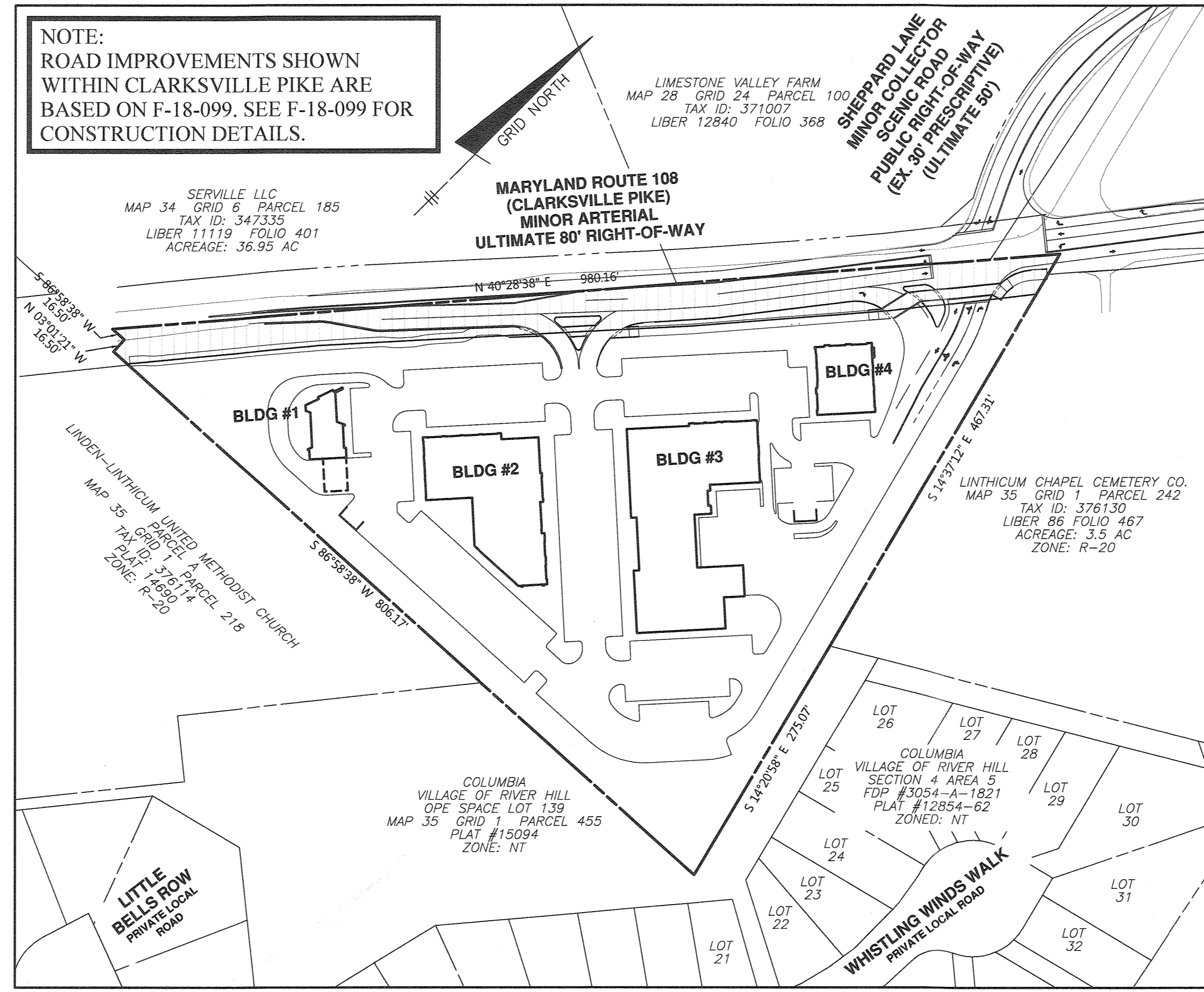


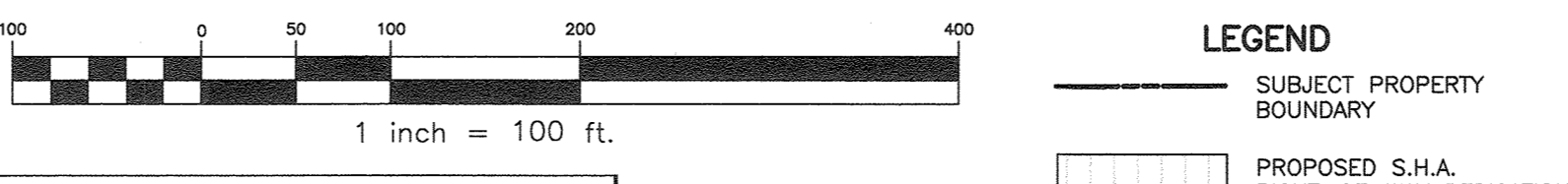
GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLDS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. THIS SUBJECT PROPERTY IS ZONED B-1 PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
5. THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
6. THE EXISTING TOPOGRAPHY ON-SITE IS FROM A FIELD RUN SURVEY PREPARED BY DART, MCCUNE, & WALKER, INC. IN JANUARY, 2009. THE EXISTING TOPOGRAPHY ALONG CLARKSVILLE PIKE AND UP PROPOSED RIGHT-OF-WAY DEDICATION IS FROM A FIELD RUN SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC. IN JANUARY, 2017.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS #0044 AND #35A2 WERE USED FOR THIS PROJECT.
8. THIS SITE IS WITHIN THE METROPOLITAN DISTRICT.
9. WATER IS PUBLIC. THE EXISTING CONTRACT NUMBER IS 20-3340/C.P. W-8178. AN ADVANCED DEPOSIT ORDER (A.D.O.) WAS SUBMITTED FOR THE ONSITE PUBLIC WATER AND APPROVED ON AUGUST 27, 2018 AS #3485. THE DRAINAGE AREA IS "PATUKENT".
10. EXISTING UTILITIES SHOWN ARE BASED ON FIELD SURVEY LOCATIONS BY BENCHMARK ENGINEERING, INC. IN JANUARY 2017, AND BY DART, MCCUNE, & WALKER, INC IN JANUARY, 2009.
11. THERE ARE NO WETLANDS, STREAMS, THEIR REQUIRED BUFFERS, 100-YEAR FLOODPLAIN OR STEEP SLOPES 25% OR GREATER WITH MORE THAN 20,000 SF OF CONTIGUOUS AREA LOCATED ON THIS SITE.
12. THE EXISTING HOUSE ON THE PROPERTY IS A HISTORIC STRUCTURE THAT DATES TO THE 1920's. AN APPLICATION FOR ADVISORY COMMENTS WAS HEARD BY THE HISTORIC PRESERVATION COMMISSION ON MARCH 2, 2017 IN CASE HPC-17-18. THE COMMISSION RECOMMENDED PRESERVING THE HISTORIC HOUSE AND SAID IT CONTRIBUTES TO THE STREETScape.
13. THERE IS A HISTORIC GRAVE SITE LOCATED ON THIS PROPERTY THAT IS IDENTIFIED AS #35-4 ON THE HOWARD COUNTY CEMETERY SITE INVENTORY MAP. THE LOCATION SHOWN ON THIS SDR IS DERIVED FROM OLD AERIAL MAPS, ORAL HISTORY, AND GROUND PENETRATING RADAR PERFORMED BY FORREST ENVIRONMENTAL SERVICES, INC. CEMETERY #35-4 WAS RECOVERED BY THE CP&B ON MARCH 6, 2018. CP&B REQUESTED TO KEEP THE PERIMETER OF THE CEMETERY LARGER SINCE THE SPECIFIC FOOTPRINT OF THE CEMETERY WERE NOT KNOWN. CEMETERY #35-4 IS TO REMAIN.
THE HOWARD COUNTY CEMETERY PRESERVATION BOARD HAS REVIEWED THE CASE FOR THE GRAVE SITES. IF GRAVE SITES ARE DISCOVERED DURING CONSTRUCTION, PER SECTION 16.1305 OF THE HOWARD COUNTY ZONING ORDINANCE, WORK IN THAT AREA SHALL BE SUSPENDED UNTIL A DETERMINATION CAN BE MADE BY DPZ AS TO HOW TO ADDRESS THE SITE.
14. THERE IS AN EXISTING HOUSE LOCATED ON THIS SITE THAT IS CURRENTLY BEING LIVED IN BY THE OWNER. THERE ARE SEVERAL OTHER STRUCTURES LOCATED ON THIS SITE CONSISTING OF A COMMERCIAL GARDEN CENTER, GREENHOUSES, STORAGE AREAS THAT ARE DEFINED BY STONE WALLS, ENTRANCE MONUMENTS, ETC. ALL STRUCTURES ARE TO BE REMOVED.
15. THE TRAFFIC IMPACT STUDY WAS PREPARED BY THE TRAFFIC CONCEPTS, INC. DATED NOVEMBER 8, 2017. IT WAS APPROVED BY SHA ON 12-19-2017 AND APPROVED BY HOWARD COUNTY ON 5-2-2018.
16. A NOISE STUDY IS NOT REQUIRED SINCE THIS IS A COMMERCIAL PROJECT.
17. THE GEOTECHNICAL REPORT WAS PREPARED BY HILLIS-CARNES ENGINEERING ASSOCIATES, INC, DATED FEBRUARY, 2018.
18. THIS SITE DOES NOT ABUT A SCENIC ROAD.
19. A SIMPLIFIED FOREST STAND DELINEATION WAS PREPARED BY J. CHRIS OGLE IN NOVEMBER, 2016. THERE ARE NO FOREST COMMUNITIES LOCATED ON THIS SITE. THERE IS ONE SPECIMEN TREE LOCATED ON THIS SITE, A 4" SPRUCE IN GOOD CONDITION. THE SPECIMEN TREE IS TO BE REMOVED.
20. THE DESIGN ADVISORY PANEL MEETING WAS FIRST HELD ON FEBRUARY 8, 2017. AFTER ADDRESSING PANEL MEMBERS CONCERNS, A SECOND MEETING WAS HELD ON 12-13-2017.
21. STORMWATER MANAGEMENT FOR THIS PROJECT IS BASED ON REDEVELOPMENT CRITERIA. 50% OF THE EXISTING IMPERVIOUS AREA AND 100% OF NEW OR ADDITIONAL IMPERVIOUS AREA SHALL BE TREATED VIA ESD TO THE MCP. THIS IS BEING ACCOMPLISHED VIA THREE (M-6) MICRO BIO-RETENTION FACILITIES AND TWO (F-1) SURFACE SAND FILTERS. IN ADDITION, QUANTITY MANAGEMENT IS BEING PROVIDED IN TWO (UGS) UNDERGROUND STORAGE FACILITIES SUCH THAT THE POST DEVELOPED 2, 10, AND 100-YR RUNOFF AMOUNTS DO NOT EXCEED THE CURRENT RUNOFF AMOUNTS. ALL FACILITIES ARE PRIVATELY OWNED AND PRIVATELY MAINTAINED.
22. THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL HAVE BEEN ADDRESSED BY A CERTIFIED LANDSCAPE PLAN WITHIN THIS PLAN SET. THE FINANCIAL SURETY IN THE AMOUNT OF \$42,700.00 (FOR 22 SHADE TREES AND 22 EVERGREEN TREES) FOR THE REQUIRED PERIMETER AND PARKING ISLAND LANDSCAPING SHALL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT. AND 158 SHA-65.
23. THE PROVISIONS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION IS BEING MET BY THE PAYMENT OF A FEE-IN-LIEU IN THE AMOUNT OF \$9,801.00 FOR THE 0.3 ACRE OBLIGATION. THE OBLIGATION AMOUNT IS BASED ON THE DIFFERENCE BETWEEN THE PROPOSED ON-SITE LIMIT OF DISTURBANCE AND THE EXISTING ON-SITE IMPERVIOUS AREAS PER THE DEPARTMENT OF PLANNING AND ZONING MEMO, "FOREST CONSERVATION PROGRAM CHANGE FOR PREVIOUSLY DEVELOPED AREAS COVERED BY IMPERVIOUS SURFACE - EFFECTIVE DECEMBER 1, 2015 MARYLAND'S FOREST PRESERVATION ACT OF 2013 (STATE HOUSE BILL NO. 706)". THE PROPOSED ON-SITE LIMIT OF DISTURBANCE AMOUNTS TO 5.75 ACRES AND THE EXISTING ON-SITE IMPERVIOUS AREAS AMOUNTS TO 3.90 ACRES FOR A "TRACT AREA" AMOUNT OF 1.85 ACRES. THE OBLIGATION AMOUNTS TO 0.28 ACRES. SEE FOREST CONSERVATION WORKSHEET ON THIS SHEET.
24. ALL PROPOSED EXTERIOR LIGHTING SHALL BE DIRECTED/REFLECTED AWAY FROM ALL ADJACENT PUBLIC ROADS AND RESIDENTIAL ZONING DISTRICTS IN ACCORDANCE WITH SECTION 134.0 OF THE HOWARD COUNTY ZONING REGULATIONS.
25. KNOX BOX SHALL BE PLACED ON THE FRONT OF ALL BUILDINGS NO MORE THAN 6' TO THE RIGHT OF THE MAIN ENTRANCE AT A HEIGHT OF 4'-6". IT SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSED (INTEGRATED WITH THE FIRE SYSTEM). MORE THAN ONE KNOX BOX PER BUILDING MAY BE REQUIRED. THE CONSTRUCTION SUPERINTENDENT SHOULD COORDINATE WITH THE OFFICE OF THE FIRE MARSHAL TO DETERMINE THE NUMBER OF KNOX BOXES REQUIRED AND THE PLACEMENT LOCATIONS.
26. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
27. TRASH PICK-UP, SNOW REMOVAL AND PARKING LOT MAINTENANCE SHALL BE PRIVATE.
28. ENVIRONMENTAL CONCEPT PLAN, ECP-17-023, WAS APPROVED ON JANUARY 20, 2017.
29. A PRE-SUBMISSION COMMUNITY MEETING WAS HELD ON JANUARY 24, 2018.
30. APPLICABLE DEPARTMENT OF PLANNING AND ZONING FILE REFERENCES: SDP-91-002, ECP-17-023, F-18-099, WP-18-095
31. FOR ROAD IMPROVEMENTS ALONG CLARKSVILLE PIKE AND RELOCATED SHEPPARD LANE, SEE FINAL ROAD CONSTRUCTION PLANS F-18-099. THESE PLANS WERE SUBMITTED TO STATE HIGHWAY ADMINISTRATION ON 6-6-2018 AND TO HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING ON 7-6-2018 FOR INITIAL REVIEW.
32. WP-18-095, A REQUEST FOR AN ALTERNATE COMPLIANCE TO SECTION 16.1205(c)(7) TO REMOVE SPECIMEN TREE 'A' WAS APPROVED ON APRIL 25, 2018 WITH THE FOLLOWING CONDITIONS:
1. COMPLIANCE WITH ALL SRC AGENCY COMMENTS GENERATED WITH THE REVIEW OF THE SUBMITTED SITE DEVELOPMENT PLAN, SDP-18-044.
2. TWO (2) 2.5"-3" CALIBER, NATIVE SHADE TREES AS MITIGATED FOR THE REMOVAL OF THE SINGLE (1) SPECIMEN TREE FROM THE PROPERTY. SURETY FOR THE MITIGATION TREES SHALL BE ADDED TO THE LANDSCAPE SURETY WITH THE FINAL PLAN SUPPLEMENTAL AND ROAD CONSTRUCTION PLANS.
33. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1983) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)". A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.
ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (1 1/2" DIA) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (1 1/2" DIA) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
34. A DESIGN MANUAL WAIVER TO DESIGN MANUAL VOLUME I, SECTION 5.2.5.E.1.8 WHICH SPECIFIES THAT CONTROL STRUCTURE SHALL BE COMPOSED OF THE SAME MATERIAL AS THE PIPE ATTENUATION FACILITY TO ALLOW THE ALUMINIZED CMP ATTENUATION FACILITY TO DISCHARGE INTO A CONCRETE CONTROL STRUCTURE (S-1 AND S-2) WAS APPROVED ON AUGUST 14, 2018.

COMMERCIAL SITE DEVELOPMENT PLAN
RIVER HILL SQUARE



NOTE: ROAD IMPROVEMENTS SHOWN WITHIN CLARKSVILLE PIKE ARE BASED ON F-18-099. SEE F-18-099 FOR CONSTRUCTION DETAILS.



Stormwater Management Information table with columns: Lot/Parcel, Facility Name & Number, Practice Type (Quantity), Public, Private, HOA Maintains, Misc.

Stormwater Management Summary Table - Quantity Analysis table with columns: Study Point, Condition @ Study point, Q2-yr (cfs), Q10-yr (cfs), Q100-yr (cfs).

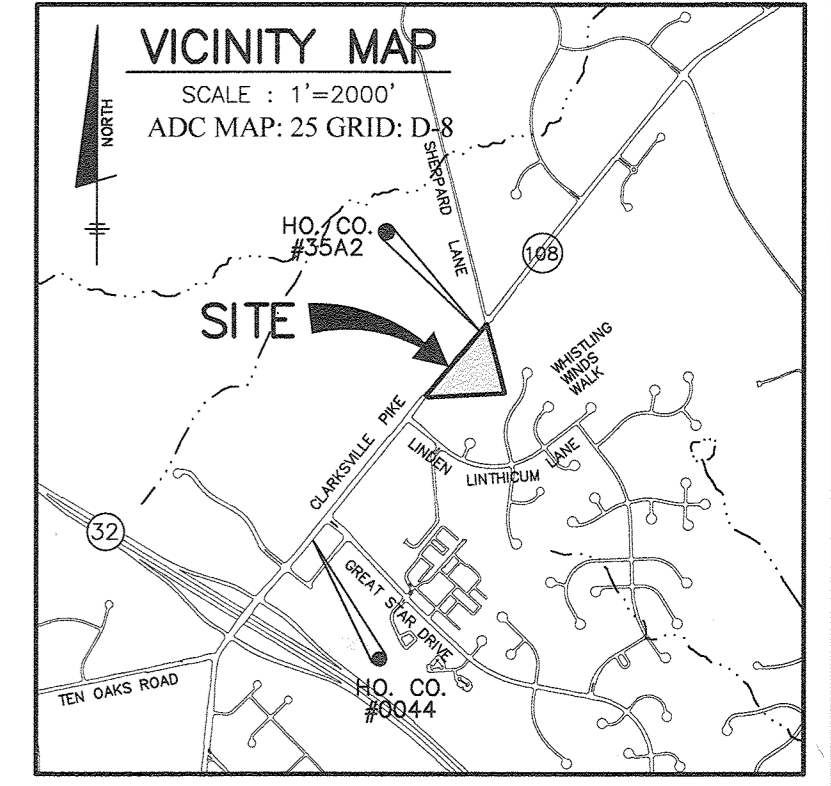
Stormwater Management Summary Table table with columns: Practice, Drainage Area (sf), Impervious Area (sf), % Imp, Rv, Pe, Required, ESDv Provided (cf), ESDv Provided (cf), Ownership, Rev Required (cf), Rev Provided (cf).

Redevelopment Summary table with columns: Existing, New, Total for Impervious Area On-Site (sf) and Impervious Area Required to be treated (sf).

Notes: 1. The Pe required for Surface Sand Filter #2 is weighted based on 0.32 acres of new impervious at a Pe of 2.6' 0.32 acres of new impervious at a Pe of 2.6' 0.62 acres of redevelopment impervious at a Pe of 1.0'

BENCH MARKS (NAD83)

HO, CO. No. 0044 ELEV. 484.477
STAMPED BRASS DISK SET ON TOP OF CONCRETE (3' DEEP) COLUMN.
1.3' EAST OF THE EDGE OF PAVEMENT MD ROUTE 108.
112'± NORTH OF BGE#532720, AND 87.5' NORTHEAST PROJECTED WALL LINE OF KENDALL HARDWARE
N 562.176.494' E 1,329.641.911'



FOREST CONSERVATION WORKSHEET VERSION 1.0 (Enter in Yellow Cells)

NET TRACT AREA: A. Total tract area = 1.85, B. Area within 100 year floodplain = 0.00, C. Area to remain in agricultural production = 0.00, D. Net tract area = 1.85

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual) Input the number "1" under the appropriate land use zoning, and limit to only one entry.

Table with columns: ARA, MDR, IDA, HDR, MPD, CIA and rows for E. Afforestation Threshold and F. Conservation Threshold.

EXISTING FOREST COVER: G. Existing forest cover (excluding floodplain) = 0.0, H. Area of forest above afforestation threshold = 0.0, I. Area of forest above conservation threshold = 0.0

BREAK EVEN POINT (BEP): J. Forest retention above threshold with no mitigation (BEP) = 0.0, K. Clearing permitted without mitigation = 0.0

PROPOSED FOREST CLEARING: L. Total area of forest to be cleared = 0.0, M. Total area of forest to be retained = 0.0

PLANTING REQUIREMENTS: N. Reforestation for clearing above conservation threshold = 0.0, P. Reforestation for clearing below conservation threshold = 0.0, Q. Credit for retention above conservation threshold = 0.0, R. Total reforestation required = 0.0, S. Total afforestation required = 0.3, T. Total reforestation and afforestation required = 0.3

* Total tract area equals difference between existing on-site impervious area and proposed on-site limit of disturbance. See General Note #23.

SHEET INDEX table with columns: NO., DESCRIPTION, listing sheets 1 through 25.

ADDRESS CHART

Table with columns: BUILDING, STREET ADDRESS, listing buildings 1 through 4.

PARKING TABULATION CHART table with columns: Building (Use), Square Footage, Zoning Section, Parking Requirement, # of spaces req., ADA spaces.

Notes: 1. Includes 450 sf of outdoor dining space. 2. Does not include the 11 LLV parking spaces reserved for post office vehicles. 3. Above chart is based on "Table 208.2 Parking Spaces" of the 2010 ADA Standards for Accessible Design for the entire site. 4. Per the Maryland Accessibility Code, Section .07.B.3.a, one in every four accessible parking spaces, but not less than one, shall "Van Accessit

SITE ANALYSIS DATA CHART

- A.) TOTAL PROJECT AREA = 6.99 acres
B.) AREA OF PLAN SUBMISSION = 6.99 acres
C.) AREA OF LAND DEDICATION TO SHA = 0.89 acres
D.) REMAINDER SITE AREA AFTER DEDICATION = 6.10 acres
E.) LIMIT OF DISTURBED AREA = 5.6 acres
F.) PRESENT ZONING: B-1
G.) PROPOSED USE OF SITE: COMMERCIAL
H.) FLOOR AREA (BUILDINGS 1 thru 4) = 40,153 SF
I.) NUMBER OF PARKING SPACES REQUIRED: SEE "PARKING TABULATION CHART"
J.) OPEN SPACE ON-SITE: N/A
K.) BUILDING COVERAGE OF SITE = 0.92 AC. PERCENTAGE OF GROSS AREA = 13.2%
L.) APPLICABLE DPZ FILE REFERENCES: SEE GENERAL NOTE 30.

PERMIT INFORMATION CHART table with columns: SUBDIVISION NAME, SECTION/AREA, LOT/PARCEL #, PLAT No. OR L/F, GRID No., ZONE, TAX MAP NO, ELECTION DISTRICT, CENSUS TRACT.

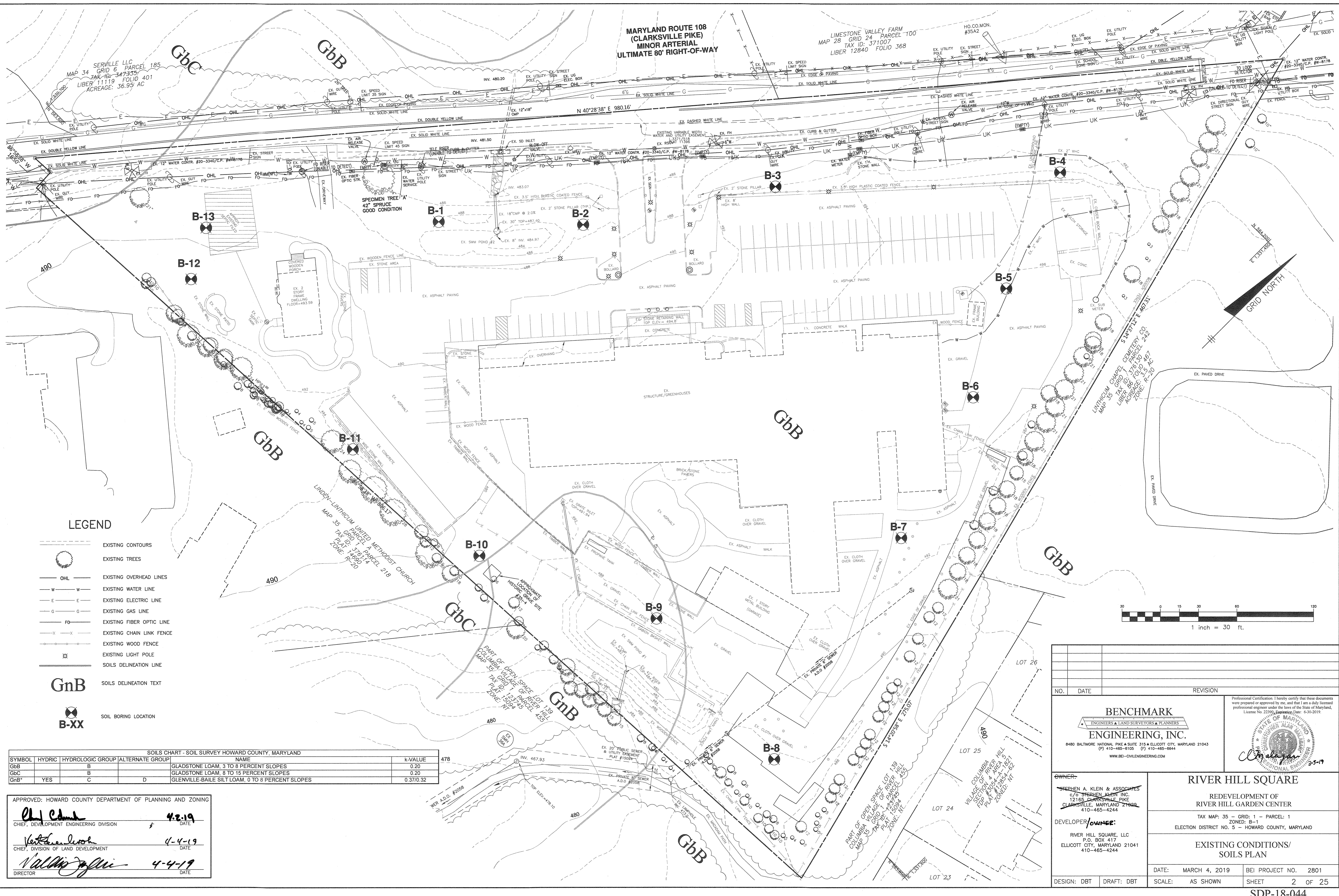
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Includes signatures and dates for Chief, Development Engineering Division and Chief, Division of Land Development.

Professional seal for Benchmark Engineers, Inc. and project information for RIVER HILL SQUARE REDEVELOPMENT OF RIVER HILL GARDEN CENTER, including owner and developer details.

**MARYLAND ROUTE 108
(CLARKSVILLE PIKE)
MINOR ARTERIAL
ULTIMATE 80' RIGHT-OF-WAY**

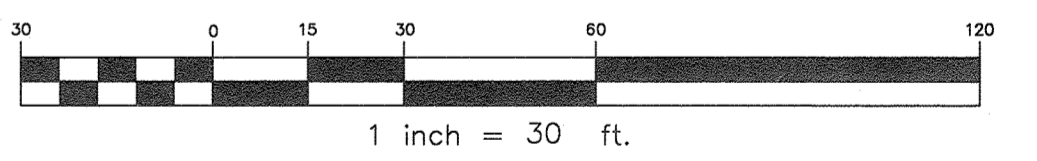
LIMESTONE VALLEY FARM
MAP 28 GRID 24 PARCEL 100
TAX ID: 371007
LIBER 12840 FOLIO 368

SERVILLE LLC PARCEL 185
MAP 34 GRID 6
TAX ID: 347325
LIBER 11119 FOLIO 401
ACREAGE: 36.95 AC



LEGEND

- EXISTING CONTOURS
- EXISTING TREES
- EXISTING OVERHEAD LINES
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING FIBER OPTIC LINE
- EXISTING CHAIN LINK FENCE
- EXISTING WOOD FENCE
- EXISTING LIGHT POLE
- SOILS DELINEATION LINE
- GnB** SOILS DELINEATION TEXT
- SOIL BORING LOCATION



SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
GbB		B		GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	0.20
GbC		B		GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	0.20
GnB	YES	C	D	GLENNVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	0.37/0.32

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 4-4-19
DIRECTOR

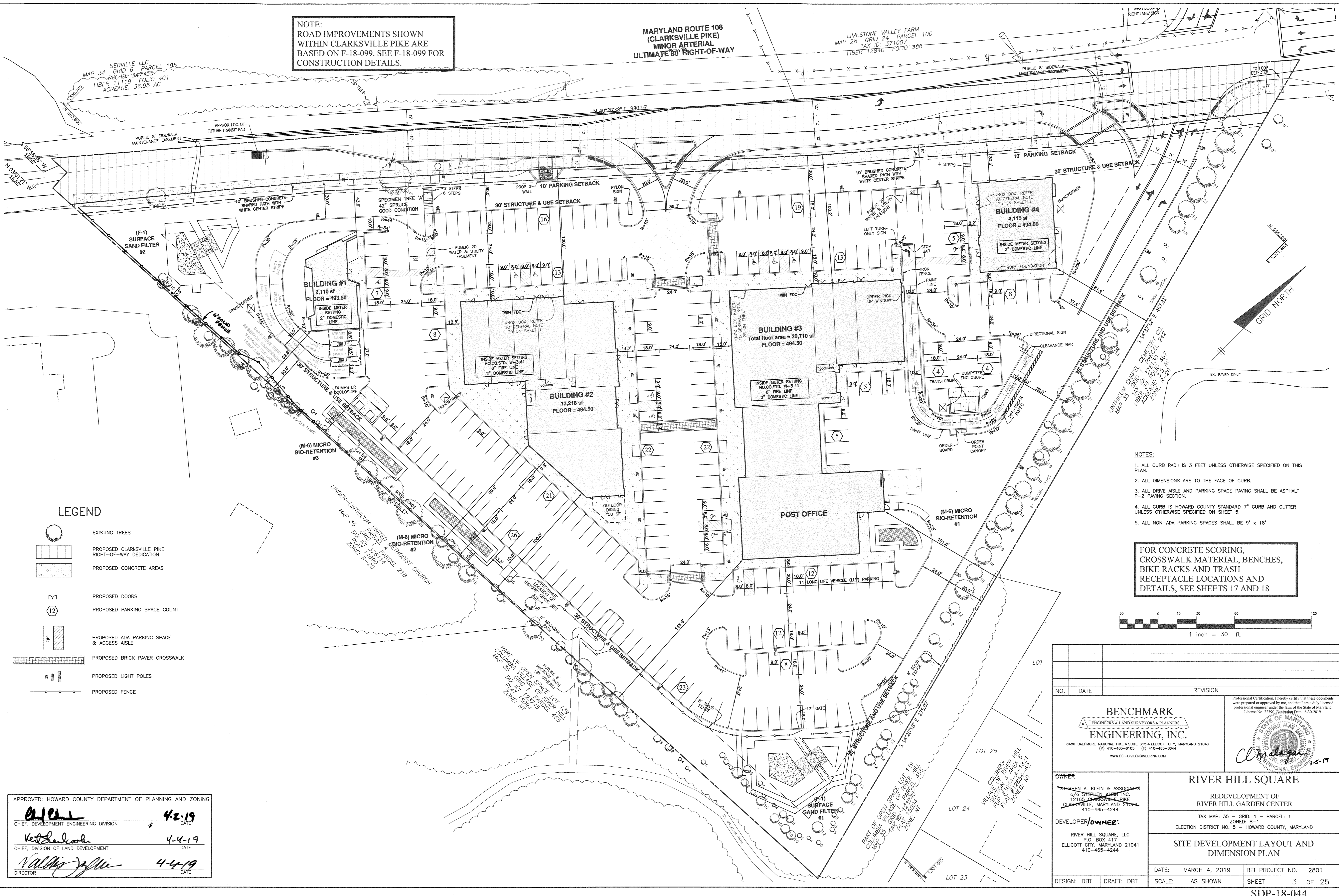
NO.		DATE		REVISION	
<p align="center">BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043 (P) 410-465-8105 (F) 410-465-6644 WWW.BE-CIVILENGINEERING.COM</p>					
<p>OWNER: STEPHEN A. KLEIN & ASSOCIATES 707 SHERMAN ALBERT INC. 12165 CLARKSVILLE PIKE CLARKSVILLE, MARYLAND 21029 410-465-4244</p>			<p align="center">RIVER HILL SQUARE REDEVELOPMENT OF RIVER HILL GARDEN CENTER TAX MAP: 35 - GRID: 1 - PARCEL: 1 ZONED: B-1 - HOWARD COUNTY, MARYLAND ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND</p>		
<p>DEVELOPER/OWNER: RIVER HILL SQUARE, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244</p>			<p align="center">EXISTING CONDITIONS/ SOILS PLAN</p>		
DATE: MARCH 4, 2019		BEI PROJECT NO. 2801		DESIGN: DBT	
SCALE: AS SHOWN		SHEET 2 OF 25		DRAFT: DBT	

NOTE:
ROAD IMPROVEMENTS SHOWN
WITHIN CLARKSVILLE PIKE ARE
BASED ON F-18-099. SEE F-18-099 FOR
CONSTRUCTION DETAILS.

MARYLAND ROUTE 108
(CLARKSVILLE PIKE)
MINOR ARTERIAL
ULTIMATE 80' RIGHT-OF-WAY

LIMESTONE VALLEY FARM
MAP 28 GRID 24 PARCEL 100
TAX ID: 371007
LIBER 12840 FOLIO 368

SERVILLE LLC
GRID 6 PARCEL 185
MAP 34 TAX ID: 347935
LIBER 11119 FOLIO 401
ACREAGE: 36.95 AC

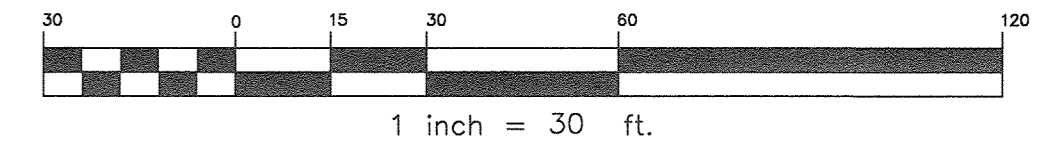


LEGEND

- EXISTING TREES
- PROPOSED CLARKSVILLE PIKE RIGHT-OF-WAY DEDICATION
- PROPOSED CONCRETE AREAS
- PROPOSED DOORS
- PROPOSED PARKING SPACE COUNT
- PROPOSED ADA PARKING SPACE & ACCESS AISLE
- PROPOSED BRICK PAVER CROSSWALK
- PROPOSED LIGHT POLES
- PROPOSED FENCE

- NOTES:
1. ALL CURB RADII IS 3 FEET UNLESS OTHERWISE SPECIFIED ON THIS PLAN.
 2. ALL DIMENSIONS ARE TO THE FACE OF CURB.
 3. ALL DRIVE AISLE AND PARKING SPACE PAVING SHALL BE ASPHALT P-2 PAVING SECTION.
 4. ALL CURBS IS HOWARD COUNTY STANDARD 7" CURB AND GUTTER UNLESS OTHERWISE SPECIFIED ON SHEET 5.
 5. ALL NON-ADA PARKING SPACES SHALL BE 9' x 18'

FOR CONCRETE SCORING,
CROSSWALK MATERIAL, BENCHES,
BIKE RACKS AND TRASH
RECEPTACLE LOCATIONS AND
DETAILS, SEE SHEETS 17 AND 18



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4-4-19
DIRECTOR DATE

NO.	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BE-CIVILENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 22390, Expiration Date: 6-30-2019.

OWNER:
STERGEN A. KLEIN & ASSOCIATES
C/O STERGEN KLEIN INC.
12165 CLARKSVILLE PIKE
CLARKSVILLE, MARYLAND 21034
410-465-4244

DEVELOPER/OWNER:
RIVER HILL SQUARE, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

RIVER HILL SQUARE

REDEVELOPMENT OF
RIVER HILL GARDEN CENTER

TAX MAP: 35 - GRID: 1 - PARCEL: 1
ZONED: B-1
ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND

**SITE DEVELOPMENT LAYOUT AND
DIMENSION PLAN**

DATE: MARCH 4, 2019
SCALE: AS SHOWN

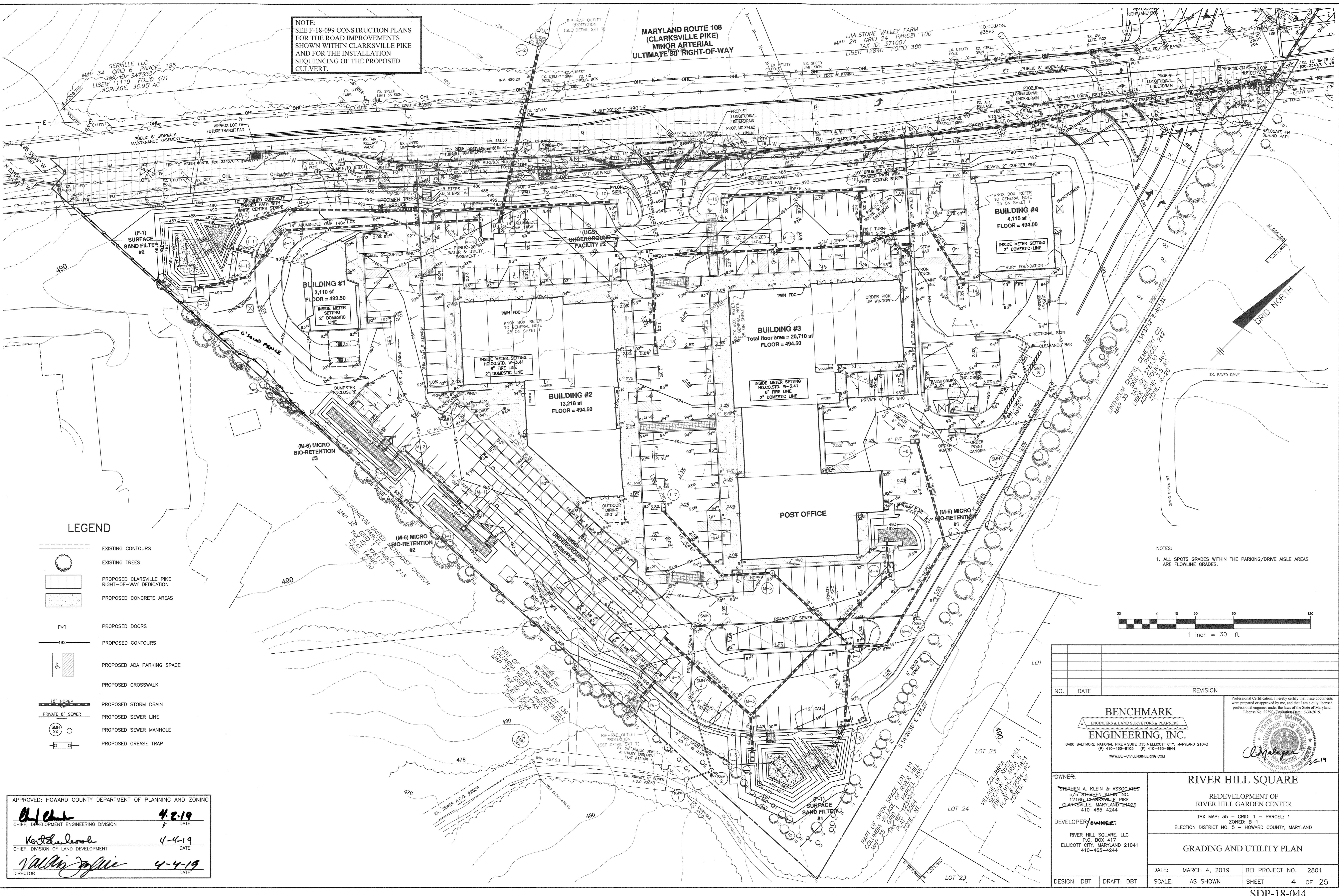
BEI PROJECT NO. 2801
SHEET 3 OF 25

DESIGN: DBT
DRAFT: DBT

NOTE:
SEE F-18-099 CONSTRUCTION PLANS
FOR THE ROAD IMPROVEMENTS
SHOWN WITHIN CLARKSVILLE PIKE
AND FOR THE INSTALLATION
SEQUENCING OF THE PROPOSED
CULVERT.

**MARYLAND ROUTE 108
(CLARKSVILLE PIKE)
MINOR ARTERIAL
ULTIMATE 80' RIGHT-OF-WAY**

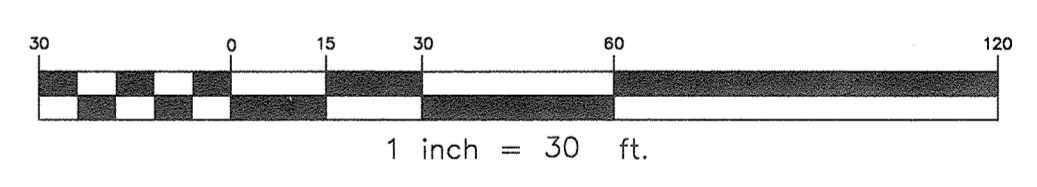
LIMESTONE VALLEY FARM
MAP 28 GRID 24 PARCEL 100
TAX ID: 371007
LIBER T2840 FOLIO 368



LEGEND

- EXISTING CONTOURS
- EXISTING TREES
- PROPOSED CLARKSVILLE PIKE RIGHT-OF-WAY DEDICATION
- PROPOSED CONCRETE AREAS
- PROPOSED DOORS
- PROPOSED CONTOURS
- PROPOSED ADA PARKING SPACE
- PROPOSED STORM DRAIN
- PROPOSED SEWER LINE
- PROPOSED SEWER MANHOLE
- PROPOSED GREASE TRAP

NOTES:
1. ALL SPOTS GRADES WITHIN THE PARKING/DRIVE AISLE AREAS ARE FLOWLINE GRADES.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard 4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Karl Anderson 4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

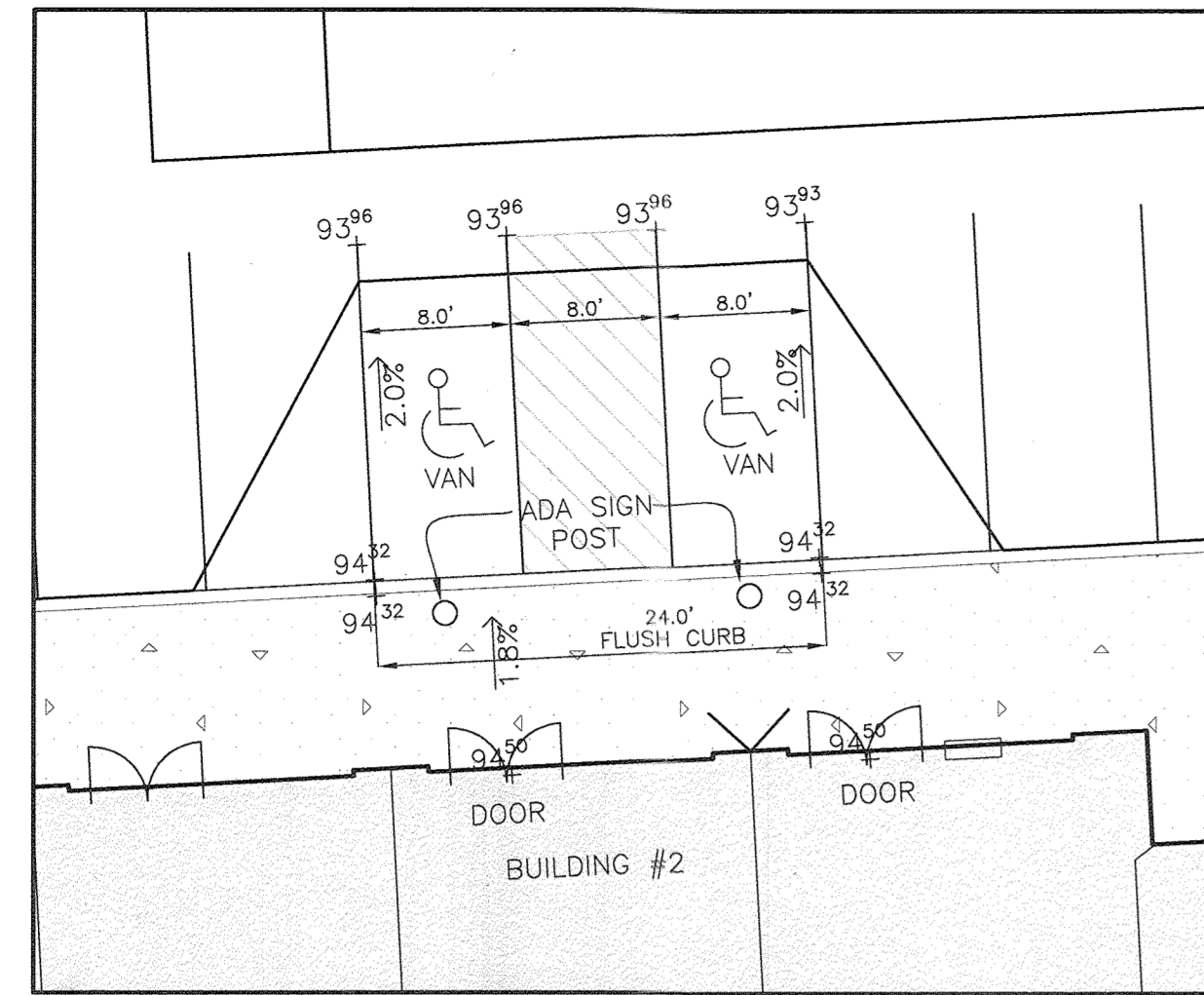
Nathaniel J. Jaffe 4-4-19
DIRECTOR DATE

NO.	DATE	REVISION

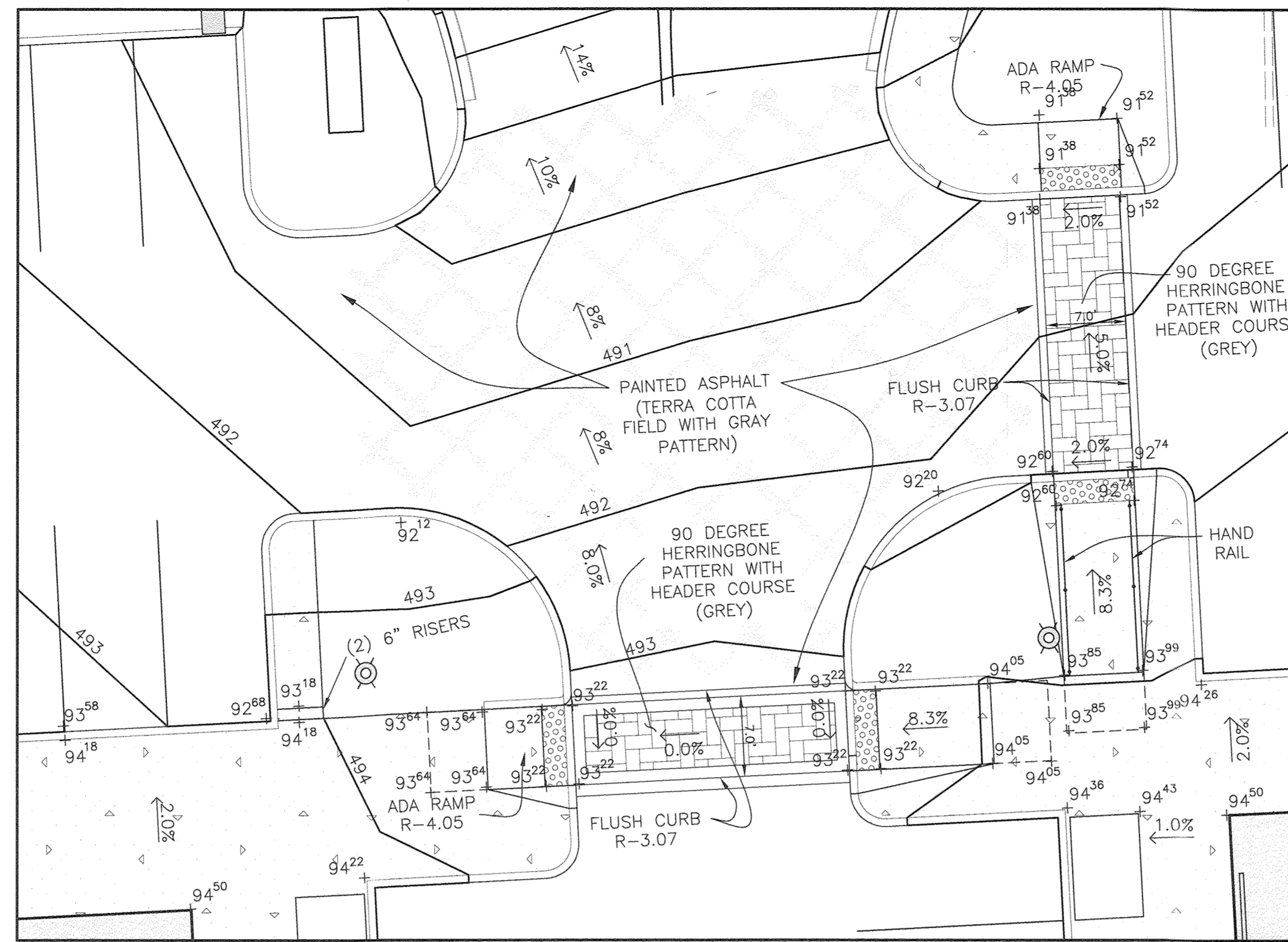
BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043
(P) 410-485-6105 (F) 410-485-6644
WWW.BEI-CIVILENGINEERING.COM

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 22390, Expiration Date: 6-30-2019.

