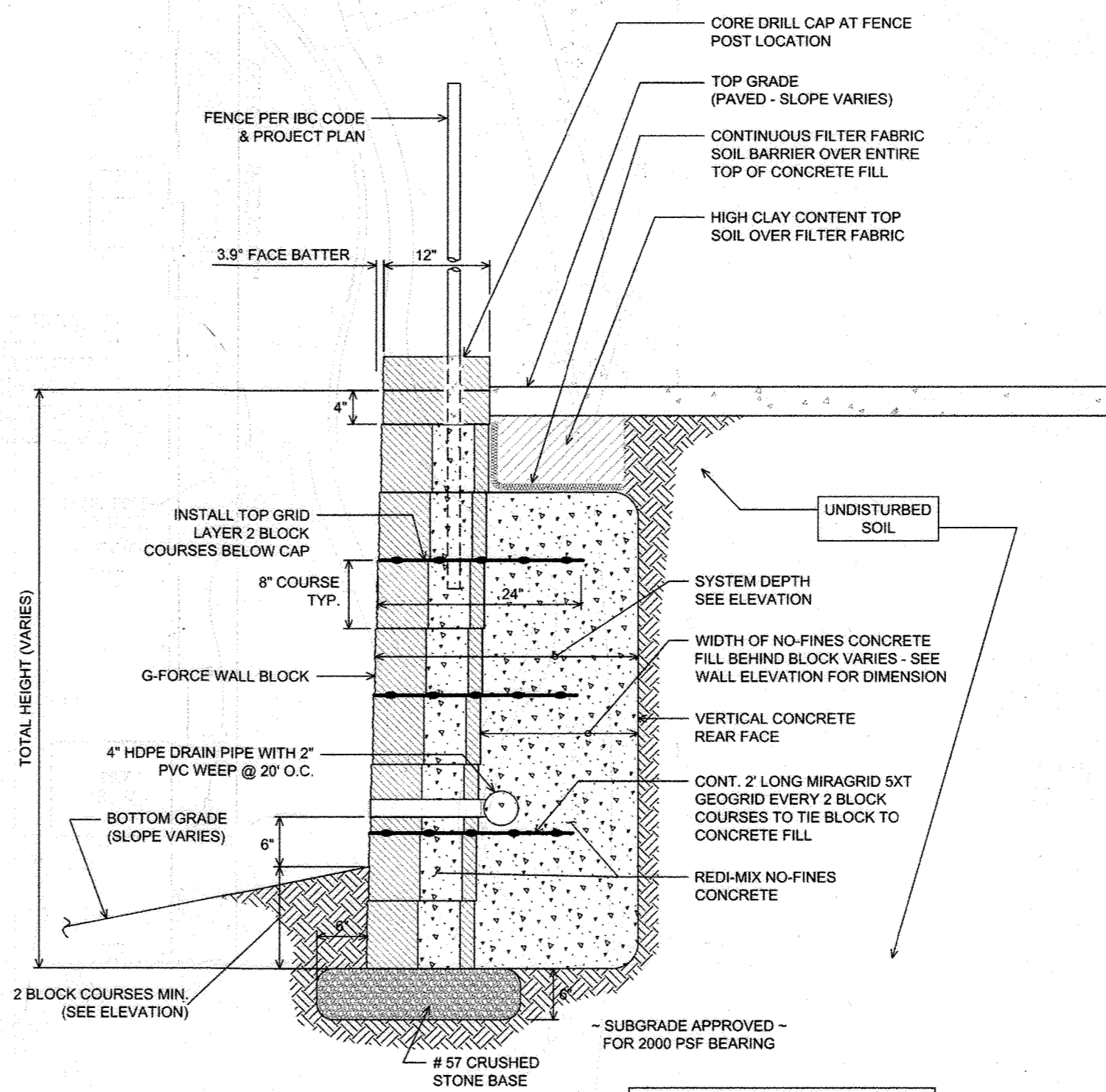
"NO-FINES" CONCRETE SHALL CONSIST OF PORTLAND CEMENT, WATER AND 1/2" - 3/4" COARSE AGGREGATE. FLY ASH MAY ALSO BE USED AS PART OF THE MIX DESIGN AS REQUIRED. THE CONCRETE SHALL BE MIXED BY MACHINE AND THE QUANTITY OF WATER USED SHALL NOT EXCEED THAT REQUIRED TO COMPLETELY COAT ALL THE AGGREGATE PARTICLE WITHOUT FORMING EXCESS GROUT.