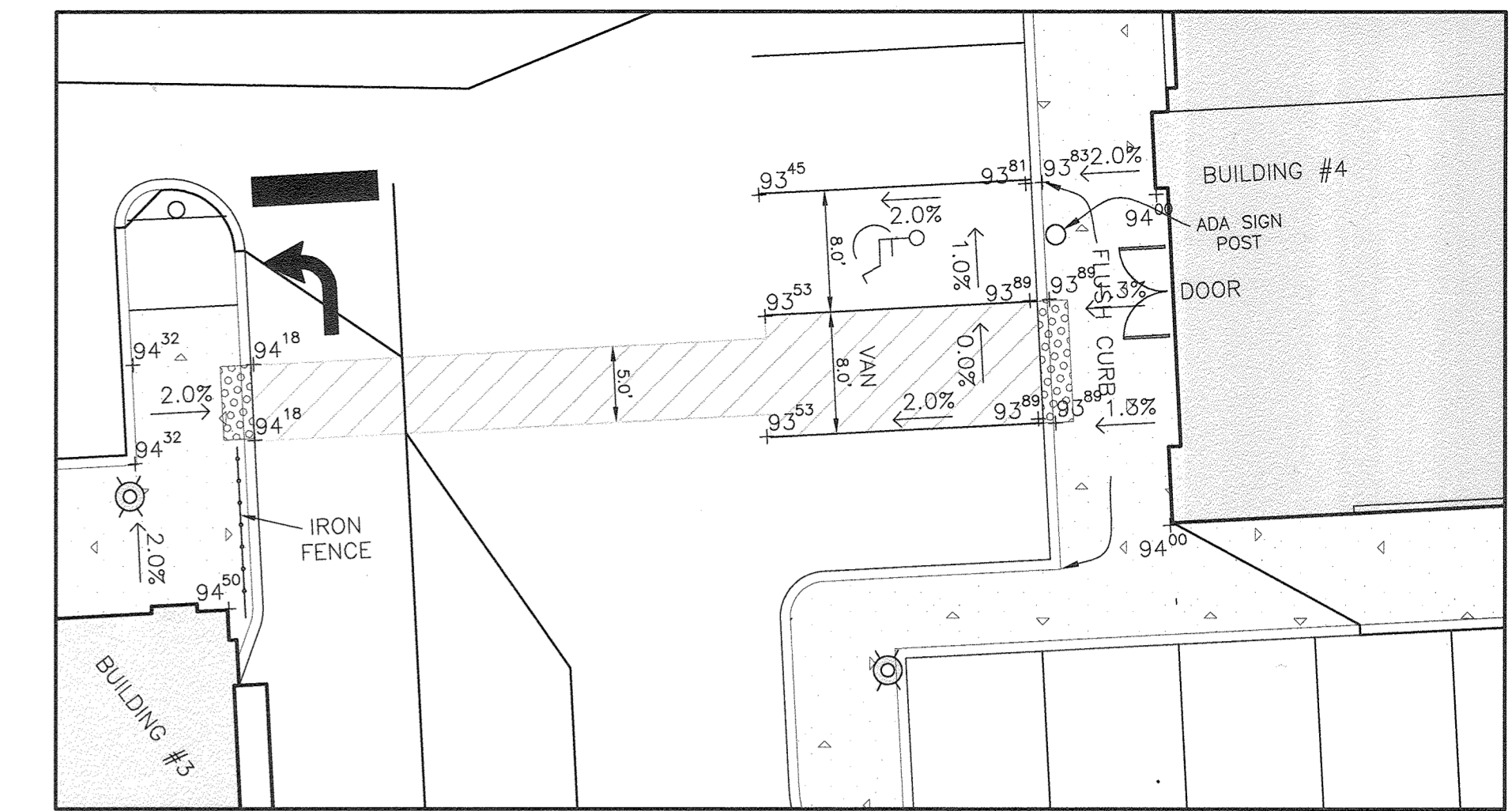
OWNER: STERRIN A. KLEIN & ASSOCIATES C/O STERRIN KLEIN INC. 12165 CLARKSVILLE PIKE CLARKSVILLE, MARYLAND 21029 410-485-4244	RIVER HILL SQUARE REDEVELOPMENT OF RIVER HILL GARDEN CENTER TAX MAP: 35 - GRID: 1 - PARCEL: 1 ZONED: B-1 - ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND
DEVELOPER/OWNER: RIVER HILL SQUARE, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-485-4244	GRADING AND UTILITY PLAN
DATE: MARCH 4, 2019 SCALE: AS SHOWN	BEI PROJECT NO. 2801 SHEET 4 OF 25



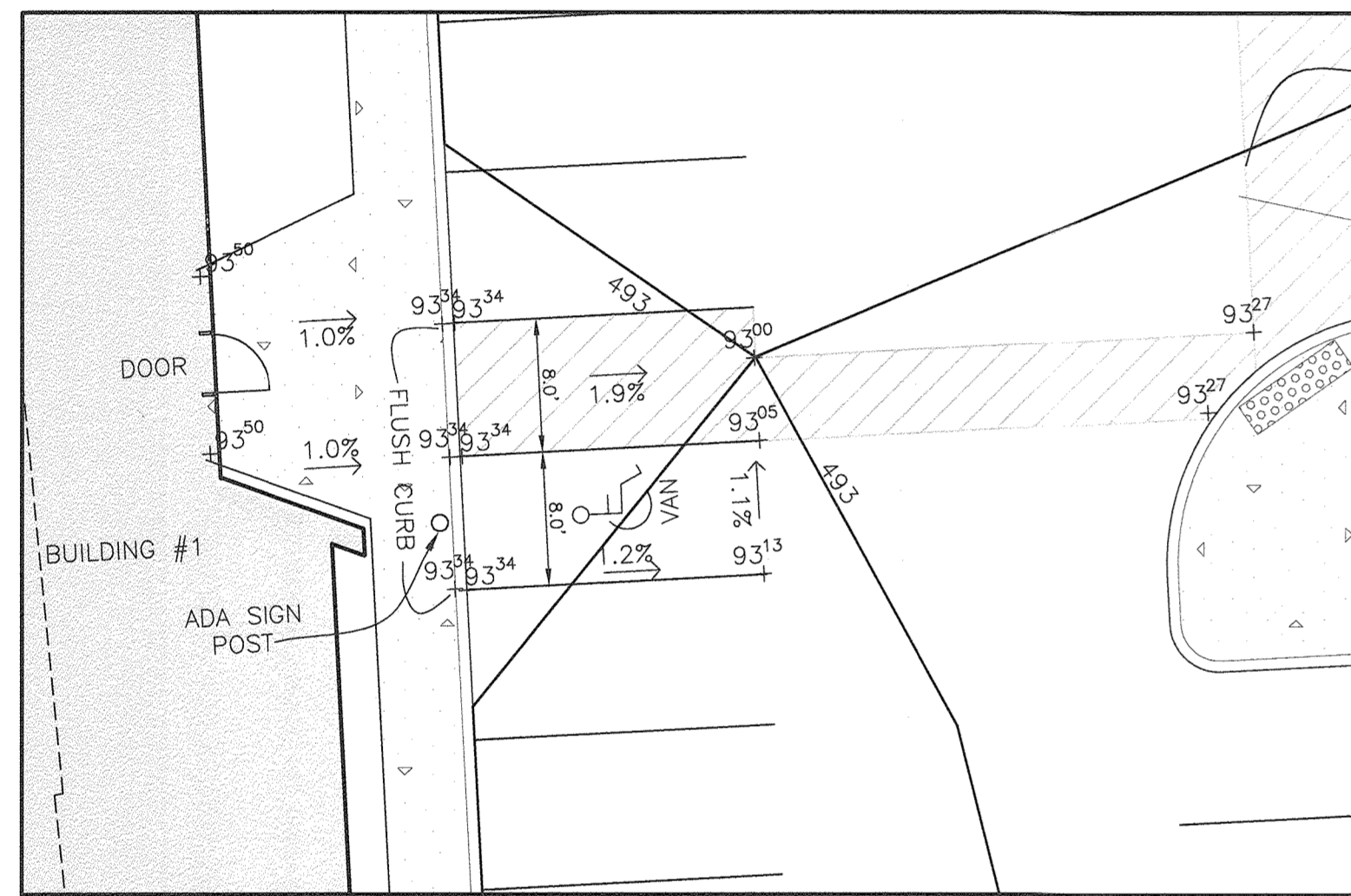
BUILDING #2



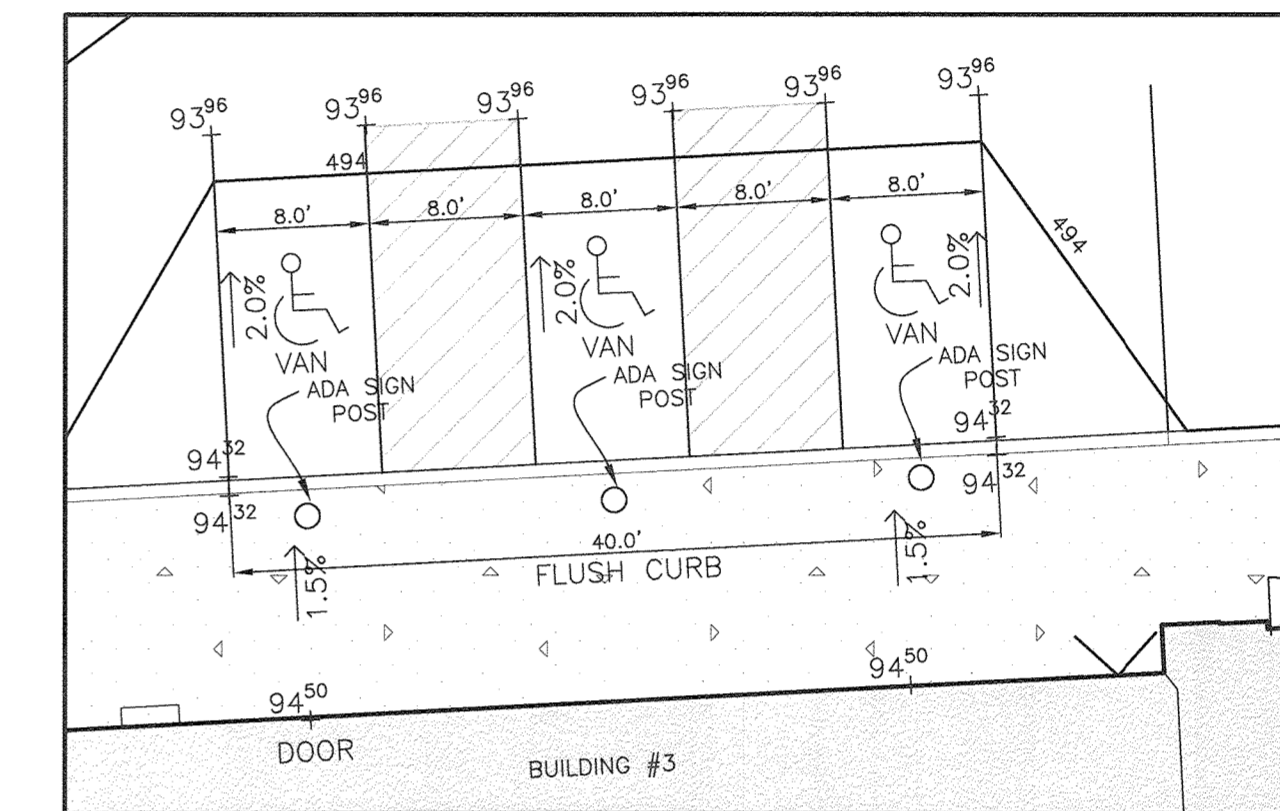
MAIN INTERSECTION AT RIGHT-IN/RIGHT-OUT



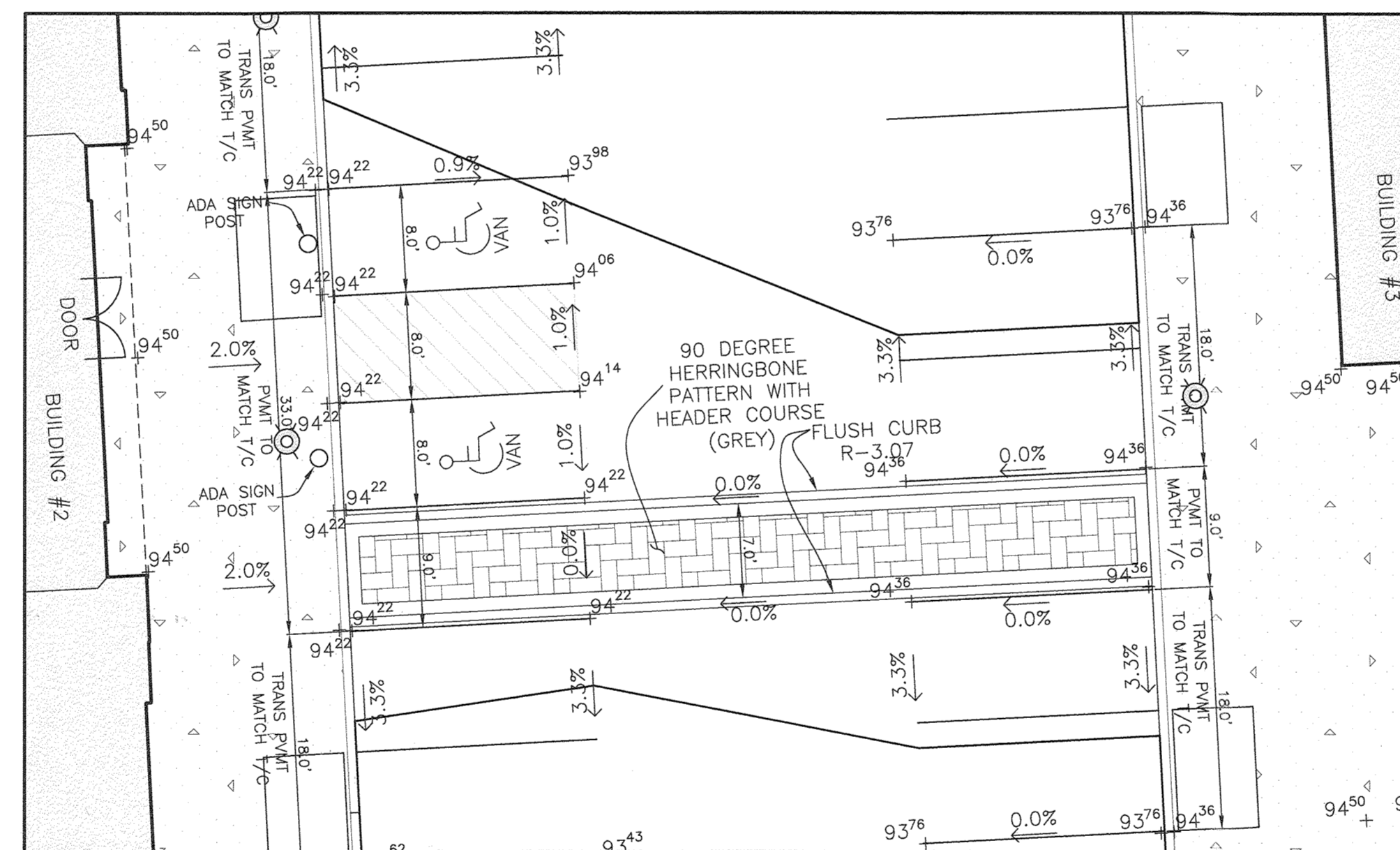
BUILDING #4



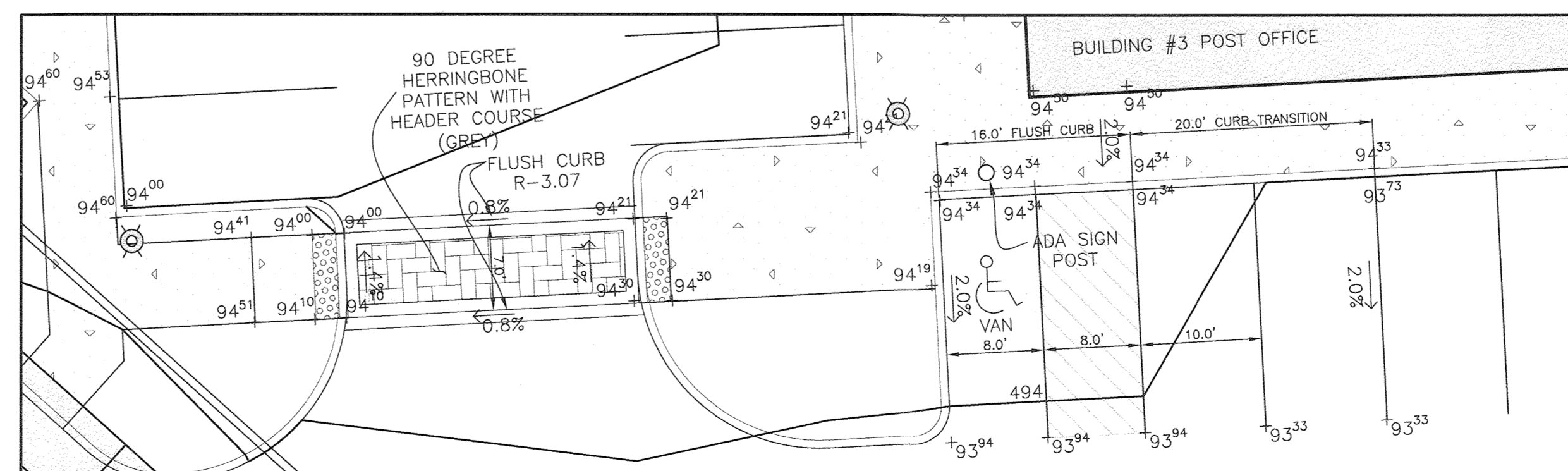
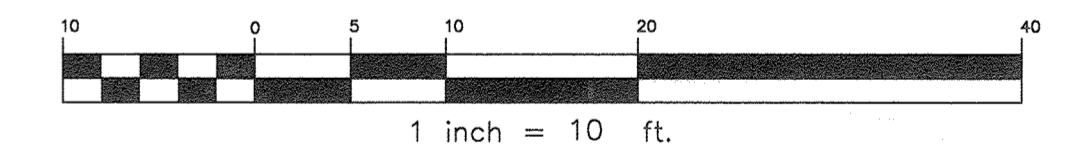
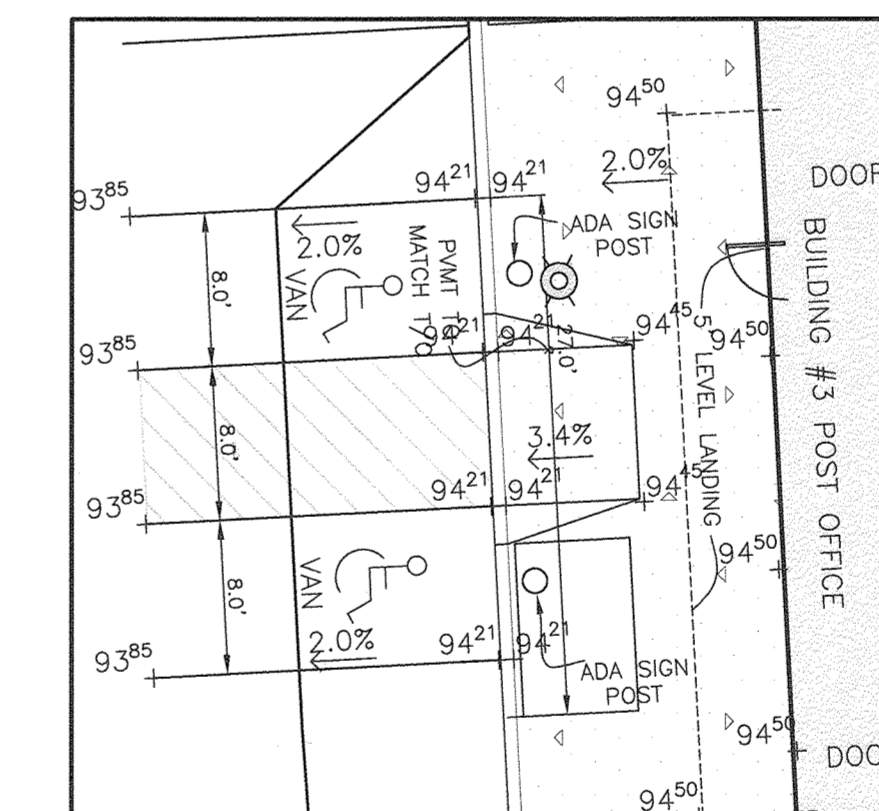
BUILDING #1



BUILDING #3

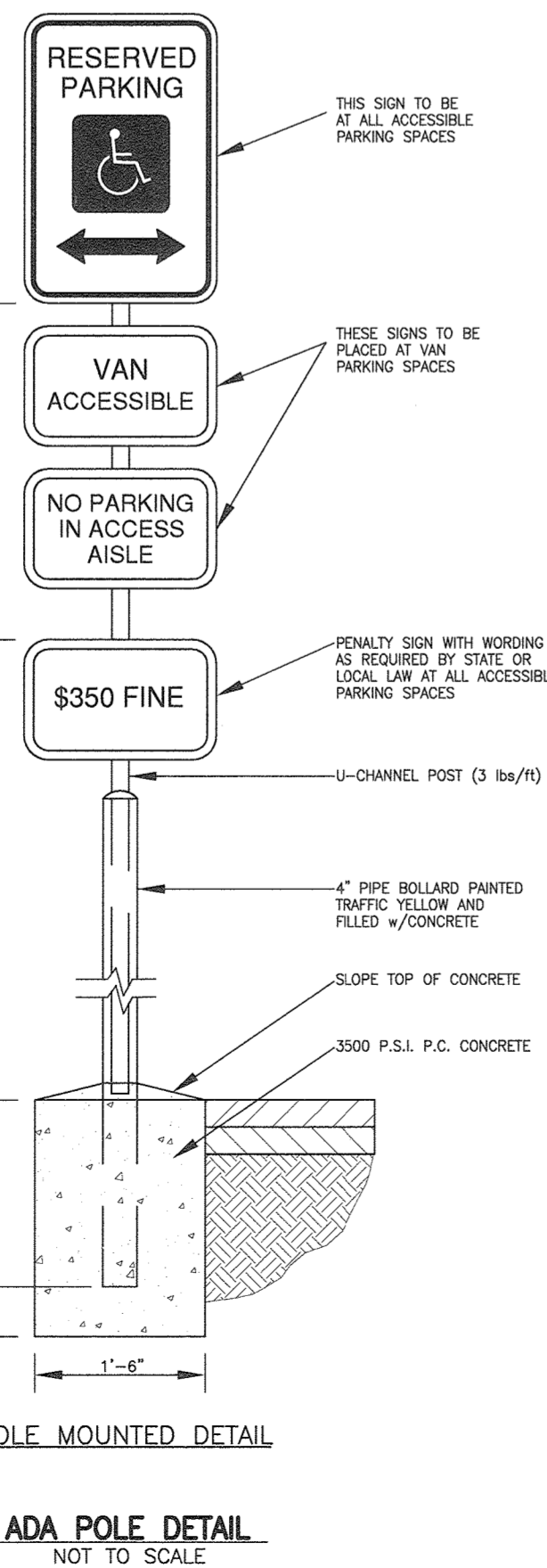


CROSSWALK MID-BUILDING BUILDINGS #2 AND #3



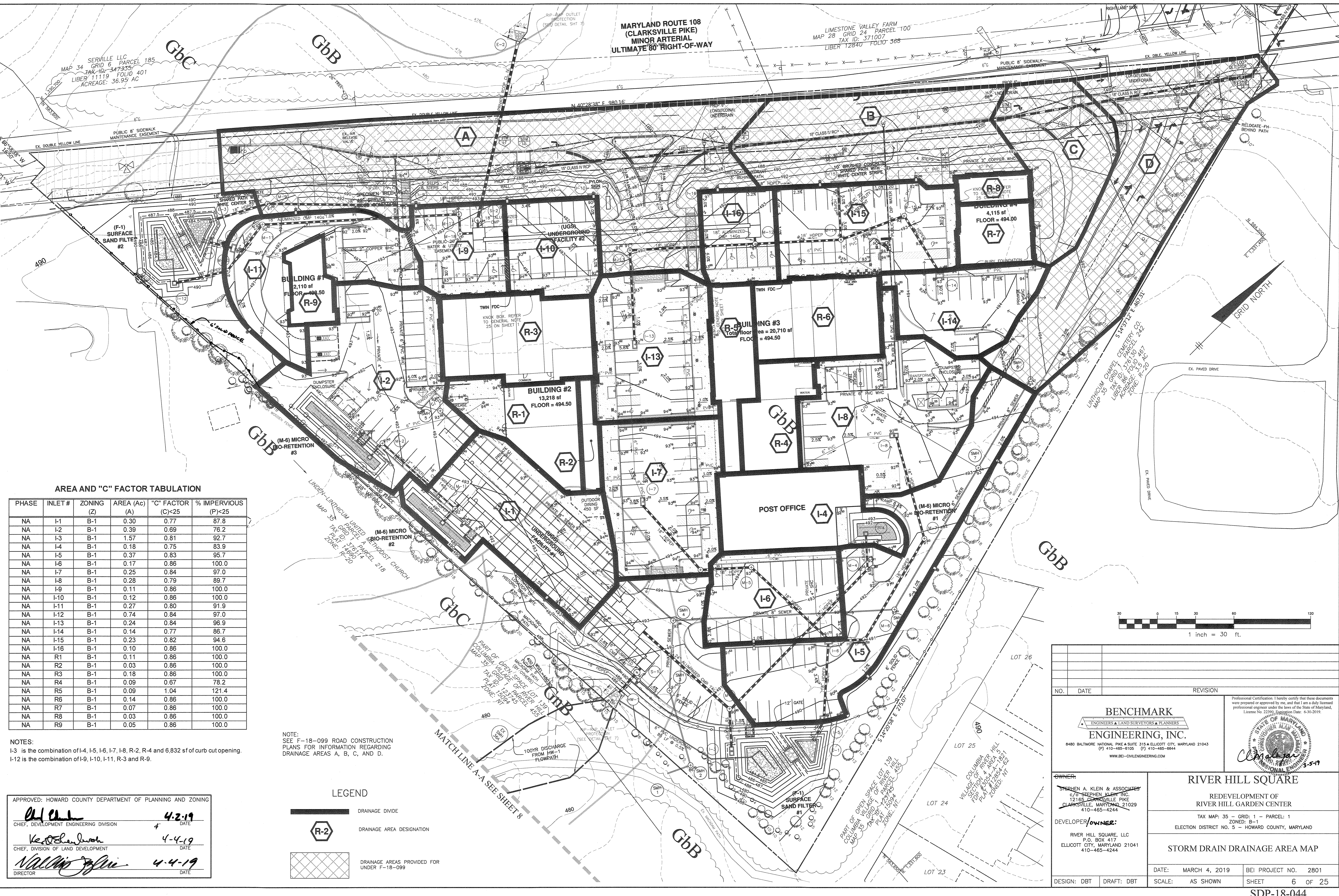
CROSSWALK REAR OF SITE BUILDINGS #2 AND #3

POST OFFICE



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division: *Chad Clark* 4-2-19
 Chief, Division of Land Development: *Karl Schuch* 4-4-19
 Director: *Walter J. J. J.* 4-4-19

NO.		DATE		REVISION	
BENCHMARK ENGINEERING, INC. ENGINEERS & LAND SURVEYORS & PLANNERS 8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6444 WWW.BEI-CIVILENGINEERING.COM					
OWNER: STEPHEN A. KLEIN & ASSOCIATES 12165 CLARKSVILLE PIKE CLARKSVILLE, MARYLAND 21029 410-465-4244					
RIVER HILL SQUARE REDEVELOPMENT OF RIVER HILL GARDEN CENTER TAX MAP: 35 - GRID: 1 - PARCEL: 1 ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND					
ADA COMPLIANCE PLAN					
DATE: MARCH 4, 2019		BEI PROJECT NO. 2801			
DESIGN: DBT		DRAFT: DBT		SCALE: AS SHOWN	
				SHEET 5 OF 25	



AREA AND "C" FACTOR TABULATION

PHASE	INLET #	ZONING (Z)	AREA (Ac) (A)	"C" FACTOR (C)<25	% IMPERVIOUS (P)<25
NA	I-1	B-1	0.30	0.77	87.8
NA	I-2	B-1	0.39	0.69	76.2
NA	I-3	B-1	1.57	0.81	92.7
NA	I-4	B-1	0.18	0.75	83.9
NA	I-5	B-1	0.37	0.83	95.7
NA	I-6	B-1	0.17	0.86	100.0
NA	I-7	B-1	0.25	0.84	97.0
NA	I-8	B-1	0.28	0.79	89.7
NA	I-9	B-1	0.11	0.86	100.0
NA	I-10	B-1	0.12	0.86	100.0
NA	I-11	B-1	0.27	0.80	91.9
NA	I-12	B-1	0.74	0.84	97.0
NA	I-13	B-1	0.24	0.84	96.9
NA	I-14	B-1	0.14	0.77	86.7
NA	I-15	B-1	0.23	0.82	94.6
NA	I-16	B-1	0.10	0.86	100.0
NA	R1	B-1	0.11	0.86	100.0
NA	R2	B-1	0.03	0.86	100.0
NA	R3	B-1	0.18	0.86	100.0
NA	R4	B-1	0.09	0.67	78.2
NA	R5	B-1	0.09	1.04	121.4
NA	R6	B-1	0.14	0.86	100.0
NA	R7	B-1	0.07	0.86	100.0
NA	R8	B-1	0.03	0.86	100.0
NA	R9	B-1	0.05	0.86	100.0

NOTES:
 I-3 is the combination of I-4, I-5, I-6, I-7, I-8, R-2, R-4 and 6.832 sf of curb cut opening.
 I-12 is the combination of I-9, I-10, I-11, R-3 and R-9.

NOTE:
 SEE F-18-099 ROAD CONSTRUCTION PLANS FOR INFORMATION REGARDING DRAINAGE AREAS A, B, C, AND D.

LEGEND

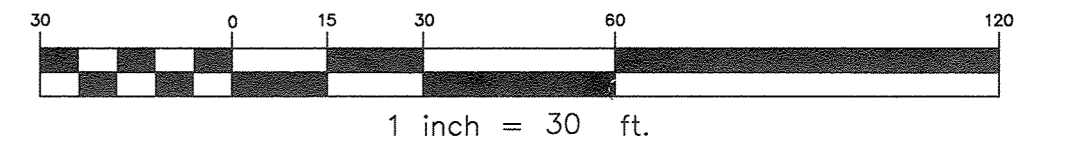
- DRAINAGE DIVIDE
- DRAINAGE AREA DESIGNATION
- DRAINAGE AREAS PROVIDED FOR UNDER F-18-099

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-2-19
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4-4-19
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4-4-19
 DIRECTOR DATE



NO.	DATE	REVISION

BENCHMARK
 ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE & SUITE 315 ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-6644
 WWW.BEI-CIVILENGINEERING.COM

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 22390, Expiration Date: 6-30-2019.

[Professional Seal]

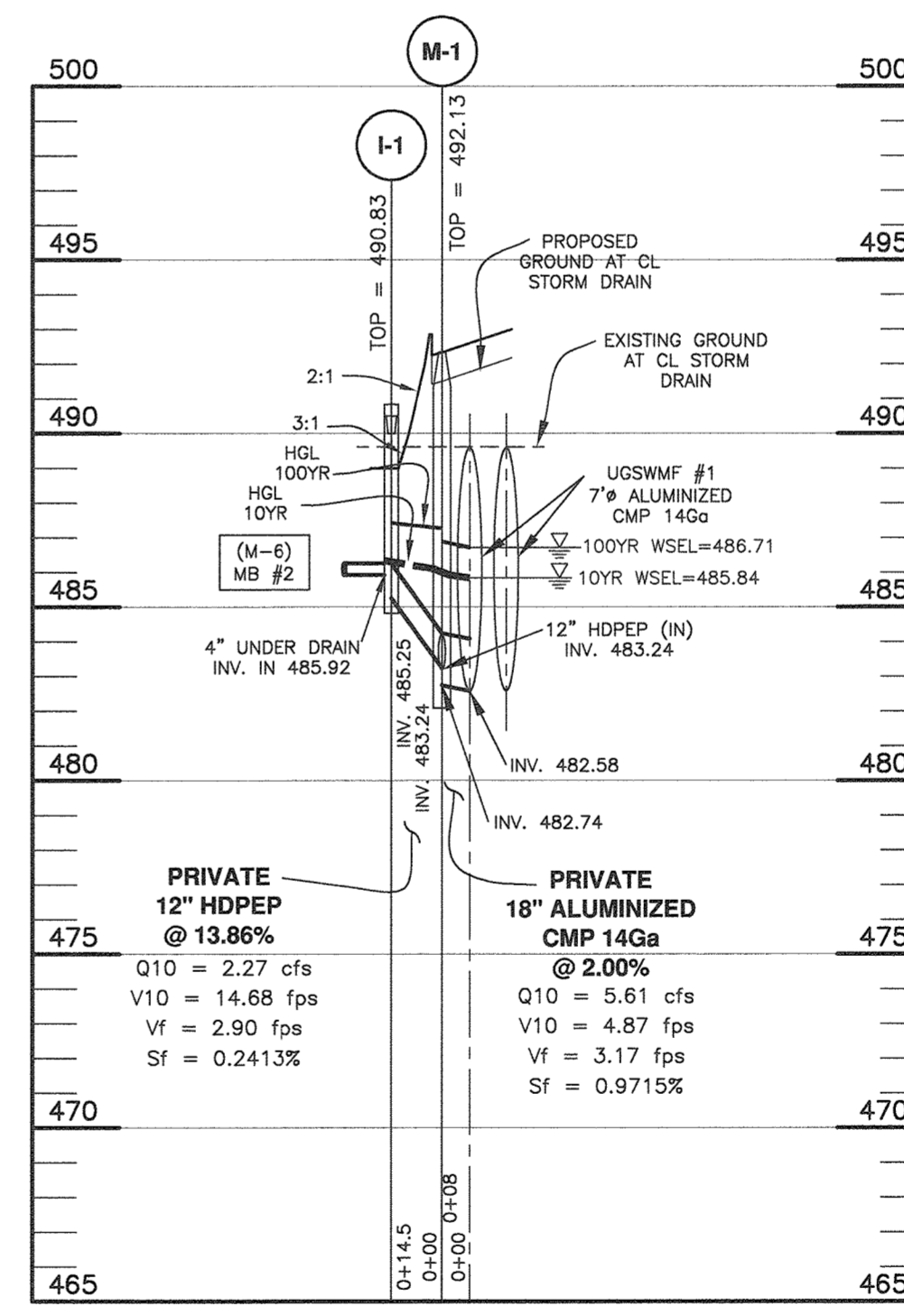
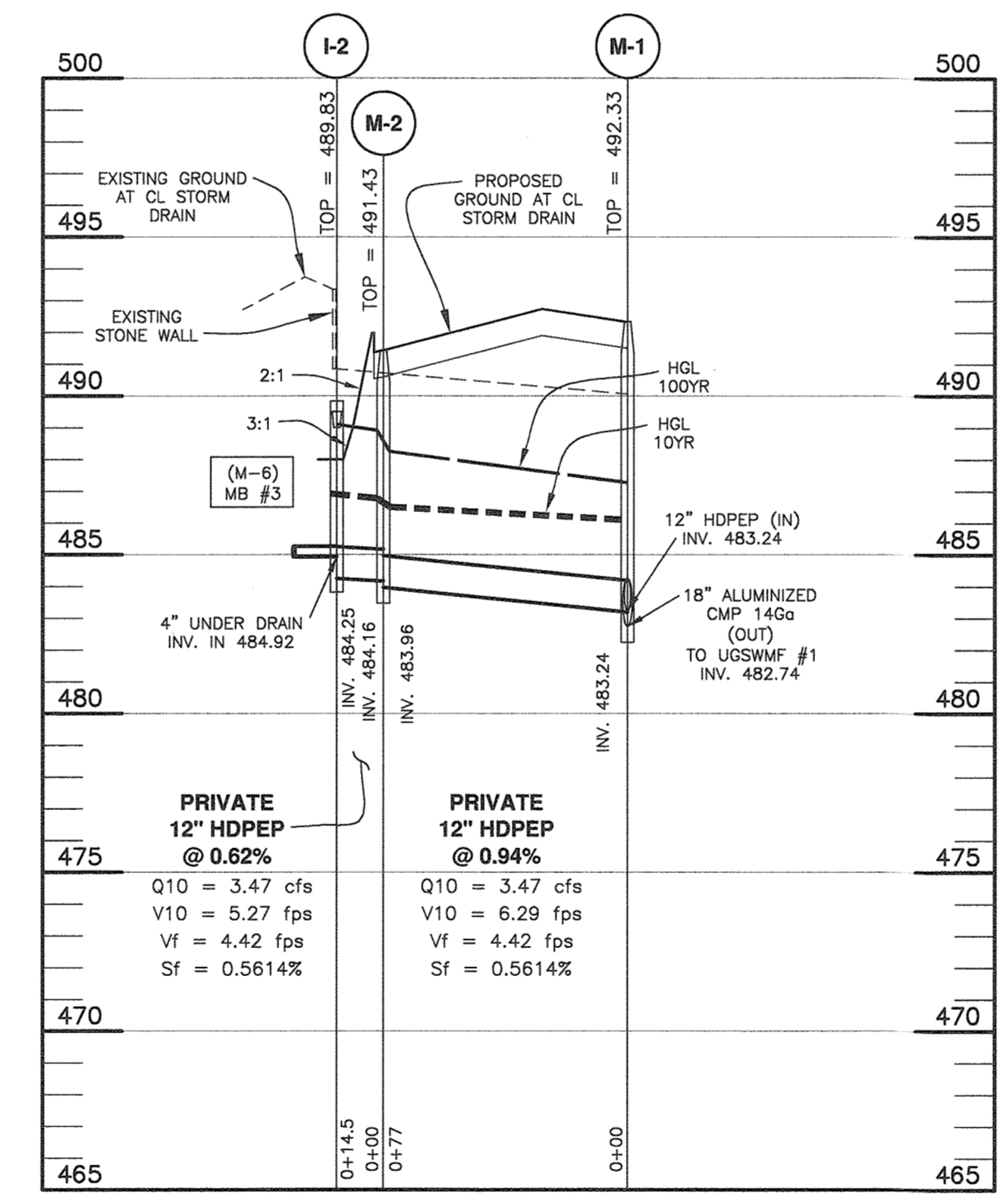
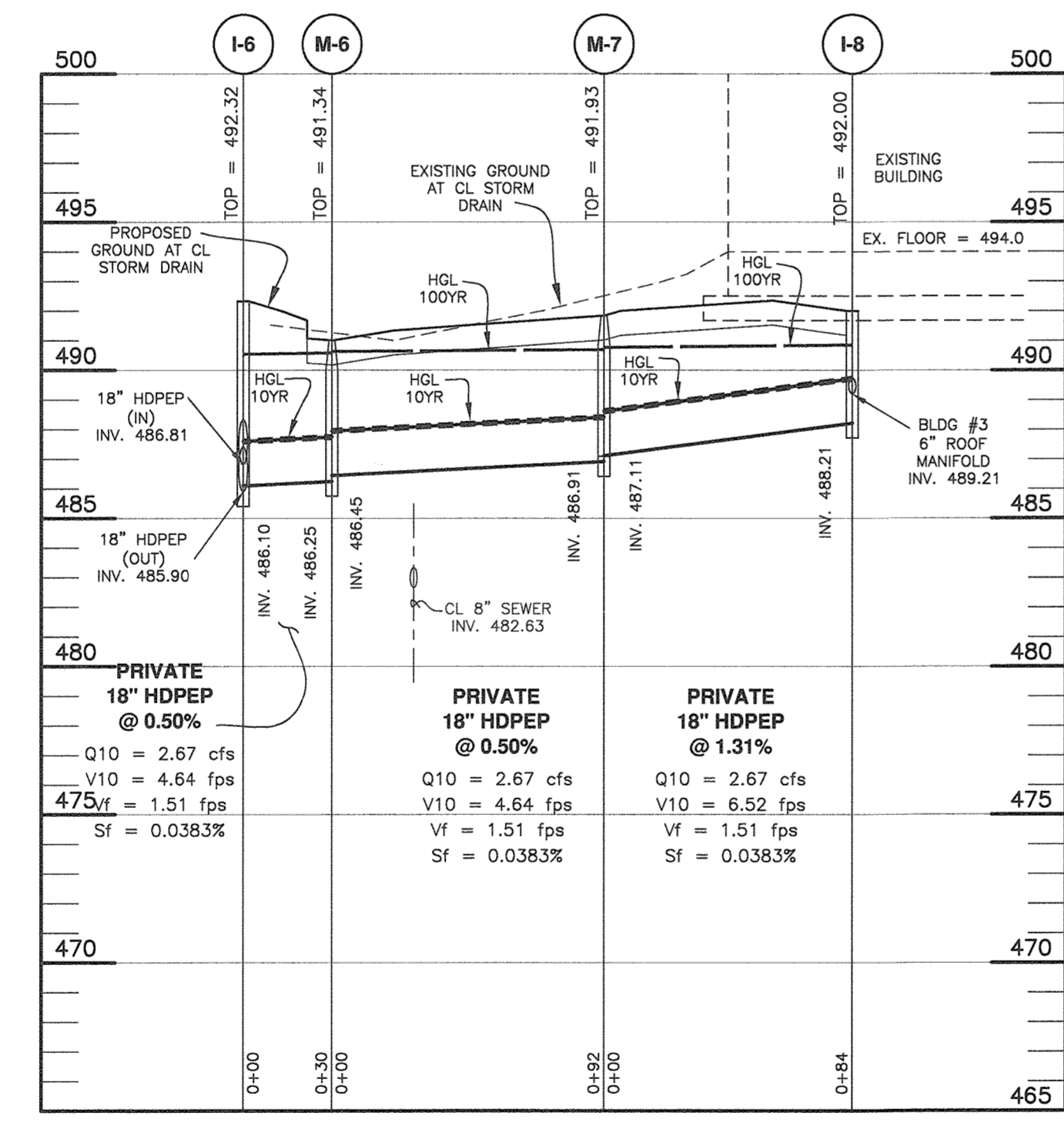
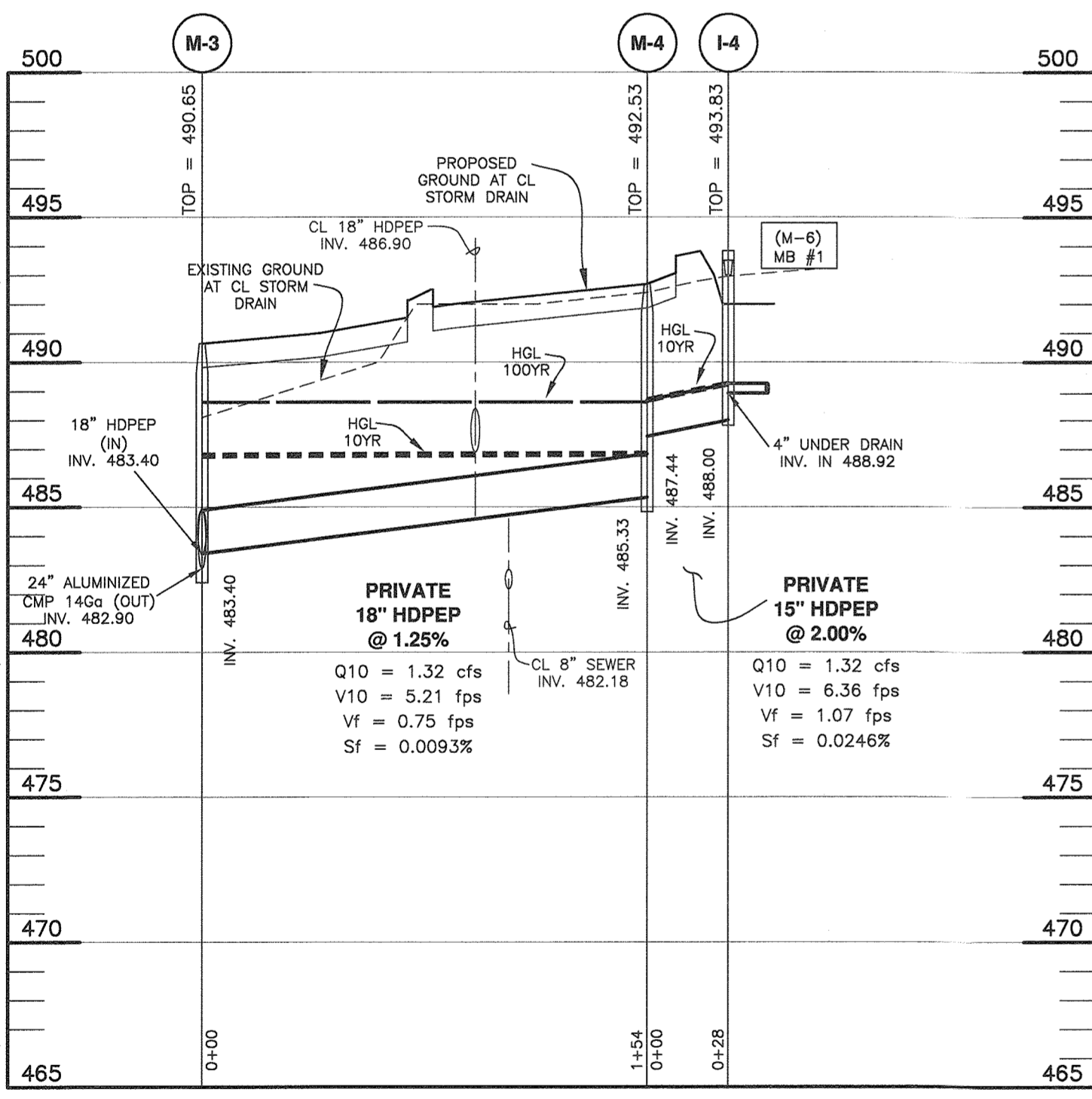
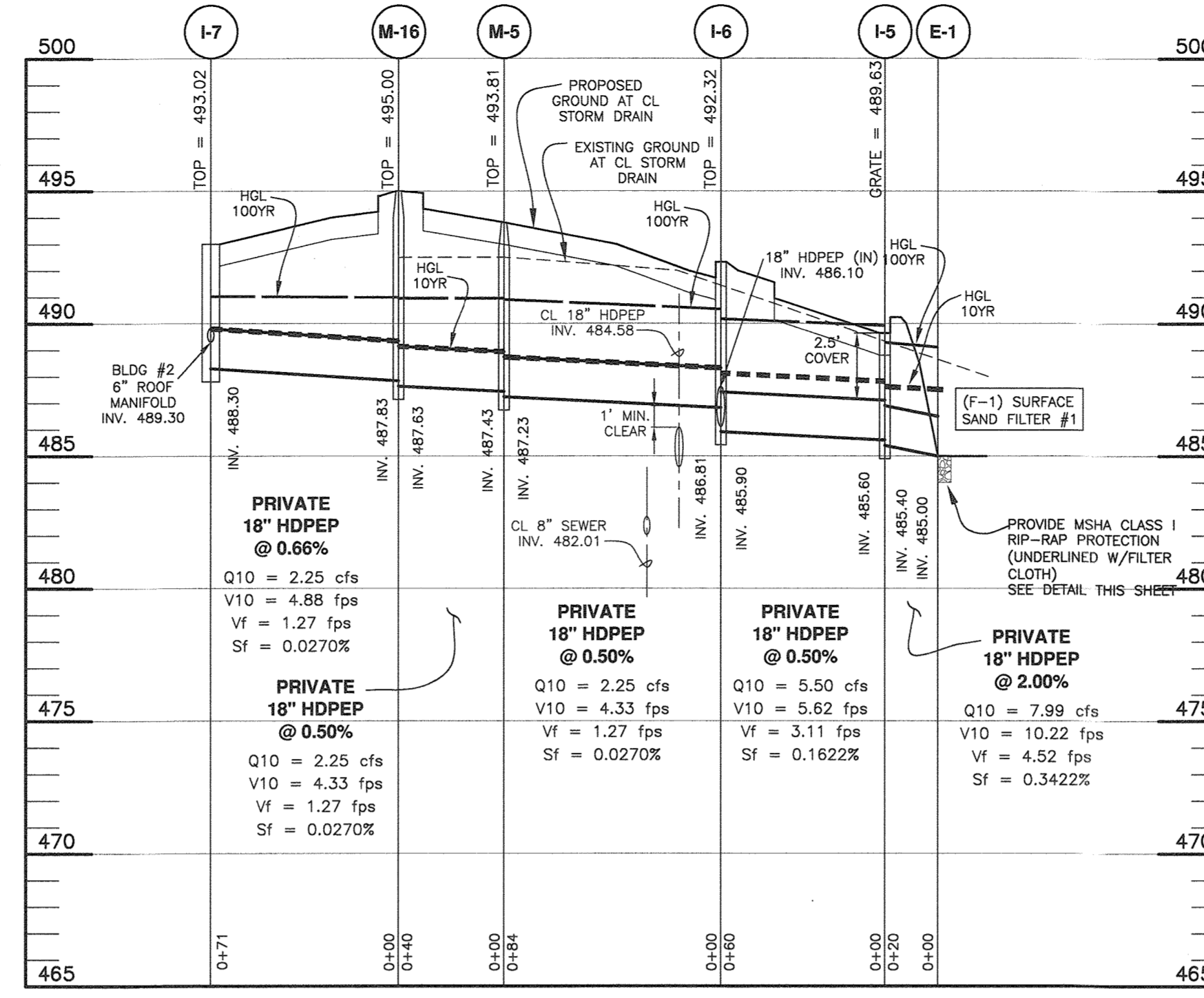
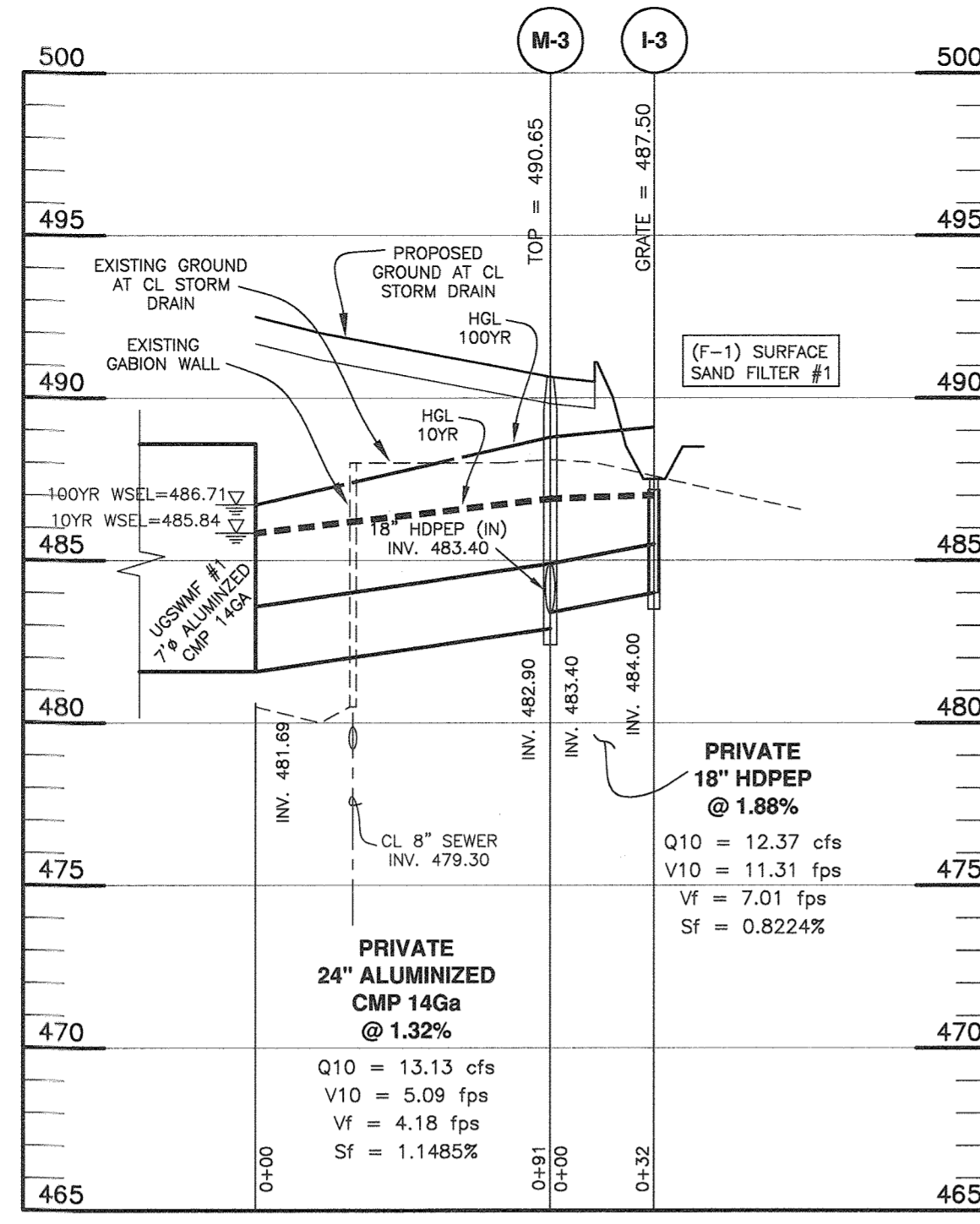
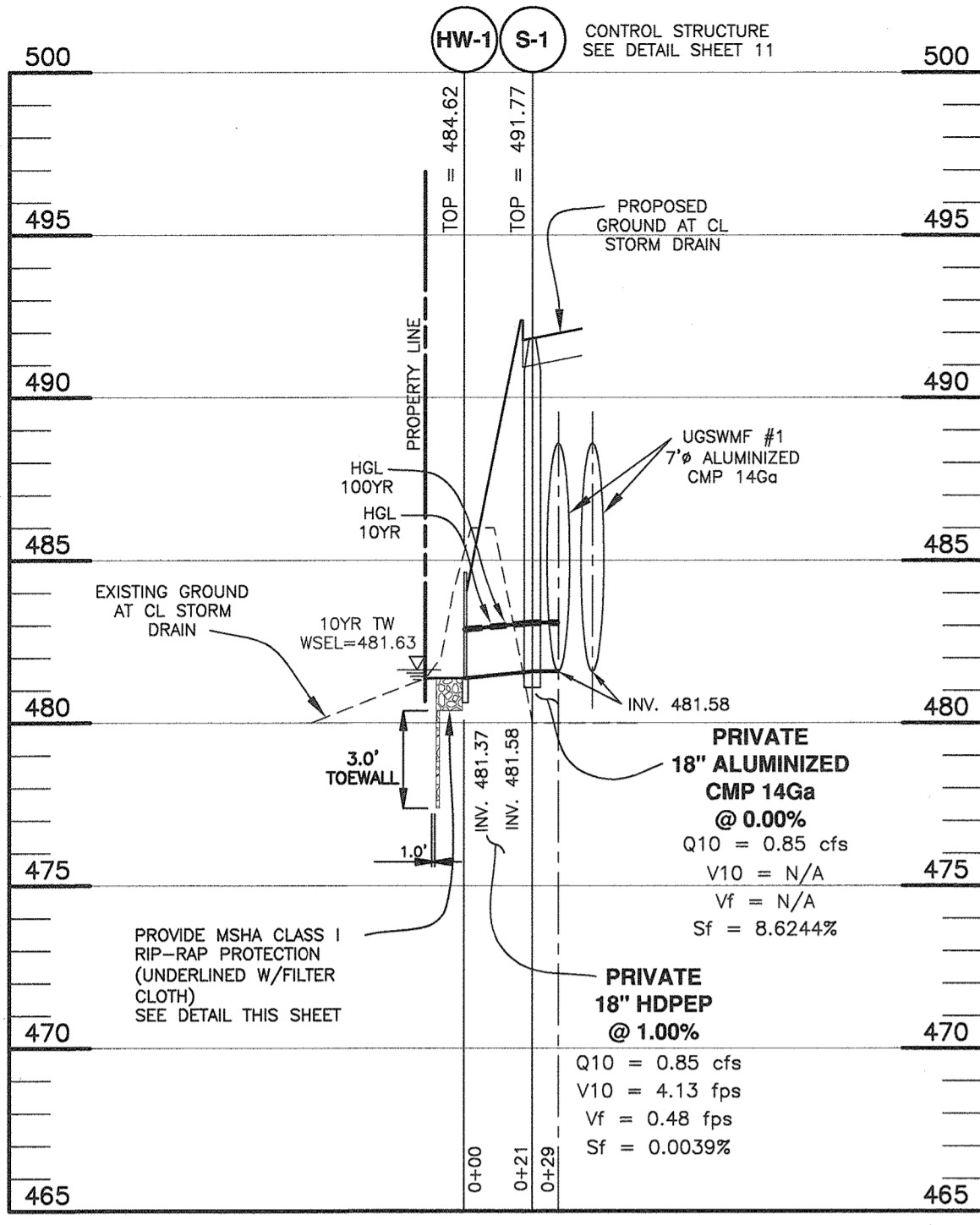
OWNER:
 STEPHEN A. KLEIN & ASSOCIATES
 12165 CLARKSVILLE PIKE
 CLARKSVILLE, MARYLAND 21029
 410-465-4244

DEVELOPER/OWNER:
 RIVER HILL SQUARE, LLC
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 410-465-4244

RIVER HILL SQUARE
 REDEVELOPMENT OF
 RIVER HILL GARDEN CENTER
 TAX MAP: 35 - GRID: 1 - PARCEL: 1
 ZONED: B-1 - HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND

STORM DRAIN DRAINAGE AREA MAP

DATE: MARCH 4, 2019 BEI PROJECT NO. 2801
 DESIGN: DBT DRAFT: DBT SCALE: AS SHOWN SHEET 6 OF 25



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

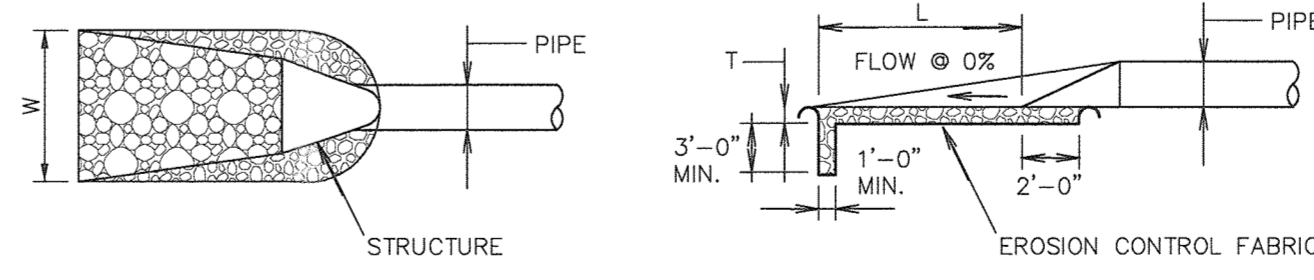
[Signature] 4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 4-4-19
DIRECTOR

CONSTRUCTION SPECIFICATIONS

- THE SUBGRADE FOR THE FILTER, RIP-RAP, OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
- THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
- GEOTEXILE CLASS C28 OR BETTER SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE PREPARED BY PLACING ANOTHER PIECE OF GEOTEXILE FABRIC OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXILE FABRIC. ALL OVERLAPS WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXILE FABRIC SHALL BE A MINIMUM OF ONE FOOT.
- STONE FOR THE RIP-RAP OR GABION OUTLETS MAY BE PLACED BY EQUIPMENT. THEY SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR THE RIP-RAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXILE FABRIC. HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.
- THE STONE SHALL BE PLACED SO THAT IT BLENDS IN WITH THE EXISTING GROUND. IF THE STONE IS PLACED TOO HIGH THEN THE FLOW WILL BE FORCED OUT OF THE CHANNEL AND SCOUR ADJACENT TO THE STONE WILL OCCUR.



STRUCTURE	Q2 (cfs)	V2 (fps)	d2 (ft)	Q10 (cfs)	V10 (fps)	d10 (ft)	d50	LENGTH(L)	WIDTH(W)	THICK.(T)	SHA CLASS
HW-1	0.67	3.90	0.23	0.85	4.13	0.26	9.5"	8'	9.5"	19"	I
E-1	-	-	-	7.99	14.94	0.51	9.5"	FOREBAY	FOREBAY	19"	J
E-2	0.72	2.58	0.23	0.93	2.71	0.33	9.5"	8'	10'	19"	J
E-3	-	-	-	2.71	6.05	0.50	9.5"	FOREBAY	FOREBAY	19"	J
E-4	-	-	-	2.46	5.69	0.30	9.5"	FOREBAY	FOREBAY	19"	I

NOT TO SCALE

OUTLET PROTECTION DETAIL
NOT TO SCALE

STORM DRAIN STRUCTURE SCHEDULE

STRUCT NO.	TYPE	HO.CO. STD. DETAIL	LOCATION	INVERT IN	INVERT OUT	TOP ELEVATION	THROAT ELEVATION	MAINTENANCE
INLETS								
I-1	D Inlet (open on 2 sides)	D-4.10	N 563598.61 E 1331154.10	-	485.92 (4")	485.25 (12")	490.83	490.00 PRIVATE
I-2	D Inlet (open on 2 sides)	D-4.10	N 563584.34 E 1331077.58	-	484.92 (4")	484.25 (12")	489.83	489.00 PRIVATE
I-3	double S Inlet	D-4.23	N 563623.22 E 1331439.21	-	-	484.00 (18")	487.50	NA PRIVATE
I-4	D Inlet (open on 2 sides)	D-4.10	N 563816.37 E 1331394.34	-	488.92 (4")	488.00 (15")	493.83	493.00 PRIVATE
I-5	S comb	D-4.32	N 563891.81 E 1331472.99	-	485.60 (18")	485.40 (18")	489.63	NA PRIVATE
I-6	A-5 (3.0' wide)	D-4.01	N 563795.86 E 1331435.38	486.81 (18")	486.10 (18")	485.90 (18")	492.32	491.72 PRIVATE
I-7	double S Inlet	D-4.23	N 563710.72 E 1331293.38	-	488.30 (6")	488.00 (6")	492.02	NA PRIVATE
I-8	double S Inlet	D-4.23	N 563886.30 E 1331355.69	489.21 (6")	-	488.21 (18")	492.00	NA PRIVATE
I-9	A-5 (3.0' wide)	D-4.01	N 563747.62 E 1330965.54	487.31 (6")	486.51 (18")	486.31 (18")	492.64	492.04 PRIVATE
I-10	A-5 (3.0' wide)	D-4.01	N 563849.87 E 1331066.71	-	-	487.54 (18")	491.16	490.56 PRIVATE
I-11	A-5 (2.5' wide)	D-4.01	N 563824.94 E 1330888.51	487.00 (6")	-	484.75 (18")	490.35	489.75 PRIVATE
I-12	S Inlet	D-4.22	N 563572.21 E 1330873.42	-	481.80 (6")	481.80 (18")	487.00	NA PRIVATE
I-13	double S Inlet	D-4.23	N 563793.98 E 1331162.01	488.03 (6")	-	487.20 (18")	492.70	NA PRIVATE
I-14	A-5 (2.5' wide)	D-4.01	N 563906.60 E 1331294.10	490.00 (6")	-	485.85 (18")	493.64	493.04 PRIVATE
I-15	A-10 (3.0' wide)	D-4.03	N 563993.16 E 1331186.67	-	486.05 (18")	485.85 (18")	492.35	491.75 PRIVATE
I-16	A-5 (3.0' wide)	D-4.01	N 563915.29 E 1331116.68	-	-	487.10 (18")	491.80	491.20 PRIVATE
MANHOLES								
S-1	See detail sheet 14	NA	N 563613.12 E 1331344.57	-	481.58 (18")	481.58 (18")	491.77	PRIVATE
S-2	See detail sheet 15	NA	N 563774.84 E 1331006.15	-	478.00 (18")	478.05 (24")	493.24	PRIVATE
M-1	4' Diameter Pre-Cast	G-5.12	N 563803.02 E 1331153.34	483.24 (12")	-	483.24 (18")	492.13	PRIVATE
M-2	4' Diameter Pre-Cast	G-5.12	N 563598.98 E 1331076.81	-	-	484.16 (12")	491.43	PRIVATE
M-3	4' Diameter Pre-Cast	G-5.12	N 563644.18 E 1331415.97	483.40 (18")	-	483.40 (18")	490.65	PRIVATE
M-4	4' Diameter Pre-Cast	G-5.12	N 563797.81 E 1331414.94	-	-	487.44 (18")	492.53	PRIVATE
M-5	4' Diameter Pre-Cast	G-5.12	N 563734.48 E 1331349.66	-	-	487.23 (18")	493.81	PRIVATE
M-6	4' Diameter Pre-Cast	G-5.12	N 563757.43 E 1331452.77	-	-	485.45 (18")	491.00	PRIVATE
M-7	4' Diameter Pre-Cast	G-5.12	N 563948.08 E 1331428.51	487.11 (18")	-	487.11 (18")	491.93	PRIVATE
M-8	4' Diameter Pre-Cast	G-5.12	N 563667.83 E 1330890.94	-	-	485.18 (18")	491.00	PRIVATE
M-9	4' Diameter Pre-Cast	G-5.12	N 563908.23 E 1330895.89	-	-	481.33 (18")	491.10	PRIVATE
M-10	4' Diameter Pre-Cast	G-5.12	N 563635.22 E 1330889.53	-	-	480.62 (18")	490.40	PRIVATE
M-11	4' Diameter Pre-Cast	G-5.12	N 563915.15 E 1331173.10	484.50 (18")	-	484.50 (18")	493.96	PRIVATE
M-12	4' Diameter Pre-Cast	G-5.12	N 563842.29 E 1331107.42	-	-	486.44 (18")	491.76	PRIVATE
M-13	4' Diameter Pre-Cast	G-5.12	N 563695.03 E 1331210.07	490.07 (6" x 485.57 (18"))	-	485.57 (18")	493.30	PRIVATE
M-14	4' Diameter Pre-Cast	G-5.12	N 564013.27 E 1331240.01	489.00 (6")	-	489.00 (18")	492.64	PRIVATE
M-15	4' Diameter Pre-Cast	G-5.12	N 563704.93 E 1331323.03	-	-	487.83 (18")	495.00	PRIVATE
M-16	4' Diameter Pre-Cast	G-5.12	N 563767.73 E 1330962.75	-	-	479.65 (18")	492.66	PRIVATE
M-17	4' Diameter Pre-Cast	G-5.12	N 563757.52 E 1331004.08	-	-	479.30 (18")	493.21	PRIVATE
M-18	4' Diameter Pre-Cast	G-5.12	N 563757.52 E 1331004.08	-	-	479.30 (18")	493.21	PRIVATE
END SECTIONS								
E-1	18" HDPE	NA	N 563673.60 E 1331479.79	-	-	485.00 (18")	-	PRIVATE
E-2	24" Concrete	D-5.51	N 563895.80 E 1330929.83	-	-	475.33 (24")	-	PRIVATE
E-3	18" HDPE	NA	N 563625.73 E 1330858.60	-	-	484.50 (18")	-	PRIVATE
E-4	18" HDPE	NA	N 563611.26 E 1330865.25	-	-	484.50 (18")	-	PRIVATE
HW-1	Type 'C' 18" Concrete	D-5.21	N 563592.15 E 1331345.68	-	-	481.37 (18")	484.62	PRIVATE

STRUCTURE LOCATION FOR MANHOLES IS AT THE CENTER OF THE MANHOLE
STRUCTURE LOCATION FOR TYPE 'A' INLETS IS AT THE MIDPOINT ALONG THE GUTTER PAN
STRUCTURE LOCATION FOR TYPE 'S' INLETS IS AT THE CENTER OF THE GRATE
STRUCTURE LOCATION FOR END SECTIONS IS AT THE MIDPOINT OF THE END OF THE STRUCTURE
PRECAST STRUCTURES MEETING HS-20 LOADING MAY BE USED.

STORM DRAIN PIPE SCHEDULE

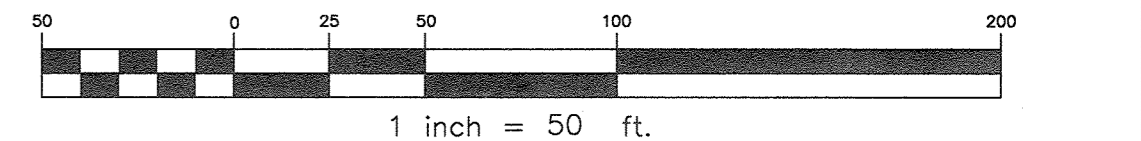
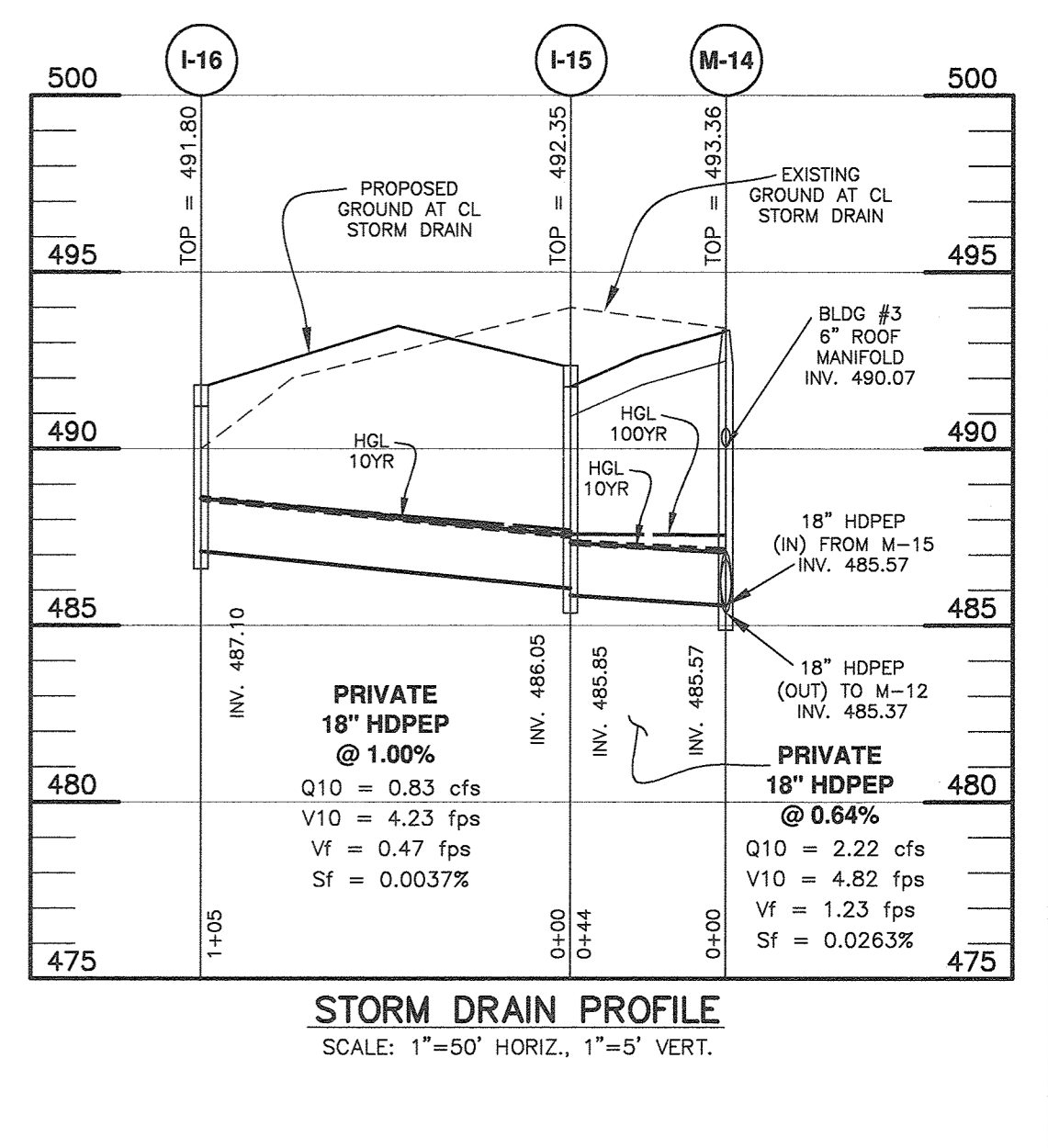
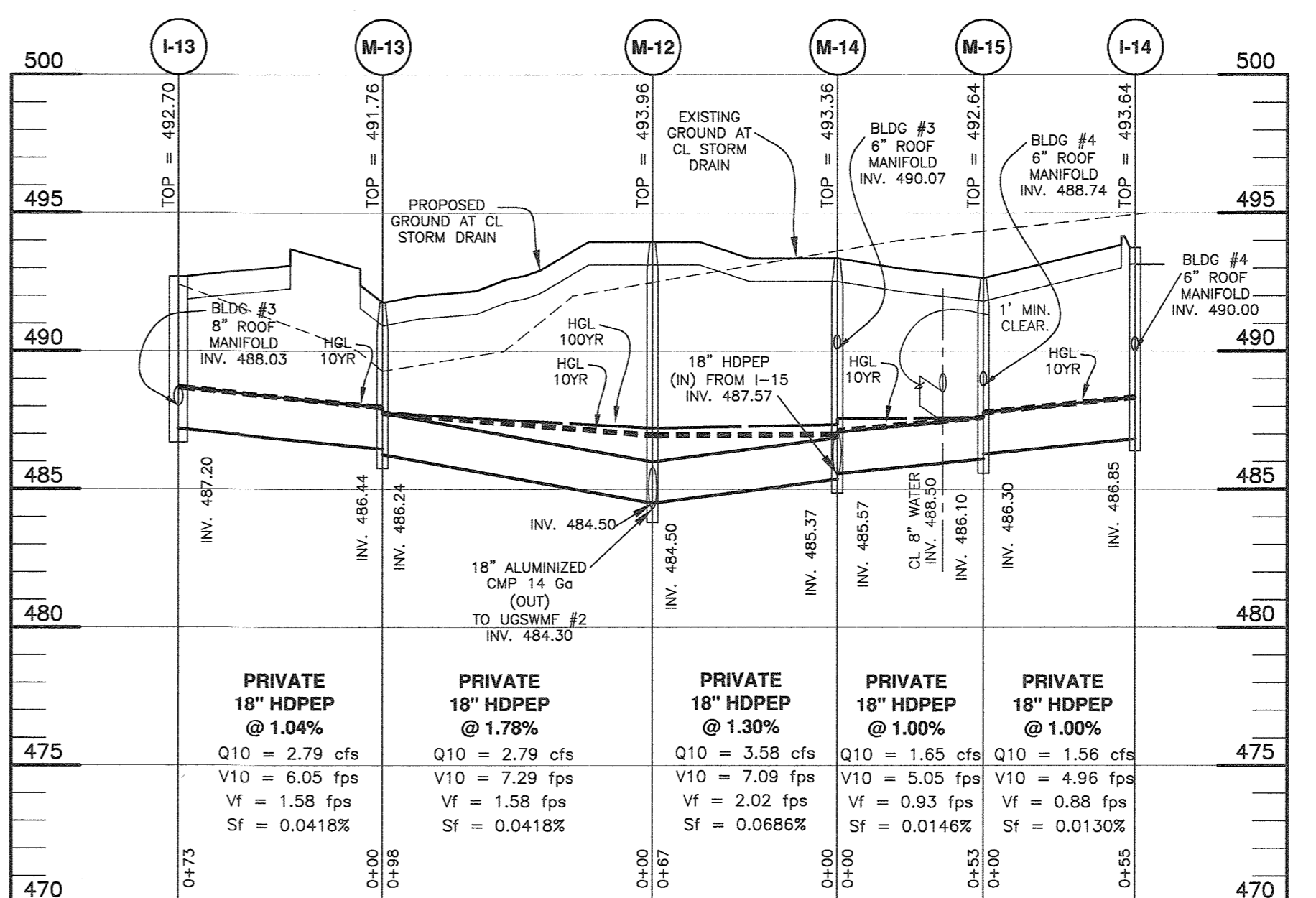
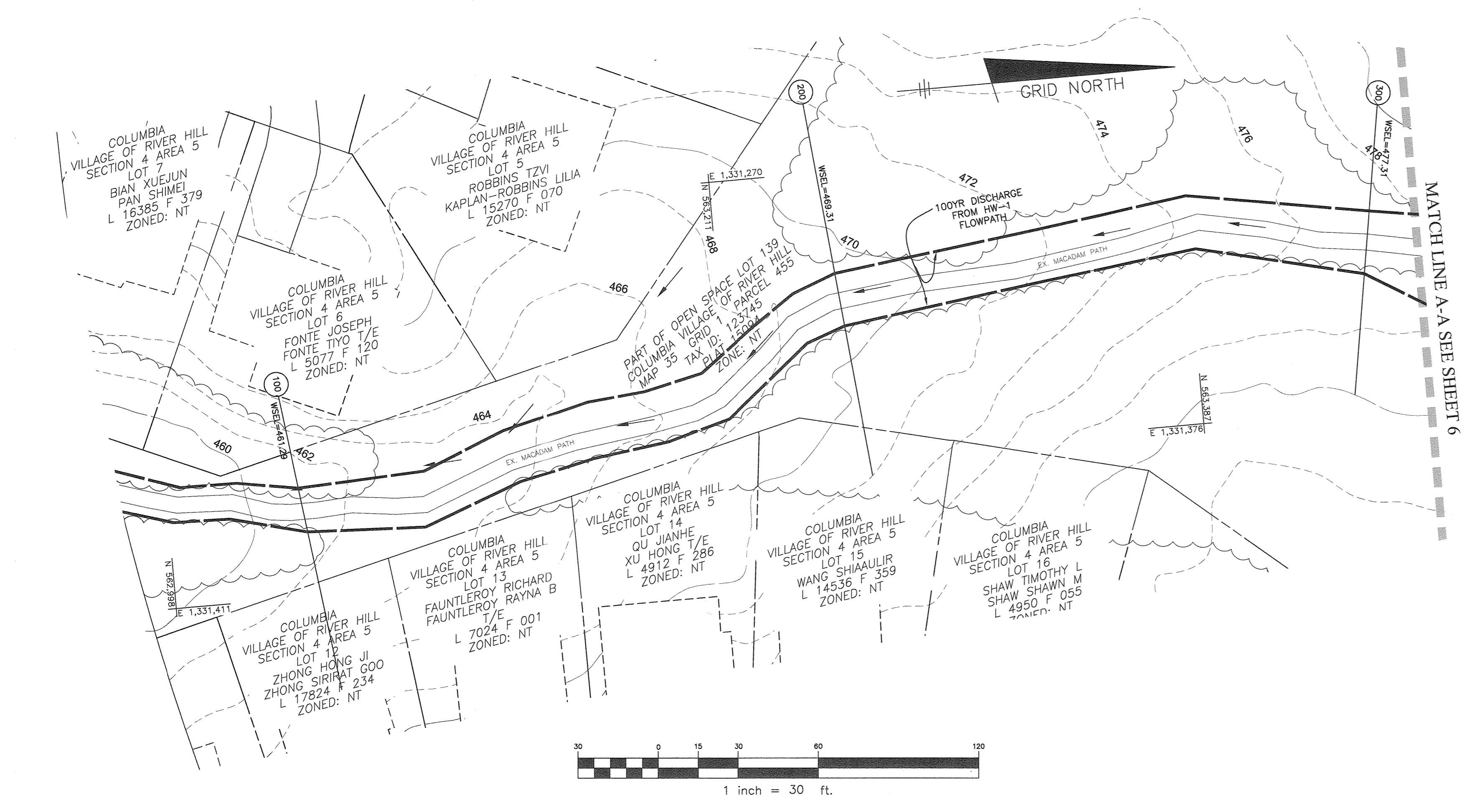
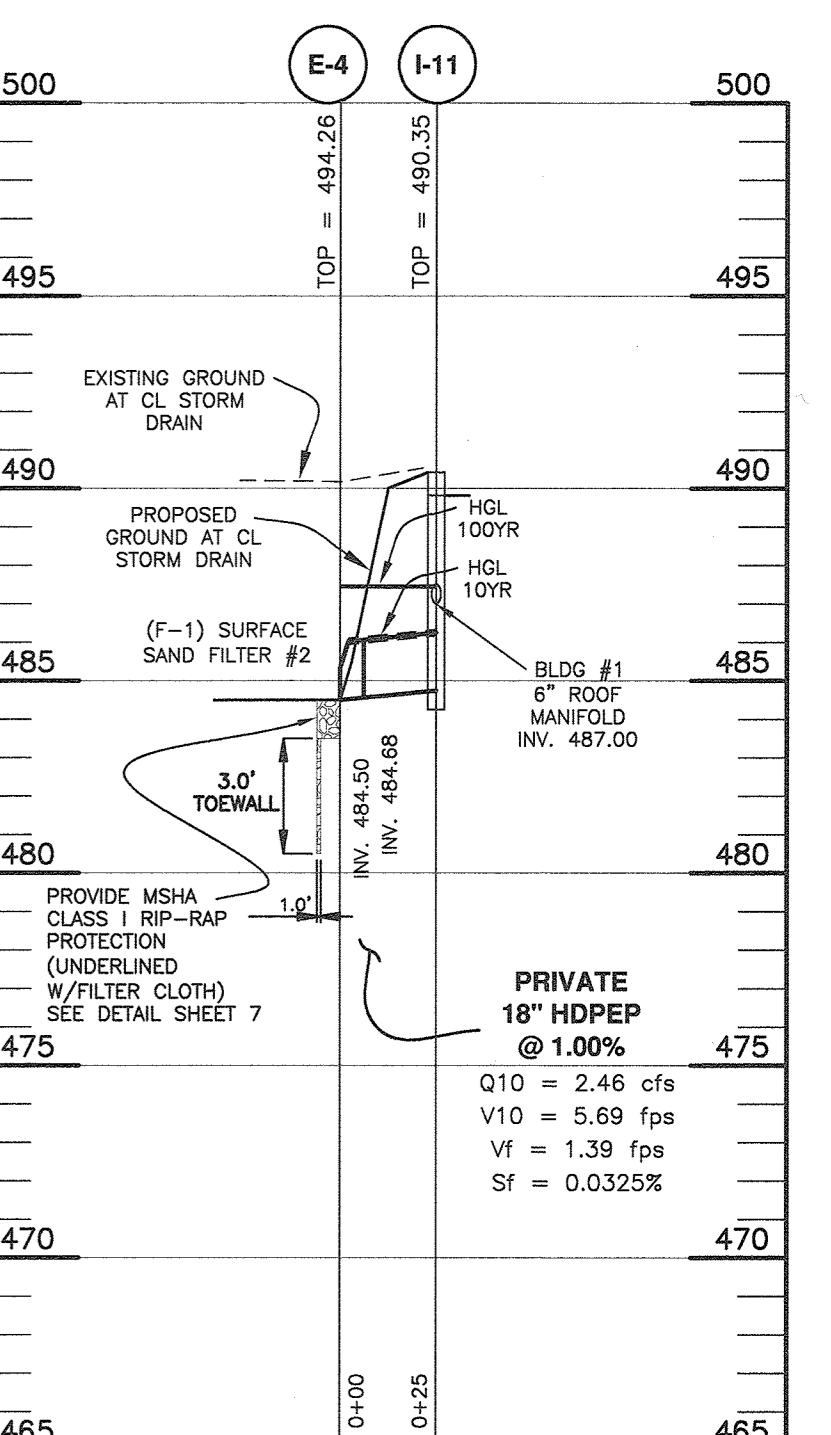
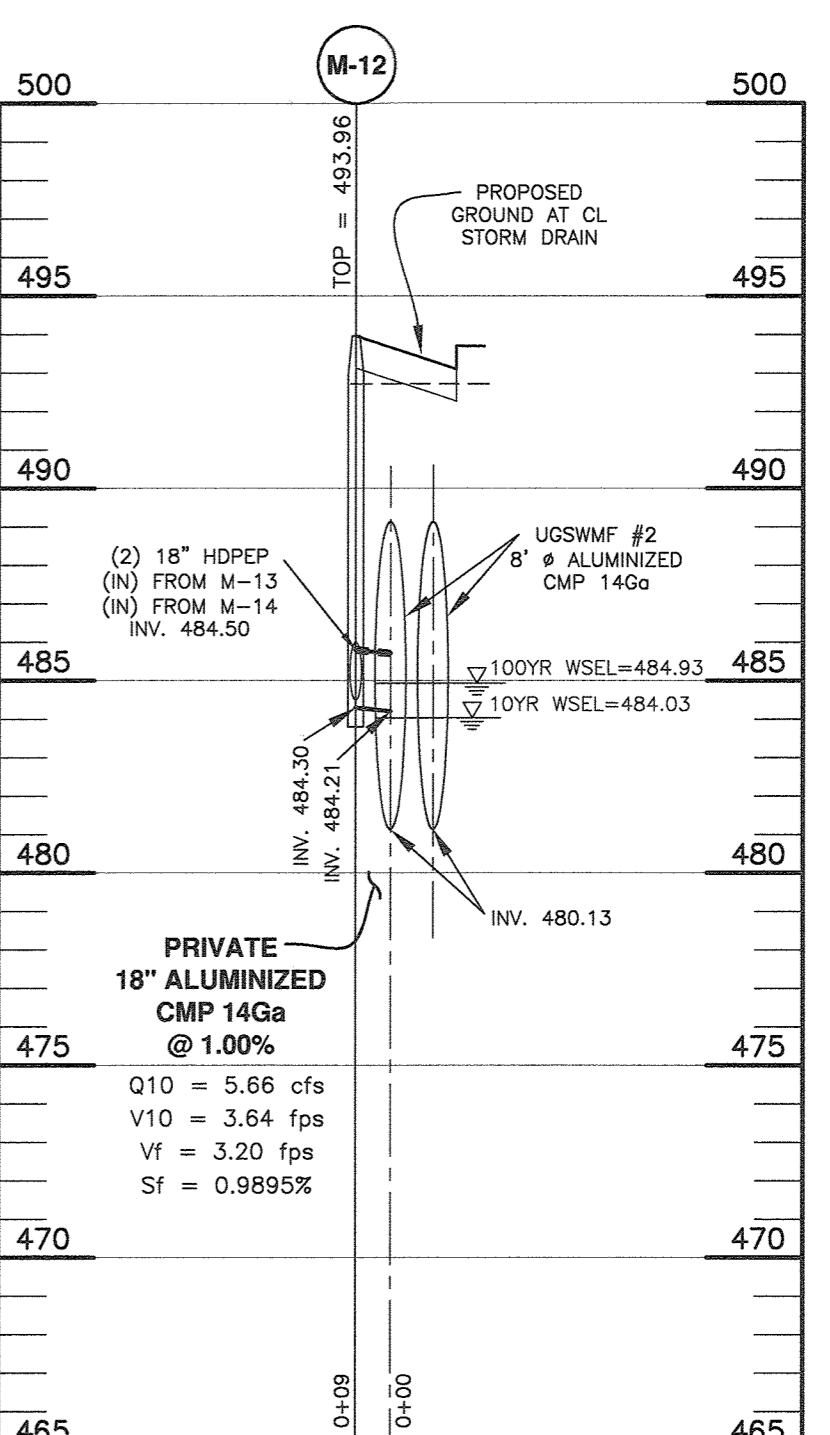
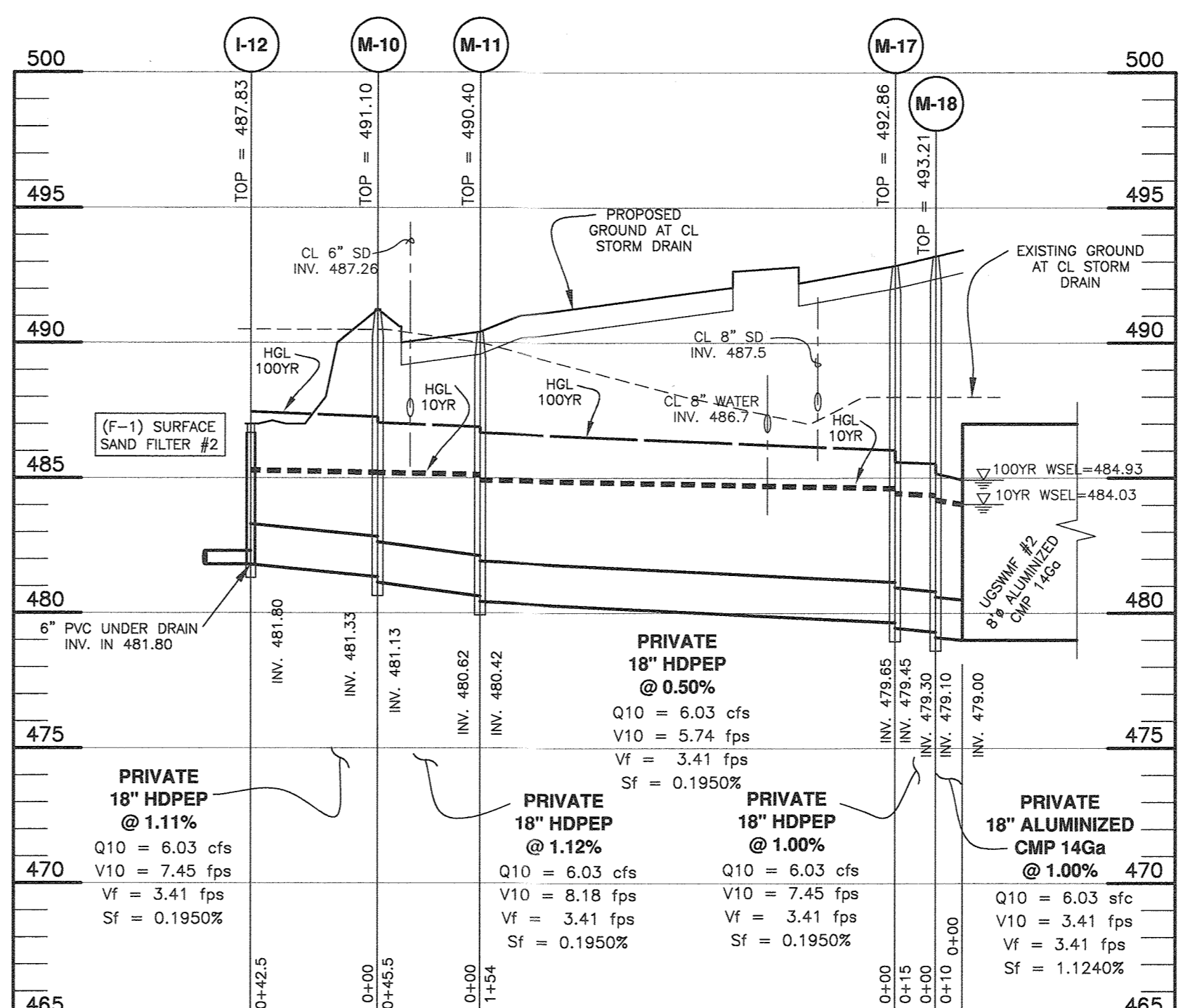
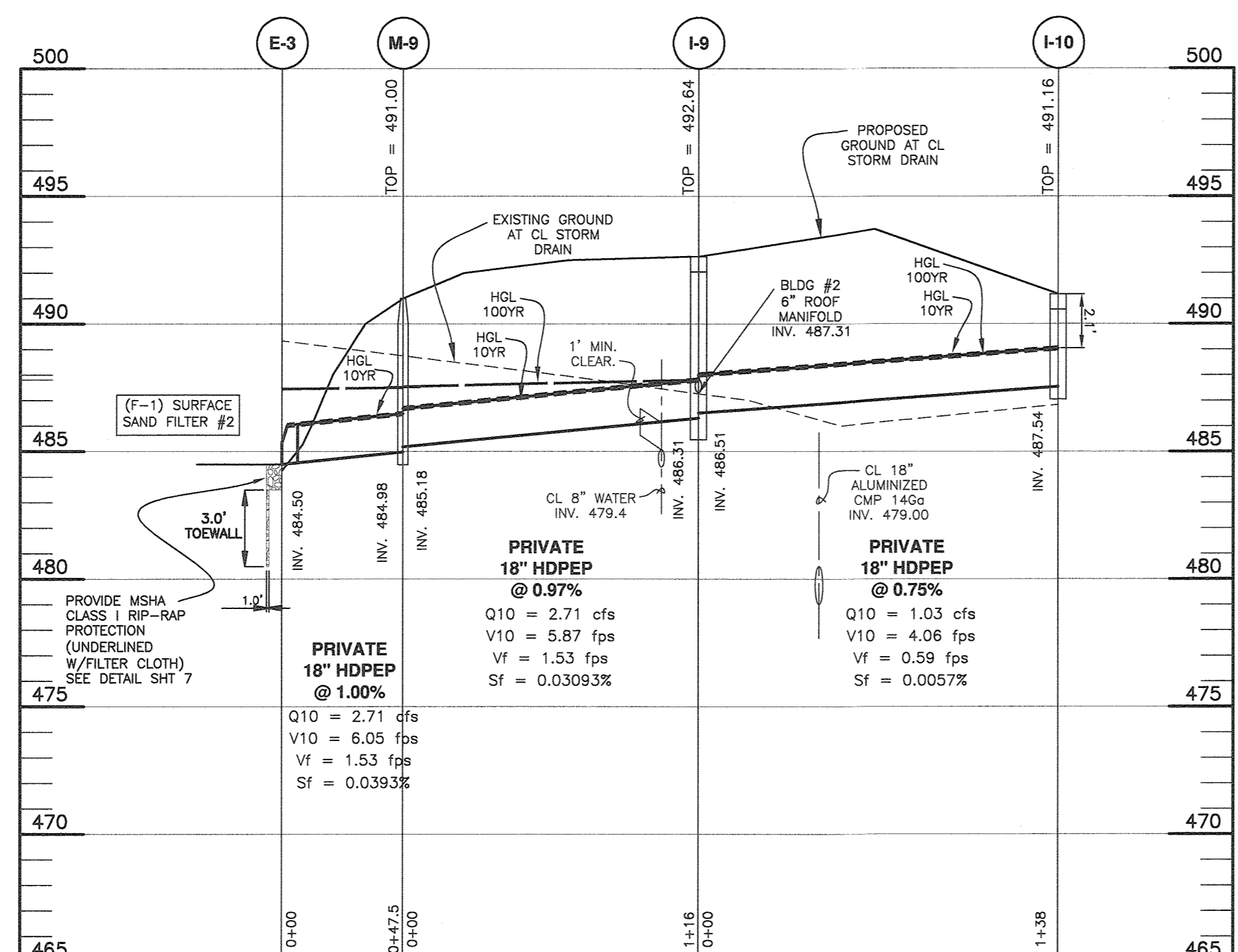
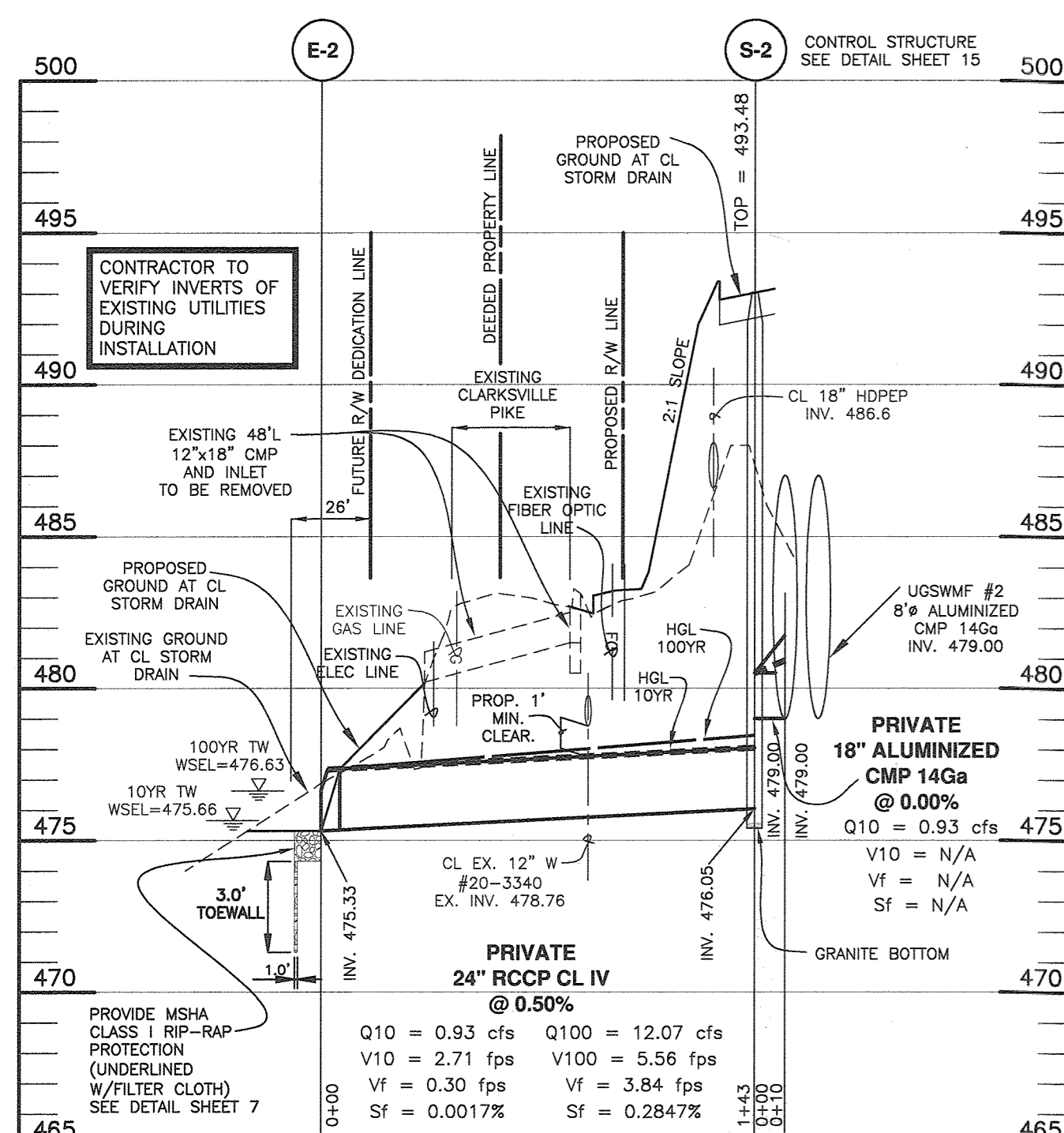
SIZE	TYPE	LENGTH (L.F.)	MAINTENANCE
6"	PVC (ROOF DRAIN MANIFOLD)	1378	PRIVATE
8"	PVC (ROOF DRAIN MANIFOLD)	204	PRIVATE
12"	HDPEP	106	PRIVATE
15"	HDPEP	28	PRIVATE
18"	HDPEP	1763	PRIVATE
18"	ALUMINIZED CMP 14Ga	72	PRIVATE
24"	ALUMINIZED CMP 14Ga	91	PRIVATE
24"	RCCP CL. IV	138	PRIVATE

All HDPE pipes shall have smooth interior. No interior corrugations.

BENCHMARK ENGINEERS, LAND SURVEYORS & PLANNERS, INC.
8880 BALTIMORE NATIONAL PIKE SUITE 318 ELLICOTT CITY, MARYLAND 21043
(P) 410-465-8105 (F) 410-465-8644
WWW.BE-CVLENGINEERING.COM

REDEVELOPMENT OF RIVER HILL GARDEN CENTER
TAX MAP: 35 - GRID: 1 - PARCEL: 1
ZONED: B-1
ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND

STORM DRAIN PROFILES & DETAILS
DATE: MARCH 4, 2019 BEI PROJECT NO. 2801
SCALE: AS SHOWN SHEET 7 OF 25



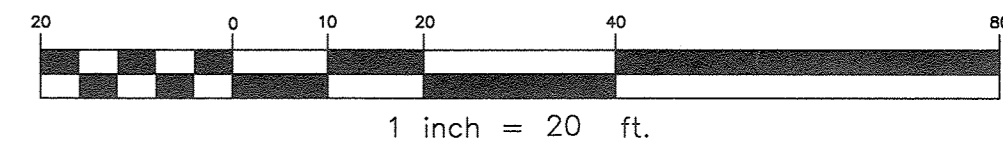
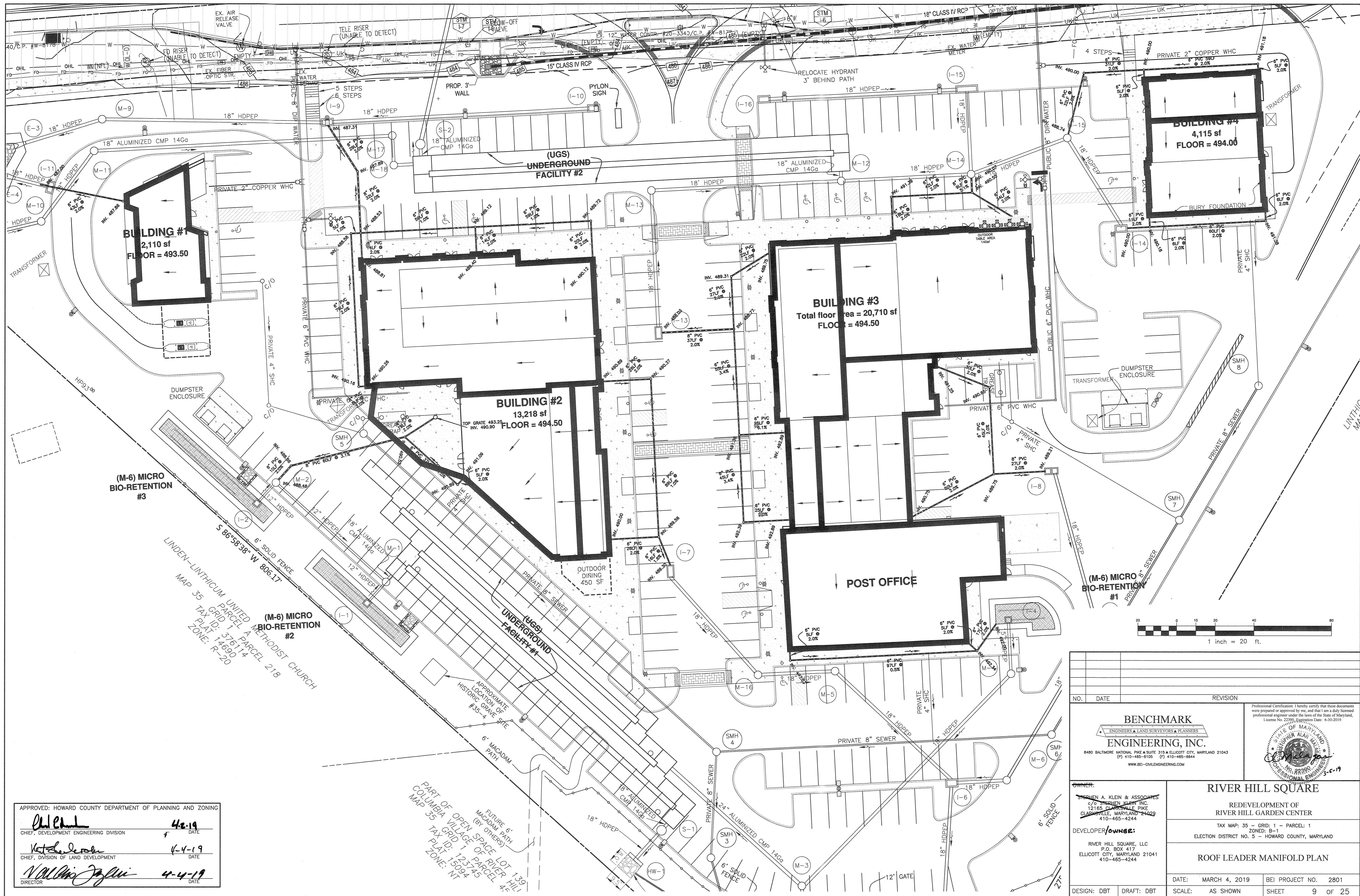
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 4-4-19
DIRECTOR

NO. DATE REVISION	
<p>BENCHMARK ENGINEERING, INC. ENGINEERS & LAND SURVEYORS & PLANNERS 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6444 WWW.BEI-CIVILENGINEERING.COM</p>	
<p>OWNER: STEFEN A. KLEIN & ASSOCIATES C/O SPECTRUM WEST INC. 12165 CLARKSVILLE PIKE CLARKSVILLE, MARYLAND 21029 410-465-4244</p>	<p>REDEVELOPMENT OF RIVER HILL GARDEN CENTER</p> <p>TAX MAP: 35 - GRID: 1 - PARCEL: 1 ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND</p>
<p>DEVELOPER/OWNER: RIVER HILL SQUARE, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244</p>	<p>STORM DRAIN PROFILES</p> <p>DATE: MARCH 4, 2019 BEI PROJECT NO. 2801 SCALE: AS SHOWN SHEET 8 OF 25</p>



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-2-19
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4-4-19
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4-4-19
 DIRECTOR DATE

(M-6) MICRO BIO-RETENTION #3
 5 86°58'38" W 806.17'
 LINDEN-LINTHICUM UNITED METHODIST CHURCH
 MAP 35 GRID 1 - PARCEL 218
 TAX ID: 378114
 PLAT 1690
 ZONE: R-20

(M-6) MICRO BIO-RETENTION #2

PART OF OPEN SPACE LOT 139
 COLUMBIA VILLAGE OF RIVER HILL
 MAP 35 GRID 1 PARCEL 45
 TAX ID: 123745
 PLAT 15094
 ZONE: NT

NO.	DATE	REVISION

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 22390, Expiration Date: 6-30-2019.

BENCHMARK ENGINEERS, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 6480 BALTIMORE NATIONAL PIKE SUITE 318 ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-6644
 WWW.BE-CIVILENGINEERING.COM

OWNER:
 STEPHEN A. KLEIN & ASSOCIATES
 1700 SHERWOOD BLVD. INC.
 12165 CLARKSVILLE PIKE
 CLARKSVILLE, MARYLAND 21029
 410-465-4244

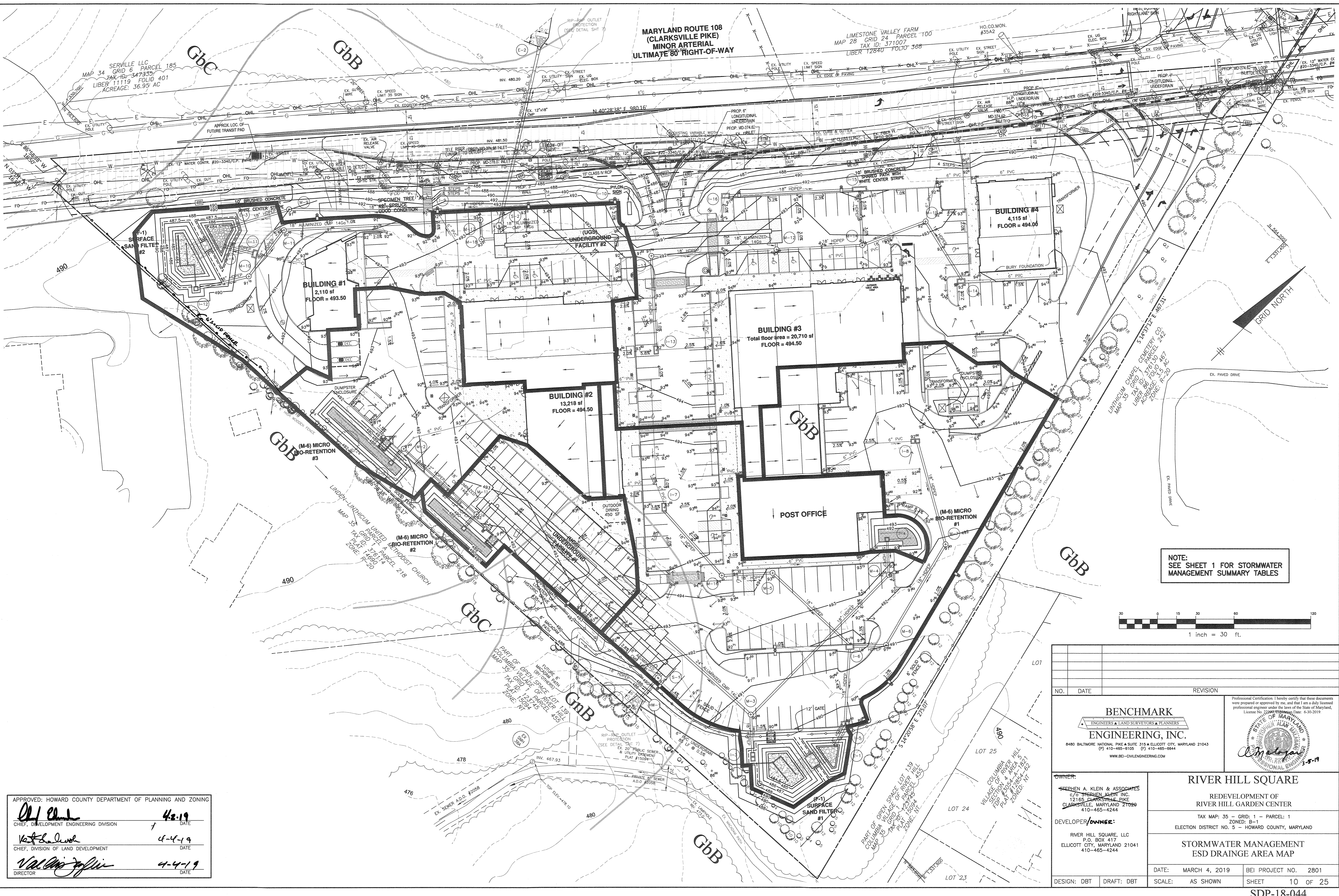
DEVELOPER/OWNER:
 RIVER HILL SQUARE, LLC
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 410-465-4244

RIVER HILL SQUARE
 REDEVELOPMENT OF RIVER HILL GARDEN CENTER
 TAX MAP: 35 - GRID: 1 - PARCEL: 1
 ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND

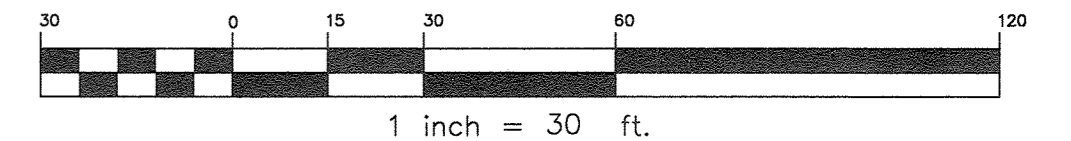
ROOF LEADER MANIFOLD PLAN

DATE: MARCH 4, 2019
 BEI PROJECT NO. 2801
 SCALE: AS SHOWN
 SHEET 9 OF 25

DESIGN: DBT DRAFT: DBT



NOTE:
SEE SHEET 1 FOR STORMWATER
MANAGEMENT SUMMARY TABLES



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Clark 4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION / DATE

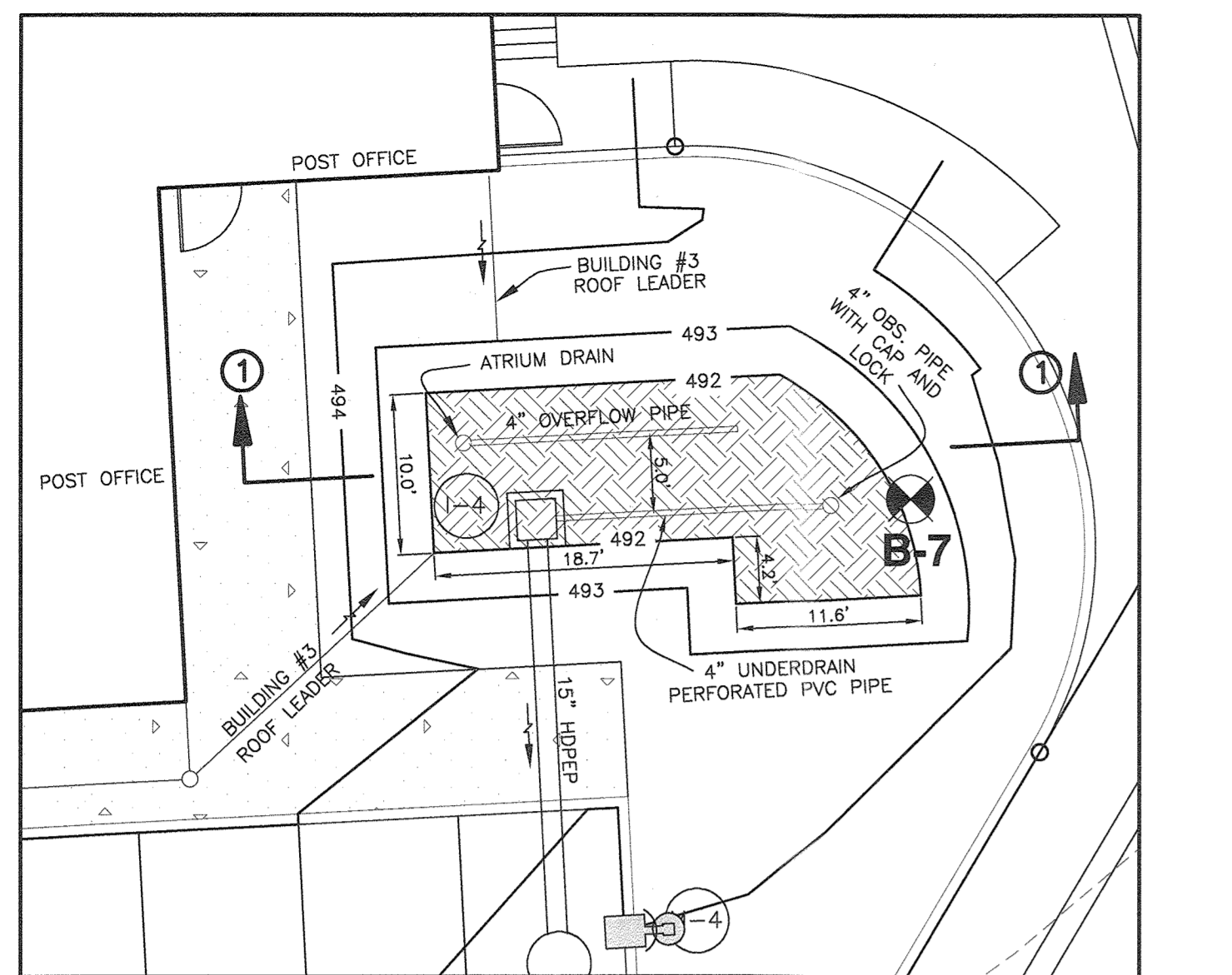
Val Davis 4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT / DATE