"NO-FINES" CONCRETE INSTALLATION STEPS

- 1. SUBGRADE SHALL BE CLEAN AND FIRM BEFORE PLACING CONCRETE. 2. PLACE CONCRETE IN 16" (2 BLOCK COURSE) LIFTS, FILLING ALL VOIDS IN BLOCK - ROD CONCRETE AS NEEDED TO CONSOLIDATE. 3. PLACE GEOGRID TIES EVERY 2 BLOCK COURSES IN-BETWEEN CONCRETE LIFTS. 4. WAIT SEVERAL HOURS BETWEEN CONCRETE LIFTS TO ALLOW CONCRETE TO SUFFICIENTLY HARDEN.

TYPICAL MIX DESIGN

- CEMENT - PORTLAND CEMENT, TYPE 1 OR II, ASTM C150
- AGGREGATE - NO. 57 OR NO. 6 STONE OR EQUIVALENT, ASTM C33
- AGGREGATE/CEMENT RATIO - APPROX 6:1 BY WEIGHT
- WATER/CEMENT RATIO - 0.35 TO 0.45 BY WEIGHT
- IN-PLACE VOID RATIO - 20% - 30%
- IN-PLACE UNIT WEIGHT = 110 TO 130 LBS/CF
- COMPRESSIVE STRENGTH - 2,000 PSI NOMINALLY @ 28 DAYS



TYPICAL "NO-FINES" WALL SECTION STA. 1+10 TO 1+40 N.T.S.



AS-BUILT CERTIFICATION FOR PSWM I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

NAME: J. NAME PE # 1693 DATE 6-12-24

NO AS-BUILT INFORMATION ON THIS SHEET

OWNER: COLUMBIA ASSOCIATION INC. C/O ALBERT F. EDWARDS 10221 WINCOPIN CIRCLE COLUMBIA, MD 21044 (410) 381-3551

OWNER/DEVELOPER: 94 UNIT BUILDING 2 (4%); ROSLYN RISE FOUR, LLC 59 UNIT BUILDING 1 (9%); ROSLYN RISE NINE, LLC C/O MACKENZIE KIESEL 875 HOLLINS STREET, SUITE 202 BALTIMORE, MD 21201 (410) 230-2117

Table with columns: NO., REVISION, DATE

SITE DEVELOPMENT PLANS

RETAINING WALL CONSTRUCTION DETAILS

ROSLYN RISE

VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8 COLUMBIA, MD 21044

TAX MAP 30 GRID 19 TAX MAP 36 GRID 12 5TH ELECTION DISTRICT

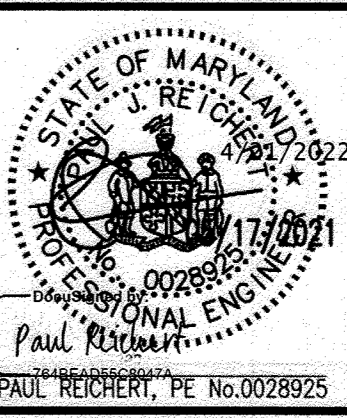
LOTS 7 & 8, ZONED: NT PARCEL 272 LOT 5, PARCEL 81 HOWARD COUNTY, MARYLAND

HILLIS-CARNES ENGINEERING ASSOCIATES

10975 Guilford Road, Suite A Annapolis Junction, Maryland (410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

PROFESSIONAL CERTIFICATE

DESIGN BY: AM/JE DRAWN BY: AM CHECKED BY: HM DATE: SEPTEMBER 2021 SCALE: AS SHOWN W.O. NO.: 20632A 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. 0028923 EXPIRATION DATE: 01-16-2022



AS-BUILT APRIL 2024

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING Documented by: 5/31/2022 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 5/31/2022 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 6/1/2022 DIRECTOR DATE:

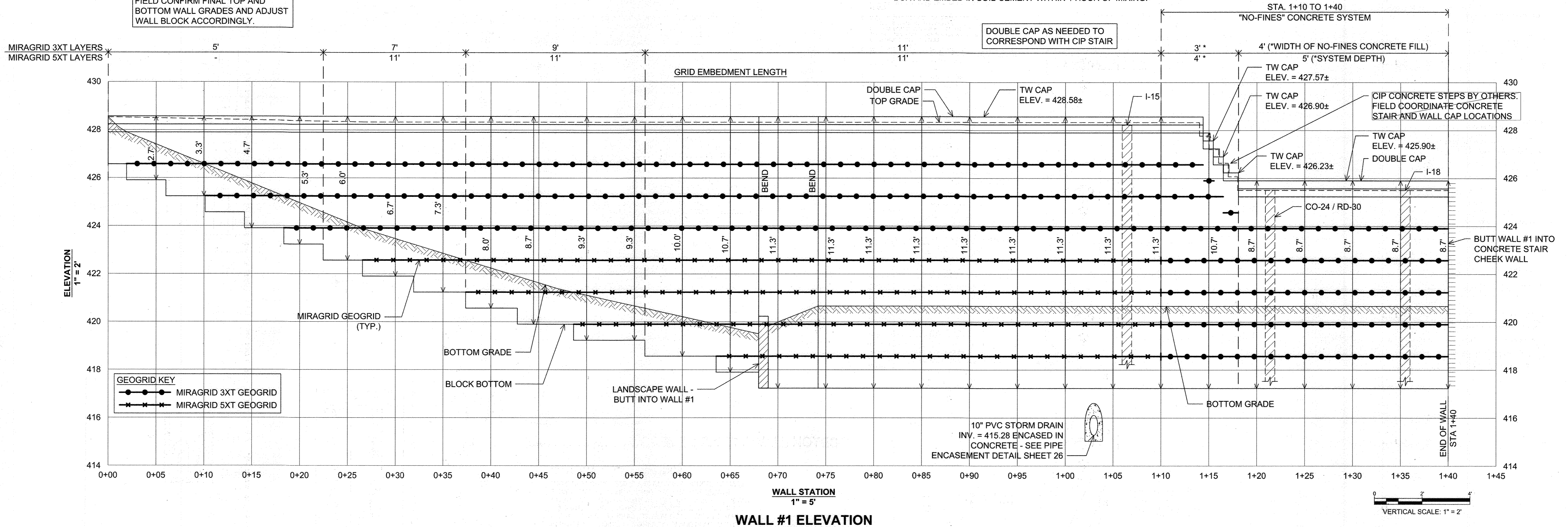
STANDARD DETAIL CONCRETE ENCASUREMENT AND CRADLE DETAILS FOR SEWER MAINS M 9.0

190

NOTE:
FIELD CONFIRM FINAL TOP AND
BOTTOM WALL GRADES AND ADJUST
WALL BLOCK ACCORDINGLY.

NOTE:
INSTALL INLET STRUCTURE I-15 AND ASSOCIATED PIPE
DURING WALL CONSTRUCTION. BACKFILL AROUND ENTIRE
PERIMETER OF INLET BOX FOR FULL WALL HEIGHT WITH A 2
FT. THICK WRAP OF COMPACTED SOIL-CEMENT CONSISTING
OF A RATIO OF 180 LBS. (2 BAGS) PORTLAND CEMENT
THOROUGHLY MIXED WITH 1 CU. YD. OF TYPE SM SOIL AT 3%
OVER OPTIMUM MOISTURE. TRIM GEOGRIDS AT FACE OF INLET
BOX AND EMBED IN SOIL-CEMENT WITHIN 1 HOUR OF MIXING.