Val Davis 4-4-19
DIRECTOR / DATE

NO.	DATE	REVISION

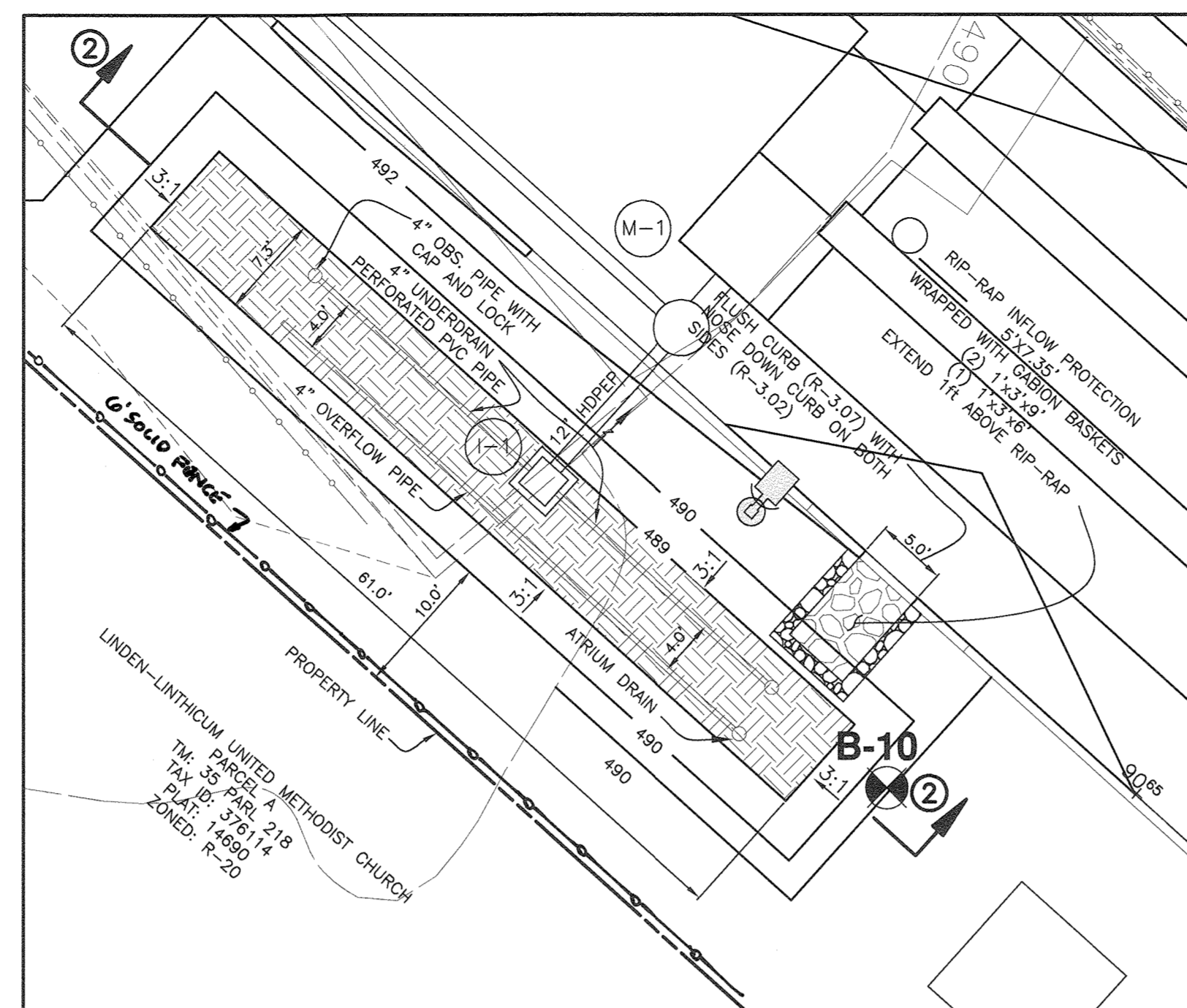
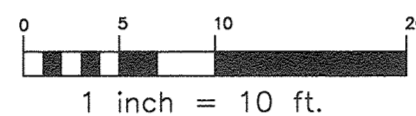
BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BE-CIVILENGINEERING.COM

<p>OWNER: STEPHEN A. KLEIN & ASSOCIATES 2707 SHERMAN AVE. INC. 12165 CLARKSVILLE PIKE CLARKSVILLE, MARYLAND 21029 410-465-4244</p> <p>DEVELOPER/OWNER: RIVER HILL SQUARE, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244</p>	<p>RIVER HILL SQUARE</p> <p>REDEVELOPMENT OF RIVER HILL GARDEN CENTER</p> <p>TAX MAP: 35 - GRID: 1 - PARCEL: 1 ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND</p> <p>STORMWATER MANAGEMENT ESD DRAINAGE AREA MAP</p>
<p>DESIGN: DBT DRAFT: DBT</p>	<p>DATE: MARCH 4, 2019 BEI PROJECT NO. 2801</p> <p>SCALE: AS SHOWN SHEET 10 OF 25</p>



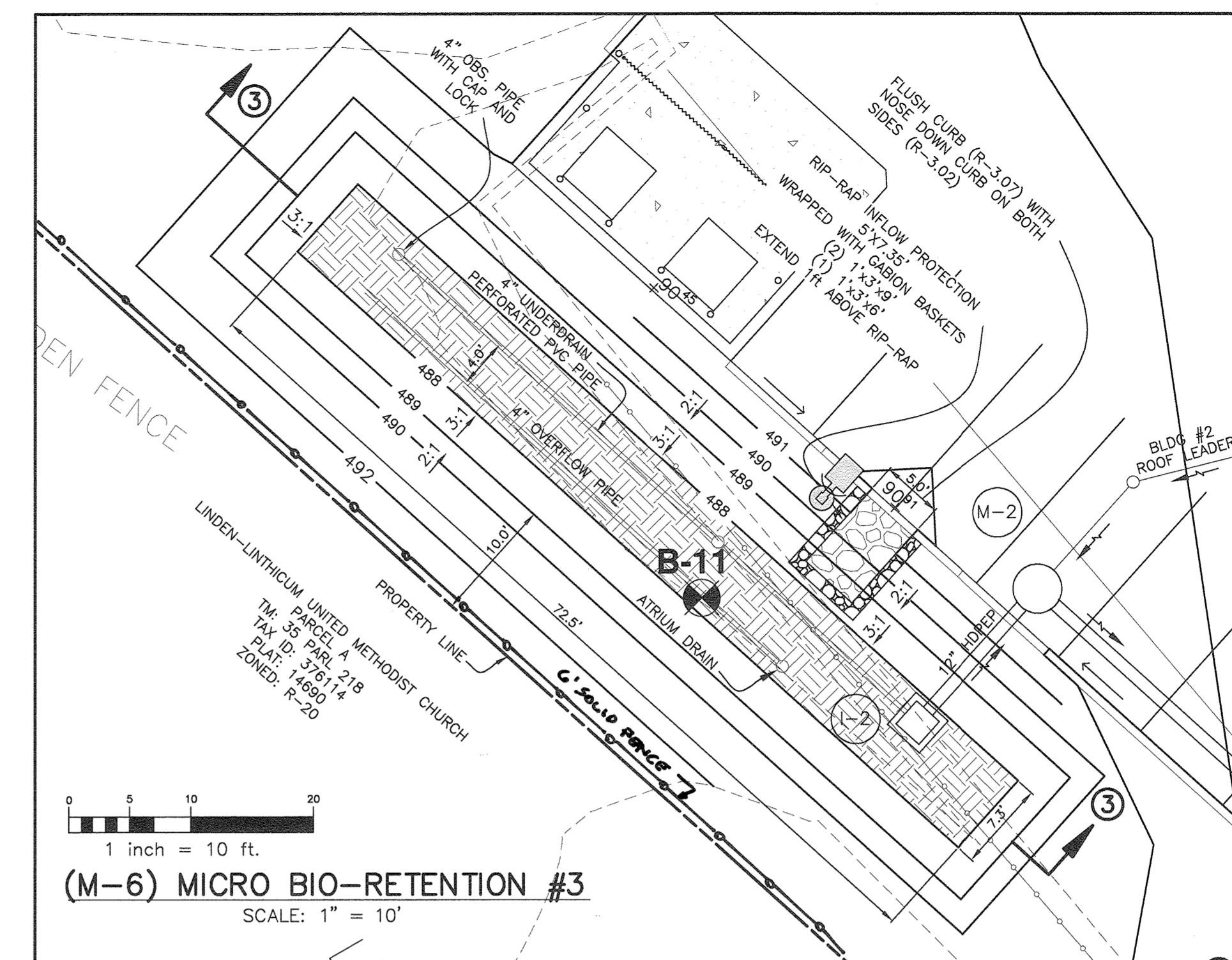
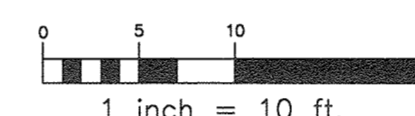
(M-6) MICRO BIO-RETENTION #1

SCALE: 1" = 10'



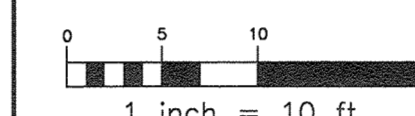
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SCALE: 1" = 10'

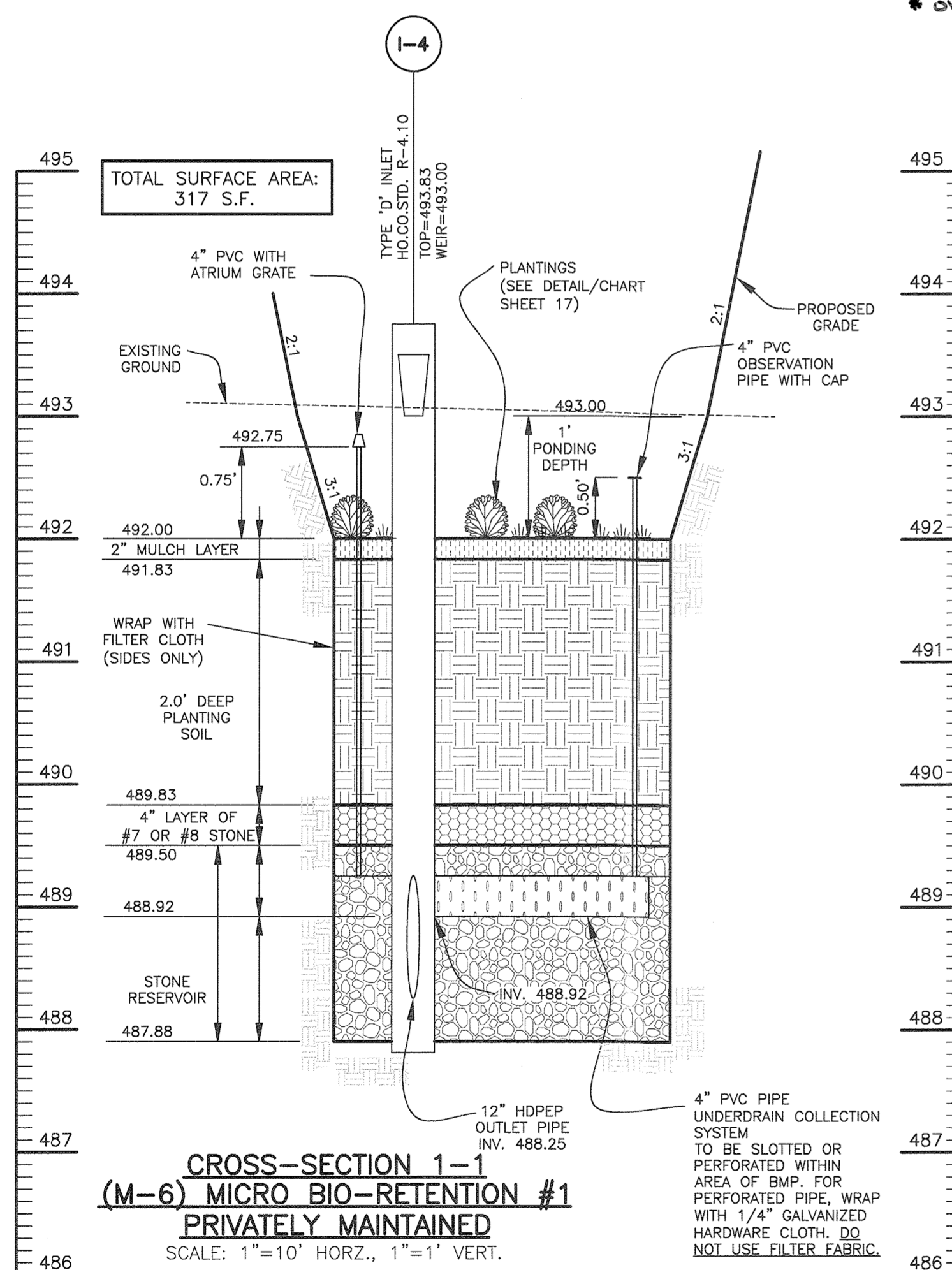


(M-6) MICRO BIO-RETENTION #3

SCALE: 1" = 10'

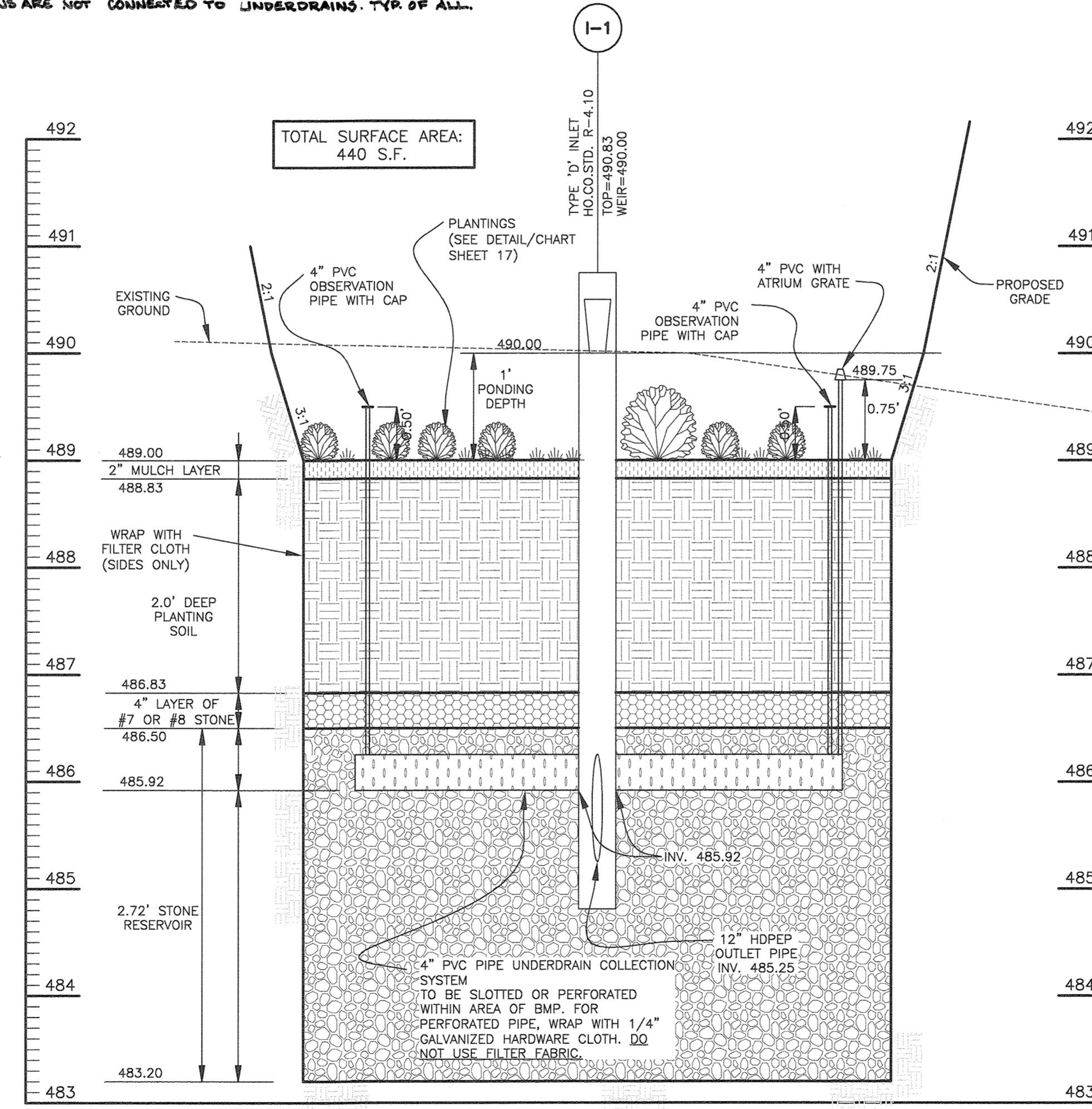


* OVERFLOW DRAINS ARE NOT CONNECTED TO UNDERDRAINS. TYP. OF ALL.



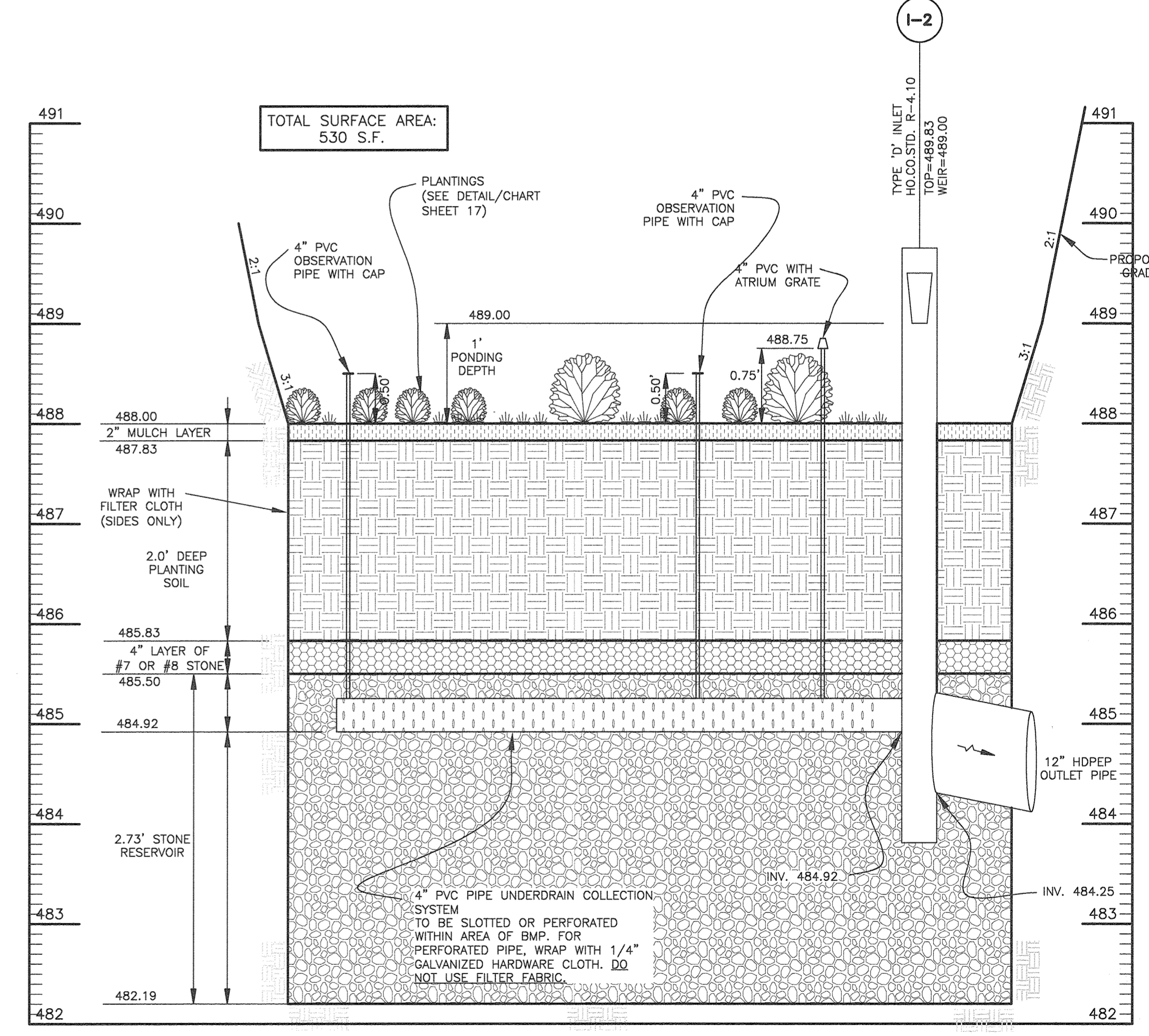
CROSS-SECTION 1-1
(M-6) MICRO BIO-RETENTION #1
PRIVATELY MAINTAINED

SCALE: 1"=10' HORZ., 1"=1' VERT.



CROSS-SECTION 2-2
(M-6) MICRO BIO-RETENTION #2
PRIVATELY MAINTAINED

SCALE: 1"=10' HORZ., 1"=1' VERT.



CROSS-SECTION 3-3
(M-6) MICRO BIO-RETENTION #3
PRIVATELY MAINTAINED

SCALE: 1"=10' HORZ., 1"=1' VERT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4-4-19
DIRECTOR DATE

NO.	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 315 A ELLICOTT CITY, MARYLAND 21043
(P) 410-485-6105 (F) 410-485-6644
WWW.BE-CIVLENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 22390 (P) 04/18/18 (F) 06/30/2019

[Signature]
PROFESSIONAL ENGINEER
3-5-19

OWNER:
STEBEN A. KLEIN & ASSOCIATES
C/O STEPHEN KLEIN, INC.
12165 CLARKSVILLE PIKE
CLARKSVILLE, MARYLAND 21029
410-485-4244

DEVELOPER/OWNER:
RIVER HILL SQUARE, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-485-4244

RIVER HILL SQUARE

REDEVELOPMENT OF
RIVER HILL GARDEN CENTER

TAX MAP: 35 - GRID: 1 - PARCEL: 1
ZONED: B-1
ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND

SWM DETAILS
(M-6) MICRO BIO-RETENTION

DATE: MARCH 4, 2019 BEI PROJECT NO. 2801
SCALE: AS SHOWN SHEET 11 OF 25

Table B.4.1 Materials Specifications for Micro-Bioretenion, Rain Gardens & Landscape Infiltration-

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 1 nonwoven
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 underneath pipes. Perforated pipe shall be wrapped with 1/4-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) <i>not using previously approved State or local standards</i> requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.R/89; 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 carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

B.4.7

Supp. 1

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

- 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. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland Stormwater Design Manual Volume II, Table A.4.1 and 2.
- The Owner shall perform a plant inspection in the spring and in the fall of each year. During the inspection, the Owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material 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 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.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 4-4-19
DIRECTOR

CONSTRUCTION SPECIFICATIONS

B.4.C Specifications for Micro-Bioretenion, Rain Gardens, Landscape Infiltration & Infiltration Berms

1. Material Specifications:

The allowable materials to be used in these practices are detailed in Table B.4.1.

2. Filtering Media or Planting Soil:

The soil shall be a uniform mix, free 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-bioretenion practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05. The planting soil shall be tested and 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 and (60%-65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).
Clay Content - Media shall have a clay content of less than 5%.
pH Range - Should be between 5.5 - 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into 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 textual 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.

3. Compaction:

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoes to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. 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 alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture 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.

Rototill 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 (rototilling) 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 soil in lifts 2" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

4. Plant Material:

Recommended plant material for micro-bioretenion practices can be found in Appendix A, Section A.2.3.

5. 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 accepted mulch. Pine 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 aged (6 to 12 months) for acceptance.

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 defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

6. Underdrains:

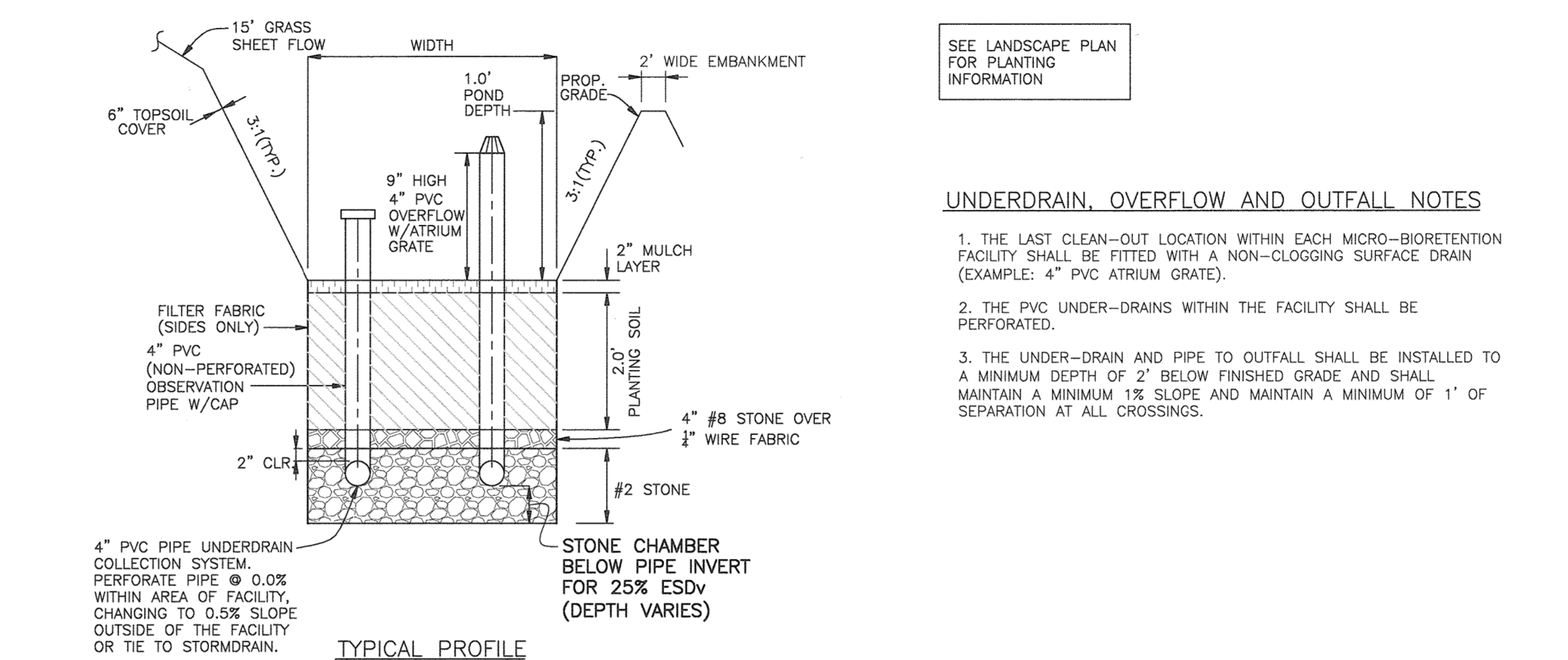
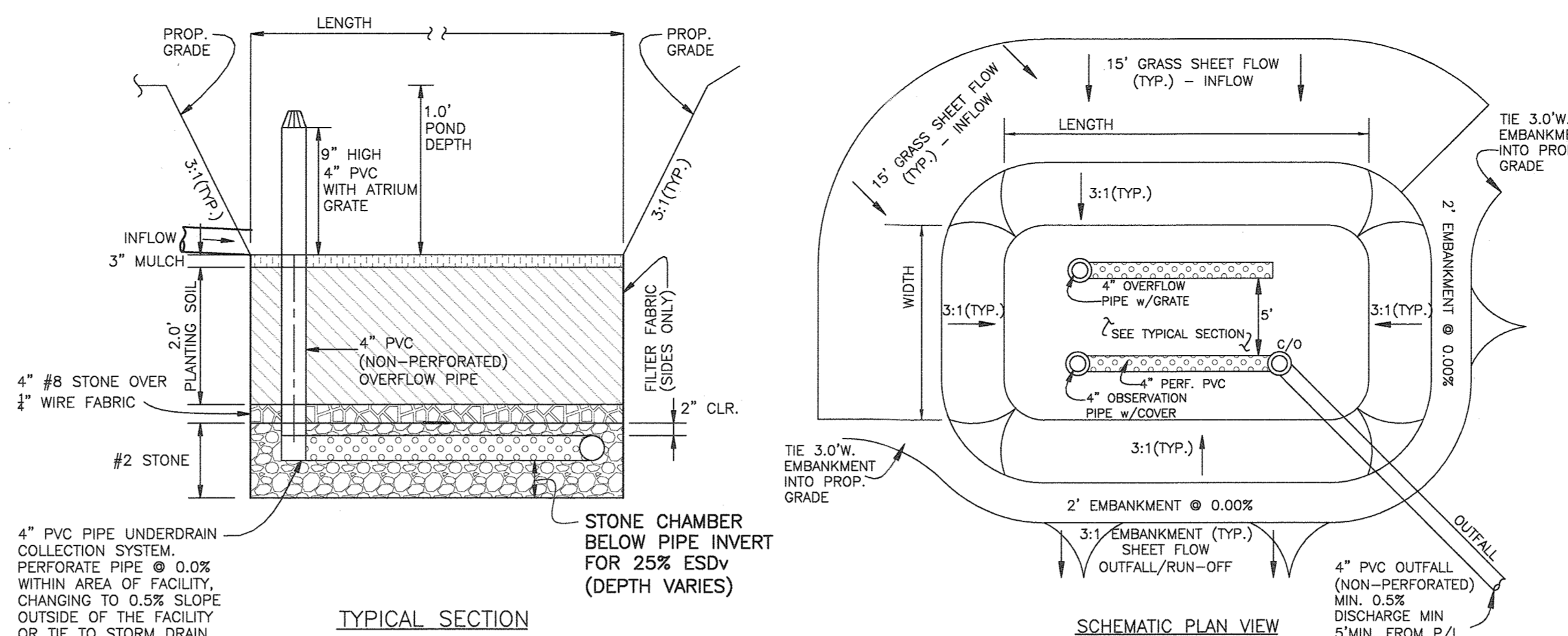
Underdrains should meet the following criteria:

- 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 or HDPE).
- Perforations - If perforated pipe is used, perforations should be 3/4" 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 pipe shall be at a minimum 0.5% slope.
- A rigid, non-perforated 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 (1/4" 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".

The 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).

7. Miscellaneous:

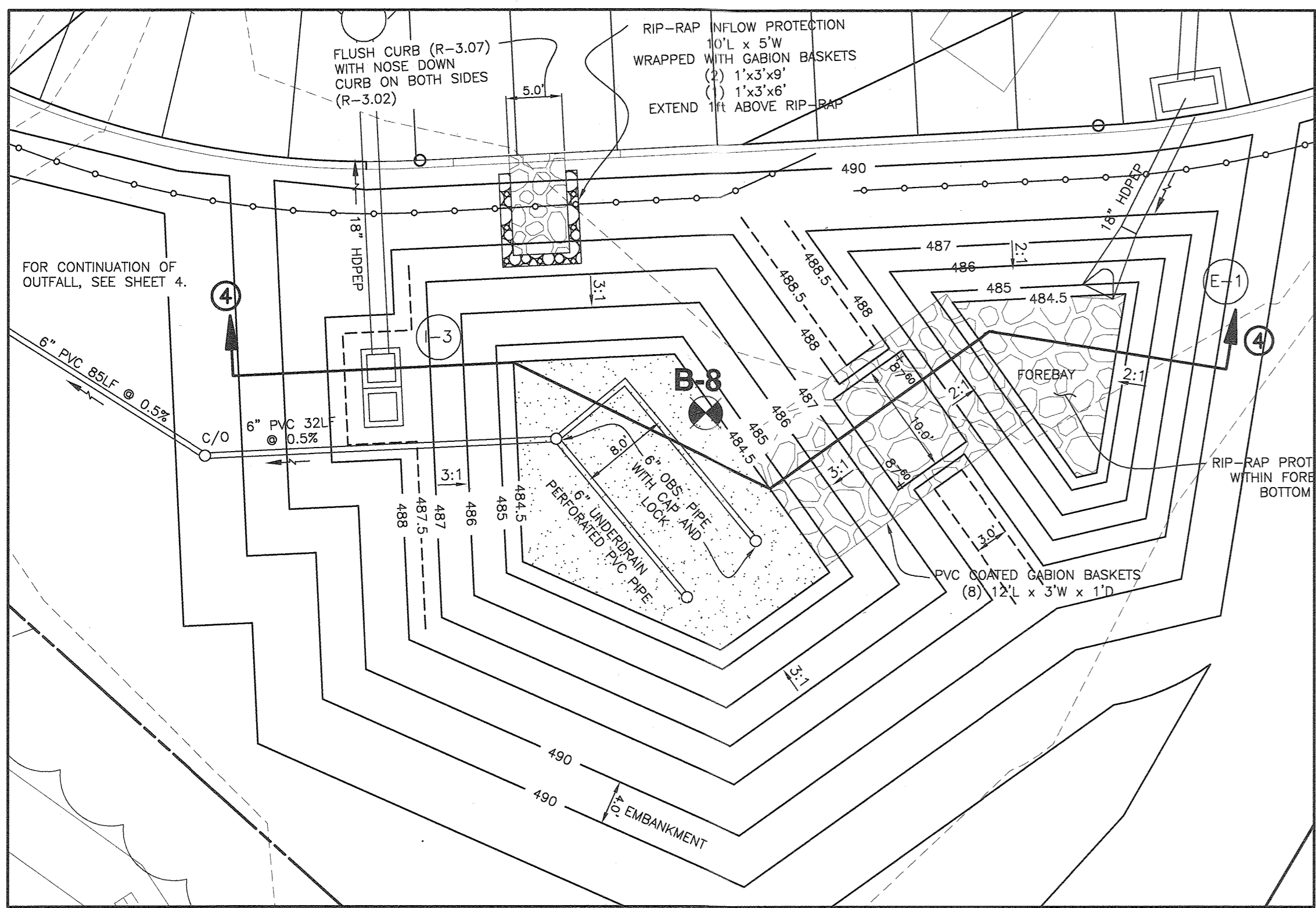
These practices may not be constructed until all contributing drainage area has been stabilized.



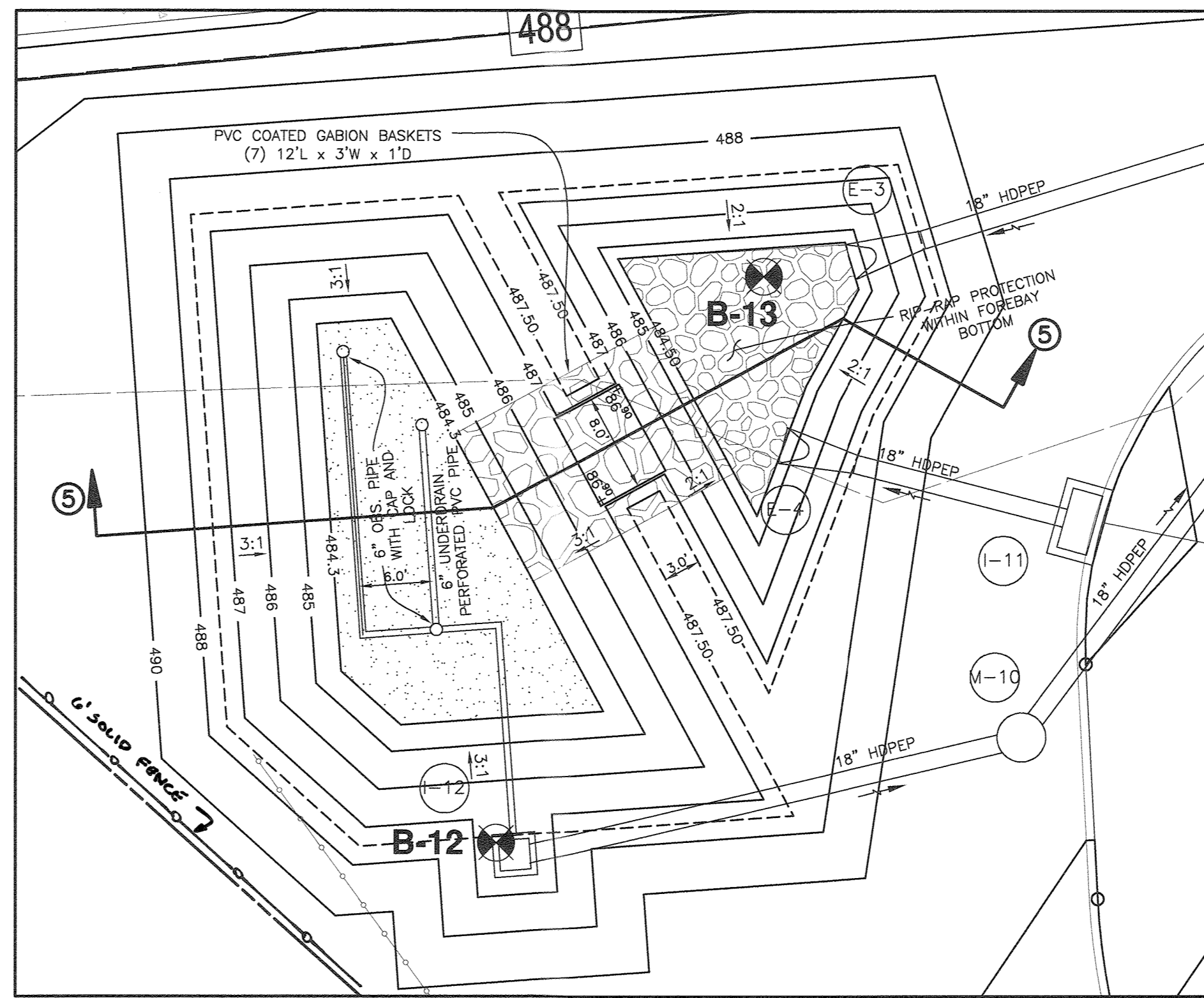
- UNDERDRAIN, OVERFLOW AND OUTFALL NOTES**
- THE LAST CLEAN-OUT LOCATION WITHIN EACH MICRO-BIORETENTION FACILITY SHALL BE FITTED WITH A NON-CLOGGING SURFACE DRAIN (EXAMPLE: 4" PVC ATRIUM GRATE).
 - THE PVC UNDER-DRAINS WITHIN THE FACILITY SHALL BE PERFORATED.
 - THE UNDER-DRAIN AND PIPE TO OUTFALL SHALL BE INSTALLED TO A MINIMUM DEPTH OF 2' BELOW FINISHED GRADE AND SHALL MAINTAIN A MINIMUM 1% SLOPE AND MAINTAIN A MINIMUM OF 1' OF SEPARATION AT ALL CROSSINGS.

STANDARD MICRO-BIORETENTION DETAILS
NOT TO SCALE

NO.		DATE		REVISION	
 8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 WWW.BE-CIVILENGINEERING.COM					
Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 22390, Expiration Date: 6-30-2019.					
OWNER: STEPHEN A. KLEIN & ASSOCIATES C/O STEPHEN KLEIN INC 12165 CLARKSVILLE PIKE CLARKSVILLE, MARYLAND 21029 410-465-4244			RIVER HILL SQUARE REDEVELOPMENT OF RIVER HILL GARDEN CENTER TAX MAP: 35 - GRID: 1 - PARCEL: 1 ZONED: B-1 ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND		
DEVELOPER/OWNER: RIVER HILL SQUARE, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244			SWM DETAILS (M-6) MICRO BIO-RETENTION		
DESIGN:	DBT	DRAFT:	DBT	SCALE:	AS SHOWN
DATE:	MARCH 4, 2019	BEI PROJECT NO.:	2801	SHEET:	12 OF 25



(F-1) SURFACE SAND FILTER #1
SCALE: 1" = 10'



(F-1) SURFACE SAND FILTER #2
SCALE: 1" = 10'

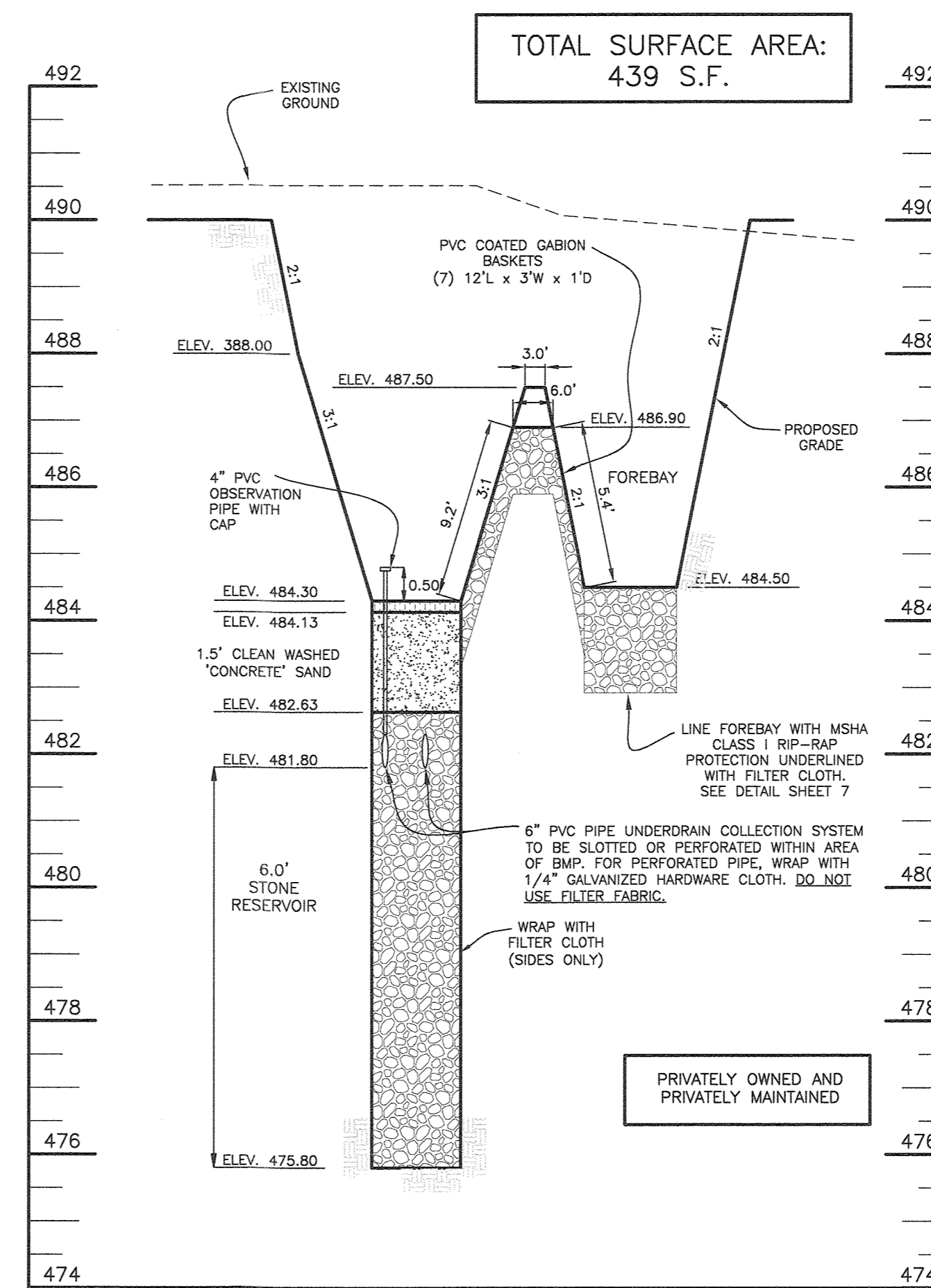
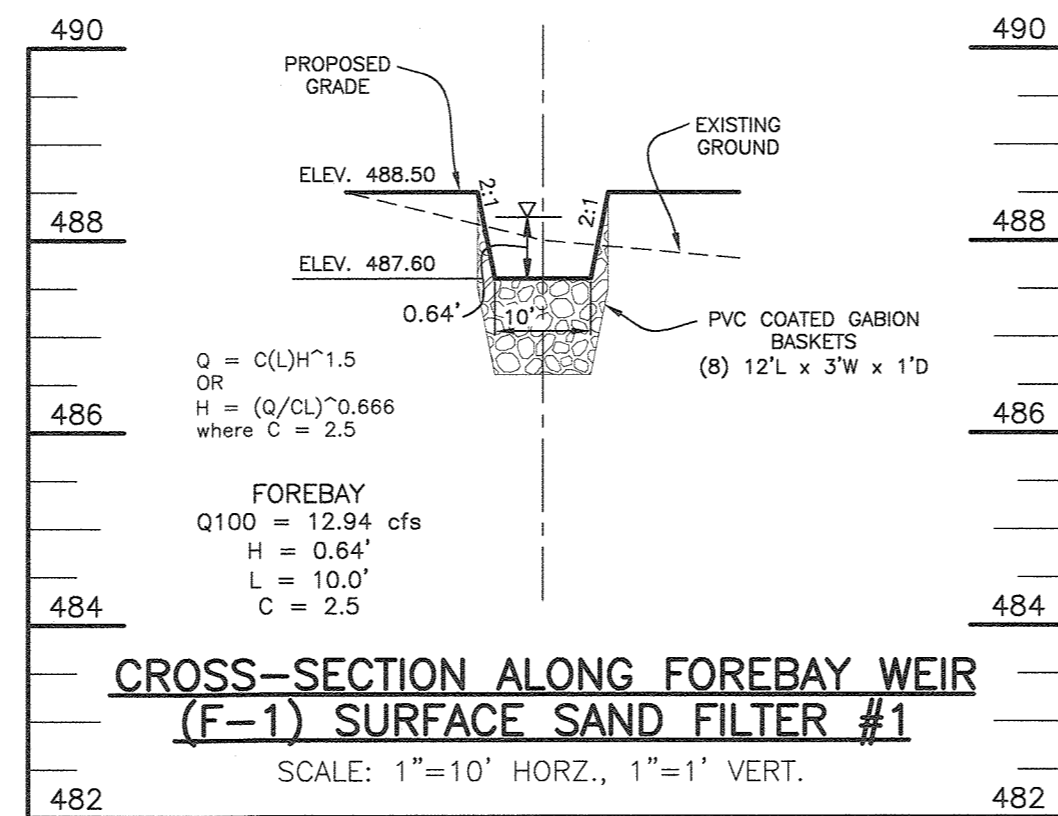
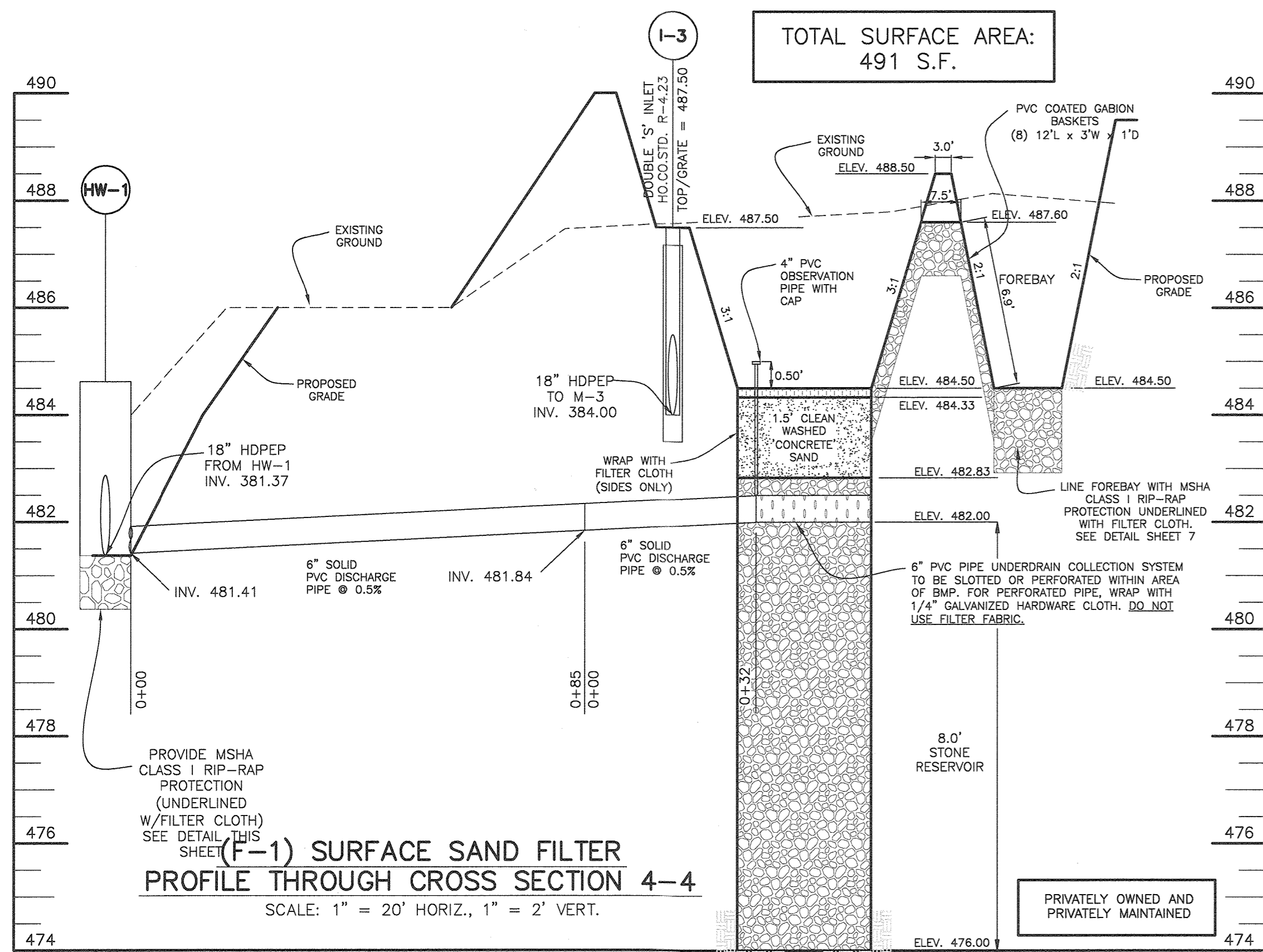
Material	Specification/Test Method	Size	Notes
sand	clean AASHTO-M-6 or ASTM-C-33 concrete sand	0.075" to 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.
pcat	ash content: < 15% pH range: 5.2 to 4.9 loose bulk density: 0.12 to 0.15 g/cc	n/a	The material must be red-seed hemic peat, shredded, uncompacted, uniform, and clean.
leaf compost	AASHTO-M-43	0.375" to 0.75"	n/a
underdrain gravel	ASTM-D-4833 (puncture strength - 125 lb.)	0.375" to 0.75"	Must maintain 125 gpm per sq. ft. flow rate. Note: a 4" pea gravel layer may be substituted for geotextiles meant to "separate" sand filter layers.
geotextile fabric (if required)	ASTM-D-4632 (Tensile Strength - 300 lb.)	30 mil thickness	Liner to be ultraviolet resistant. A geotextile fabric should be used to protect the liner from puncture.
impermeable liner (if required)	ASTM-D-4833 (thickness) ASTM-D-412 (tensile strength 1,100 lb., elongation 200%) ASTM-D-624 (Tear resistance - 150 lb./in) ASTM-D-471 (water adsorption: +8 to -2% mass)	n/a	n/a
underdrain piping	ASTM-D-4833 (thickness) F 758, Type PS 28 or AASHTO-M-278	4" - 6" rigid schedule 40 PVC or SDR35	3/8" surf. @ 6" on center. 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes
concrete (cast-in-place)	MSHA Standards and Specs. Section 902, Min No. 3, f _c = 3500 psi, normal weight, air-entrained, re-inforcing to meet ASTM-A15-60	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 State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland
concrete (pre-cast)	per pre-cast manufacturer	n/a	SEB ABOVE NOTE
non-rebar steel	ASTM A-36	n/a	structural steel to be hot-dipped galvanized ASTM-A-123

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND PRIVATELY MAINTAINED (F-1) SURFACE SAND FILTER

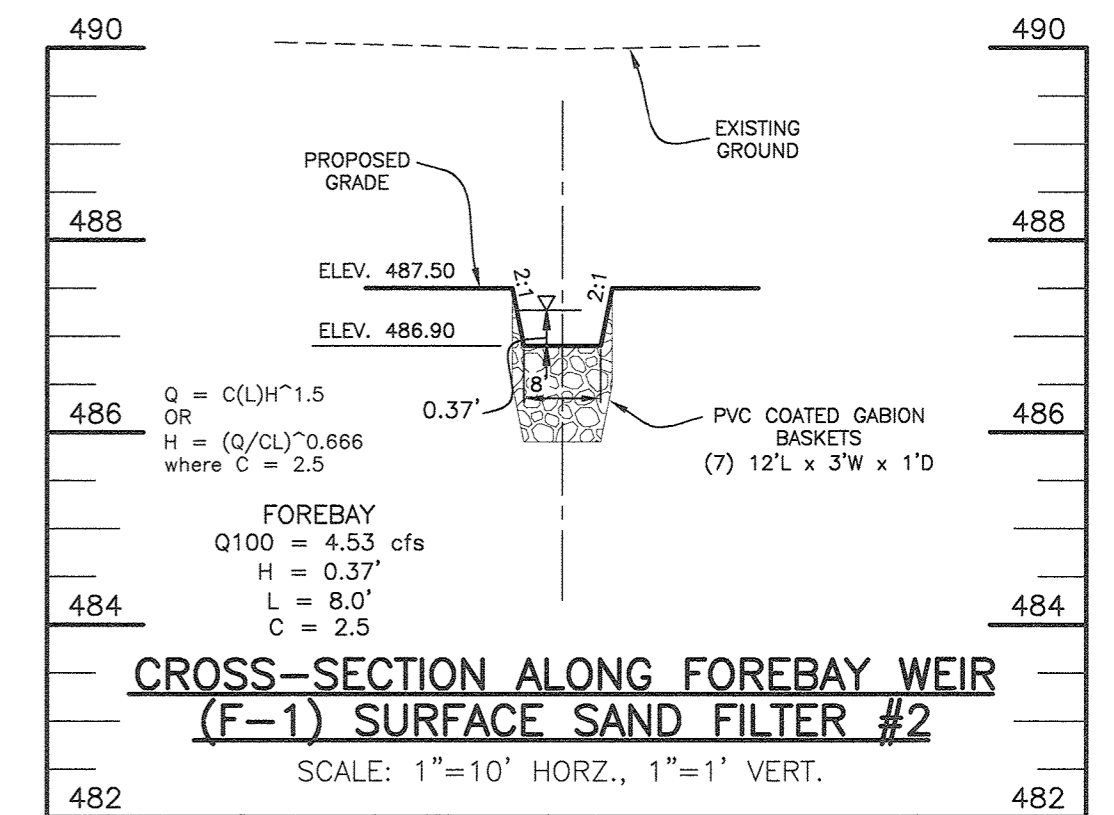
- ROUTINE MAINTENANCE**
- THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
 - THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
 - FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
 - DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
 - VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
 - REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY, IF APPLICABLE.
 - WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.
 - A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
 - THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
 - ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

NON-ROUTINE MAINTENANCE

- STRUCTURAL COMPONENTS OF THE POND SUCH AS THE EMBANKMENT, THE RISER STRUCTURE AND TRASH RACK, AND PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THESE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.



(F-1) SURFACE SAND FILTER PROFILE THROUGH CROSS SECTION 5-5
SCALE: 1" = 20' HORIZ., 1" = 2' VERT.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 4-2-19 DATE

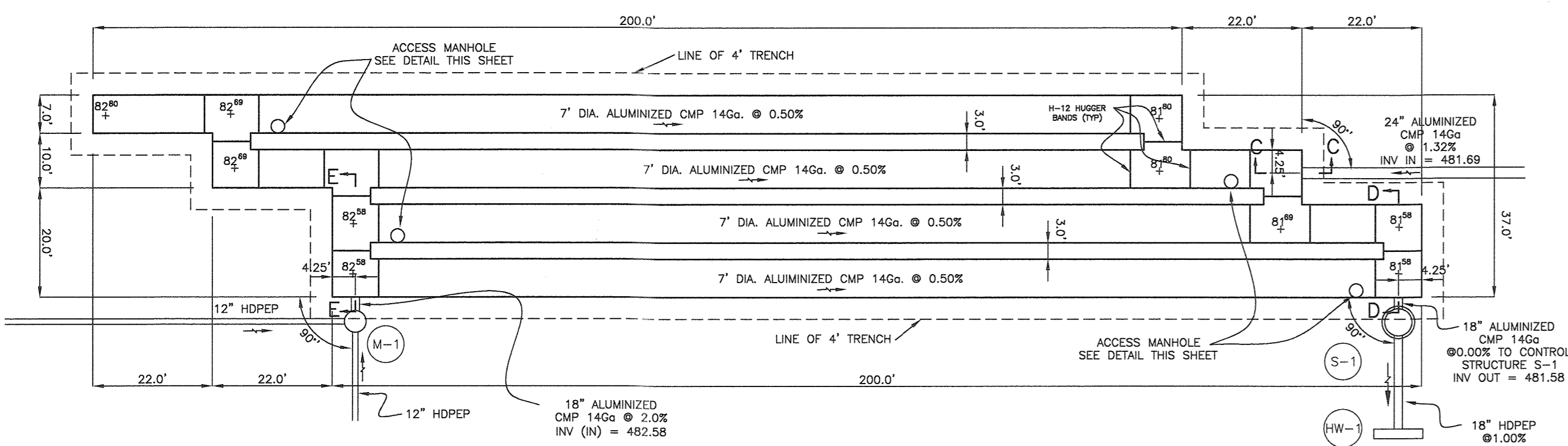
CHIEF, DIVISION OF LAND DEVELOPMENT 4-4-19 DATE

DIRECTOR 4-4-19 DATE

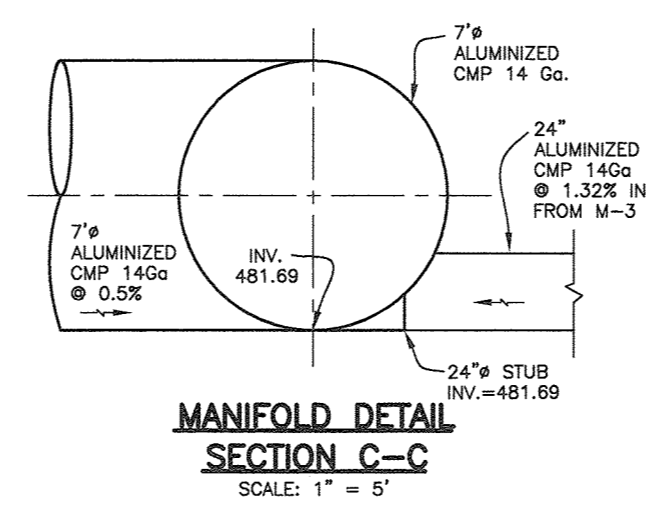
NO.	DATE	REVISION
<p>Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 22396, 4/19/19, Date: 6-30-2019.</p> <p>BENCHMARK ENGINEERING, INC. 12165 CHARLESVILLE PIKE CLARKSVILLE, MARYLAND 21086 410-465-6244 WWW.BE-CIVILENGINEERING.COM</p>		
<p>OWNER: RIVER HILL SQUARE, LLC P.O. BOX 417 ELLCOTT CITY, MARYLAND 21041 410-465-4244</p>		<p>REDEVELOPMENT OF RIVER HILL GARDEN CENTER</p> <p>TAX MAP: 35 - GRID: 1 - PARCEL: 1 ZONED: B-1 - HOWARD COUNTY, MARYLAND ELECTION DISTRICT NO. 5</p> <p>SWM DETAILS (F-1) SURFACE SAND FILTERS</p> <p>DATE: MARCH 4, 2019 SCALE: AS SHOWN</p>
<p>DESIGN: DBT DRAFT: DBT</p>		<p>BEI PROJECT NO. 2801 SHEET 13 OF 25</p>

OPERATION AND MAINTENANCE SCHEDULE FOR UNDERGROUND STORMWATER MANAGEMENT FACILITIES

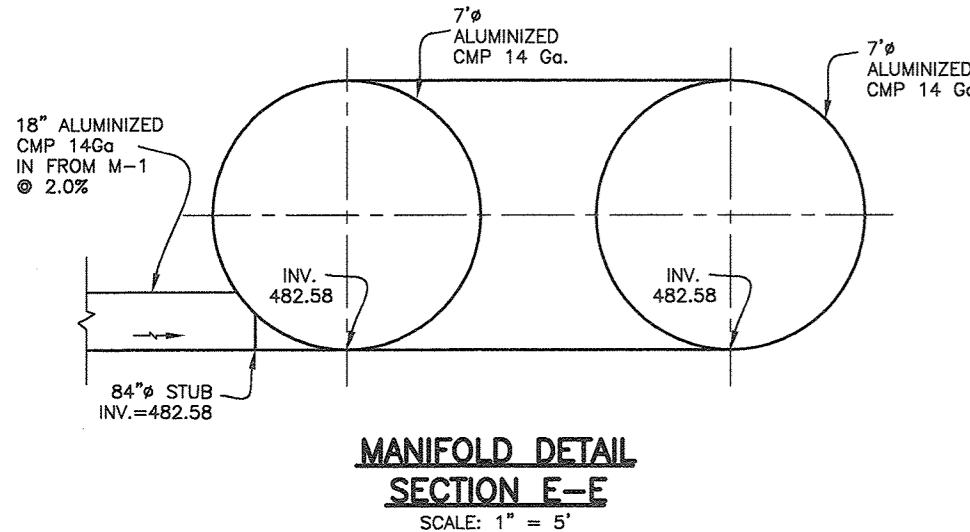
1. THE UNDERGROUND STORM WATER MANAGEMENT FACILITY IS PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN THE FACILITY TO MAINTAIN ITS OPERATION AND FUNCTION.
2. THE UNDERGROUND STORM WATER MANAGEMENT FACILITY SHALL BE INSPECTED YEARLY AT A MINIMUM AND AFTER ESPECIALLY SEVERE STORM EVENTS.
3. WHEN SEDIMENT ACCUMULATION OF MORE THAN 2" IS OBSERVED OR ANY DEBRIS THAT MIGHT OBSTRUCT THE OUTFALL IS OBSERVED, THE FACILITY SHALL BE CLEANED.
4. THE FACILITY SHALL BE CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES NOTIFYING THEM OF THE SPILL AND CLEAN-UP OPERATION.
5. THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND STORM WATER MANAGEMENT FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL AND LIQUID.
6. THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX(6) MONTHS. IF OBSTRUCTIONS ARE FOUND, THE OWNER SHALL HAVE THEM REMOVED AND PROPERLY DISPOSED OF.



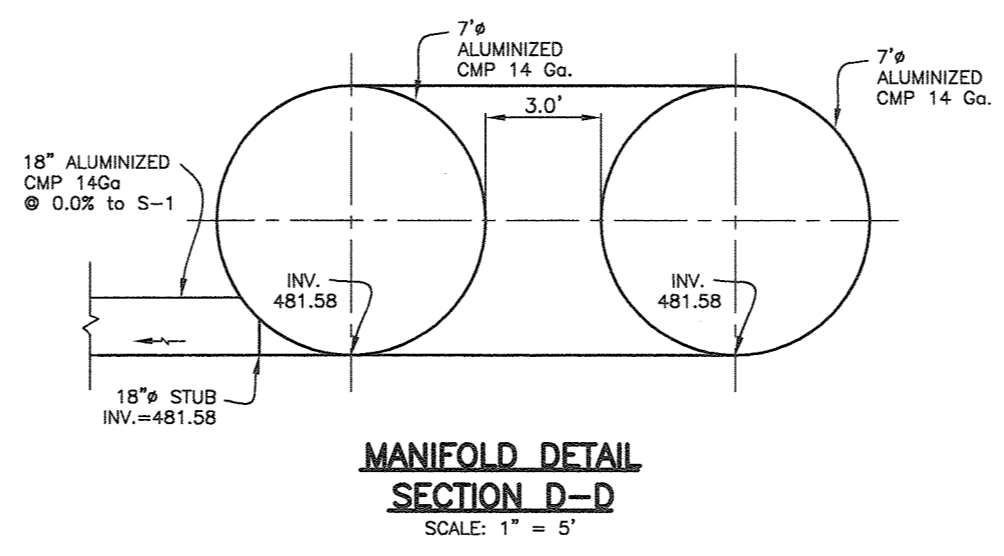
(UGS) UNDERGROUND FACILITY #1 PIPE LAYOUT PLAN
SCALE: 1" = 20'



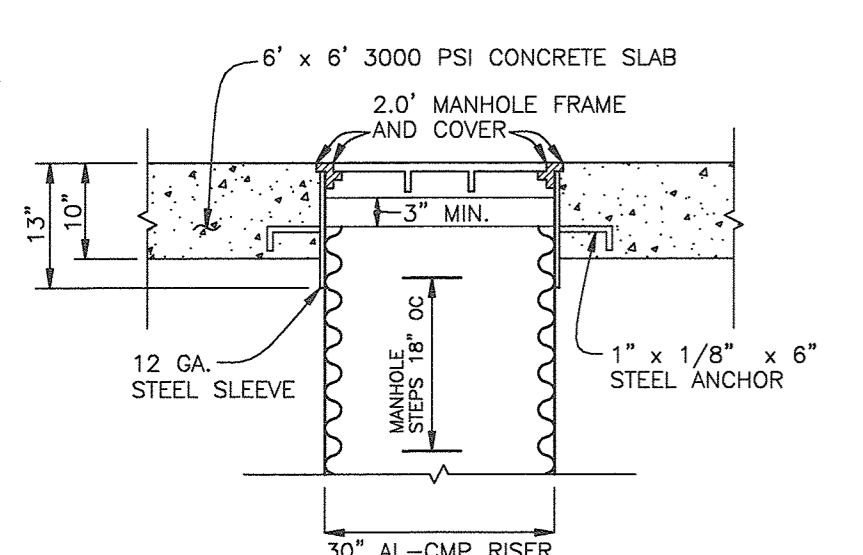
MANIFOLD DETAIL SECTION C-C
SCALE: 1" = 5'



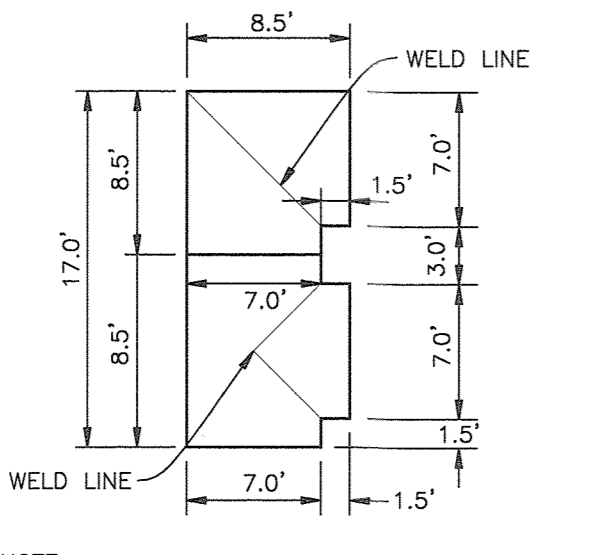
MANIFOLD DETAIL SECTION E-E
SCALE: 1" = 5'



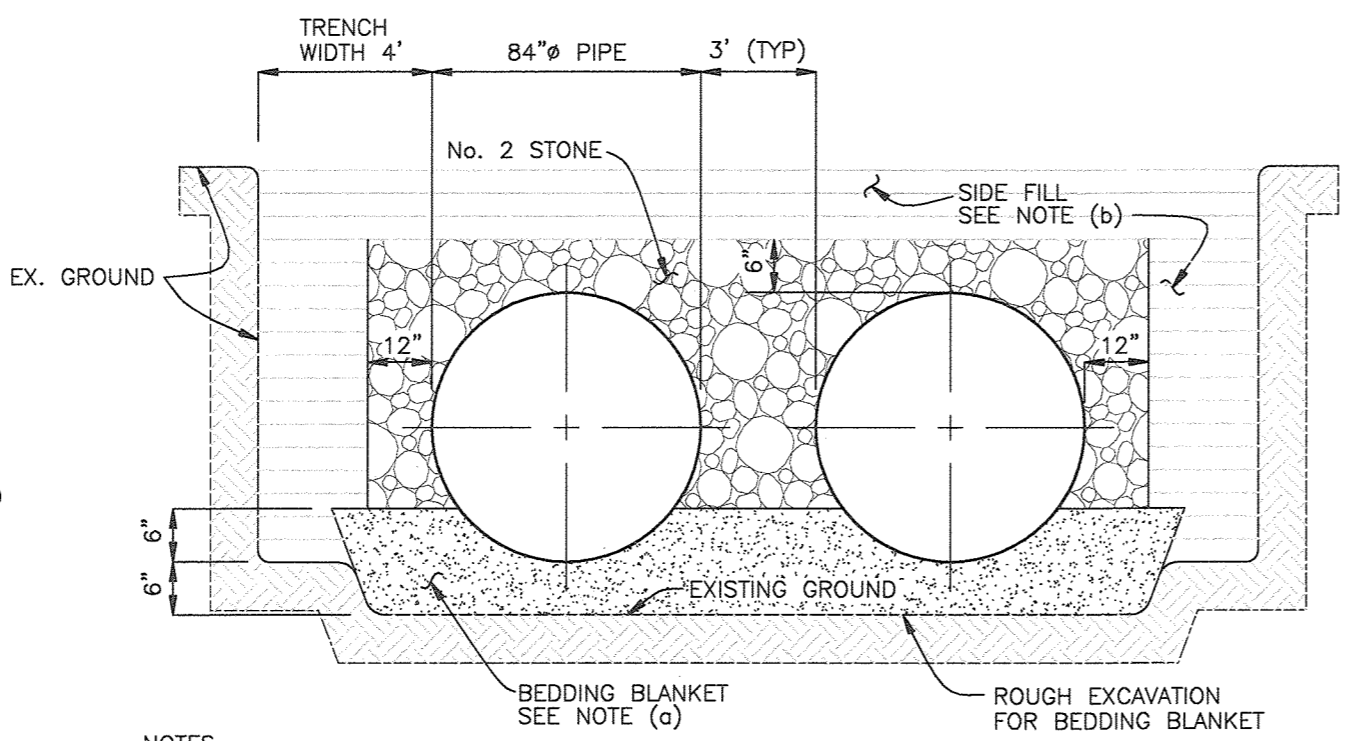
MANIFOLD DETAIL SECTION D-D
SCALE: 1" = 5'



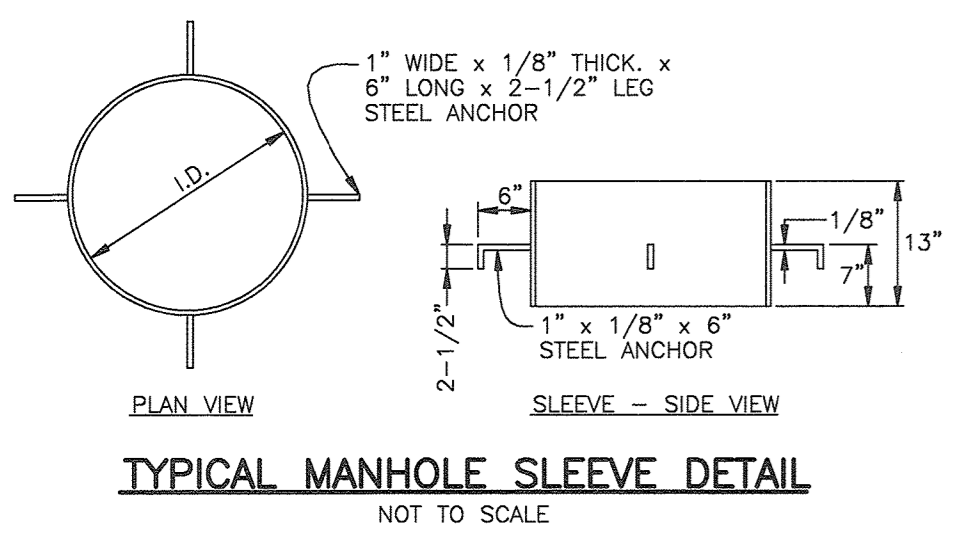
TYPICAL ALUMINIZED CMP RISER MANHOLE SLEEVE DETAIL
NOT TO SCALE



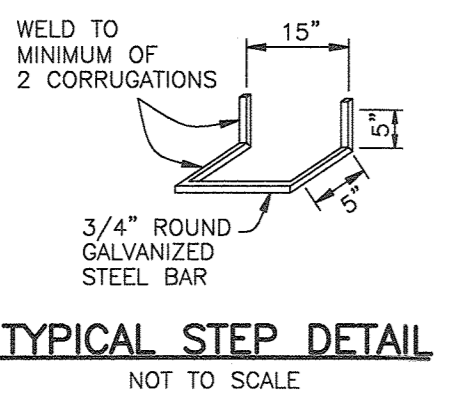
TYPICAL ELBOW/TEE DETAIL
NOT TO SCALE



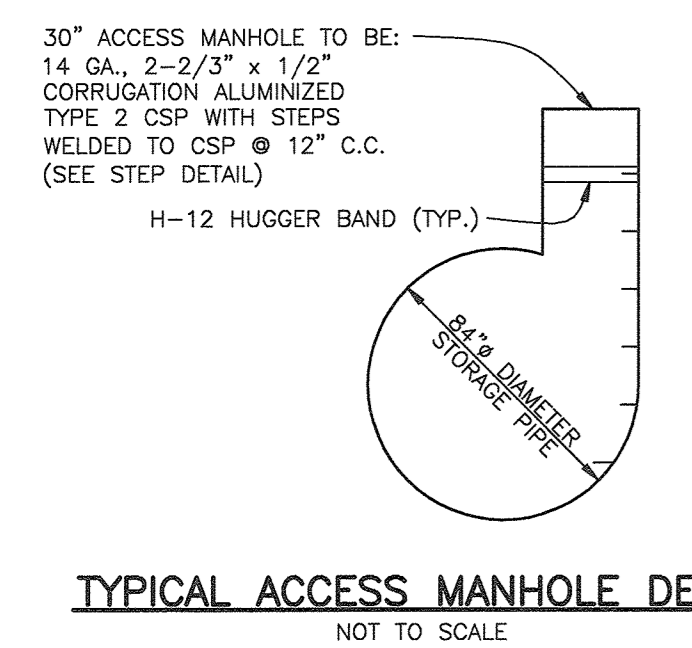
TYPICAL BEDDING AND BACKFILL DETAIL
NOT TO SCALE



TYPICAL MANHOLE SLEEVE DETAIL
NOT TO SCALE



TYPICAL STEP DETAIL
NOT TO SCALE



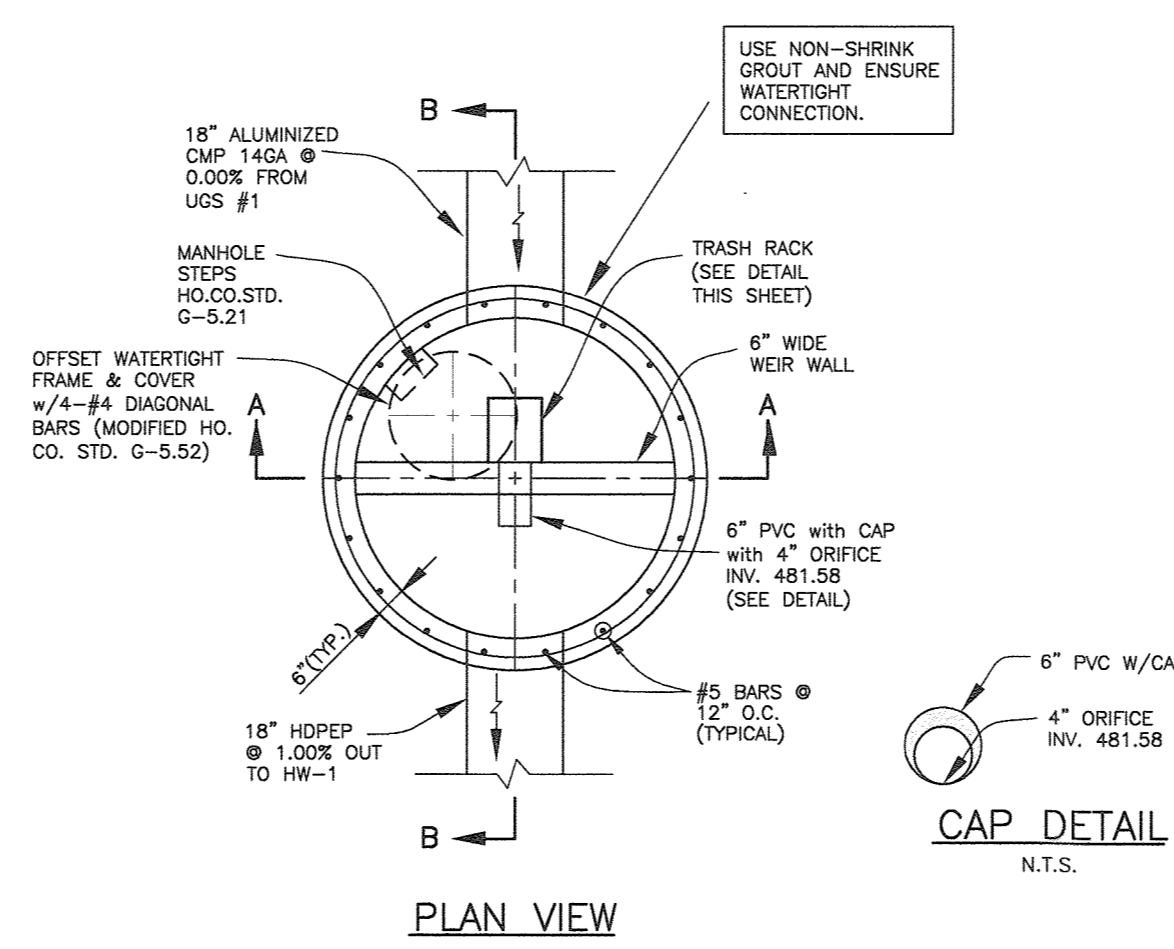
TYPICAL ACCESS MANHOLE DETAIL
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

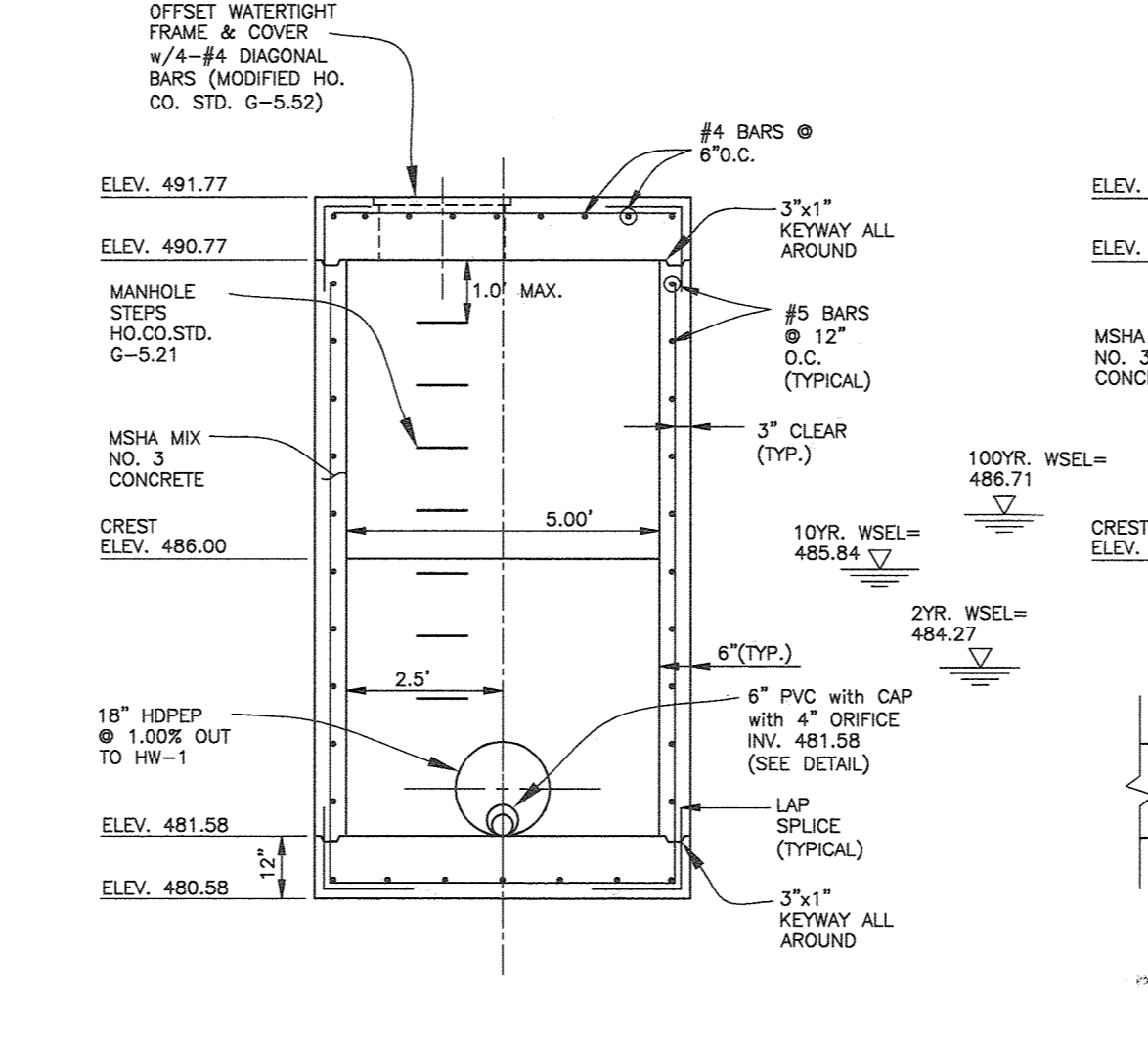
[Signature] 4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

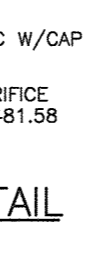
[Signature] 4-4-19
DIRECTOR DATE



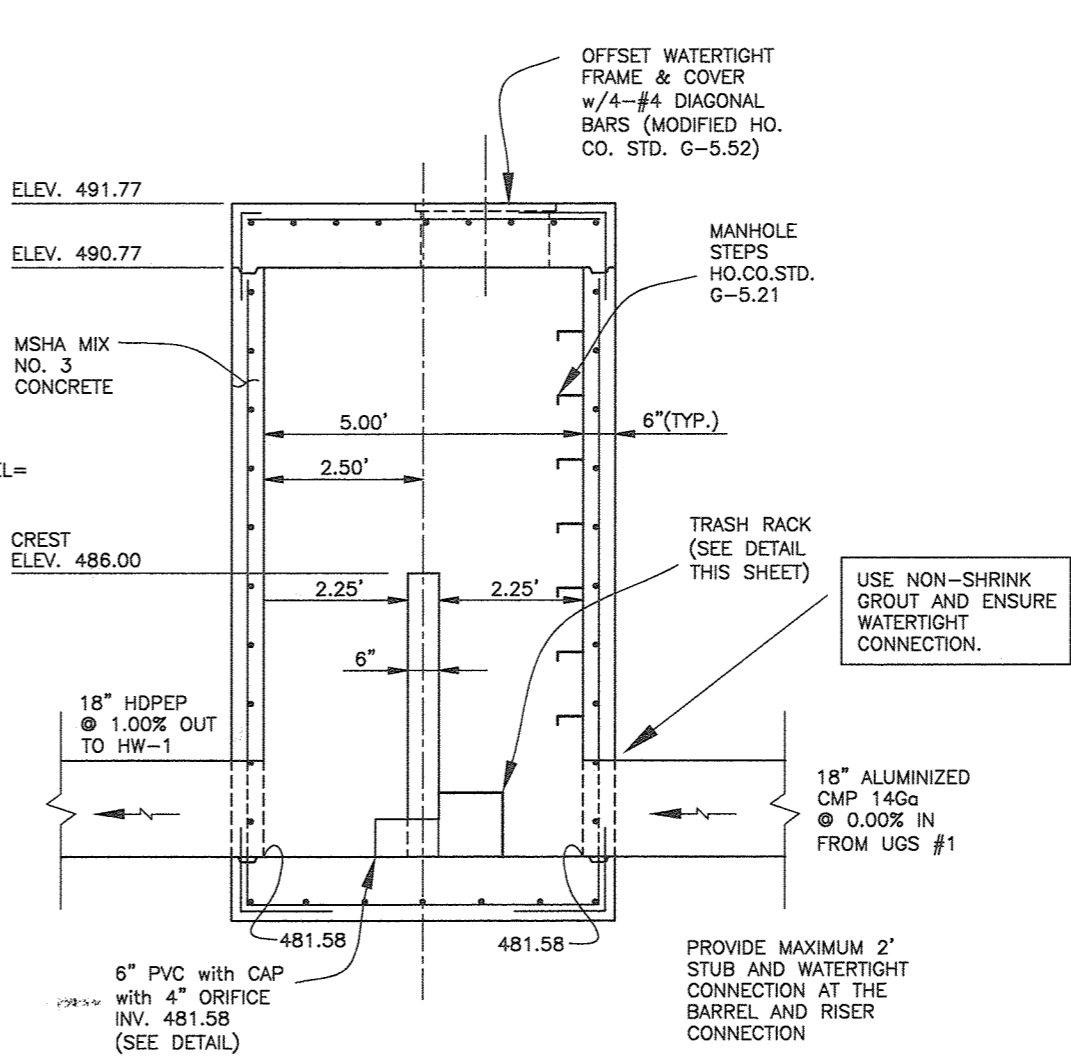
PLAN VIEW



SECTION A-A FRONT VIEW



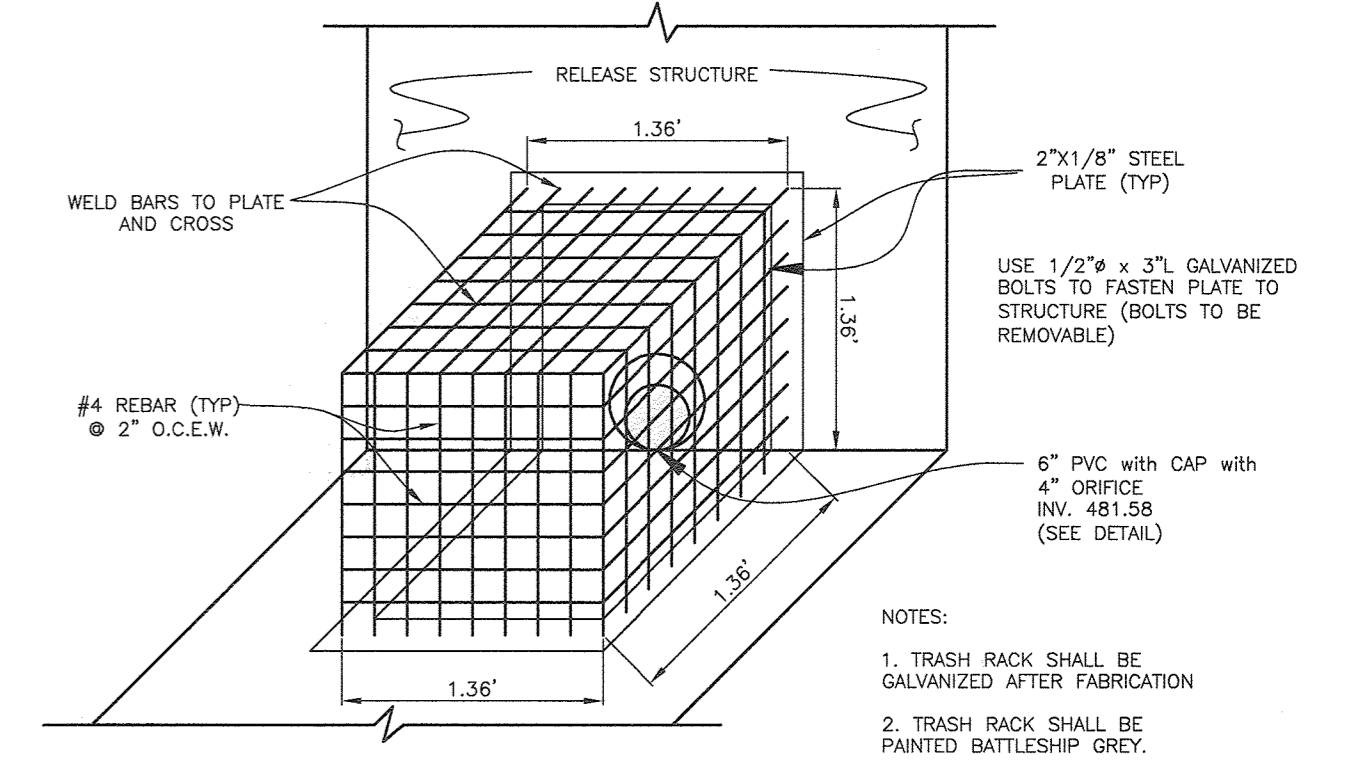
CAP DETAIL
N.T.S.



SECTION B-B SIDE VIEW

S-1 DETAIL
SCALE: 1" = 3'

NOTE: SEE GENERAL NOTE 34 ON SHEET 1 FOR DESIGN MANUAL WAIVER INFORMATION REGARDING THIS STRUCTURE.



TRASH RACK DETAIL @ S-1
SCALE: 1" = 1'-0"

CONSTRUCTION SPECIFICATIONS

- A. BEDDING**
1. THE BED SHALL BE PLACED TO UNIFORM GRADE AND LINE TO ENSURE GOOD VERTICAL ALIGNMENT AND TO AVOID EXCESSIVE STRESSES AT PIPE JOINTS. THE BEDDING SHALL BE FREE OF ROCK FORMATIONS, PROTRUDING STONES, FROZEN LUMPS, ROOTS, AND FOREIGN MATERIAL. THE BEDDING FOUNDATION MUST BE A STABLE, WELL GRADED GRANULAR MATERIAL. ANY MATERIAL THAT HAS INADEQUATE BEARING CAPACITY MUST BE REMOVED AND REPLACED WITH A COMPACTED SELECT FILL APPROVED BY THE GEO-TECHNICAL ENGINEER.
- B. BACKFILL**
1. THE FILL MATERIAL SHALL BE FREE OF ROCKS, FROZEN LUMPS, AND FOREIGN MATTER THAT COULD CAUSE HARD SPOTS IN BACKFILL OR THAT COULD DECOMPOSE AND CREATE VOIDS.
 2. BACKFILL MATERIAL SHALL BE A WELL GRADED GRANULAR MATERIAL.
 3. HIGHLY PLASTIC SILTS, HIGHLY PLASTIC CLAYS, ORGANIC SILTS, ORGANIC CLAYS AND PEATS SHALL NOT BE USED AS BACKFILL MATERIAL.
 4. BACKFILL SHALL BE PLACED SYMMETRICALLY ON EACH SIDE OF THE STRUCTURE IN SIX-INCH TO EIGHT-INCH LOOSE LAYERS TO ONE FOOT ABOVE THE TOP OF THE PIPE. EACH LAYER IS TO BE COMPACTED TO THE SPECIFIED DENSITY (MINIMUM 90%) BEFORE PLACING THE NEXT LAYER. REFERENCE ASTM A798.
- C. PIPE**
1. THE PIPE FABRICATOR SHALL PROVIDE SPECIFICATIONS OF ALL MATERIALS (BASED ON HS25 LOADING).
 2. SHOP DRAWINGS ARE TO BE PROVIDED BY FABRICATOR. APPROVAL BY ENGINEER IS REQUIRED PRIOR TO CONSTRUCTION.
 3. CONTRACTOR IS REQUIRED TO COORDINATE APPROVAL OF SHOP DRAWINGS AND SPECIFICATIONS AND SHALL BE OBLIGATED FOR ANY COST THEREOF.
- D. GENERAL**
1. DEBRIS IS TO BE KEPT OUT OF THE FACILITY DURING AND AFTER CONSTRUCTION.

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.

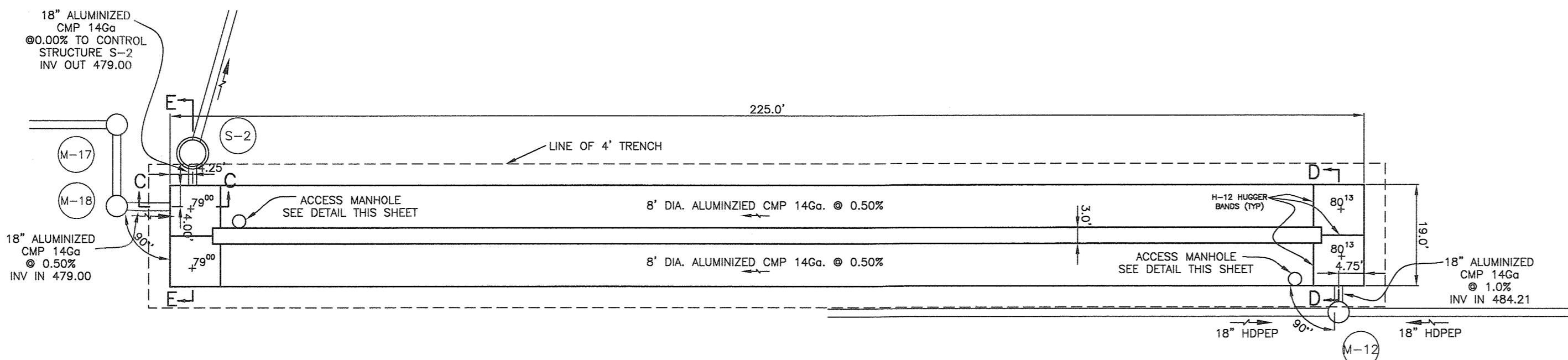
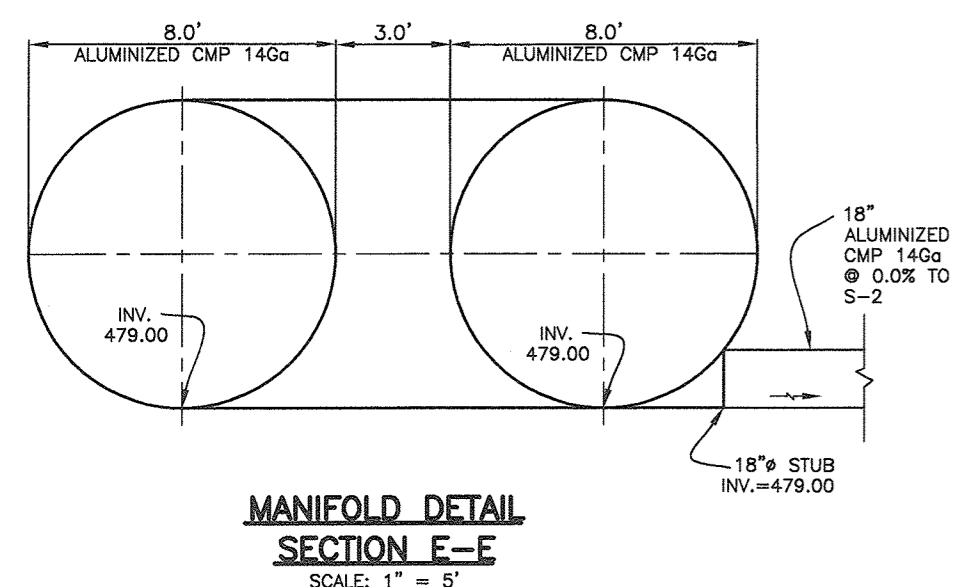
ENGINEERS & LAND SURVEYORS & PLANNERS

8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6444
WWW.BE-CIVILENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 22389 (Expiration Date: 6-30-2019)

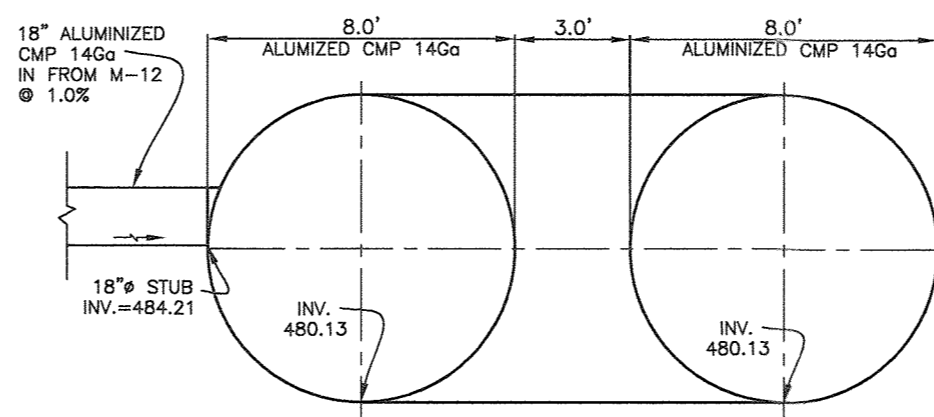
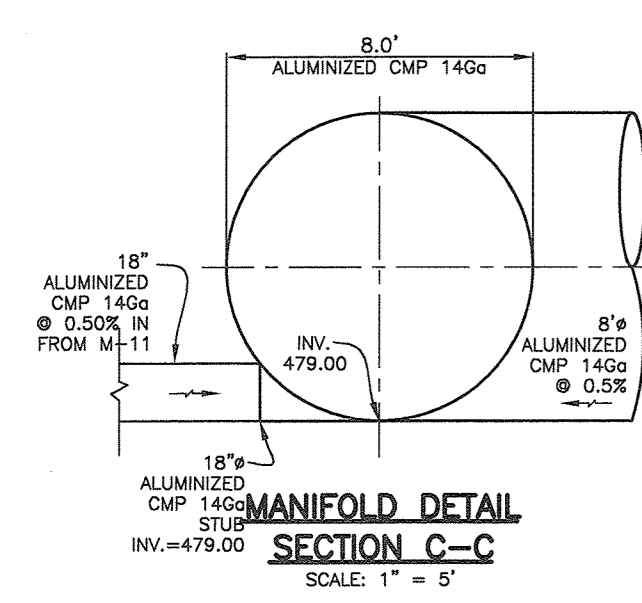
[Signature]

OWNER: STEVEN A. KLEIN & ASSOCIATES C/O STEPHEN ALBERT INC. 12165 CLARKSVILLE PIKE CLARKSVILLE, MARYLAND 21029 410-465-4244	RIVER HILL SQUARE
DEVELOPER/OWNER: RIVER HILL SQUARE, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244	REDEVELOPMENT OF RIVER HILL GARDEN CENTER
TAX MAP: 35 - GRID: 1 - PARCEL: 1 ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND	SWM DETAILS (UGS) UNDERGROUND FACILITY #1
DATE: MARCH 4, 2019	BEI PROJECT NO. 2801
DESIGN: DBT	DRAFT: DBT
SCALE: AS SHOWN	SHEET 14 OF 25



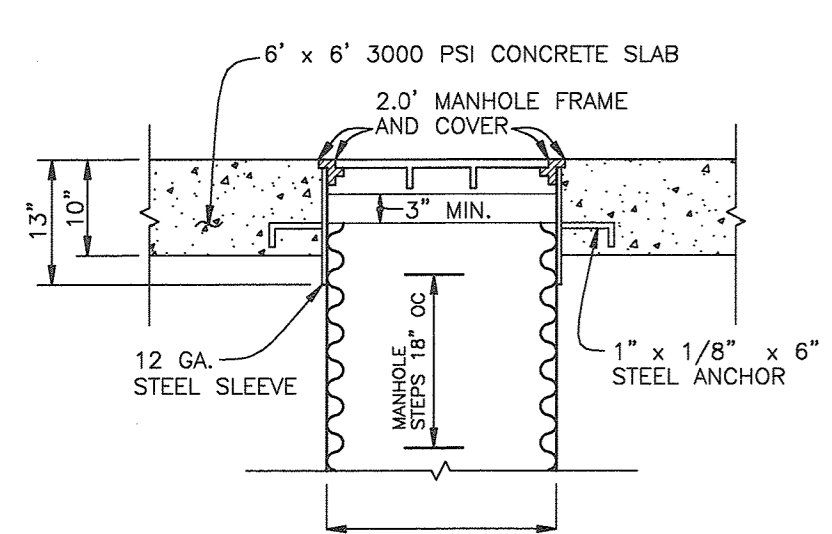
(UGS) UNDERGROUND FACILITY #2
PIPE LAYOUT PLAN

SCALE: 1" = 20'



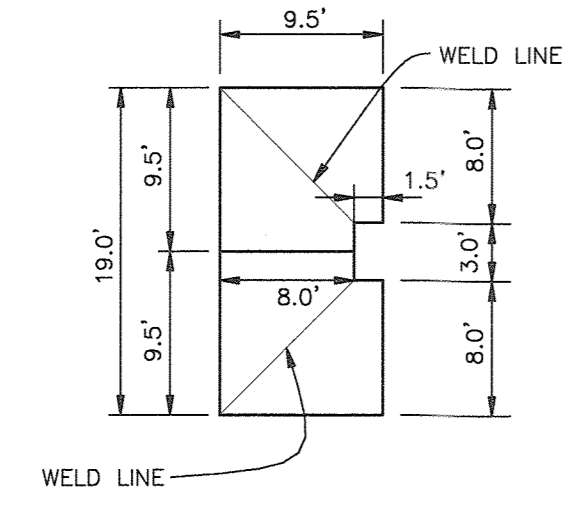
MANIFOLD DETAIL
SECTION D-D

SCALE: 1" = 5'



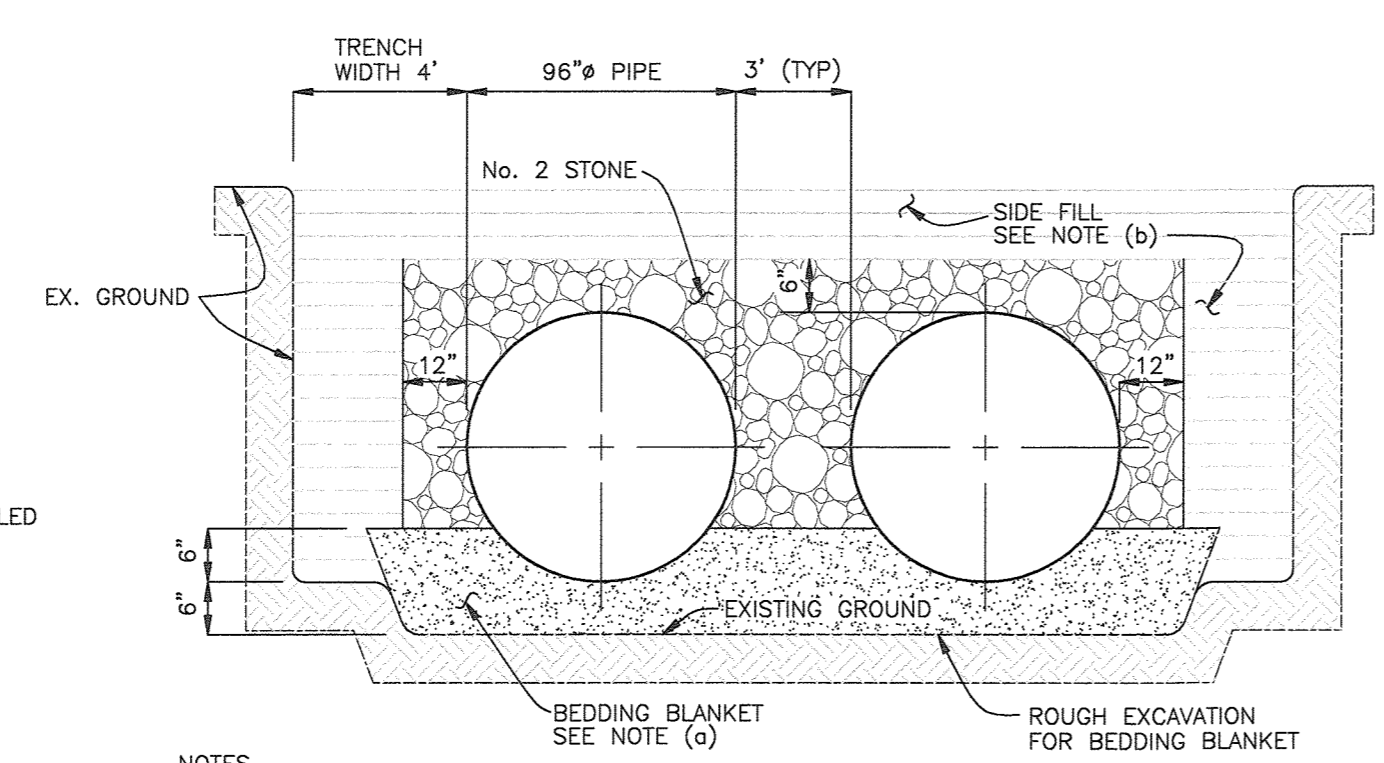
TYPICAL ALUMINIZED CMP RISER
MANHOLE SLEEVE DETAIL

NOT TO SCALE



TYPICAL ELBOW/TEE DETAIL

NOT TO SCALE



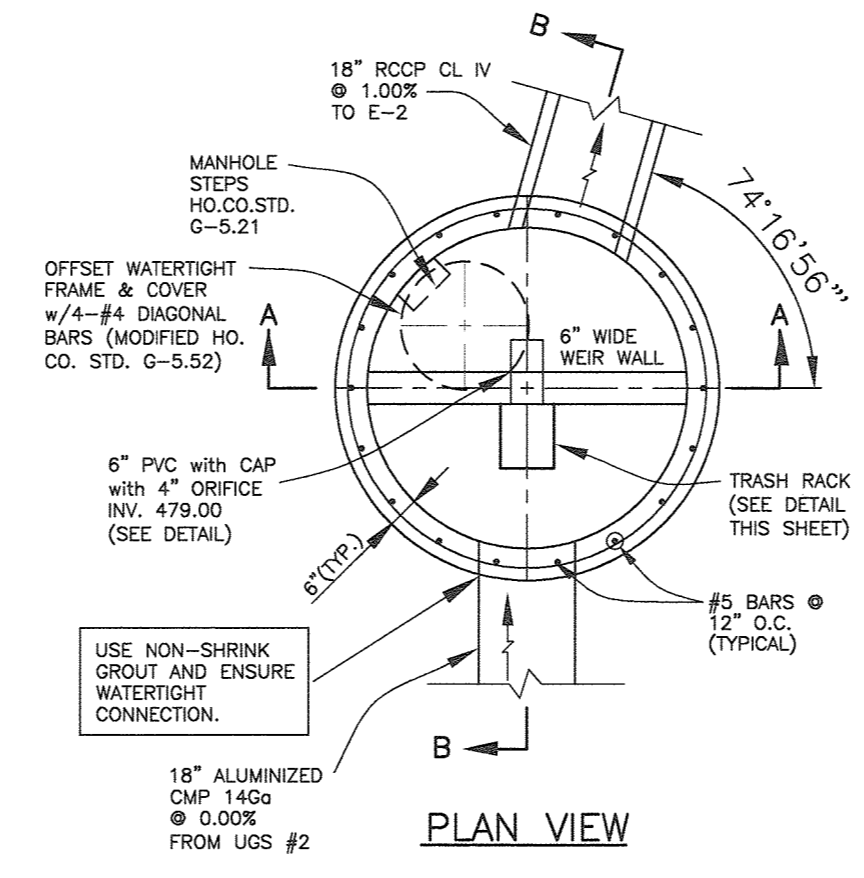
TYPICAL BEDDING AND BACKFILL DETAIL

NOT TO SCALE

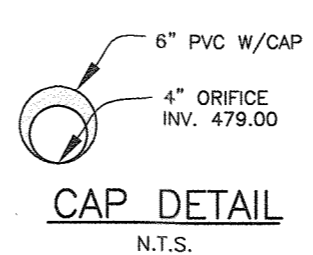
- NOTES:
- (a) BEDDING BLANKET OF LOOSE GRANULAR FILL ROUGHLY SHAPED TO FIT BOTTOM OF PIPE. MINIMUM THICKNESS BEFORE PLACING PIPE SHALL BE SIX INCHES.
 - (b) SIDE FILL TO BE COMPACTED IN 6 TO 8 INCHES OF COMPACTED LAYERS. COMPACTION SHALL NOT BE LESS THAN 90% STANDARD PROCTOR DENSITY (AASHTO 199).

CONSTRUCTION SPECIFICATIONS

- A. BEDDING
- THE BED SHALL BE PLACED TO UNIFORM GRADE AND LINE TO ENSURE GOOD VERTICAL ALIGNMENT AND TO AVOID EXCESSIVE STRESSES AT PIPE JOINTS. THE BEDDING SHALL BE FREE OF ROCK FORMATIONS, PROTRUDING STONES, FROZEN LUMPS, ROOTS, AND FOREIGN MATERIAL. THE BEDDING FOUNDATION MUST BE A STABLE, WELL GRADED GRANULAR MATERIAL. ANY MATERIAL THAT HAS INADEQUATE BEARING CAPACITY MUST BE REMOVED AND REPLACED WITH A COMPACTED SELECT FILL APPROVED BY THE GEO-TECHNICAL ENGINEER.
- B. BACKFILL
- THE FILL MATERIAL SHALL BE FREE OF ROCKS, FROZEN LUMPS, AND FOREIGN MATTER THAT COULD CAUSE HARD SPOTS IN BACKFILL OR THAT COULD DECOMPOSE AND CREATE VOIDS.
 - BACKFILL MATERIAL SHALL BE A WELL GRADED GRANULAR MATERIAL.
 - HIGHLY PLASTIC SILTS, HIGHLY PLASTIC CLAYS, ORGANIC SILTS, ORGANIC CLAYS AND PEATS SHALL NOT BE USED AS BACKFILL MATERIAL.
 - BACKFILL SHALL BE PLACED SYMMETRICALLY ON EACH SIDE OF THE STRUCTURE IN SIX-INCH TO EIGHT-INCH LOOSE LAYERS TO ONE FOOT ABOVE THE TOP OF THE PIPE. EACH LAYER IS TO BE COMPACTED TO THE SPECIFIED DENSITY (MINIMUM 90%) BEFORE PLACING THE NEXT LAYER. REFERENCE ASTM #708.
- C. PIPE
- THE PIPE FABRICATOR SHALL PROVIDE SPECIFICATIONS OF ALL MATERIALS (BASED ON HS25 LOADING).
 - SHOP DRAWINGS ARE TO BE PROVIDED BY FABRICATOR. APPROVAL BY ENGINEER IS REQUIRED PRIOR TO CONSTRUCTION.
 - CONTRACTOR IS REQUIRED TO COORDINATE APPROVAL OF SHOP DRAWINGS AND SPECIFICATIONS AND SHALL BE OBLIGATED FOR ANY COST THEREOF.
- D. GENERAL
- DEBRIS IS TO BE KEPT OUT OF THE FACILITY DURING AND AFTER CONSTRUCTION.

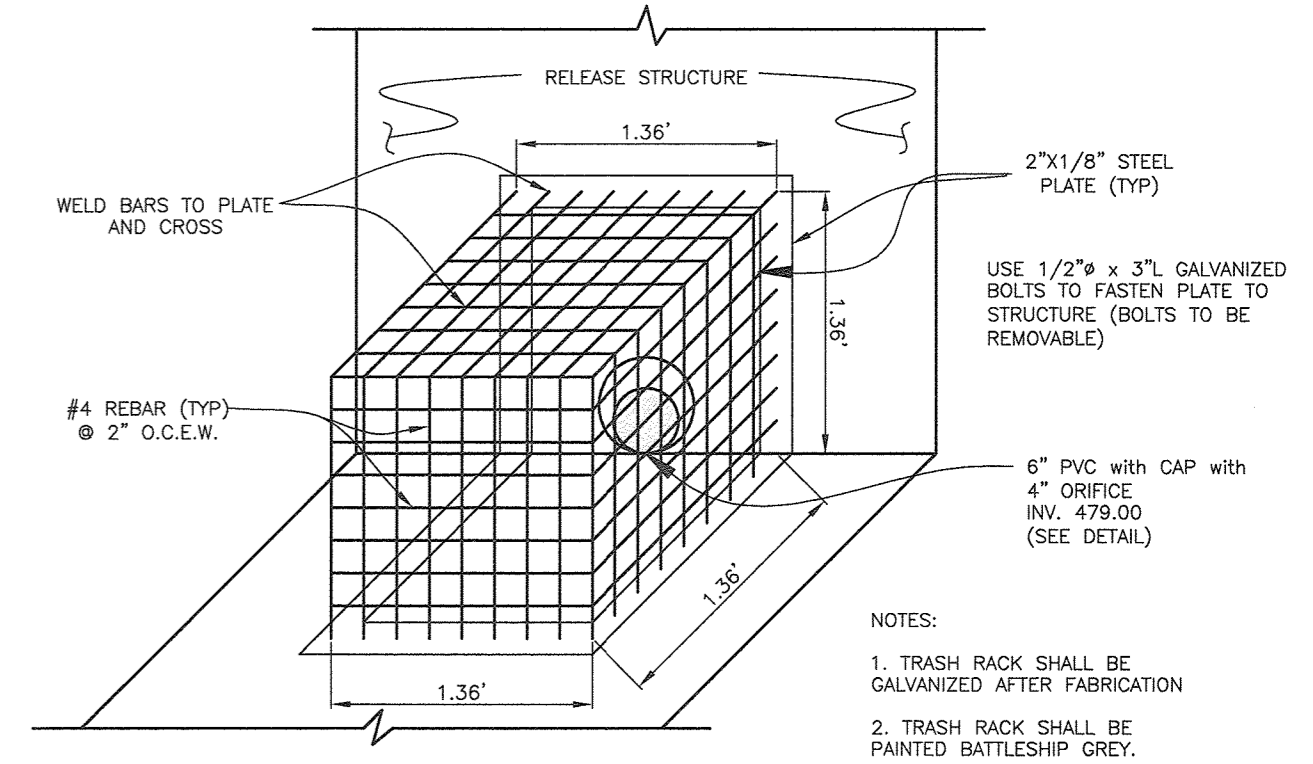


PLAN VIEW



CAP DETAIL

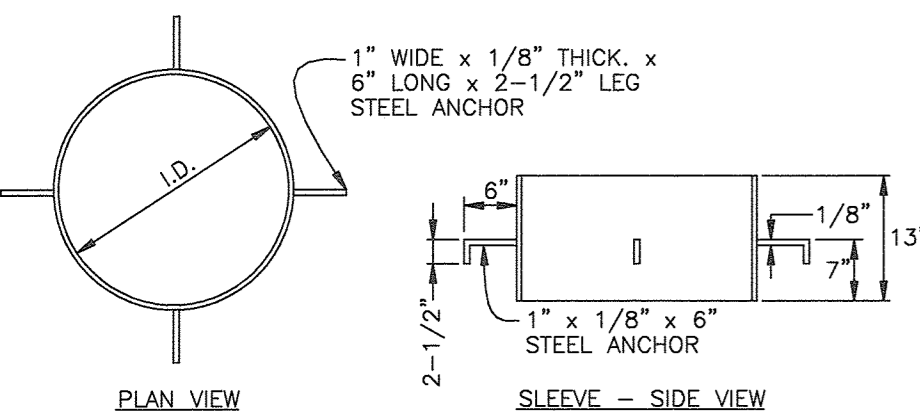
N.T.S.