NOTE:
INSTALL CO-24 / RD-30 AND ASSOCIATED PIPE
DURING WALL CONSTRUCTION. ADJUST STRUCTURE
AND ASSOCIATED PIPE AS NEEDED TO AVOID
CONFLICT WITH "NO-FINES" CONCRETE SYSTEM



GEOGRID KEY
 ●●●●● MIRAGRID 3XT GEOGRID
 ××××× MIRAGRID 5XT GEOGRID

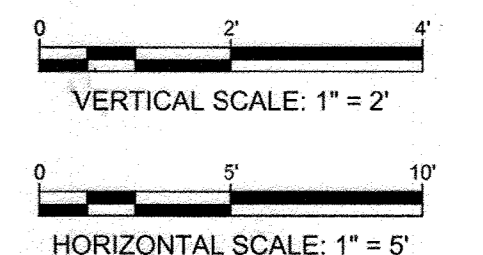
DOUBLE CAP AS NEEDED TO
CORRESPOND WITH CIP STAIR

STA. 1+10 TO 1+40
"NO-FINES" CONCRETE SYSTEM
4' (WIDTH OF NO-FINES CONCRETE FILL)
5' (SYSTEM DEPTH)

CIP CONCRETE STEPS BY OTHERS.
FIELD COORDINATE CONCRETE
STAIR AND WALL CAP LOCATIONS

BUTT WALL #1 INTO
CONCRETE STAIR
CHEEK WALL

10" PVC STORM DRAIN
INV. = 415.28 ENCASED IN
CONCRETE - SEE PIPE
ENCASEMENT DETAIL SHEET 26



WALL #1 ELEVATION
 1" = 5'

OWNER
 COLUMBIA ASSOCIATION INC.
 C/O ALBERT F. EDWARDS
 10221 WINCOPIN CIRCLE
 COLUMBIA, MD 21044
 (410) 381-3551

OWNER/DEVELOPER
 94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
 59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
 C/O MACKENZIE KIESEL
 875 HOLLINS STREET, SUITE 202
 BALTIMORE, MD 21201
 (410) 230-2117

NO.	REVISION	DATE

NO AS-BUILT INFORMATION ON THIS SHEET

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 5/31/2022
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR



AS-BUILT CERTIFICATION FOR PWSM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN
 WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND
 COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS.
 I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS
 SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE
 UNDERGROUND SWM FACILITY.
 DATE: 6-12-24
 P.E. # 16193

SITE DEVELOPMENT PLANS
MSE RETAINING WALL #1 ELEVATION
ROSLYN RISE
 VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOTS 5, 7 & 8
 COLUMBIA, MD 21044

TAX MAP 30 GRID 19
 TAX MAP 36 GRID 1
 5TH ELECTION DISTRICT

LOTS 7 & 8, PARCEL 272
 LOT 5, PARCEL 81
 HOWARD COUNTY, MARYLAND

HILLIS-CARNES
ENGINEERING ASSOCIATES
 10975 Guilford Road, Suite A Annapolis Junction, Maryland
 (410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

DESIGN BY: AM/JE
 DRAWN BY: AM
 CHECKED BY: HM
 DATE: SEPTEMBER 2021
 SCALE: AS SHOWN
 W.O. NO.: 20632A

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS
 WERE PREPARED OR APPROVED BY ME, AND
 THAT I AM A FULLY LICENSED PROFESSIONAL
 ENGINEER UNDER THE LAWS OF THE STATE
 OF MARYLAND, LICENSE NO. 0028925
 EXPIRATION DATE: 01-15-2022

27 SHEET OF 27