TRASH RACK DETAIL @ S-1

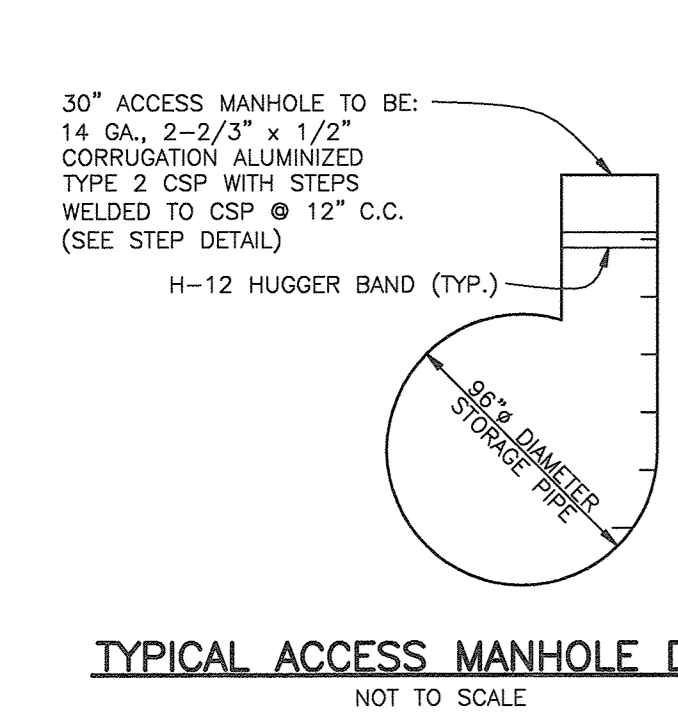
SCALE: 1" = 1'-0"

- NOTES:
- TRASH RACK SHALL BE GALVANIZED AFTER FABRICATION
 - TRASH RACK SHALL BE PAINTED BATTLESHIP GREY.



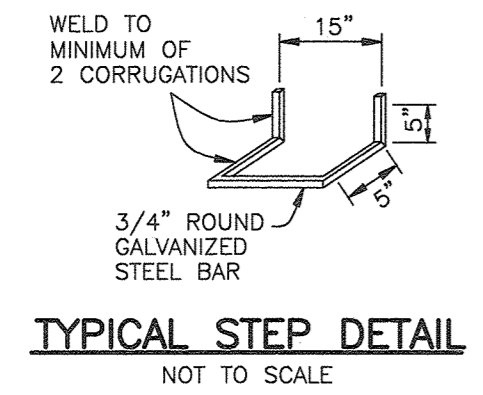
TYPICAL MANHOLE SLEEVE DETAIL

NOT TO SCALE



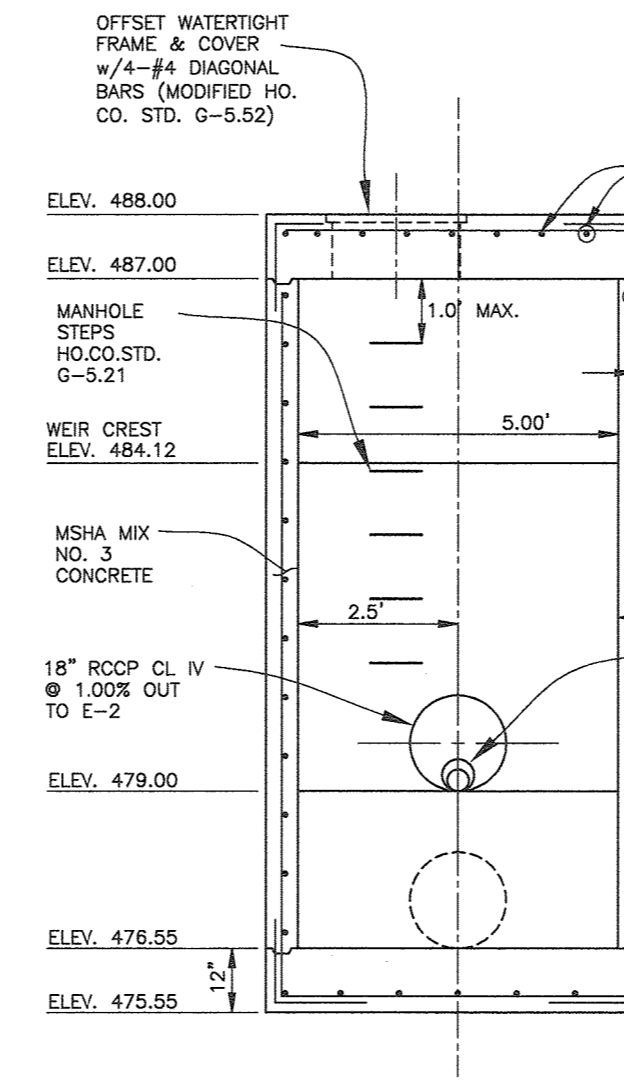
TYPICAL ACCESS MANHOLE DETAIL

NOT TO SCALE

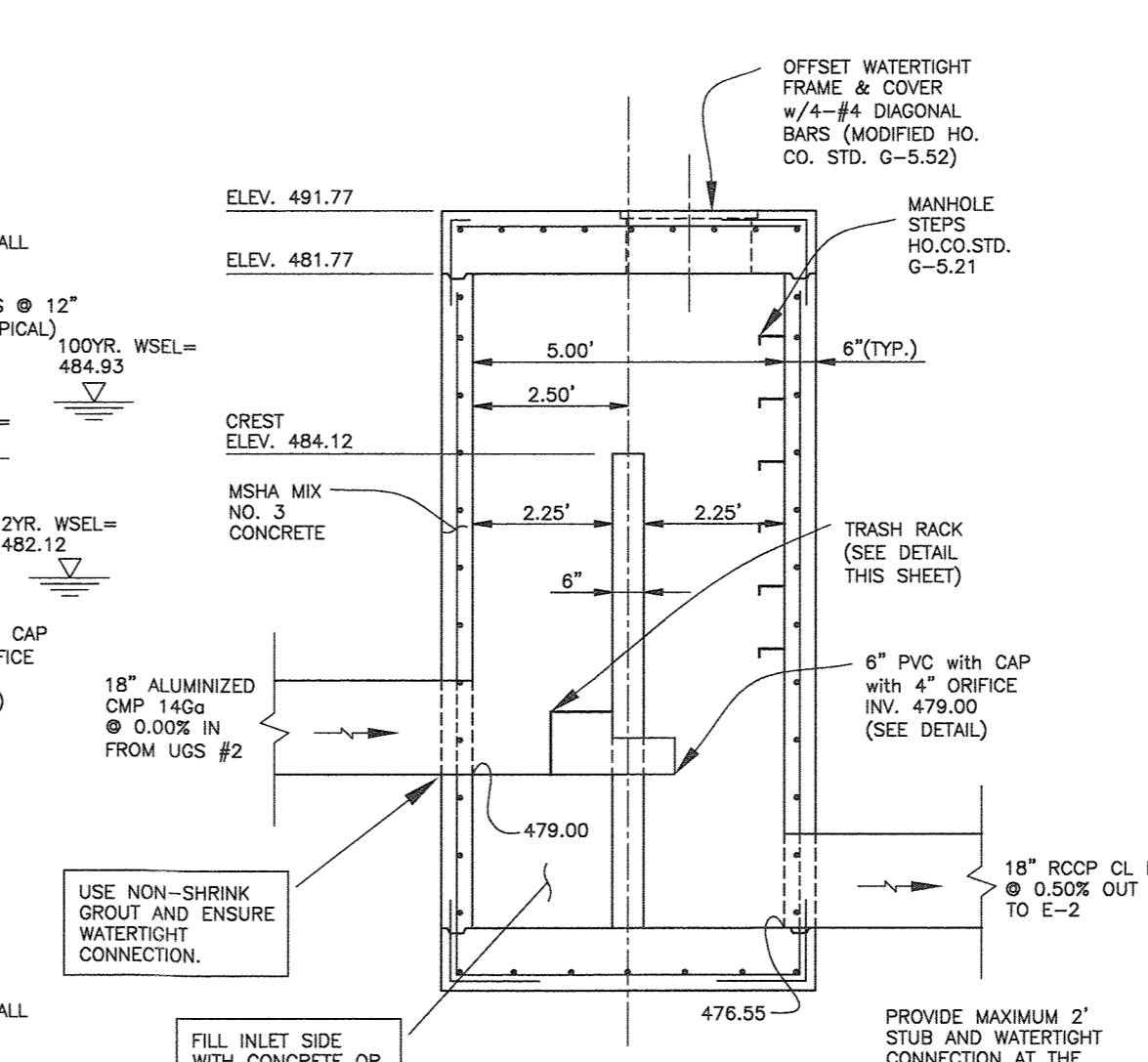


TYPICAL STEP DETAIL

NOT TO SCALE



SECTION A-A
FRONT VIEW



SECTION B-B
SIDE VIEW

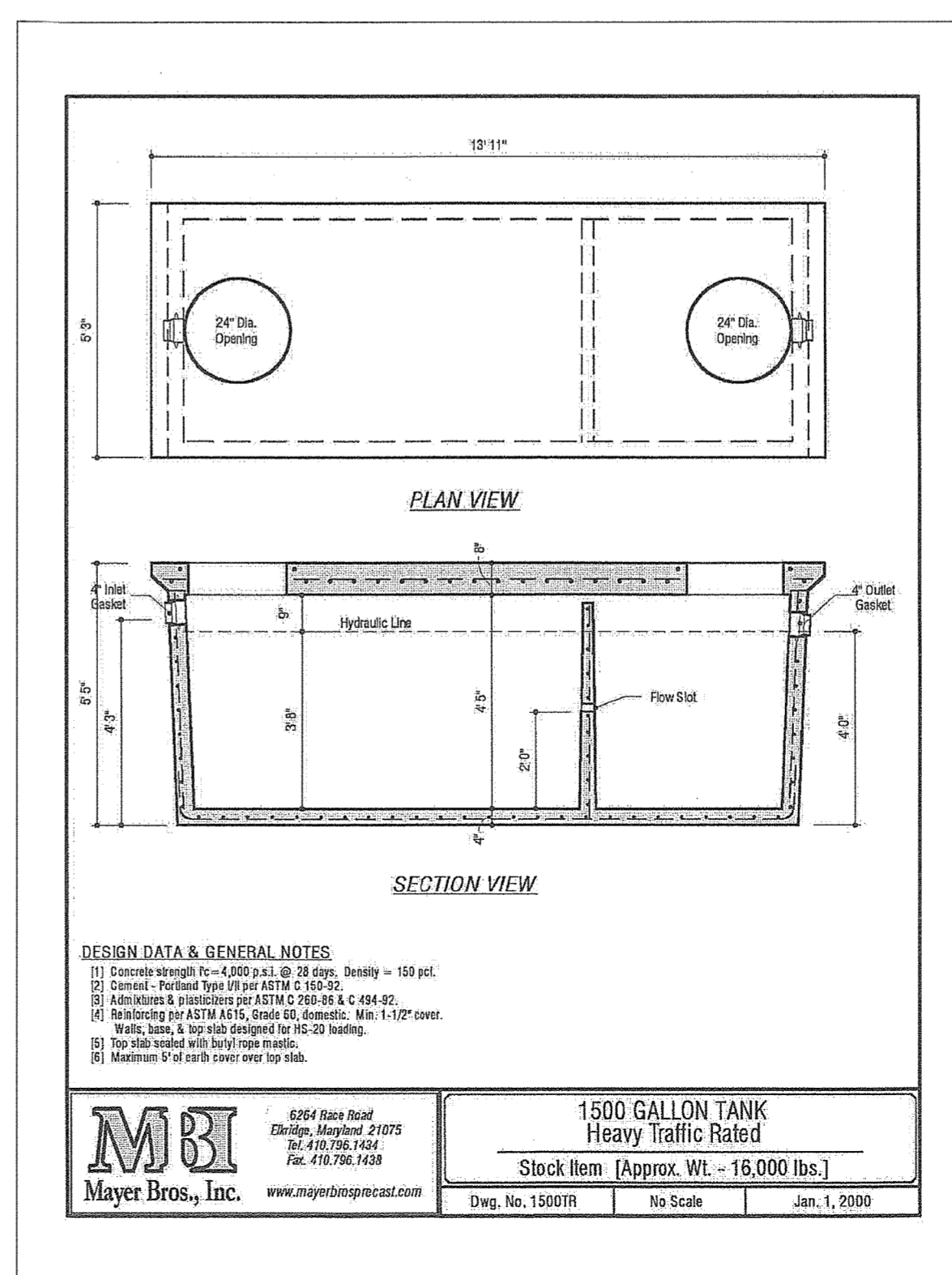
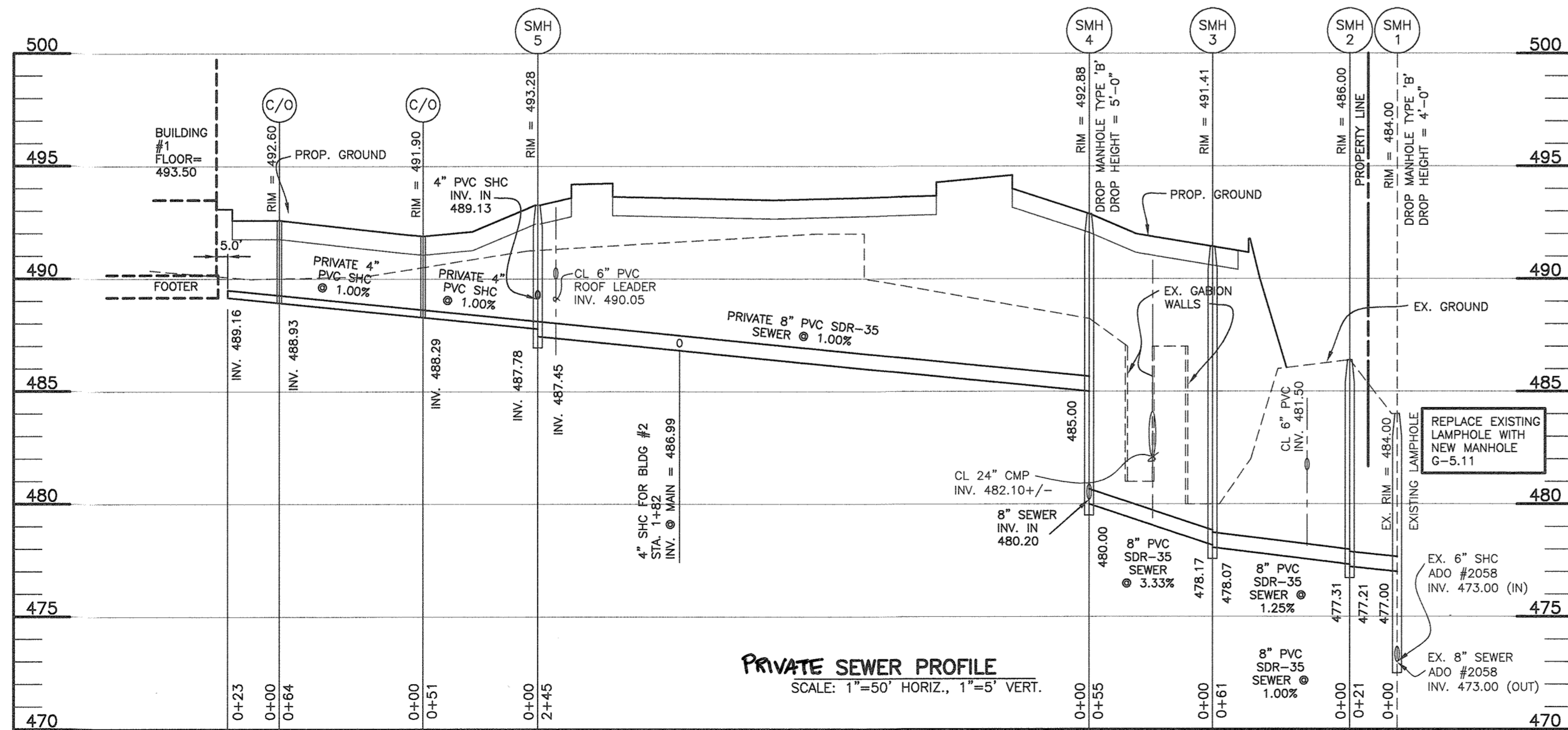
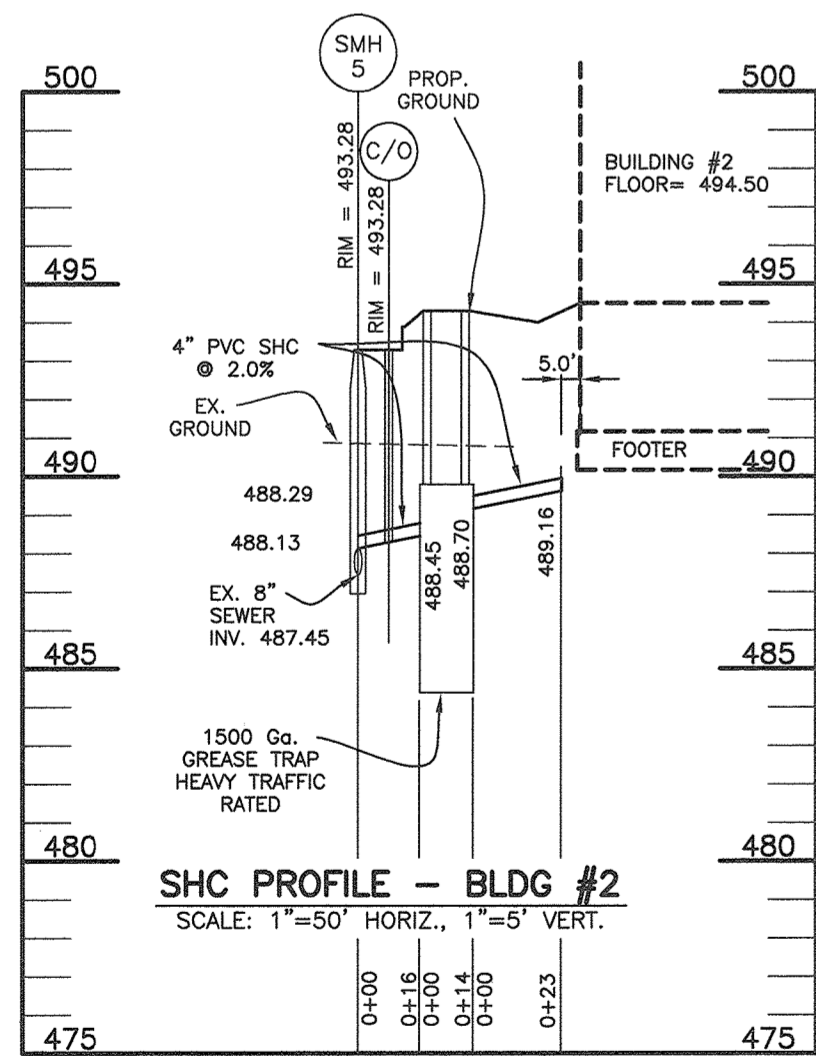
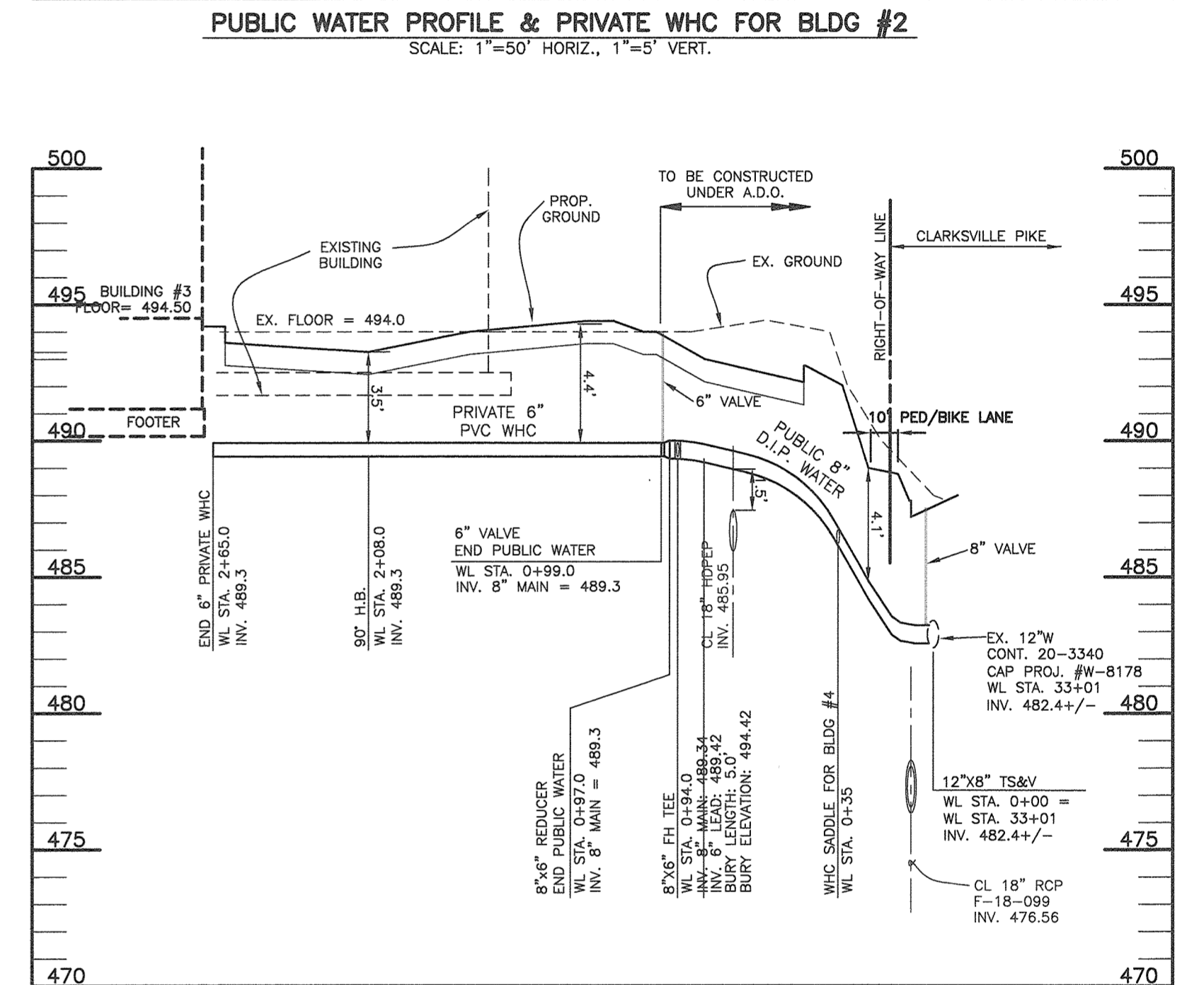
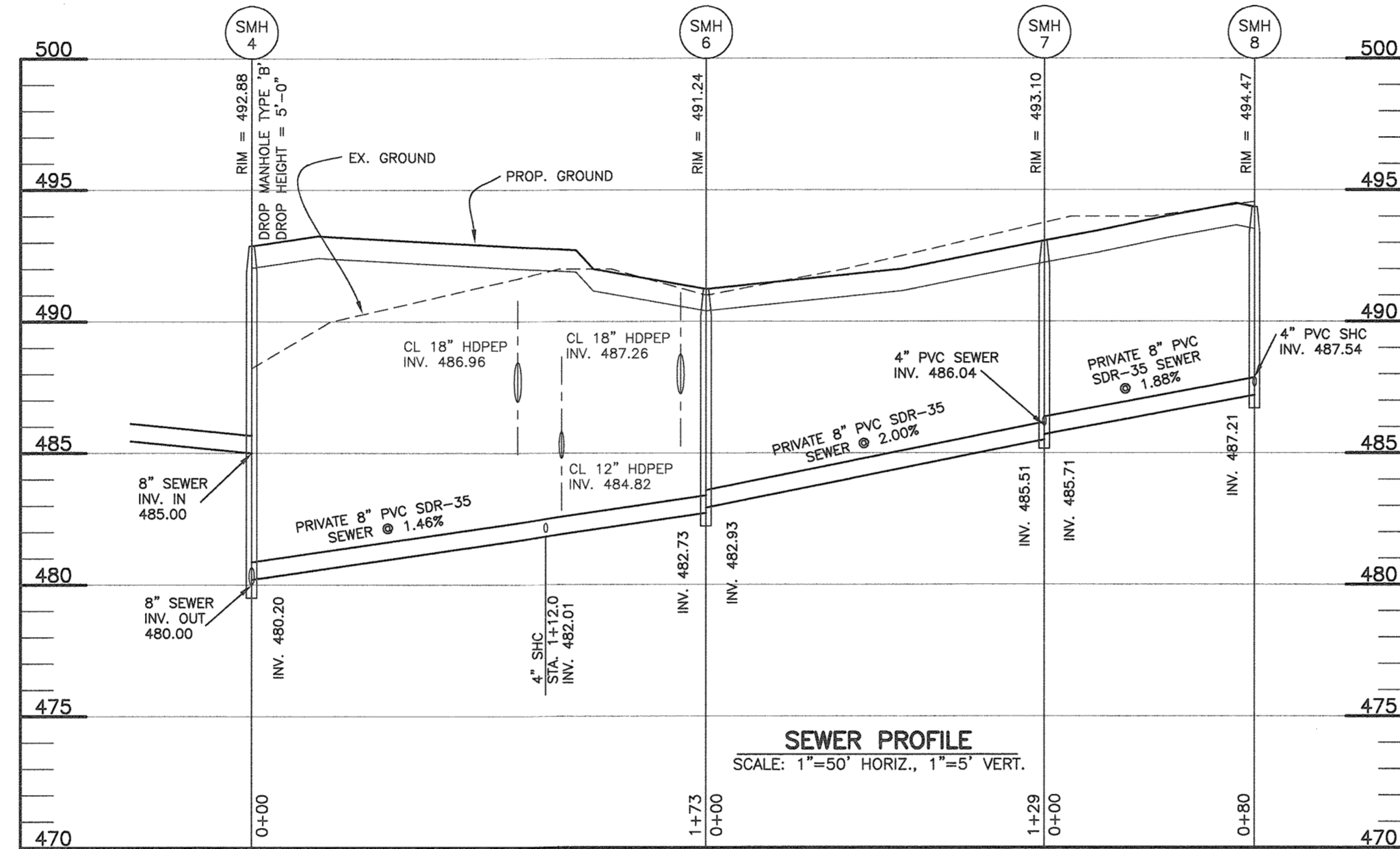
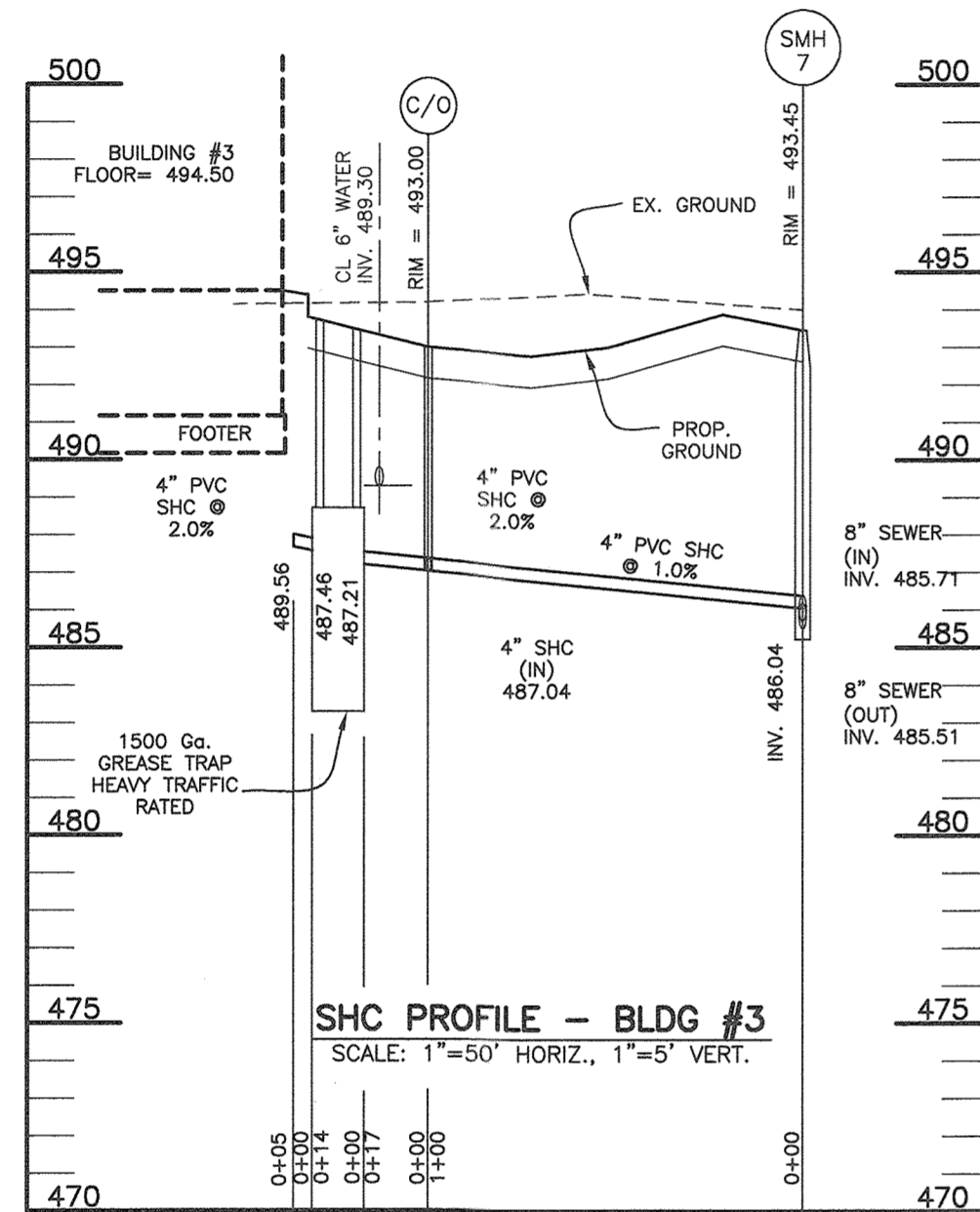
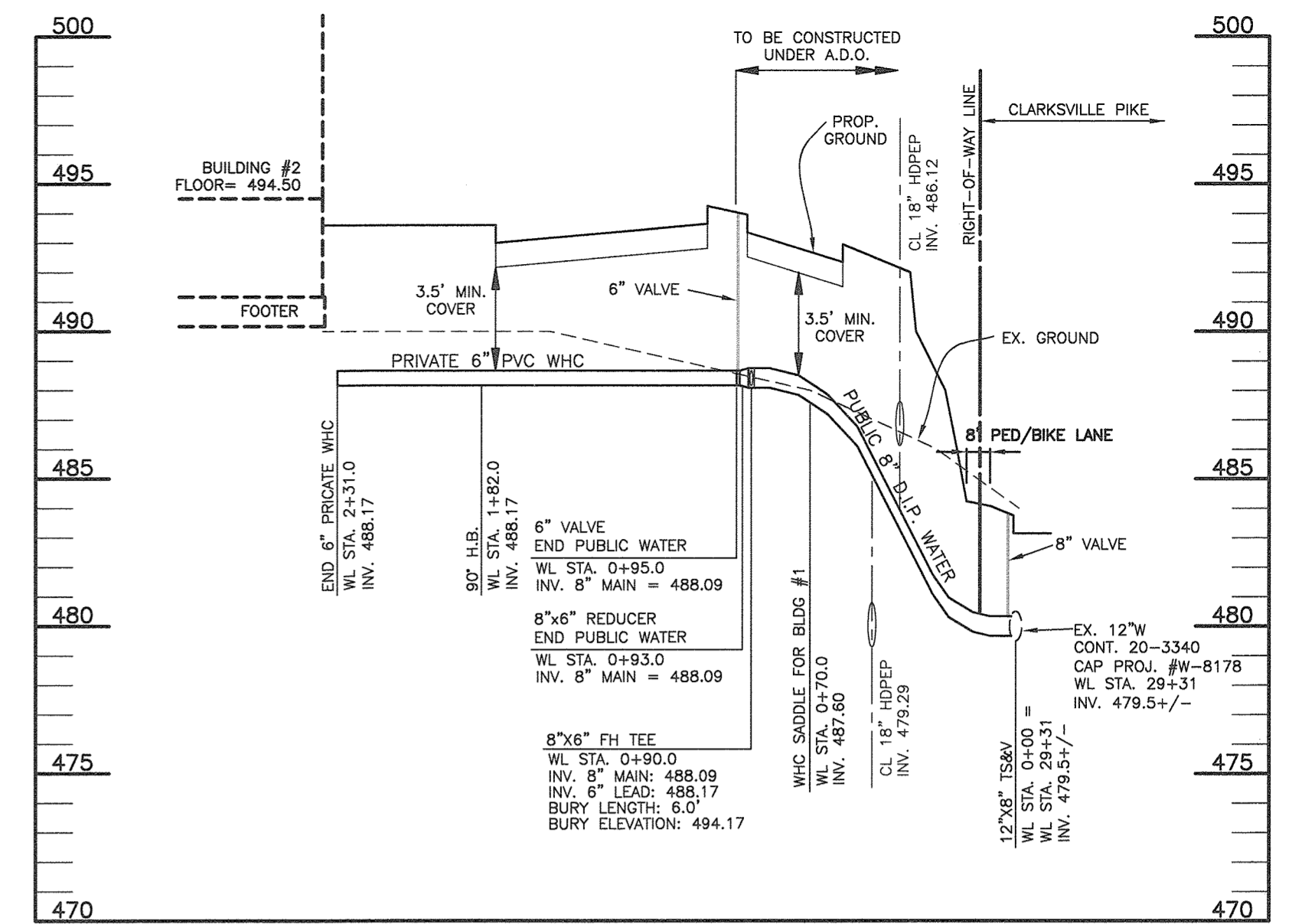
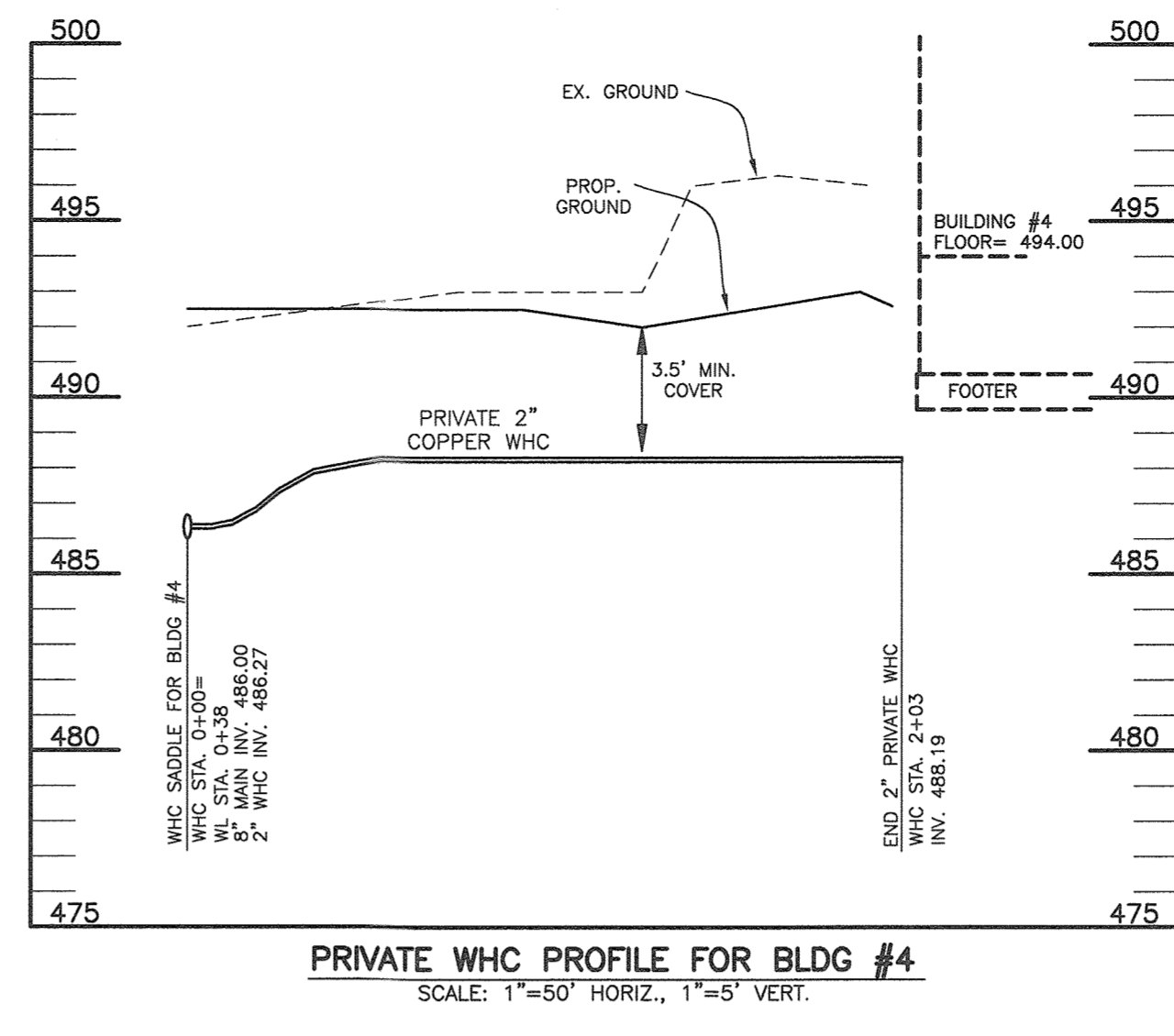
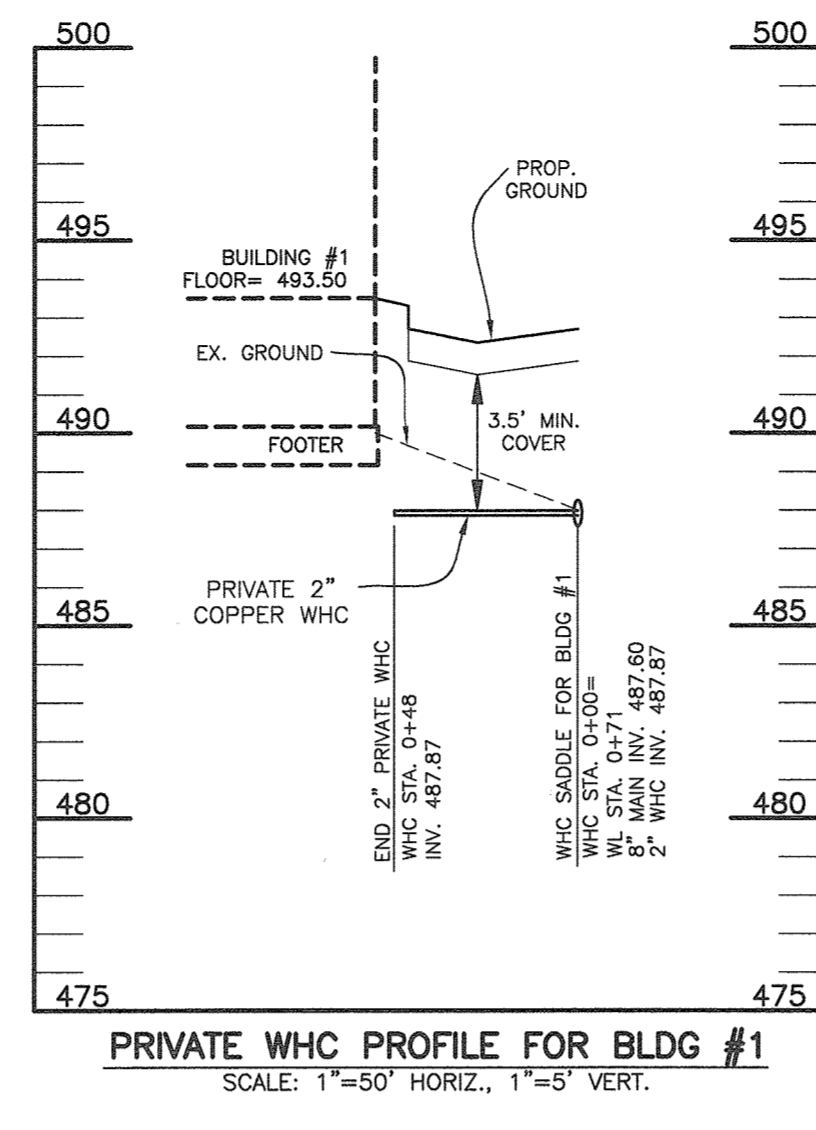
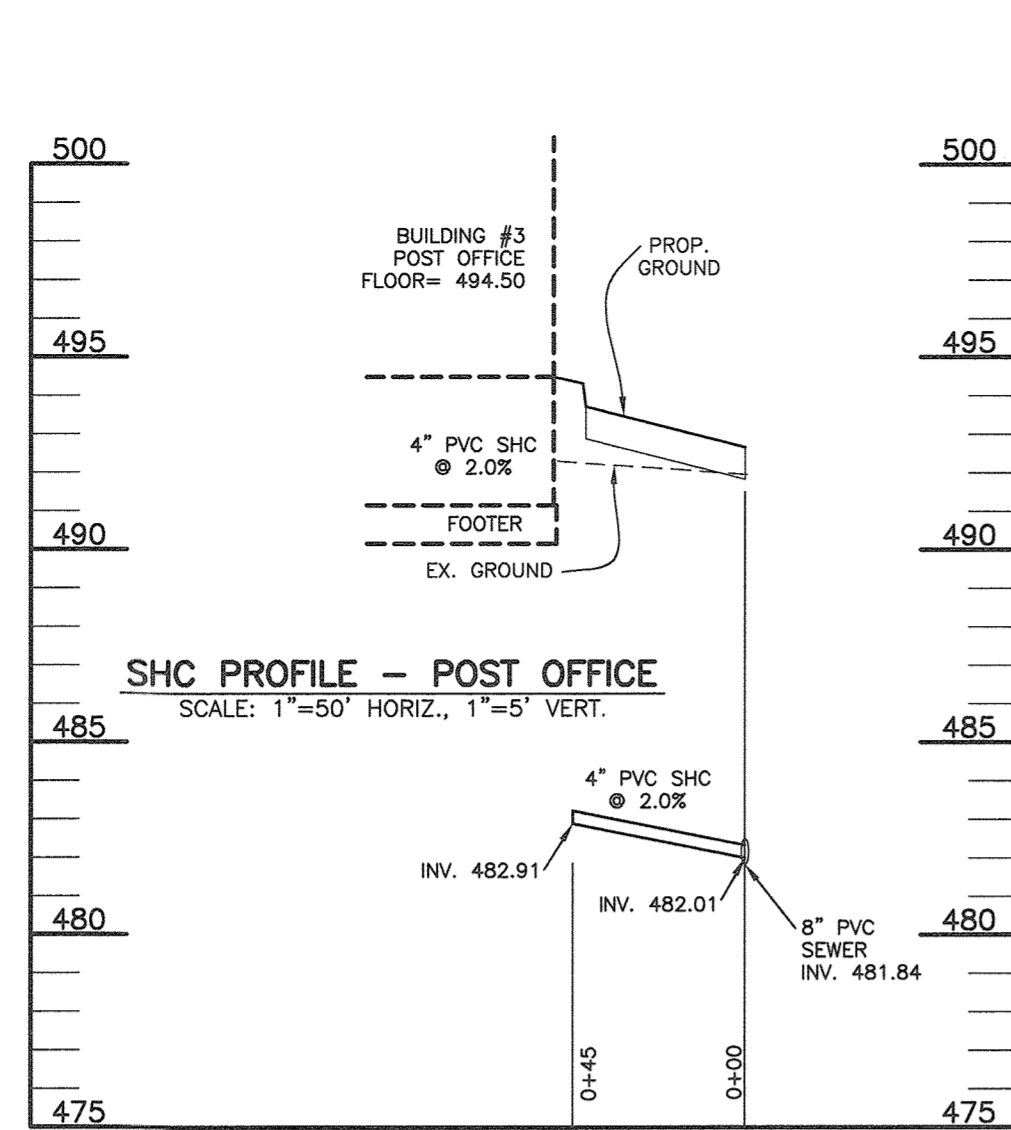
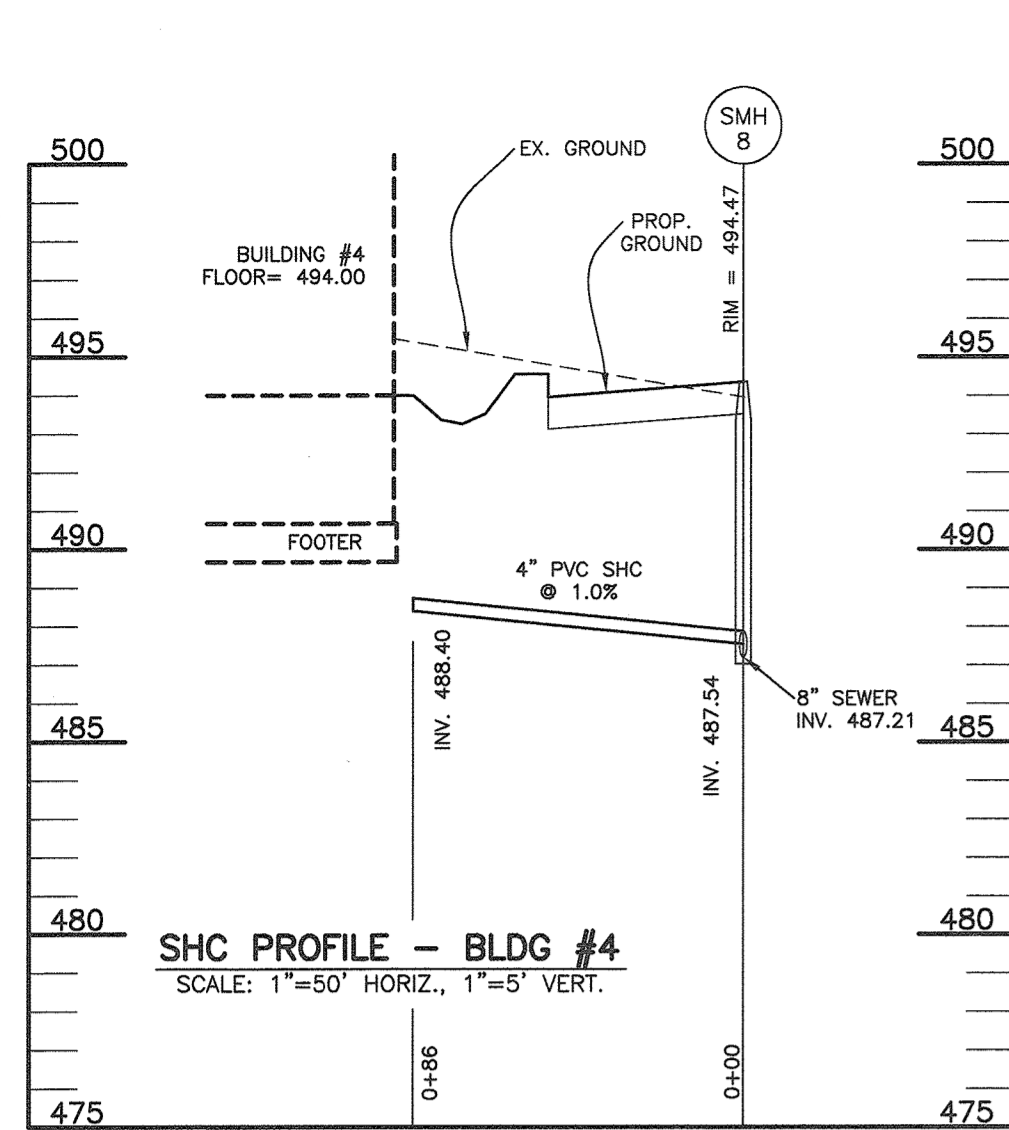
S-2 DETAIL

SCALE: 1" = 3'

NOTE: SEE GENERAL NOTE 34 ON SHEET 1 FOR DESIGN MANUAL WATER INFORMATION REGARDING THIS STRUCTURE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>[Signature]</i>	4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	4-4-19
DIRECTOR	DATE

<p>NO. DATE REVISION</p>	
<p>Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 22390, Expiration Date: 6-30-2019.</p>	
<p>BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6444 WWW.BE-CIVILENGINEERING.COM</p>	
<p>OWNER: STEPHEN A. KLEIN & ASSOCIATES C/O STEPHEN KLEIN, INC. 12165 CLARKSVILLE PIKE CLARKSVILLE, MARYLAND 21029 410-465-4244</p>	<p>DEVELOPER/OWNER: RIVER HILL SQUARE, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244</p>
<p>RIVER HILL SQUARE REDEVELOPMENT OF RIVER HILL GARDEN CENTER TAX MAP: 35 - GRID: 1 - PARCEL: 1 ZONED: B-1 ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND</p>	
<p>SWM DETAILS (UGS) UNDERGROUND FACILITY #2</p>	
DATE: MARCH 4, 2019	BEI PROJECT NO. 2801
DESIGN: DBT	DRAFT: DBT
SCALE: AS SHOWN	SHEET 15 OF 25



PRIVATE SEWER MANHOLE SCHEDULE					
Manhole Number	Location (NAD '83)	Invert In	Invert Out	Rim Elevation	Ho.Co.Std. Detail
1	N 563572.59 E 1331416.51	477.00 (8")	EX 473.00 (8")	484.00	G-5.11 & S-1.33
2	N 563591.58 E 1331425.51	477.31 (8")	477.21 (8")	486.00	G-5.11
3	N 563621.13 E 1331372.65	478.17 (8")	478.07 (8")	491.41	G-5.11
4	N 563661.74 E 1331335.97	485.00 (8")	480.20 (8")	492.88	G-5.11 & S-1.33
5	N 563648.80 E 1331090.99	487.78 (4")	489.13 (4")	487.45 (8")	G-5.11
6	N 563790.45 E 1331452.00	482.95 (8")	482.73 (8")	491.24	G-5.11
7	N 563934.46 E 1331415.16	486.61 (8")	486.74 (4")	493.45	G-5.11
8	N 563992.94 E 1331400.20	487.54 (4")	487.21 (8")	494.47	G-5.11

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-2-19
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4-4-19
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4-4-19
 DIRECTOR DATE

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 21394, Registration Date: 6-30-2019.

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE & SUITE 315 ELLICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-6644
 WWW.BE-CIVILENGINEERING.COM

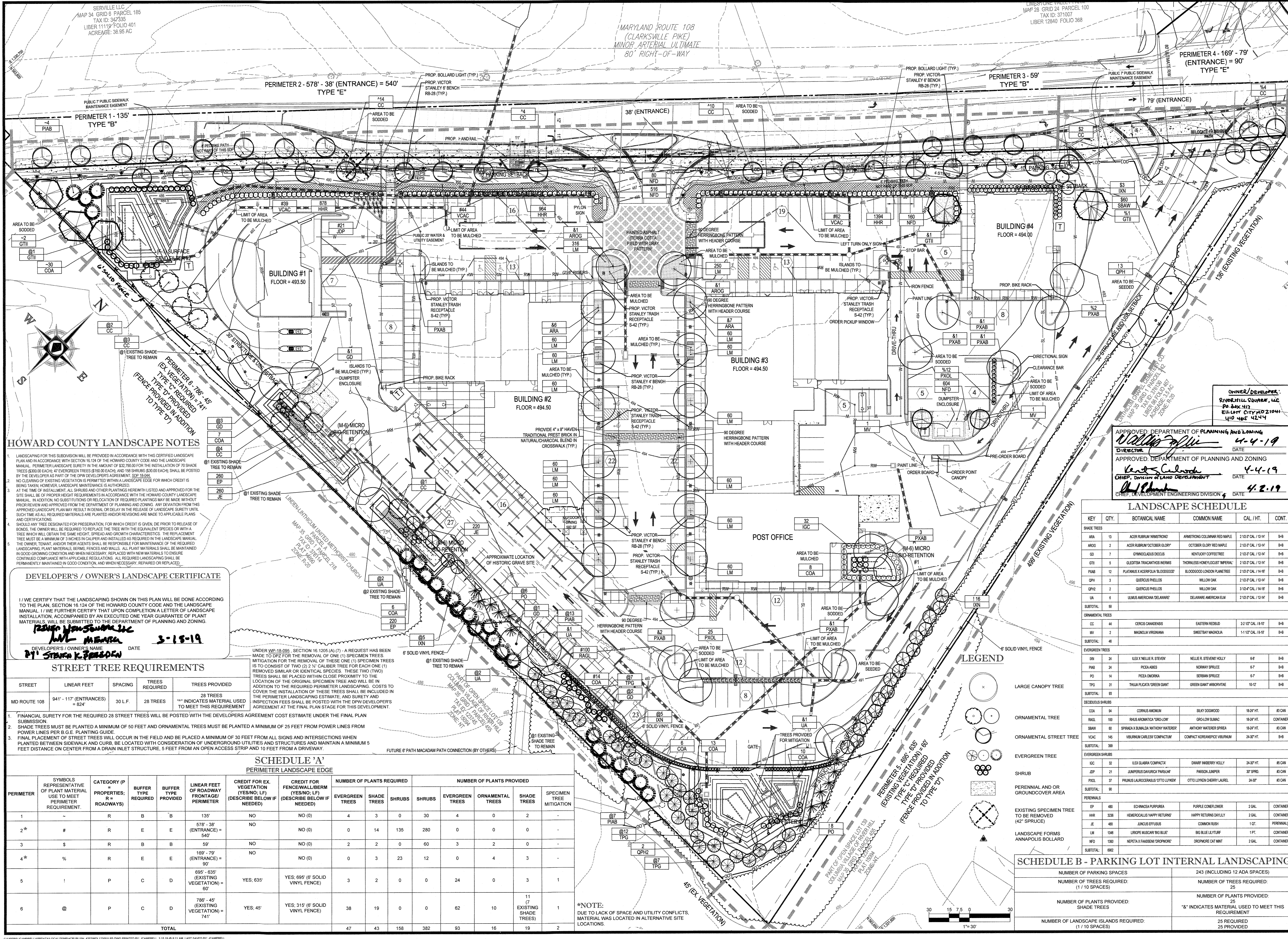
OWNER:
 STEPHEN A. KLEIN & ASSOCIATES
 C/O STERNBERG INC.
 12165 CLARKSVILLE PIKE
 CLARKSVILLE, MARYLAND 21029
 410-465-6105

DEVELOPER/OWNER:
 RIVER HILL SQUARE, LLC
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 410-465-4244

RIVER HILL SQUARE
 REDEVELOPMENT OF RIVER HILL GARDEN CENTER
 TAX MAP: 35 - GRID: 1 - PARCEL: 1
 ZONED: B-1
 ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND

WATER AND SEWER PROFILES AND DETAILS

DATE: MARCH 4, 2019 BEI PROJECT NO. 2801
 DESIGN: DBT DRAFT: DBT SCALE: AS SHOWN SHEET 16 OF 25



HOWARD COUNTY LANDSCAPE NOTES

- LANDSCAPING FOR THIS SUBDIVISION WILL BE PROVIDED IN ACCORDANCE WITH THIS CERTIFIED LANDSCAPE PLAN AND IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. PERIMETER LANDSCAPE SURETY IN THE AMOUNT OF \$32,700.00 FOR THE INSTALLATION OF 70 SHADE TREES (\$300.00 EACH), 47 EVERGREEN TREES (\$150.00 EACH), AND 138 SHRUBS (\$50.00 EACH) SHALL BE POSTED BY THE DEVELOPER AS PART OF THE DEVELOPER'S AGREEMENT, SDP 8926A. NO CLEARING OF EXISTING VEGETATION IS PERMITTED WITHIN A LANDSCAPE EDGE FOR WHICH CREDIT IS BEING TAKEN, HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THE SITE SHALL BE OF PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR REDUCTIONS OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS 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 APPLICABLE PLANS AND CERTIFICATIONS.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION, FOR WHICH 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" IN CALIBER AND INSTALLED AS REQUIRED IN THE LANDSCAPE MANUAL BY THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE MAINTAINED LANDSCAPING, PLANT MATERIALS, BENCHES, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE REQUIRED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACES WITH NEW MATERIALS TO MAINTAIN CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

DEVELOPER'S / OWNER'S LANDSCAPE 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 LANDSCAPE MANUAL. I / WE FURTHER CERTIFY THAT UPON COMPLETION A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

RESHA HANSEN
DAVID K. MENARD
 DEVELOPER'S / OWNER'S NAME DATE **3-15-19**

STAVAN K. PRASAD
 DEVELOPER'S / OWNER'S NAME DATE

STREET TREE REQUIREMENTS

STREET	LINEAR FEET	SPACING	TREES REQUIRED	TREES PROVIDED
MD ROUTE 108	941' - 117' (ENTRANCES) = 824'	30 LF.	28 TREES	28 TREES

- FINANCIAL SURETY FOR THE REQUIRED 28 STREET TREES WILL BE POSTED WITH THE DEVELOPER'S AGREEMENT COST ESTIMATE UNDER THE FINAL PLAN SUBMISSION.
- SHADE TREES MUST BE PLANTED A MINIMUM OF 50 FEET AND ORNAMENTAL TREES MUST BE PLANTED A MINIMUM OF 25 FEET FROM POWER LINES FROM POWER LINES PER B.G.E. PLANTING GUIDE.
- FINAL PLACEMENT OF STREET TREES WILL OCCUR IN THE FIELD AND BE PLACED A MINIMUM OF 30 FEET FROM ALL SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB, BE LOCATED WITH CONSIDERATION OF UNDERGROUND UTILITIES AND STRUCTURES AND MAINTAIN A MINIMUM 5 FEET DISTANCE CENTER FROM A DRAIN INLET STRUCTURE, 5 FEET FROM AN OPEN ACCESS STRIP AND 10 FEET FROM A DRIVEWAY.

SCHEDULE 'A' PERIMETER LANDSCAPE EDGE

PERIMETER	SYMBOLS REPRESENTATIVE OF PLANT MATERIAL USE TO MEET PERIMETER REQUIREMENT.	CATEGORY (P = PROPERTIES; R = ROADWAYS)	BUFFER TYPE REQUIRED	BUFFER TYPE PROVIDED	LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	CREDIT FOR EX. VEGETATION (YES/NO, LF) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR FENCE/WALL/BERM (YES/NO, LF) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED				NUMBER OF PLANTS PROVIDED			
								EVERGREEN TREES	SHADE TREES	SHRUBS	SHRUBS	EVERGREEN TREES	ORNAMENTAL TREES	SHADE TREES	SPECIMEN TREE MITIGATION
1		R	B	B	135'	NO	NO (0)	4	3	0	30	4	0	2	-
2*		R	E	E	578' - 38' (ENTRANCE) = 540'	NO	NO (0)	0	14	135	280	0	0	0	-
3		R	B	B	59'	NO	NO (0)	2	2	0	60	3	2	0	-
4*		R	E	E	169' - 79' (ENTRANCE) = 90'	NO	NO (0)	0	3	23	12	0	4	3	-
5		P	C	D	695' - 635' (EXISTING VEGETATION) = 60'	YES, 635'	YES, 635' (6" SOLID VINYL FENCE)	3	2	0	0	24	0	3	1
6		P	C	D	788' - 45' (EXISTING VEGETATION) = 741'	YES, 45'	YES, 315' (6" SOLID VINYL FENCE)	38	19	0	0	62	10	11	1
								47	43	158	382	93	16	19	2

*NOTE: DUE TO LACK OF SPACE AND UTILITY CONFLICTS, MATERIAL WAS LOCATED IN ALTERNATIVE SITE LOCATIONS.

APPROVED, DEPARTMENT OF PLANNING AND ZONING
Walter J. Williams
 DIRECTOR DATE **4-4-19**

APPROVED, DEPARTMENT OF PLANNING AND ZONING
Kent A. Calver
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE **4-4-19**

Chad Bland
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE **4-2-19**

LANDSCAPE SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	CAL. / HT.	CONT.
SHADE TREES					
ARA	13	ACER RUBRUM 'ARMISTONG'	ARMISTONG COLUMNAR RED MAPLE	210-3" CAL. / 15-14'	B+B
ARO2	2	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	210-3" CAL. / 15-14'	B+B
GO	7	Q. MICHUXIIANUS	KENTUCKY COFFEE TREE	210-3" CAL. / 15-14'	B+B
GTI	5	GLEDITSIA TRACANTHOS 'HERMIS'	THORNLESS HONEYLOCUST 'IMPERIAL'	210-3" CAL. / 15-14'	B+B
PXAB	12	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANETREE	210-3" CAL. / 14-16'	B+B
OPH	3	QUERCUS PHELLOS	WILLOW OAK	210-3" CAL. / 15-14'	B+B
OPH2	2	QUERCUS PHELLOS	WILLOW OAK	310-4" CAL. / 14-16'	B+B
UA	6	ULMUS AMERICANA 'DELAWARE'	DELAWARE AMERICAN ELM	210-3" CAL. / 15-14'	B+B
SUBTOTAL	50				
ORNAMENTAL TREES					
CC	44	CEDRUS CONGREGATA	EASTERN RED CEDAR	33-12" CAL. / 14-17'	B+B
MV	2	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	14-12" CAL. / 14-17'	B+B
SUBTOTAL	46				
EVERGREEN TREES					
DN	24	ILEX X NELLE R. STEVEN	NELLE R. STEVEN'S HOLLY	6-8'	B+B
PAB	24	PICEA ABIES	NORWAY SPRUCE	5-7'	B+B
PO	14	PICEA OMORICA	SIBIRIAN SPRUCE	5-7'	B+B
TPG	31	THUJA PLICATA 'GREEN GIANT'	GREEN GIANT ARBORVITAE	10-12'	B+B
SUBTOTAL	93				
DECIDUOUS SHRUBS					
COA	94	CORNUS AMOMIUM	SILKY DOGWOOD	16-24" HT.	#3 CAN
RAGL	100	RUBUS ARAMATICUS 'SROLOW'	GRACIOUS SALAM	16-24" HT.	CONTAINER
SBW	60	SPIRAEA X BAMBUSA 'ANTHONY WATERER'	ANTHONY WATERER SPIREA	16-24" HT.	#3 CAN
VCAC	145	VIBURNUM CARLESI 'COMPACTUM'	COMPACT KOREANSPICE VIBURNUM	24-30" HT.	B+B
SUBTOTAL	399				
EVERGREEN SHRUBS					
IGC	32	ILEX ALABRA 'COMPACTA'	DIWAR INKBERY HOLLY	24-30" HT.	#3 CAN
JDP	21	JUNIPERUS DAURICARIA 'PARSONS'	PARSONS JUNIPER	30" SPRED.	#3 CAN
PXOL	37	PRUNUS LAUROCEARASIS 'OTTO LUXEM'	OTTO LUXEM CHERRY LAUREL	24-30"	#3 CAN
SUBTOTAL	90				
PERENNIALS					
EP	400	EDIMUNDA PURPUREA	PURPLE CORNFLOWER	2 GAL.	CONTAINER
HRR	3206	HIBISCUS SYRIACUS 'HAPPY RETURN'	HAPPY RETURN DAYLILY	2 GAL.	CONTAINER
JE	480	JANUS EUPHORBIA	COMMON RUSH	1 QT.	PERENNIALS
LM	1548	LIRIODENAZIUM 'BIG BLUE'	BIG BLUE LILYTURF	1 PT.	CONTAINER
NFD	1380	NEPETA X FASSISSI 'DROPPMORE'	DROPPMORE CAT MINT	2 GAL.	CONTAINER
SUBTOTAL	8902				

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	243 (INCLUDING 12 ADA SPACES)
NUMBER OF TREES REQUIRED: (1 / 10 SPACES)	NUMBER OF TREES REQUIRED: 25
NUMBER OF PLANTS PROVIDED: SHADE TREES	NUMBER OF PLANTS PROVIDED: 25
NUMBER OF LANDSCAPE ISLANDS REQUIRED: (1 / 10 SPACES)	NUMBER OF LANDSCAPE ISLANDS PROVIDED: 25 REQUIRED 25 PROVIDED

BOHLER ENGINEERING

SITE CIVIL AND CONSULTING ENGINEERING
 LAND SURVEYING PROGRAM MANAGEMENT LANDSCAPE ARCHITECTURE
 SUSTAINABLE DESIGN PERMITTING SERVICES TRANSPORTATION SERVICES

OFFICES:
 • BALTIMORE, MD
 • CHARLOTTE, NC
 • CHICAGO, IL
 • COLUMBIA, SC
 • DALLAS, TX
 • DENVER, CO
 • FORT WORTH, TX
 • HOUSTON, TX
 • KANSAS CITY, MO
 • MEMPHIS, TN
 • NEW YORK, NY
 • PHOENIX, AZ
 • PITTSBURGH, PA
 • RICHMOND, VA
 • RIVERSIDE, CA
 • TAMPA, FL
 • WASHINGTON, DC

REVISIONS

REV	DATE	COMMENT	BY
1	08/12/18	PER AGENCY COMMENTS	JCW
2	10/12/18	PER AGENCY COMMENTS	JWC
3	01/14/19	PER AGENCY COMMENTS	JWC
4	2/27/19	COMPLIANCE CHART CORRECTED	JWC
5	3/13/19	SCHEDULE 'A' & SURETY NOTE ADJUSTMENT	JWC

KNOW WHAT'S BELOW BEFORE YOU DIG

It's fast. It's free. It's law.

PROJECT NO.: MDL173001
 DRAWN BY: JCW
 CHECKED BY: ERM
 DATE: 2/23/18
 SCALE: 1" = 30'
 CAD I.D.: LPS

SITE PLAN

FOR **RIVER HILL SQUARE**

LOCATION OF SITE
 CLARKSVILLE PIKE
 HOWARD COUNTY
 MARYLAND

BOHLER ENGINEERING

22638 DAVIS DRIVE, SUITE 250
 STERLING, VIRGINIA 20164
 Phone: (703) 709-9500
 Fax: (703) 709-9501
 VA@BohlerEng.com

E.R. MANNING LANDSCAPE ARCHITECTS

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT
 UNDER THE LAWS OF THE STATE OF MARYLAND,
 LICENSE NO. 3897 (EXPIRATION DATE: 9/30/20)

LANDSCAPE PLAN

SHEET NUMBER: **17** of 25

SDP-18-044

LANDSCAPE SPECIFICATIONS

1. SCOPE OF WORK:
THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.

2. MATERIALS
A. GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.
B. TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL, HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0, IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE (1) INCH, WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLOUDS.

C. LAWN - ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM SIX INCH (6") THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED WITHIN THE SOIL EROSION AND SEDIMENT CONTROL NOTES.
1.1 LAWN SEED MIXTURE SHALL BE FRESHLY CLEAN NEEDLE DROP SEED.
1.2 SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS.
1.3 SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.

D. MULCH - THE MULCH AROUND THE PERIMETER OF THE BUILDING SHALL BE A 3" LAYER OF DOUBLE SHREDDED BLACK CEDAR MULCH ONLY. ALL OTHER AREAS SHALL BE MULCHED WITH A 3" LAYER OF DOUBLE SHREDDED DARK BROWN HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN.

E. FERTILIZER
1.1 FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
1.2 FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY.

F. PLANT MATERIAL
1.1 ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
1.2 IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
1.3 PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
1.4 TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1/2", WHICH HAVE NOT BEEN COMPLETELY CALLED, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
1.5 ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH WITH WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
1.6 CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
1.7 SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
1.8 TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.

G. GENERAL WORK PROCEDURES
A. CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.
B. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.
C. SITE PREPARATIONS
A. BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.
B. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE TRUNK. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDERS OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.
C. CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.
D. TREE PROTECTION
A. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR 15 FEET FROM THE TRUNK OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.
B. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY "VIS-FREE", OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.
C. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.
D. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.

H. SOIL MODIFICATIONS
A. CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.
B. LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS.
C. THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY.
1.1 TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PLANTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MIXING WITH A PH HIGHER THAN 7.5.
1.2 TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 80% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY BE ADDED TO INCREASE DRAINAGE.
1.3 MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

I. FINISHED GRADING
A. UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.
B. LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1"±).
C. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.
D. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED ON PLANTING BEDS.

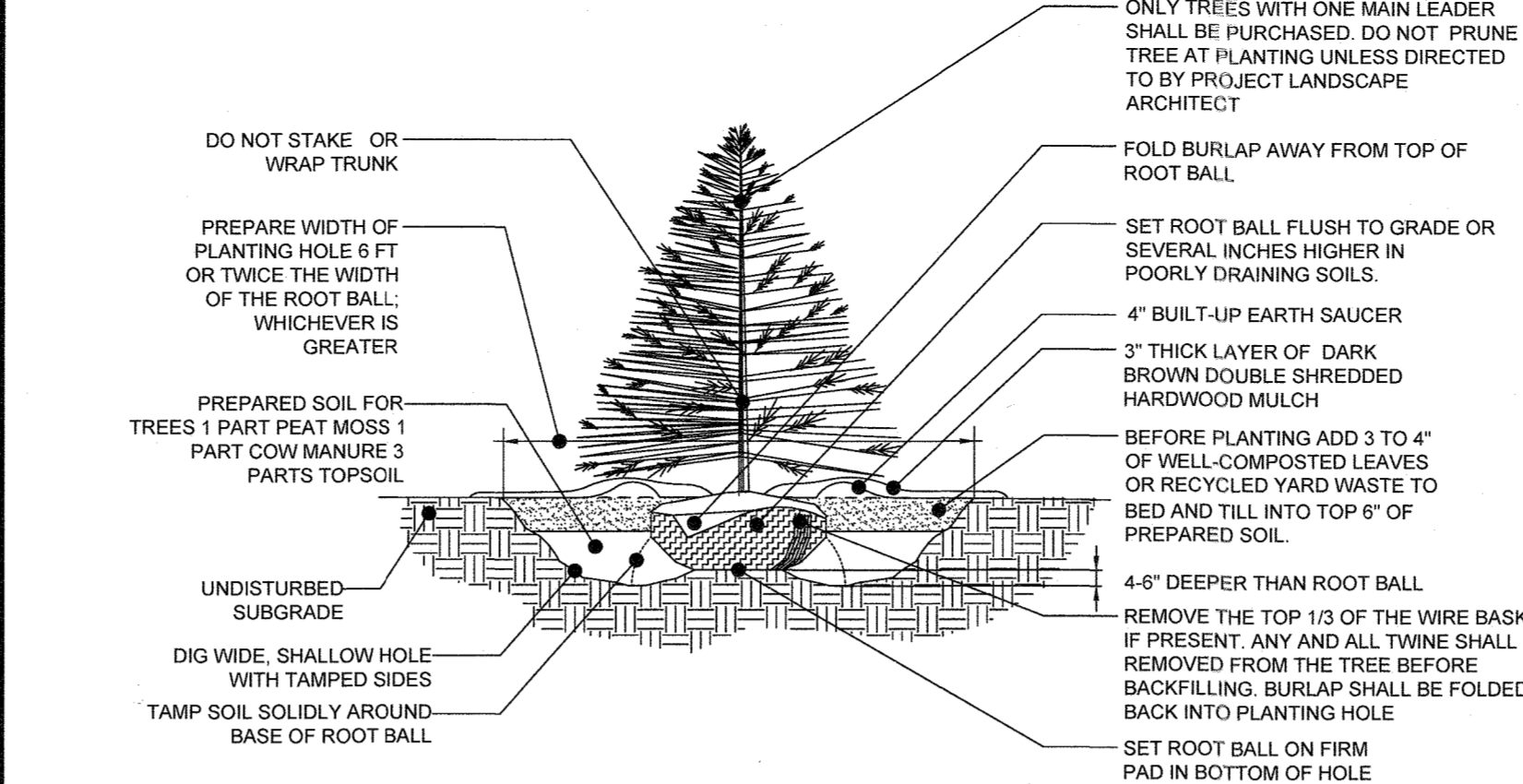
J. TOPSOILING
A. CONTRACTOR SHALL PROVIDE A SIX INCH (6") THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.
B. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.
C. CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.
D. ALL PLANTING AND LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA):
1.1 20 POUNDS "GROW POWER" OR APPROVED EQUAL.
1.2 20 POUNDS NITRO-FORM (COURSE) 39-0-0 BLUE CHIP.
E. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.

3. PLANTING
A. INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.
B. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.
C. ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN CUT ENDS PRIOR TO PLANTING. UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.
D. ALL PLANTING CONTAINERS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING.
E. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.
F. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN, MUST BE INSTALLED, INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:
1.1 PLANTS: MARCH 15 TO DECEMBER 15
1.2 LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1
G. PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.
H. FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE USUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:
ACER RUBRUM PLATANUS X ACERIFOLIA
BETULA VARIETIES POPULUS VARIETIES
CARPINUS VARIETIES PRUNUS VARIETIES
CRATAEGUS VARIETIES PYRUS VARIETIES
KOELREUTERIA QUERCUS VARIETIES
LIQUIDAMBER TYRACIFLUA TILIA TOMENTOSA
LIRIODENDRON TULIPIFERA ZELKOVA VARIETIES

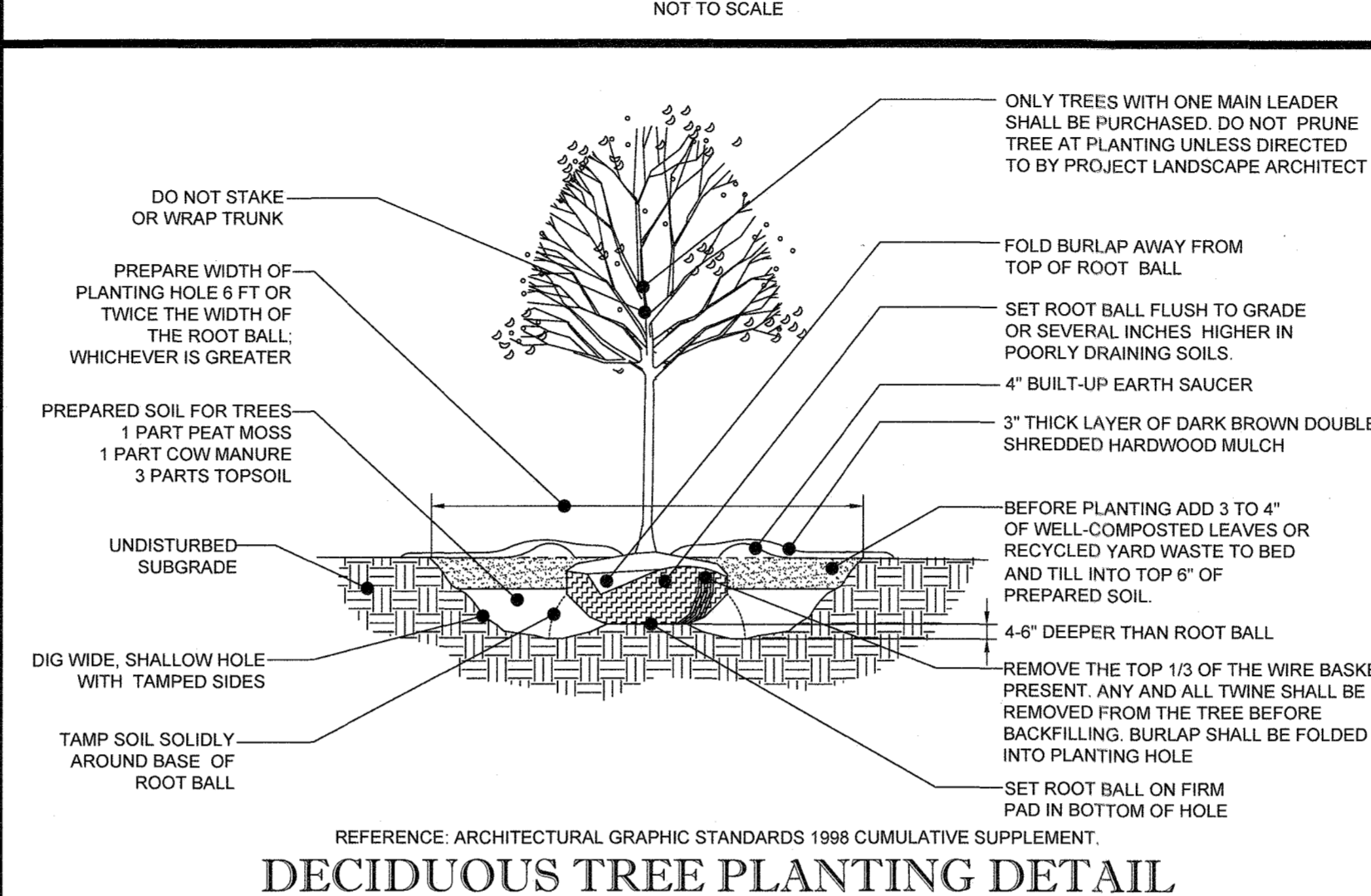
I. PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
• 1 PART PEAT MOSS
• 1 PART COMPOSTED COW MANURE BY VOLUME
• 3 PARTS TOPSOIL BY VOLUME
• 21 GRAMS AGRIFORM PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
A) 2 TABLETS PER 1 GALLON PLANT
B) 3 TABLETS PER 1 GALLON PLANT
C) 4 TABLETS PER 15 GALLON PLANT
D) LARGER PLANTS: 2 TABLETS PER 1/2" CALIPER OF TRUNK
J. FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.
K. ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.
L. ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE.
M. GROUND COVER AREAS SHALL RECEIVE A 1/2" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.
N. NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.
O. ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.
P. ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.

4. TRANSPLANTING (WHEN REQUIRED)
A. ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT.
B. IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.
C. PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30.
D. UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.
E. TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.
F. IF TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.
5. WATERING
A. NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.
B. SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.
C. IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.
6. GUARANTEE
A. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.
B. ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION.
C. TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.
D. LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.
7. CLEANUP
A. UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.
B. THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

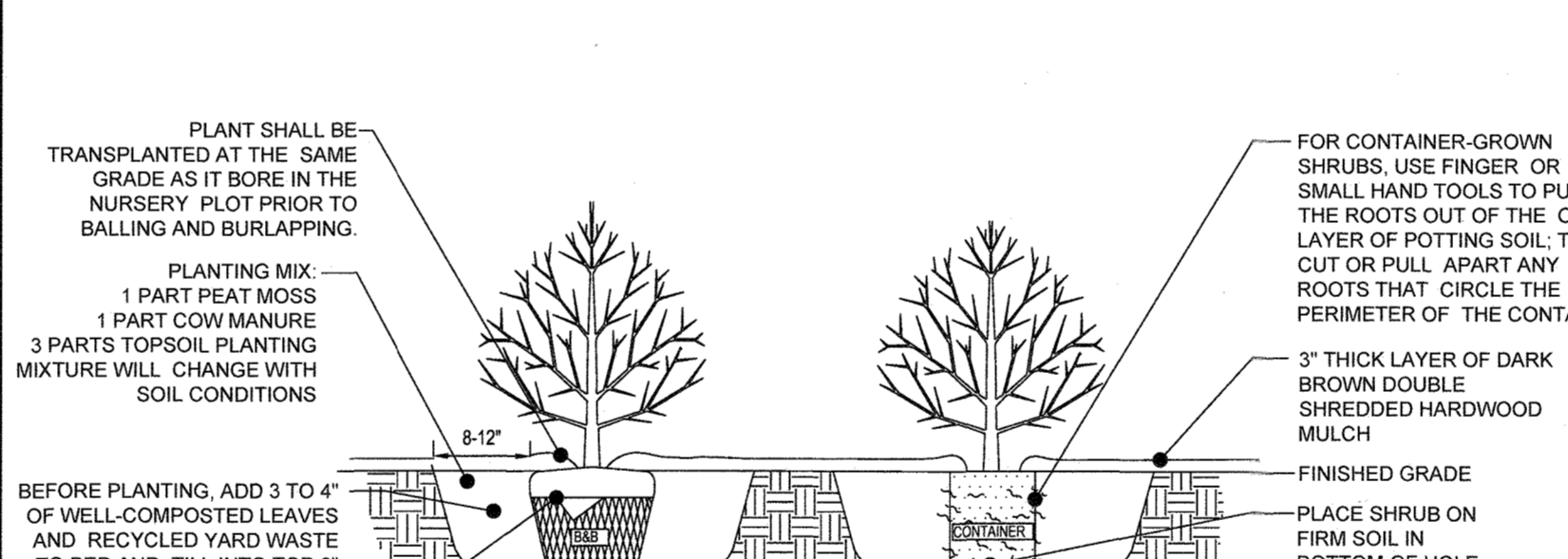
8. SEEDING SPECIFICATIONS
1. PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 2" DIAMETER.
2. PRIOR TO SEEDING, CONSULT MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
3. SEEDING RATES:
PERENNIAL RYEGRASS 1/2 LBS/1,000 SQ FT
KENTUCKY BLUEGRASS 1 LBS/1,000 SQ FT
RED FESCUE 1 1/2 LBS/1,000 SQ FT
SPREADING FESCUE 1 1/2 LBS/1,000 SQ FT
FERTILIZER (20:10:10) 14 LBS/1,000 SQ FT
MULCH 90 LBS/1,000 SQ FT
4. GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED BY OWNER.



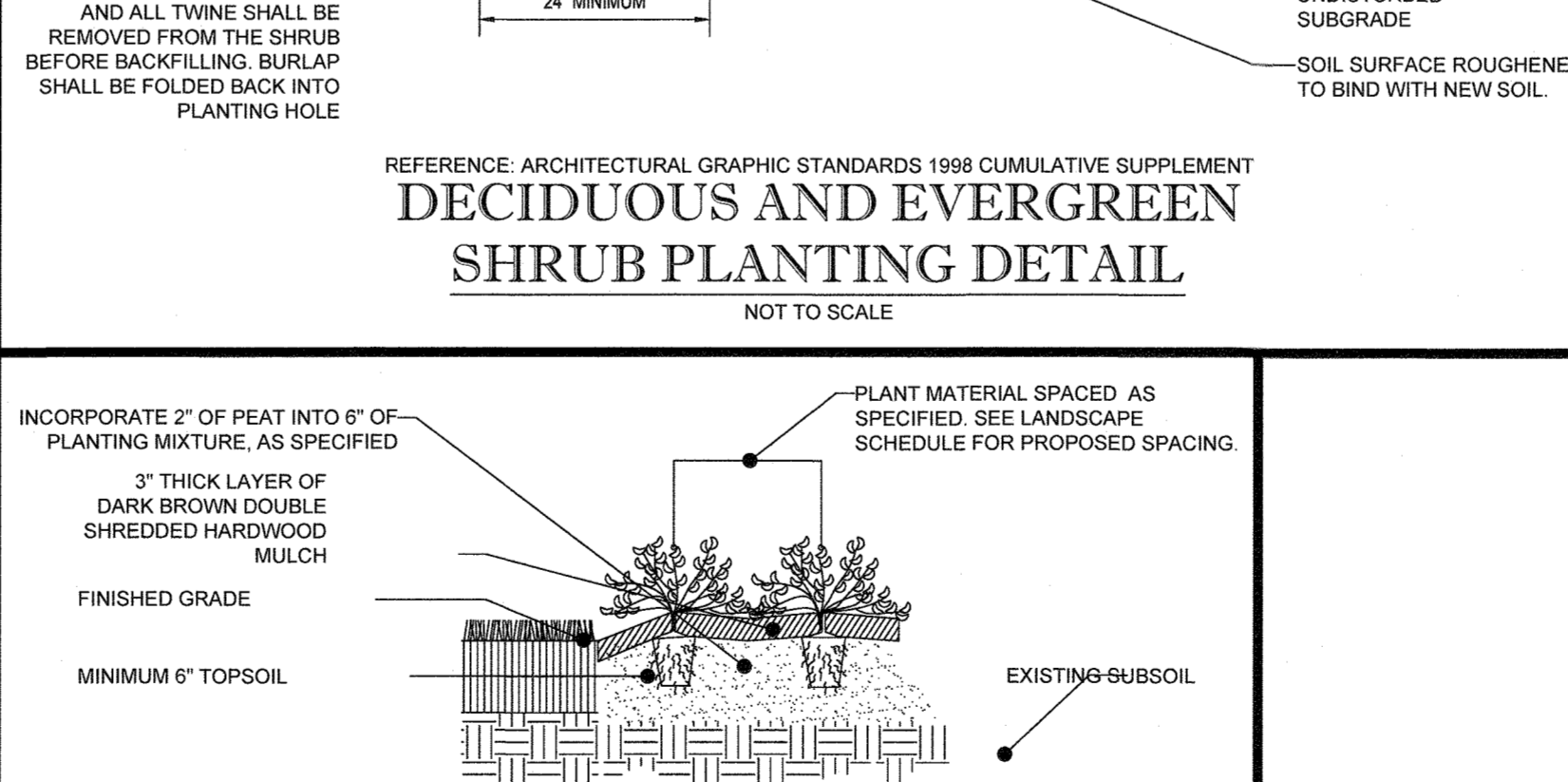
EVERGREEN TREE PLANTING DETAIL



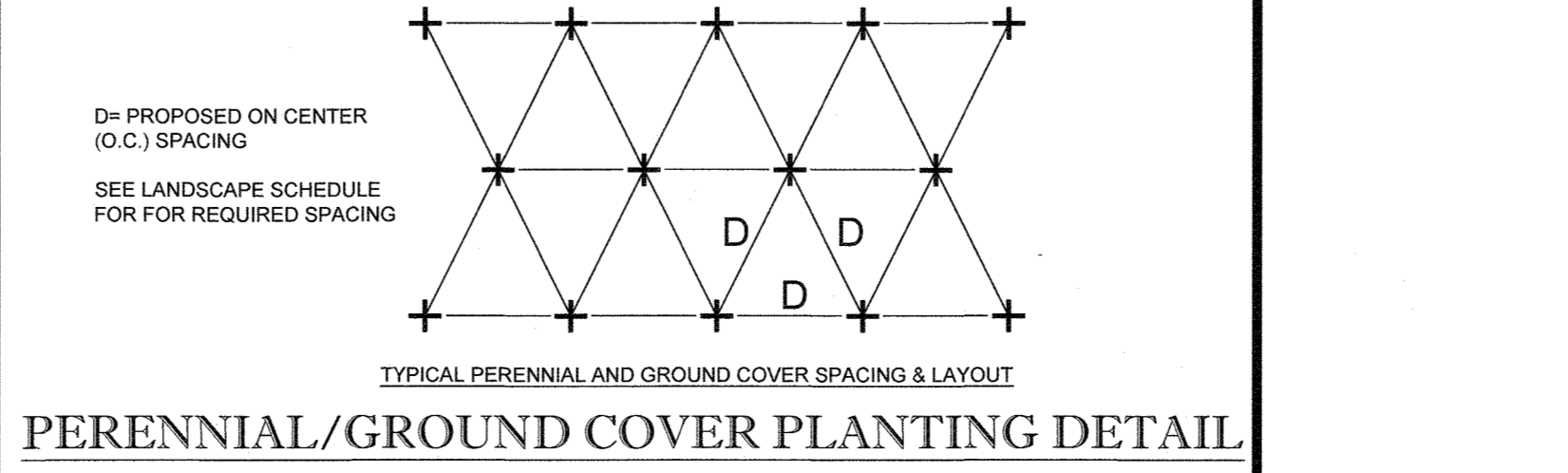
DECIDUOUS TREE PLANTING DETAIL



DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL

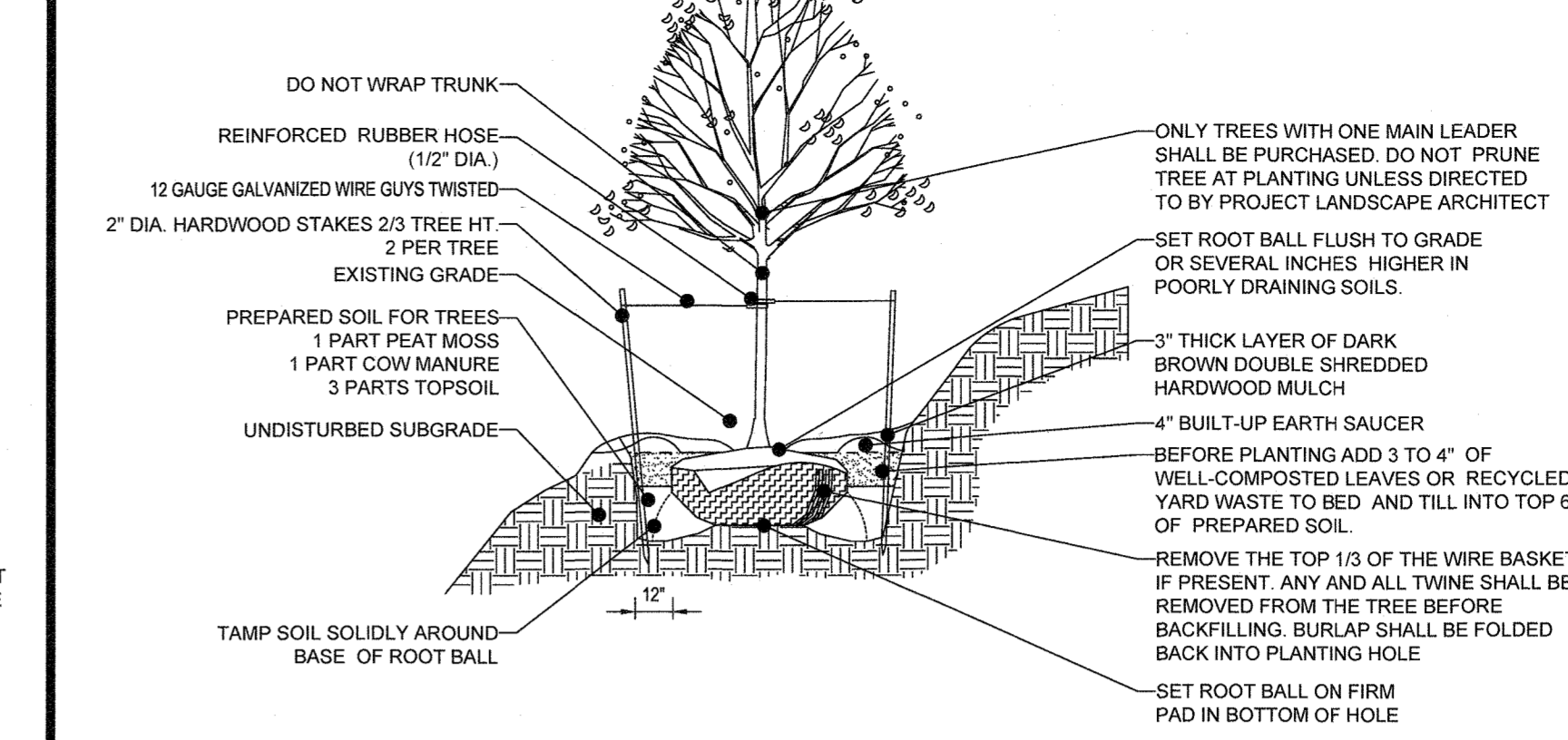


TYPICAL PERENNIAL AND GROUND COVER SPACING & LAYOUT



PERENNIAL/GROUND COVER PLANTING DETAIL

NOTE: TREE STAKING TO BE REMOVED AFTER 2 GROWING SEASONS



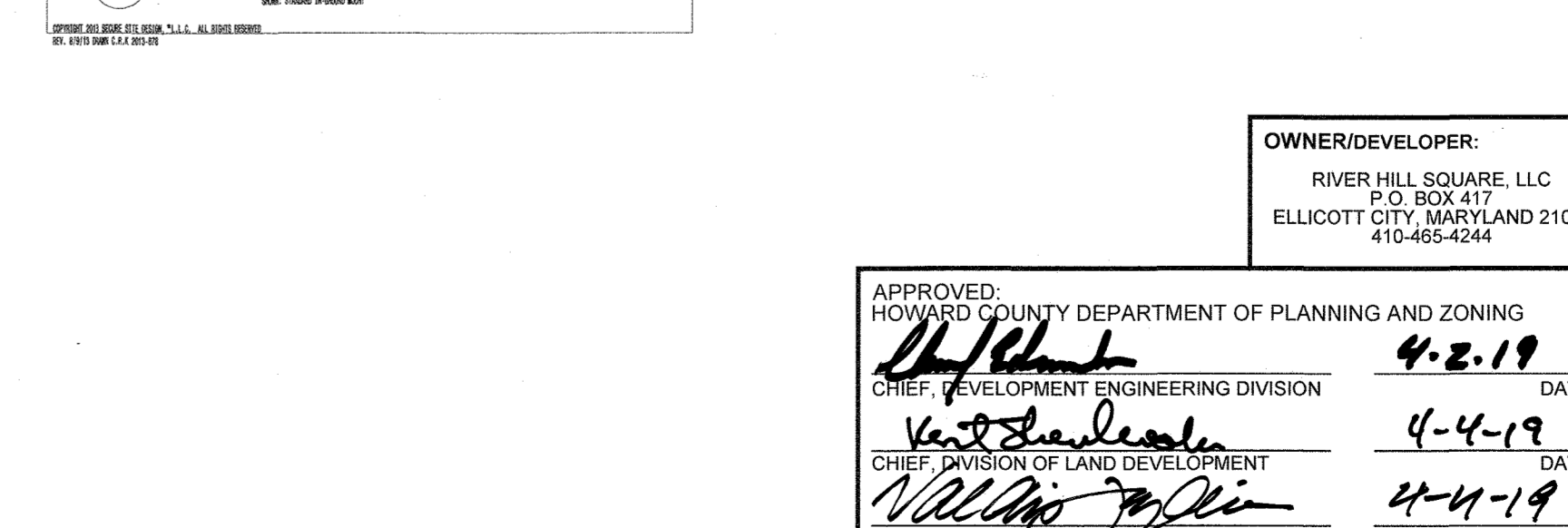
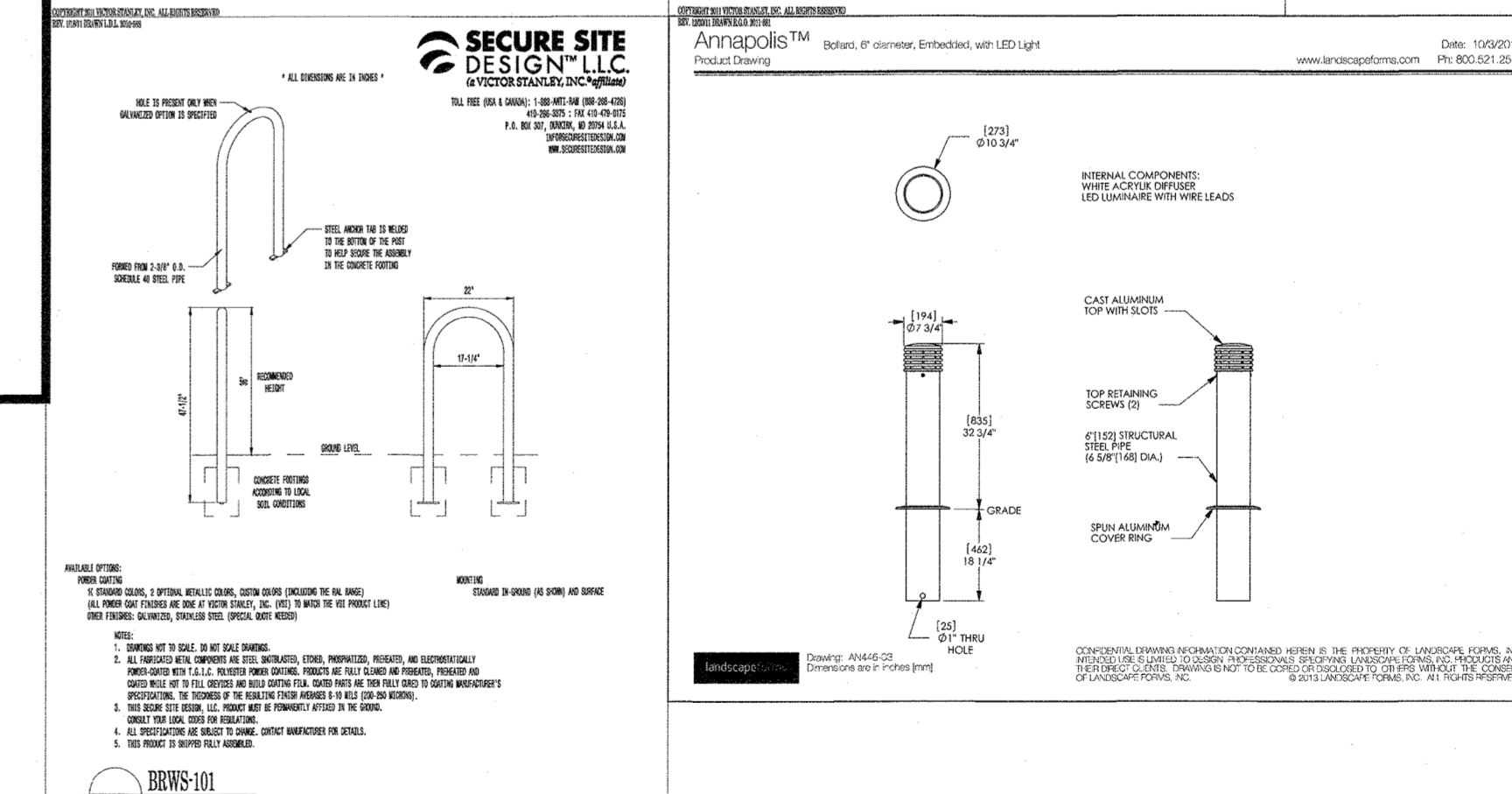
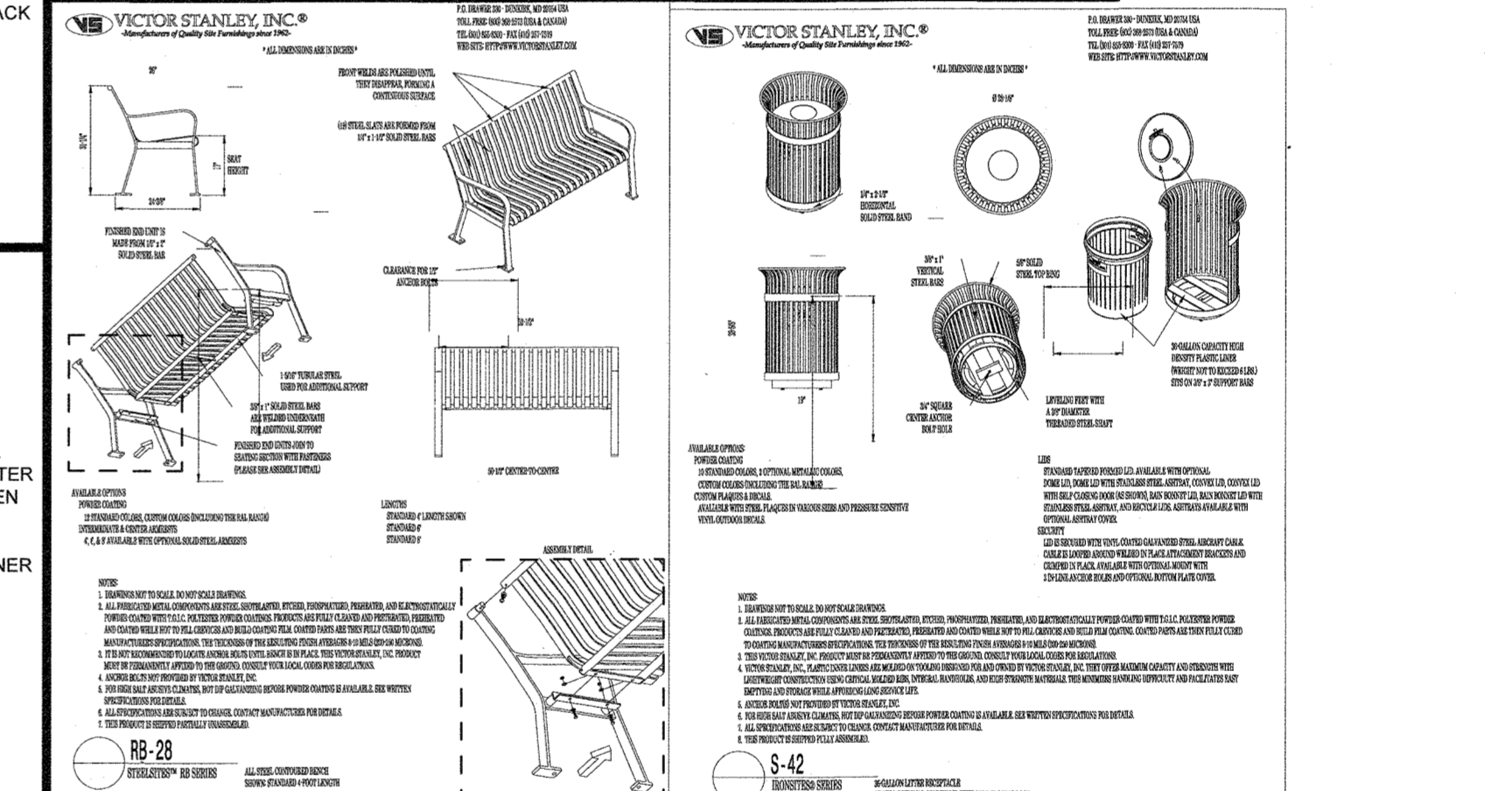
TREE PLANTING ON SLOPE DETAIL

OWNER MAINTENANCE RESPONSIBILITIES

UPON OWNER'S (OR OWNER CONTRACTOR'S) COMPLETION OF LANDSCAPING WORK, THE OWNER IS FULLY RESPONSIBLE FOR ALL FUTURE MAINTENANCE, CARE, UPKEEP, WATERING, AND TRIMMING OF ALL INSTALLED VEGETATION, PLANTS, TREES, BUSHES, SHRUBS, GRASSES, GRASS, ORNAMENTAL PLANTS AND FLOWERS, FLOWERS, GROUND COVER, AND LANDSCAPING, INCLUDING ALL LANDSCAPE ISLANDS AND AREAS ADJACENT OR PART OF THE LANDSCAPED AREAS. THIS RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

- TREES ADJACENT TO WALKWAYS AND AREAS OF PEDESTRIAN TRAFFIC MUST BE MAINTAINED TO ASSURE THAT ANY BRANCHES MUST BE LIMBED UP TO A CLEARANCE HEIGHT OF 7 FT. (FROM ALL PAVED, TRAVELED SURFACES), OR AS OTHERWISE INDICATED ON THE PLANS.
- VEGETATIVE GROUND COVER, SHRUBS AND ORNAMENTAL PLANTS AND GRASSES MUST BE TRIMMED SO THAT NO PORTION OF THE PLANT EXCEEDS 30 INCHES ABOVE GRADE (OF ALL PAVED, TRAVEL SURFACES) ALONG AND WITHIN THE SIGHT LINES OF PARKING LOTS AND INGRESS-EGRESS WAYS.
- FALLEN PLANT FLOWERS, FRUIT, SEEDS AND DEBRIS DROPPINGS ARE TO BE REMOVED IMMEDIATELY FROM VEHICULAR AND PEDESTRIAN TRAFFIC AREAS TO PREVENT TRIPPING, SLIPPING OR ANY OTHER HAZARDS.

THESE REQUIREMENTS DO NOT AFFECT THE PLANT LIFE GUARANTEES THE LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE.



ANNAPOLES 360

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• MEMPHIS, TN • NEW YORK, NY
• PHOENIX, AZ • RICHMOND, VA
• TAMPA, FL • WASHINGTON, DC

REVISIONS

REV	DATE	COMMENT	BY
1	06/12/18	PER AGENCY COMMENTS	JCW
2	10/12/18	PER AGENCY COMMENTS	JWC
3	01/14/19	PER AGENCY COMMENTS	JWC
4	2/27/19	COMPLIANCE CHART CORRECTED	JWC

KNOW WHAT'S BELOW
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BEFORE YOU DIG
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PROJECT No. MDL17300
DRAWN BY: JCW
CHECKED BY: ERM
DATE: 2/23/18
SCALE: 1" = 30'
CAD I.D.: LPS

SITE PLAN FOR RIVER HILL SQUARE
LOCATION OF SITE
CLARKSVILLE PIKE
HOWARD COUNTY
MARYLAND

BOHLER ENGINEERING
22638 DAVIS DRIVE, SUITE 250
STERLING, VIRGINIA 20164
Phone: (703) 709-9500
Fax: (703) 709-9501
VA@BohlerEng.com

E.R. McWILLIAMS
REGISTERED PROFESSIONAL ARCHITECT
ERIC P. McWILLIAMS ARCHITECT
UNDER THE LAWS OF THE STATE OF MARYLAND,
LICENSE NO. 3667, EXPIRATION DATE: 06/20/20

SHEET TITLE: LANDSCAPE PLAN
SHEET NUMBER: 18 of 25
SDP-18-044

H:\MCD\17300\ORANGEFLAN GETSMC\17300\PLANS.DWG PRINTED BY: JCAMPBELL 1:26:16 @ 8:51 AM LAST SAVED BY: JCAMPBELL

SERVILLE LLC
 MAP 34 GRID 6 PARCEL 185
 TAX ID: 347335
 LIBER 11119 FOLIO 401
 ACREAGE: 36.95 AC

LIBER ONE VOLUME 177
 MAP 28 GRID 24 PARCEL 100
 TAX ID: 371007
 LIBER 12840 FOLIO 388

MARYLAND ROUTE 108
 (CLARKSVILLE PIKE)
 MINOR ARTERIAL ULTIMATE
 80' RIGHT-OF-WAY



BOHLER ENGINEERING

1101 SOUTH WASHINGTON AVENUE, SUITE 200, CHARLOTTE, NC 28202
 (703) 799-9500
 FAX: (703) 799-9501
 VA@BohlerEng.com

LAND SURVEYING, CIVIL ENGINEERING, ARCHITECTURE, INTERIOR DESIGN, PROGRAM MANAGEMENT, TRANSPORTATION SERVICES, PERMITTING SERVICES, SUSTAINABLE DESIGN, LANDSCAPE ARCHITECTURE

CHARLOTTE, NC
 BALTIMORE, MD
 CHARLOTTE, NC
 CHICAGO, IL
 COLUMBIA, SC
 DALLAS, TX
 DENVER, CO
 HOUSTON, TX
 LOS ANGELES, CA
 MEMPHIS, TN
 NEW YORK, NY
 PITTSBURGH, PA
 RICHMOND, VA
 SOUTH BEND, IN
 TAMPA, FL
 WASHINGTON, DC

REVISIONS

REV	DATE	COMMENT	BY
1	06/12/18	PER AGENCY COMMENTS	JCW
2	10/12/18	PER AGENCY COMMENTS	JWC
3	01/14/19	PER AGENCY COMMENTS	JWC
4	2/27/19	COMPLIANCE CHART CORRECTED	JWC

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PROJECT NO: MDL173001
 DRAWN BY: JCW
 CHECKED BY: ERM
 DATE: 2/23/18
 SCALE: 1" = 30'
 CAD ID: LPS

SITE PLAN

FOR
RIVER HILL SQUARE

LOCATION OF SITE
 CLARKSVILLE PIKE
 HOWARD COUNTY
 MARYLAND

BOHLER ENGINEERING

22636 DAVIS DRIVE, SUITE 250
 STERLING, VIRGINIA 20164
 Phone: (703) 799-9500
 Fax: (703) 799-9501
 VA@BohlerEng.com

E.R. McWILLIAMS

REGISTERED PROFESSIONAL ARCHITECT
 LICENSE NO. 9553 EXPIRATION DATE: 9/20/20

OWNER/DEVELOPER:
 RIVER HILL SQUARE, LLC
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 410-465-4244

APPROVED:
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

K. S. [Signature] 4-2-19 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 4-4-19 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 4-4-19 DATE
 DIRECTOR

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LF	Description
1	1	EP-S-48-300-W-02-4-H	SHGL	0.900	0.900	EP-S-48-300-W-02-4-HS
2	16	SL760-FP-BL4275-W-03	SHGL	0.800	12.800	SL760-FP-BL4275-W-03
3	4	WAL-EP-S-48-300-W-02-4	SHGL	0.900	3.600	WAL-EP-S-48-300-W-02-4
4	12	EP-S-30-1A-W-02-4-HS	SHGL	0.900	10.800	EP-S-30-1A-W-02-4-HS
5	2	EP-S-30-1A-W-02-4	SHGL	0.900	1.800	EP-S-30-1A-W-02-4

Calculation Summary

Category	Units	Avg	Min	Max	Foot/Cft	Min/Max
Eastern Property Line	Luminaire	0.50	0.50	0.50	N/A	N/A
Northern Property Line	Luminaire	0.18	0.28	0.29	N/A	N/A
Northern Property Row_1	Luminaire	1.79	13.4	0.0	N/A	N/A
Northern Property Line	Luminaire	0.20	0.29	0.29	N/A	N/A
Parking Lot Area_1	Luminaire	2.94	8.0	0.5	5.28	18.00
Central Lot Area_1	Luminaire	2.11	10.0	0.3	23.15	118.00
Ratio: Drive	Luminaire	2.03	7.1	0.5	4.05	14.80

SHEET TITLE:
LIGHTING PLAN

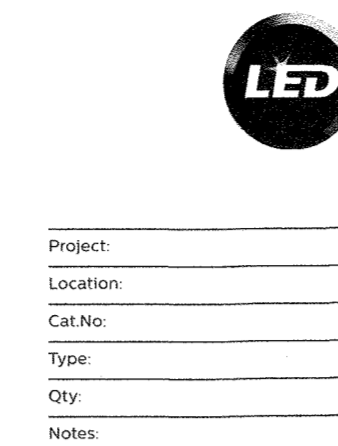
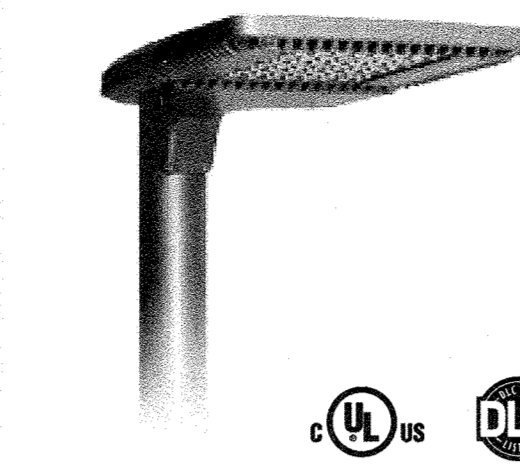
SHEET NUMBER:
19
 of 25

SDP-18-044

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GENERAL LIGHTING NOTES

- THIS PLAN IS TO BE UTILIZED FOR LIGHTING PURPOSES ONLY. REFER TO ELECTRICAL ENGINEERING PLANS FOR CIRCUITRY DESIGN AND SPECIFICATIONS.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE PROJECT ENGINEER (BOHLER) FOR REVIEW AND APPROVAL. SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE FIXTURE(S) IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN. SUBSTITUTION REQUESTS WITHOUT A PHOTOMETRIC STUDY WILL BE REJECTED.
- THIS LIGHTING PLAN DEPICTS PROPOSED SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER(S). ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
- THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ALL ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT ELEVATION ZERO (GROUND LEVEL) UNLESS OTHERWISE NOTED. THE VALUES DEPICTED ON THIS PLAN ARE IN FOOT-CANDELES.
- THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT NOT BE LIMITED TO, FREQUENT VISUAL INSPECTIONS, CLEANING OF LENSES, AND RELAMPING ACCORDING TO MANUFACTURER RECOMMENDATIONS. FAILURE TO FOLLOW THE ABOVE STEPS COULD CAUSE THE LUMINAIRES TO FUNCTION IMPROPERLY.
- THIS LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES, ONLY. POWER SYSTEM, CONDUITS, WIRING, VOLTAGES AND OTHER ELECTRICAL COMPONENTS ARE THE RESPONSIBILITY OF THE ARCHITECT, MEP AND/OR LIGHTING CONTRACTOR, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR INSTALLING LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES AND ALL OTHER APPLICABLE RULES, REGULATIONS, LAWS AND STATUTES.
- CONTRACTOR MUST BRING TO THE DESIGNER'S ATTENTION, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURES.
- THE LIGHTING CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE SITE PLAN, INCLUDING BUT NOT LIMITED TO, GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL GOVERNMENTAL RULES, LAWS, ORDINANCES, REGULATIONS AND THE LIKE.
- UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.



The Philips Gardco EcoForm Gen-2 combines economy with performance in a LED area luminaire. Capable of delivering up to 26,400 lumens or more in a compact, low profile LED luminaire, EcoForm offers a new level of customer value. EcoForm features an innovative retrofit arm kit, simplifying site conversion to LED by eliminating the need to drill additional holes in most existing poles. Integral control systems available for further energy savings.

Ordering guide

Prefix	Number of LEDs	Driver	Color Generation	Mounting	Distribution	Voltage	Options	Ordering	Motor setting	Photo-sensing	Electrical	Luminaire	Finish
ECF-S	52L	530	WW-G2	AR	Type 2	120	DO 0-10V External dimmer by photo/RF	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
	52LS	530S	WW-G2	AR	Type 2	120	BCC 0-10V External dimmer by photo/RF	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
	52L	530	WW-G2	AR	Type 2	120	BCC Dual Circuit Control	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
	52L	530	WW-G2	AR	Type 2	120	FMS Field Adjustable	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
	52L	530	WW-G2	AR	Type 2	120	SW Intexia module for Shiftrite®	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
	52L	530	WW-G2	AR	Type 2	120	SW Intexia module with #3 lens	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
	52L	530	WW-G2	AR	Type 2	120	LCC2 Intexia module with #3 lens	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
	52L	530	WW-G2	AR	Type 2	120	LCC2 Intexia module with #4 lens	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
	52L	530	WW-G2	AR	Type 2	120	LCC2 Intexia module with #4 lens	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
	52L	530	WW-G2	AR	Type 2	120	LCC2 Intexia module with #4 lens	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
	52L	530	WW-G2	AR	Type 2	120	LCC2 Intexia module with #4 lens	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
	52L	530	WW-G2	AR	Type 2	120	LCC2 Intexia module with #4 lens	MR82	Integ w/	FCB	Rating	Square Pole Adapter	Tinted
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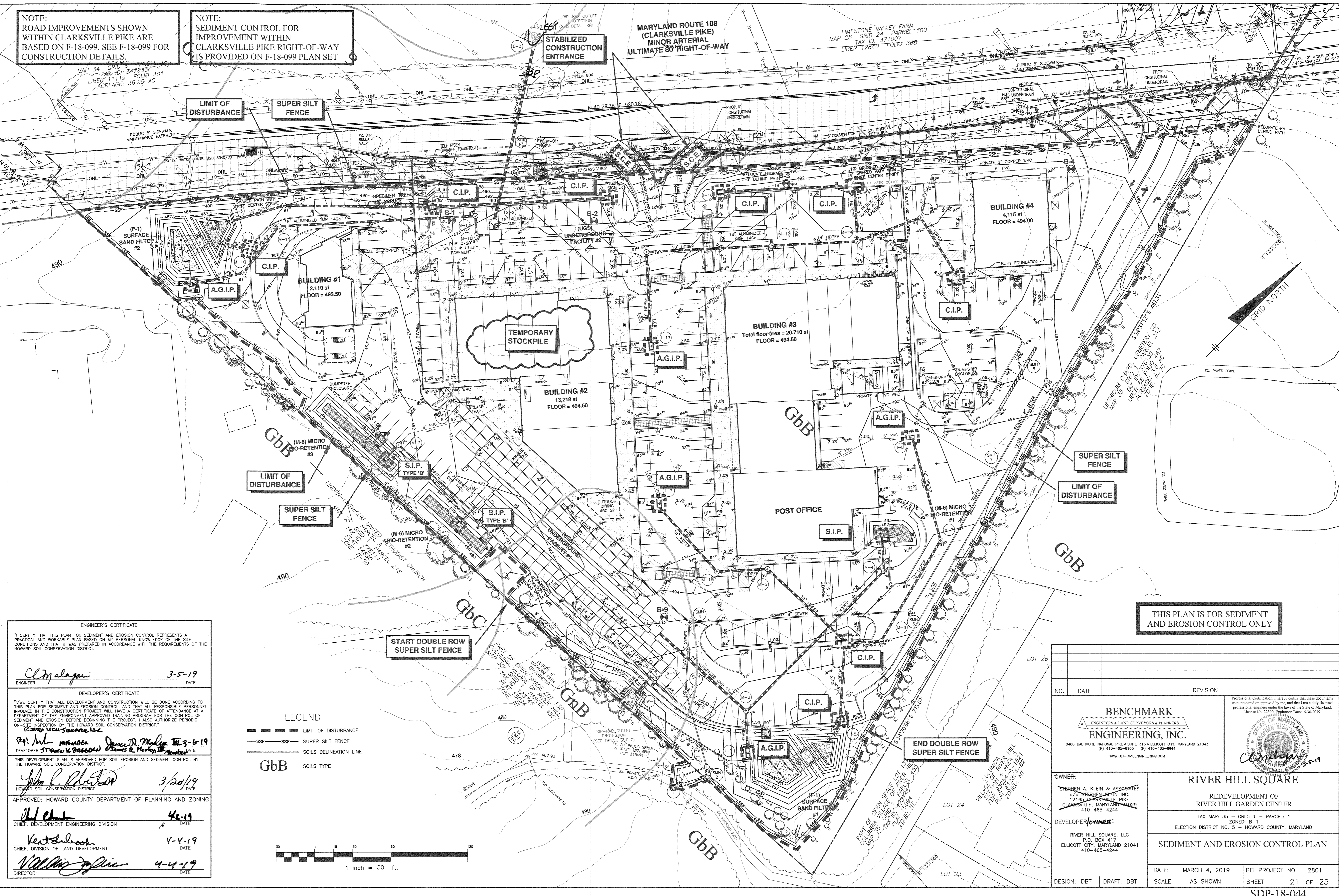
NOTE:
ROAD IMPROVEMENTS SHOWN
WITHIN CLARKSVILLE PIKE ARE
BASED ON F-18-099. SEE F-18-099 FOR
CONSTRUCTION DETAILS.

NOTE:
SEDIMENT CONTROL FOR
IMPROVEMENT WITHIN
CLARKSVILLE PIKE RIGHT-OF-WAY
IS PROVIDED ON F-18-099 PLAN SET

STABILIZED
CONSTRUCTION
ENTRANCE

MARYLAND ROUTE 108
(CLARKSVILLE PIKE)
MINOR ARTERIAL
ULTIMATE 80' RIGHT-OF-WAY

LIMESTONE VALLEY FARM
MAP 28 GRID 24 PARCEL 100
TAX ID: 371007
LIBER 12840 FOLIO 368



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

Cl Malagon 3-5-19
ENGINEER DATE

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

James K. Basson 3-6-19
DEVELOPER DATE

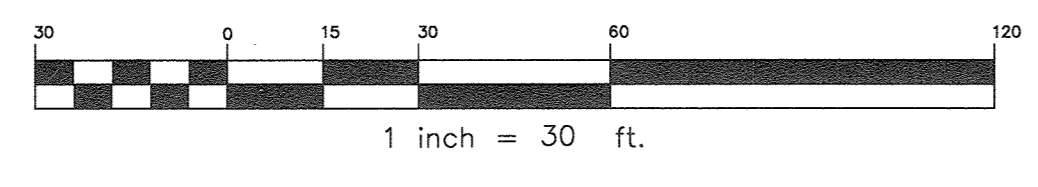
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
John R. Robertson 3/20/19
HOWARD SOIL CONSERVATION DISTRICT DATE

John C. Hester 4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kent Schulbach 4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. J. J. 4-4-19
DIRECTOR DATE

LEGEND
--- LOD --- LIMIT OF DISTURBANCE
--- SSF --- SUPER SILT FENCE
--- S.D.L. --- SOILS DELINEATION LINE
GbB SOILS TYPE



THIS PLAN IS FOR SEDIMENT
AND EROSION CONTROL ONLY

NO.	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6444
WWW.BEI-CIVILENGINEERING.COM

OWNER:
STEVEN A. KLEIN & ASSOCIATES
C/O SHERIDAN HECHT INC.
12165 CLARKSVILLE PIKE
CLARKSVILLE, MARYLAND 21029
410-465-4244

DEVELOPER/OWNER:
RIVER HILL SQUARE, LLC
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21041
410-465-4244

RIVER HILL SQUARE
REDEVELOPMENT OF
RIVER HILL GARDEN CENTER
TAX MAP: 35 - GRID: 1 - PARCEL: 1
ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND
SEDIMENT AND EROSION CONTROL PLAN

DATE: MARCH 4, 2019 BEI PROJECT NO. 2801
SCALE: AS SHOWN SHEET 21 OF 25
DESIGN: DBT DRAFT: DBT

HOWARD SOIL CONSERVATION DISTRICT (HSCD) SEDIMENT CONTROL NOTES

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Using vegetation as cover to protect exposed soil from erosion. Purpose: To promote the establishment of vegetation on exposed soil. Conditions Where Practice Applies: On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization, soil preparation, soil amendments and topsoiling, seeding and mulching, temporary stabilization, and permanent stabilization.

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

The process of preparing the soils to sustain adequate vegetative stabilization. Purpose: To provide a suitable soil medium for vegetative growth. Conditions Where Practice Applies: Where vegetative stabilization is to be established. Criteria: A. Soil Preparation 1. Temporary Stabilization a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of... b. Topsoiling is limited to areas having 2:1 or flatter slopes where...

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

The application of seed and mulch to establish vegetative cover. Purpose: To protect disturbed soils from erosion during and at the end of construction. Conditions Where Practice Applies: To the surface of all perimeter contours, slopes, and any disturbed area not under active grading. Criteria: A. Seeding 1. Specifications a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

To stabilize disturbed soils with permanent vegetation. Purpose: To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils. Exposed soils where ground cover is needed for 6 months or more. Criteria: 1. General Use a. Seed Mixtures 1. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan. 2. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

To stabilize disturbed soils with vegetation for up to 6 months. Purpose: To use fast growing vegetation that provides cover on disturbed soils. Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required. Criteria: 1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan. 2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding. 3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3-A.1.b and maintain until the next seeding season.

B-4-8 STANDARDS AND SPECIFICATIONS STOCKPILE AREA

A mound or pile of soil protected by appropriately designed erosion and sediment control measures. Purpose: To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns. Conditions Where Practice Applies: Stockpile areas are utilized when it is necessary to salvage and store soil for later use. Criteria: 1. The stockpile location and all related sediment control practices must be clearly indicated on the approved and accepted control plan. 2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3-L Gradation side. 3. Runoff from the stockpile area must drain to a suitable sediment control practice. 4. Access the stockpile area from the up-grad side. 5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner. 6. Where runoff concentrates along the toe of the stockpile, an appropriate erosion/sediment control practice must be used to intercept the discharge. 7. Stockpiles must be stabilized in accordance with the 37 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4.4 Temporary Stabilization. 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

1. The stockpile location and all related sediment control practices must be clearly indicated on the approved and accepted control plan. 2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3-L Gradation side. 3. Runoff from the stockpile area must drain to a suitable sediment control practice. 4. Access the stockpile area from the up-grad side. 5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner. 6. Where runoff concentrates along the toe of the stockpile, an appropriate erosion/sediment control practice must be used to intercept the discharge. 7. Stockpiles must be stabilized in accordance with the 37 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4.4 Temporary Stabilization. 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

H-5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

Controlling the suspension of dust particles from construction activities. Purpose: To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards. Conditions Where Practice Applies: Areas subject to dust blowing and movement where on and off-site damage is likely without treatment. Specifications: 1. Mulches: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4-3 Seeding and Mulching, and Section B-4.4 Temporary Stabilization. Mulch must be anchored to prevent blowing. 2. Vegetative Cover: See Section B-4.4 Temporary Stabilization. 3. Tillage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect. 4. Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs. 5. Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar materials may be used to reduce dust emissions. 6. Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

Establishment of vegetative cover on cut and fill slopes. Purpose: To provide timely vegetative cover on cut and fill slopes as work progresses. Conditions Where Practice Applies: Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles. Criteria: A. Incremental Stabilization - Cut Slopes 1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses. 2. Construction sequence examples (Refer to Figure B.1): a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation. b. Perform Phase 1 excavation, prepare seedbed, and stabilize. c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary. d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary. Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization. B. Incremental Stabilization - Fill Slopes 1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses. 2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plan. 3. At the end of each day, install temporary water conveyance practices(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner. 4. Construction sequence examples (Refer to Figure B.2): a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the excavation. b. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary. Note: Once placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization. Figure B.

1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses. 2. Construction sequence examples (Refer to Figure B.1): a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation. b. Perform Phase 1 excavation, prepare seedbed, and stabilize. c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary. d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary. Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization. Figure B.

ENGINEER'S CERTIFICATE: I, Cl M Malagan, ENGINEER, certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the HOWARD SOIL CONSERVATION DISTRICT. DATE: 3-5-19. DEVELOPER'S CERTIFICATE: I, John K. Blanton, DEVELOPER, certify that all development and construction will be done according to this plan for sediment and erosion control and that all responsible personnel involved in the construction project will have a certificate of attendance at a department of the environment approved training program for the control of sediment and erosion before beginning the project. DATE: 3/20/19. APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. DATE: 4-2-19. CHIEF, DEVELOPMENT ENGINEERING DIVISION. DEVELOPER/OWNER: RIVER HILL SQUARE, LLC. DATE: 4-4-19. DIRECTOR.

Permanent Seeding Summary

Table with 5 columns: No., Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths. Includes rows for Tall Fescue/Kentucky Bluegrass and Bluegrass, Kentucky.

Table B.1: Temporary Seeding for Site Stabilization

Table with 6 columns: Plant Species, Seeding Rate 1/2, Seeding Depth 2/ (inches), Recommended Seeding Dates by Plant Hardness Zone 3/ (5b and 6a, 6b, 7a and 7b). Includes rows for Cool-Season Grasses (Annual Ryegrass, Barley, Oats, Wheat, Cereal Rye) and Warm-Season Grasses (Foxtail Millet, Pearl Millet).

Notes: 1/ Seeding rates for the warm season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses. 2/ Seeding rates listed above are for temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use 1/3 of the seeding rate listed above for barley, oats, and wheat. For smaller-seeded grasses (annual ryegrass, pearl millet, foxtail millet), do not exceed more than 5% (by weight) of the overall permanent seeding mix. Cereal rye generally should not be used as a nurse crop, unless planning will occur very late fall beyond the seeding dates for other temporary seedings. Cereal rye has allelopathic properties that inhibit the germination and growth of other plants. If it must be used as a nurse crop, seed at 1/3 of the rate listed above. 3/ For sandy soils, plant seeds at twice the depth listed above. 4/ The planting dates listed are averages for each zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone.

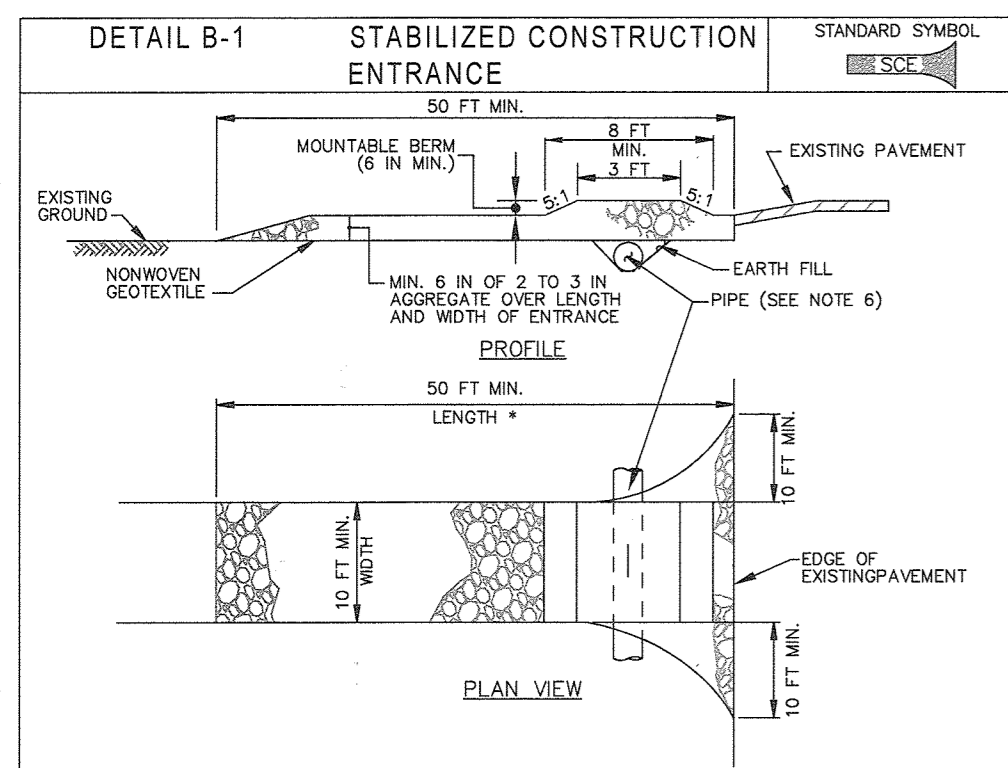
SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK

- 1. Obtain grading permit and demo permit. Notify D.I.L.P. at 410-313-1880 at least 24 hours before starting any work. (1 day)
2. Hold on-site pre-construction meeting. (1 day)
3. Install stabilized construction entrance and perimeter super silt fencing. (2 days)
4. Demo all on-site existing buildings. Remove utilities, including proper abandonment of septic field, remove paving and gravel areas, remove lighting, bollards, etc. Do NOT remove existing ponds at this time. (7 days)
5. At existing pond #1, excavate for the UGS #1. Install piping and stone. Remove existing pond outfall and install new outfall. Backfill to create a sheet-flow for runoff to the SSF along the property line. (7 days)
6. Repeat #5 at existing Pond #2 for UGS #2. (7 days)
7. Continue with mass grading of site, bringing parking areas and aisles to subgrade. Install storm drains, water, and sewer. Install F-1 Surface Sand Filters and M-6 Micro Bio-Retentions. Utilize inlet protection on all inlets. Place filter cloth over SSF and MB's until site has been stabilized to keep media clean and to avoid replacement. (90 days)
8. Install curb and gutter. (7 days)
9. Base pave. (7 days)
10. Complete fine grading of site and stabilize in accordance with the permanent seedbed notes. (7 days)
11. Upon approval from the Howard County Sediment Control Inspector, remove all sediment control devices and stabilize any remaining disturbed areas in accordance with the permanent seedbed notes. (7 days)

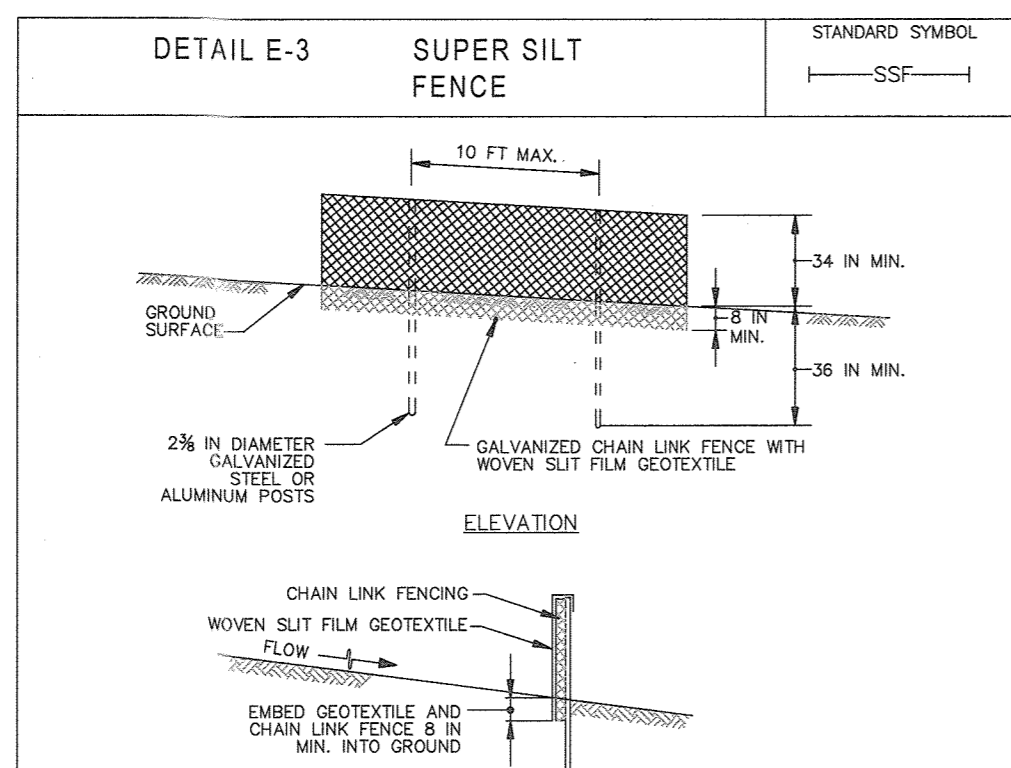
Note: Following initial soil disturbance or any re-disturbances, permanent or temporary stabilization shall be completed within: 1. A calendar days for all perimeter sediment control structures, dikes, swales and all slopes greater than 3:1. 2. 7 calendar days for all other disturbed areas. During grading and after each rainfall, contractor will inspect and provide necessary maintenance to the sediment control measures of this plan.

REVISION table with columns NO., DATE, REVISION. BENCHMARK ENGINEERING, INC. logo and address: 8480 BALTIMORE NATIONAL PIKE SUITE 315 ELLCOTT CITY, MARYLAND 21043. OWNER: STEPHEN A. KLEIN & ASSOCIATES, ENGINEERING. DEVELOPER/OWNER: RIVER HILL SQUARE, LLC. SEDIMENT AND EROSION CONTROL NOTES AND SEQUENCE OF CONSTRUCTION. DATE: MARCH 4, 2019. SHEET: 22 OF 25. SDP-18-044



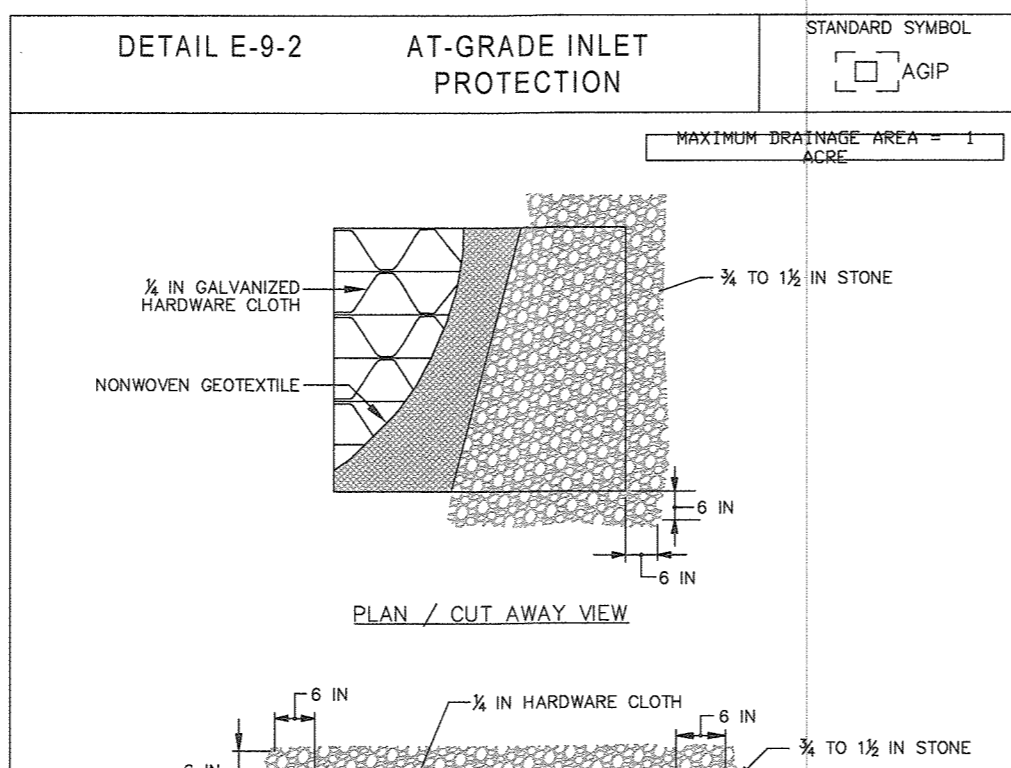
- CONSTRUCTION SPECIFICATIONS**
- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL			
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	



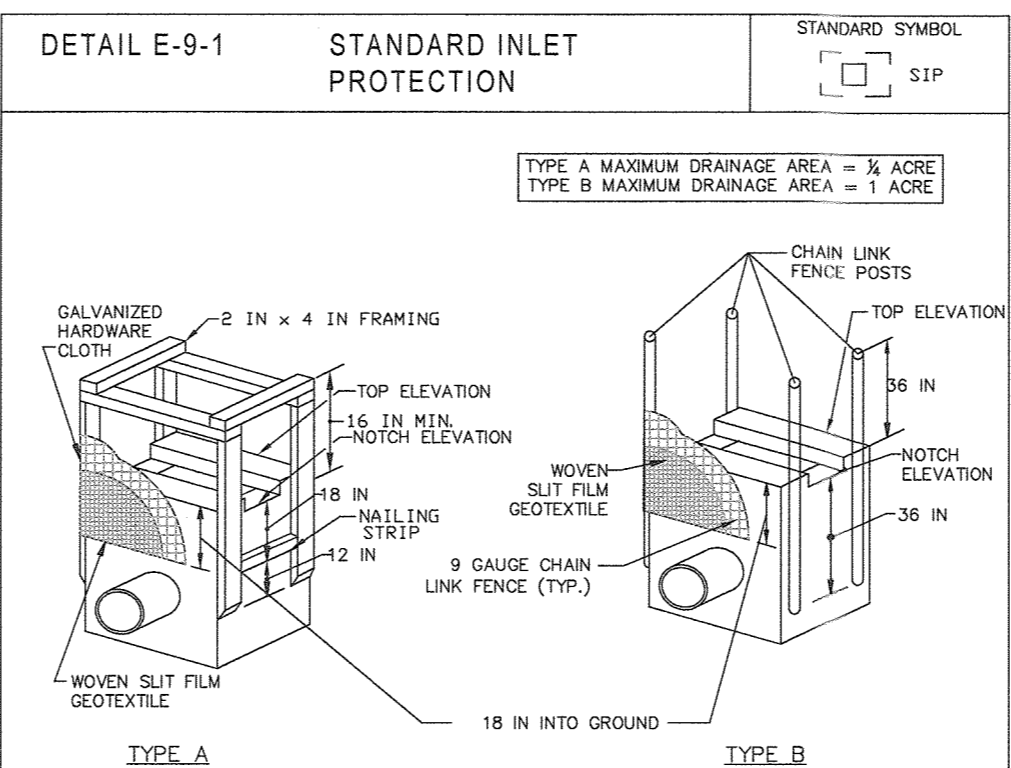
- CONSTRUCTION SPECIFICATIONS**
- INSTALL 2 3/8 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
 - FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL			
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	



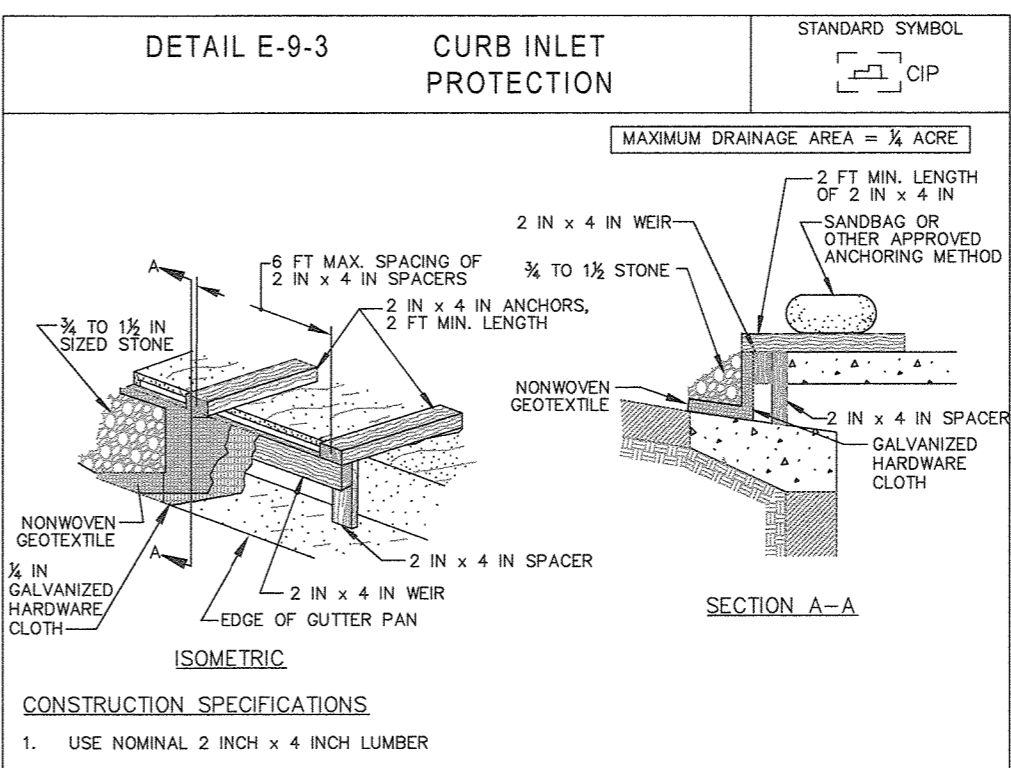
- CONSTRUCTION SPECIFICATIONS**
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
 - LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
 - PLACE CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
 - STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH STORM EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOSING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL			
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	



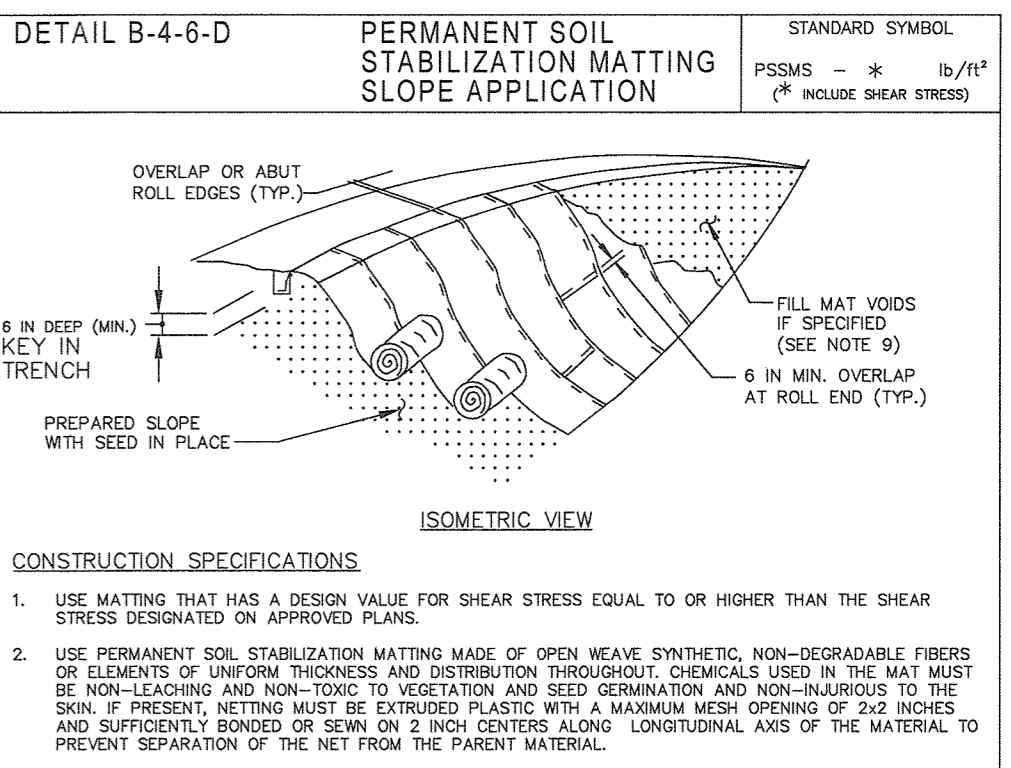
- CONSTRUCTION SPECIFICATIONS**
- USE NOMINAL 2 INCH x 4 INCH LUMBER.
 - USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
 - NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
 - ATTACH A CONTINUOUS PIECE OF 3/4 INCH GALVANIZED HARDWARE CLOTH WITH A MINIMUM WIDTH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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL			
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	



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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL			
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	



- CONSTRUCTION SPECIFICATIONS**
- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
 - USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC NON-Biodegradable FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-HARMFUL TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
 - SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "J" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "J" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 4 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 1 1/2 TO 2 INCHES IN LENGTH, 1 1/2 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
 - PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDING PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
 - UNROLL MATTING DOWN SLOPE. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
 - OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE DOWNSTREAM MAT.
 - KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
 - STAPLE/STAKE MAT IN A STAGGERED PATTERN ON A FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
 - IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYS AND STAPLED IN PLACE, FILL THE MAT Voids WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
 - ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL			
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	

ENGINEER'S CERTIFICATE

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

Clay Alajani 3-5-19
ENGINEER DATE

DEVELOPER'S CERTIFICATE

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

BY: *Stevan K. Brezina* 3-6-19
DEVELOPER DATE

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

John R. Pletcher 3/21/19
HOWARD SOIL CONSERVATION DISTRICT DATE

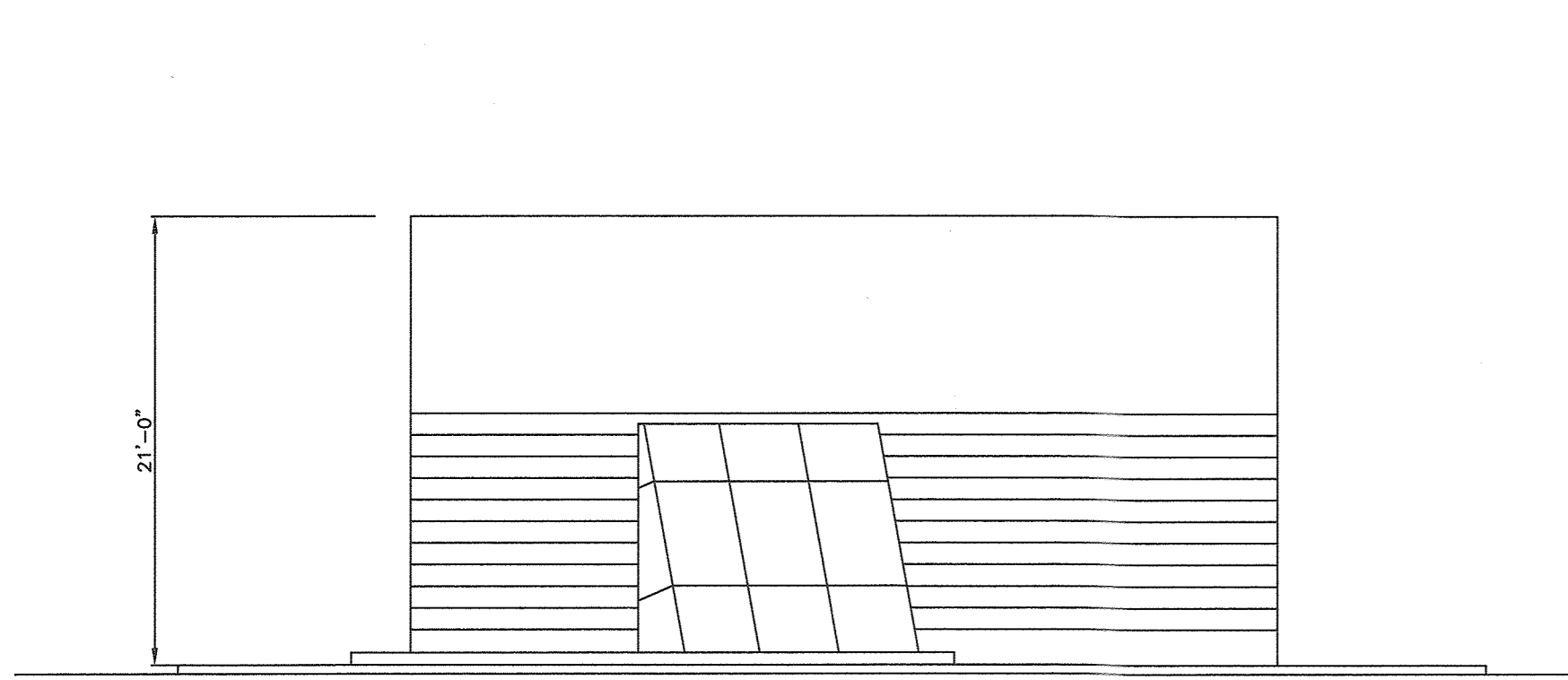
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cheryl... 4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

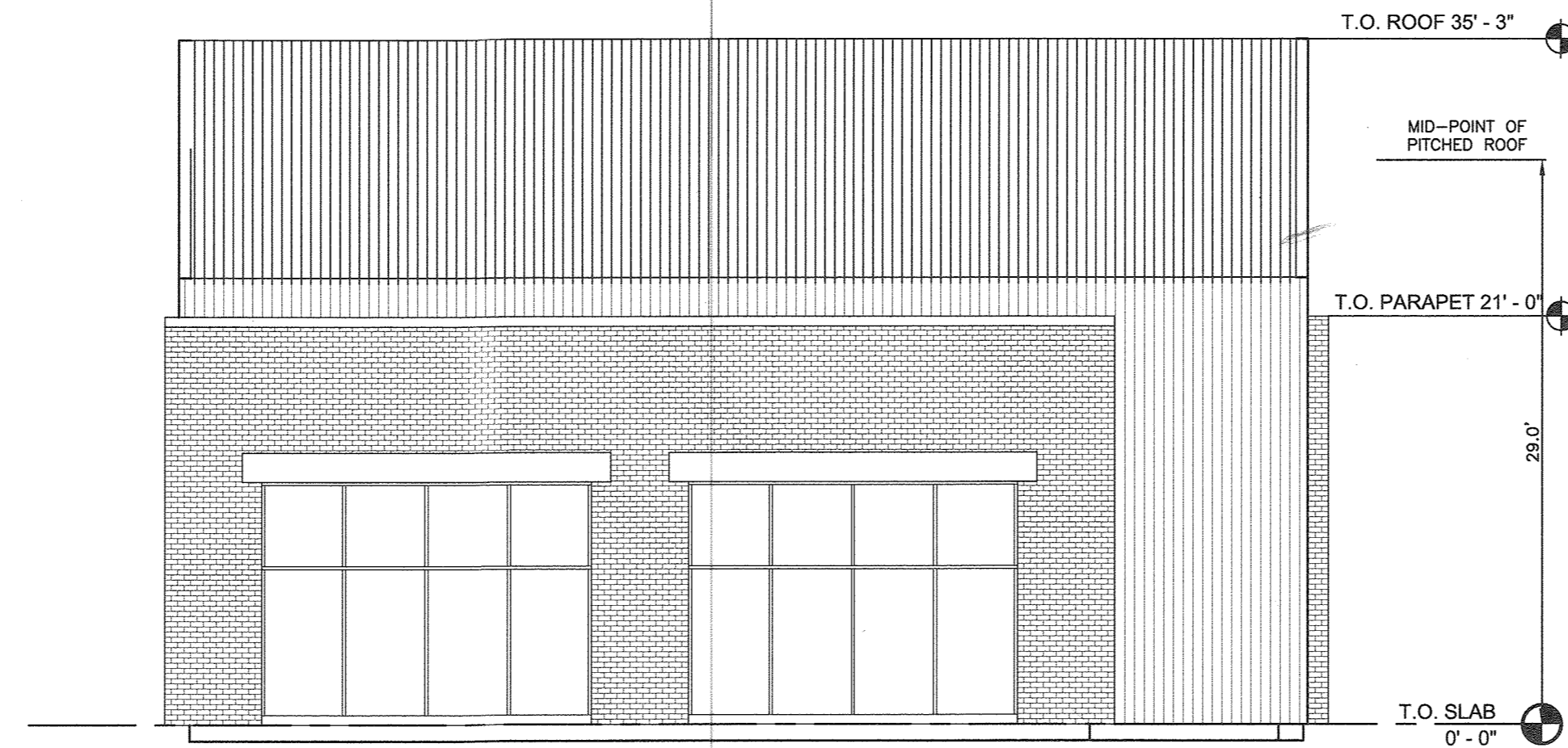
Veronica... 4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Nancy... 4-4-19
DIRECTOR DATE

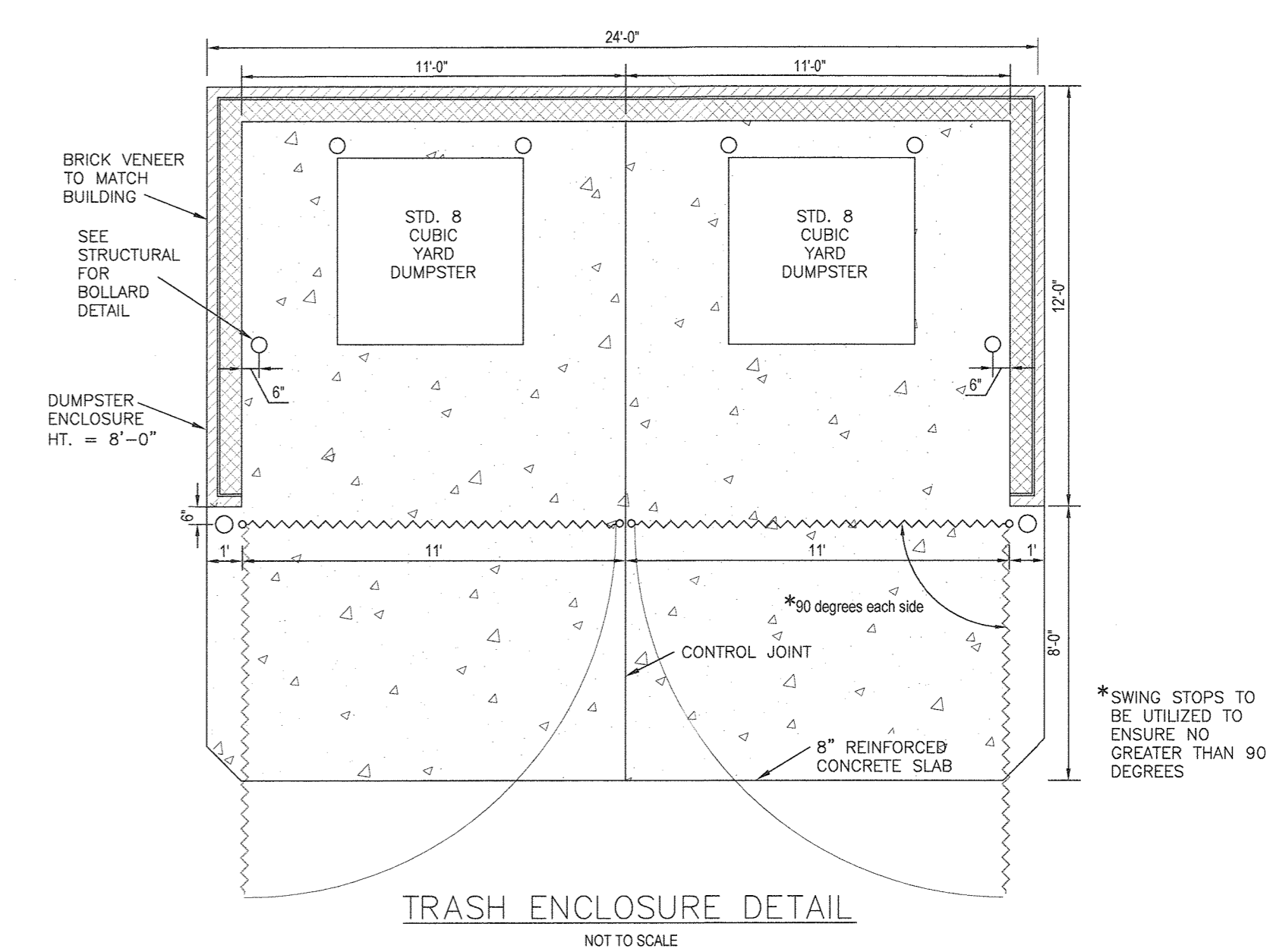
NO.	DATE	REVISION
<p>Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 22391, Expiration Date: 6-30-2019.</p> <p>BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE #4 SUITE 315A ELLICOTT CITY, MARYLAND 211043 (P) 410-465-6105 (F) 410-465-6644 WWW.BE-CIVILENGINEERING.COM</p>		
OWNER:	<p>RIVER HILL SQUARE REDEVELOPMENT OF RIVER HILL GARDEN CENTER TAX MAP: 35 - GRID: 1 - PARCEL: 1 ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND</p>	
DEVELOPER/OWNER:	<p>RIVER HILL SQUARE, LLC P.O. BOX 417 ELLCOTT CITY, MARYLAND 21041 410-465-4244</p>	
DESIGN: DBT	DRAFT: DBT	<p>DATE: MARCH 4, 2019 SCALE: AS SHOWN</p>
		<p>BEI PROJECT NO. 2801 SHEET 23 OF 25</p>



BUILDING #1 SIDE FACING CLARKSVILLE PIKE



BUILDING #4 SIDE FACING CLARKSVILLE PIKE



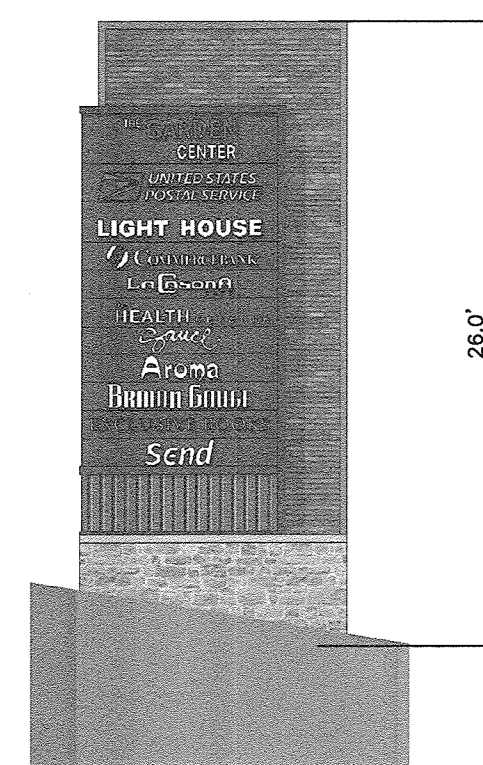
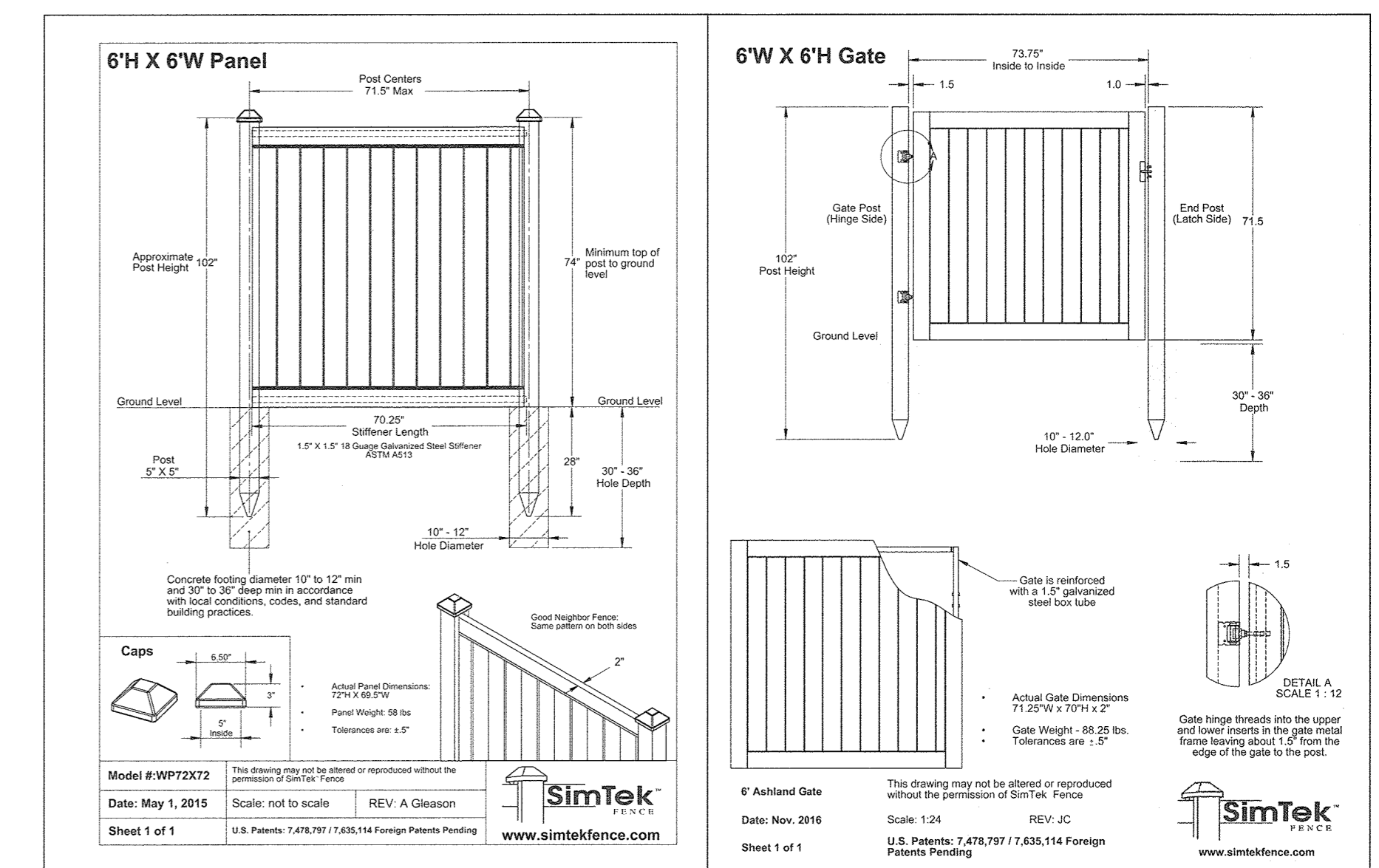
TRASH ENCLOSURE DETAIL
NOT TO SCALE



BUILDING #2 SIDE FACING CLARKSVILLE PIKE

NOTES:

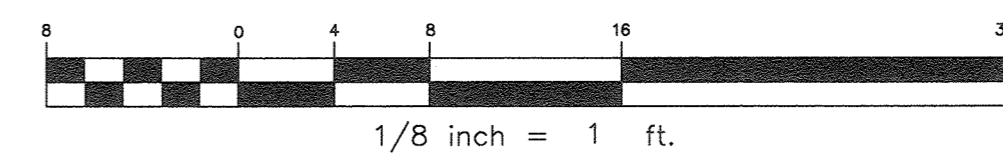
1. STOREFRONT GLAZING SHALL BE CLEAR, OPAQUE OR REFLECTIVE GLASS SHALL ONLY BE USED FOR SPANDREL ELEMENTS IN ACCORDANCE WITH CLARKSVILLE PIKE STREETScape PLAN AND DESIGN GUIDELINES..
2. ALL TENANT SIGNS SHALL BE IN ACCORDANCE WITH THE CLARKSVILLE PIKE STREETScape PLAN AND DESIGN GUIDELINES.
3. ELEVATION VIEWS FROM ALL 4 SIDES OF EACH BUILDING SHALL BE SUBMITTED WITH THE BUILDING PERMIT.



PYLON SIGN



BUILDING #3 SIDE FACING CLARKSVILLE PIKE



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>Chief</i>	4-2-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Chief</i>	4-4-19
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Director</i>	4-7-19
DIRECTOR	DATE

NO. DATE REVISION	
BENCHMARK ENGINEERS, INC. ENGINEERS, LAND SURVEYORS & PLANNERS 8480 BALTIMORE NATIONAL PIKE & SUITE 315 ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6444 WWW.BE-CIVILENGINEERING.COM	
OWNER: STEPHEN A. KLEIN & ASSOCIATES 12165 CLARKSVILLE PIKE CLARKSVILLE, MARYLAND 21029 410-465-4244	RIVER HILL SQUARE REDEVELOPMENT OF RIVER HILL GARDEN CENTER TAX MAP: 35 - GRID: 1 - PARCEL: 1 ZONED: B-1 ELECTION DISTRICT NO. 5 - HOWARD COUNTY, MARYLAND
DEVELOPER/OWNER: RIVER HILL SQUARE, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 410-465-4244	BUILDING ELEVATIONS AND DETAILS DATE: MARCH 4, 2019 BEI PROJECT NO. 2801 SCALE: AS SHOWN SHEET 25 OF 25
DESIGN: DBT	DRAFT: DBT