

**GENERAL NOTES**

- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE LOCATION AND ELEVATIONS OF THE EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, AND DEPTH OF EXISTING UTILITIES IN THE WORK AREA AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING FREDERICK WARD ASSOC., INC. AT (410)-838-7900 IN THE EVENT OF ANY DISCREPANCIES ON THE PLAN OR IN THE RELATIONSHIP OF EXISTING GRADES WITH PROPOSED GRADES PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL NOTE THAT IN THE CASE OF A DISCREPANCY BETWEEN A SCALED DIMENSION AND A FIGURED DIMENSION SHOWN ON THE PLANS, THE FIGURED DIMENSION SHALL GOVERN.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT THE FAILURE TO MENTION SPECIFICALLY WORK THAT WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST 5 WORKING DAYS PRIOR TO BEGINNING WORK:  
 HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410) 313-1880  
 MISS UTILITY (AT LEAST 48 HRS PRIOR TO ANY EXCAVATION); 1-800-257-7777  
 C&P TELEPHONE CO. 725-9976  
 HOWARD COUNTY BUREAU OF UTILITIES 313-2366  
 AT&T CABLE LOCATION DIVISION 393-3553  
 E&S&E 685-0123  
 NOTIFY HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION AT LEAST 48 HOURS PRIOR TO START (313-1855)
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS, UNLESS STATED OTHERWISE.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE PURPOSE OF THIS SITE DEVELOPMENT PLAN IS TO CONSTRUCT A GYMNASIUM AND RELATED SITE AMENITIES AND INFRASTRUCTURE.
- STORM WATER QUANTITY MANAGEMENT IS PROVIDED FOR BY WAY OF AN ON-SITE FACILITY CONSTRUCTED UNDER SDP 89-75 AND UNDER THE OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF ARCHDIOCESE OF BALTIMORE. QUALITY MANAGEMENT IS PROVIDED FOR BY WAY OF THE INFILTRATION BASIN CONSTRUCTED UNDER SDP 89-75 AND THE PRETREATMENT FACILITY CONSTRUCTED UNDER SDP 01-120.
- SECTION 404 OF THE MDE MANUAL DOES NOT APPLY NOR ARE ANY WETLANDS PERMITS REQUIRED FOR THIS PROJECT.
- PUBLIC WATER AND SEWER WILL BE UTILIZED. A WATER METER SHALL BE LOCATED WITHIN THE BUILDING AND WILL MEET ALL HOWARD COUNTY STANDARDS PROPOSED ON-SITE WATER AND SEWER SHALL BE PRIVATE.
- ALL EXISTING WATER AND SEWER ARE PUBLIC AND ARE SHOWN PER CONTRACTS 508-S AND 14-1956-D.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL SITE LIGHTING MUST BE DIRECTED AWAY FROM THE ADJACENT PUBLIC RIGHT-OF-WAY AND THE ADJACENT RESIDENTIAL PROPERTIES AND COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134.
- CONTRACTOR SHALL CONTACT THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT LEAST FIVE (5) WORKING DAYS IN ADVANCE OF THE COMMENCEMENT OF WORK @ (410) 313-1880.
- THE FLOODPLAIN SHOWN ON SITE IS IN ACCORDANCE WITH PLAT #3476 AND A NON-CRITICAL FLOOD STUDY SUBMITTED AS PART OF SDP 01-120 APPROVAL.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY WITH ONE FOOT CONTOUR INTERVALS PREPARED BY FREDERICK WARD ASSOCIATES, INC. DATED DECEMBER, 2000.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATION SYSTEM - HOWARD COUNTY MONUMENTS NO. 2485 AND NO. 24AA WERE USED FOR THIS PROJECT.
- EXISTING UTILITIES BASED ON SURVEY BY FREDERICK WARD ASSOCIATES, SDP 89-75 AND CONTRACT NO. 508-S, WATER CONTRACT NO. 14-1956-D.
- A TRAFFIC STUDY FOR THIS PROJECT IS NOT REQUIRED BASED ON PHASE II OF THE BZA CASE #97-51E. THE GYMNASIUM DOES NOT CREATE ADDITIONAL VEHICULAR TRIPS. ITS INTENDED USE IS TO SERVE THE EXISTING SCHOOL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$3,300.00.
- THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BECAUSE DISTURBING LESS THAN 40,000 SQUARE FEET OF FOREST.

**GENERAL NOTES FOR UTILITY CONSTRUCTION:**

- INFORMATION CONCERNING THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES WAS TAKEN FROM RECORDS PROVIDED BY UTILITY COMPANIES. AN ALTA SURVEY PREPARED BY FREDERICK WARD ASSOCIATES (DATED 3/01), AND HOWARD COUNTY DPW. THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. FREDERICK WARD ASSOCIATES, INC. MAKES NO GUARANTEE AS TO THE COMPLETENESS OR ACCURACY OF UTILITIES AND THEIR LOCATIONS, SHOWN OR NOT SHOWN, ON THESE DRAWINGS. SUCH INFORMATION PROVIDED ON THESE PLANS IS FOR THE CONVENIENCE OF THE CONTRACTOR. HOWEVER, THE CONTRACTOR SHALL VERIFY THE PRESENCE, ABSENCE AND LOCATIONS OF ALL UTILITIES TO HIS SATISFACTION, PRIOR TO ANY WORK UNDER THIS CONTRACT.
- THE CONTRACTOR IS TO NOTIFY MISS UTILITY AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION AND EXCAVATION. PHONE: 1-800-257-7777.
- PRIOR TO ANY CONSTRUCTION UNDER THIS CONTRACT, CONTRACTOR SHALL TEST PIT TO VERIFY EXACT LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES WHERE UTILITY TIE-INS AND CROSSINGS WILL BE ENCOUNTERED. ANY DISCREPANCIES IN HORIZONTAL AND VERTICAL LOCATIONS SHOWN ON THE DRAWINGS, PARTICULARLY AT PROPOSED STORM DRAIN, SANITARY AND WATER CONNECTIONS SHALL BE IMMEDIATELY REPORTED TO FREDERICK WARD ASSOCIATES PRIOR TO ANY CONTINUATION OF WORK UNDER THIS CONTRACT. THIS IS FOR THE PURPOSE OF IDENTIFYING ANY CONFLICTS, WHICH MAY IMPACT THE PROPOSED DESIGN, AND RESOLUTION OF SAID CONFLICTS PRIOR TO CONTINUATION OF WORK.
- ANY EXISTING UTILITIES AND AMENITIES, WHICH MAY BE DAMAGED DUE TO TEST FITTING AND UTILITY CONSTRUCTION, SHALL BE REPAIRED IN KIND AT THE SOLE EXPENSE OF THE CONTRACTOR.
- ANY SEDIMENT CONTROL MEASURES REMOVED FOR THE PURPOSE OF UTILITY CONSTRUCTION SHALL BE REPLACED AT THE END OF THE DAY BY THE UTILITY CONTRACTOR.
- LOCATION OF GAS AND ELECTRIC, AND TELEPHONE SERVICE TO BUILDING TO BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANIES BY THE OWNER.
- UTILITIES TO BE INSTALLED IN LANDSCAPED AREAS SHALL BE WRAPPED WITH BIOBARRIER PIPE PROTECTION.
- ALL UTILITY WORK WITHIN SHA R/W SHALL BE GOVERNED BY THE UTILITY PERMIT.
- ALL UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION VOLUME IV.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division Date: 11/19/01  
 Chief, Division of Land Use Planning Date: 11/19/01  
 Director Date: 11/19/01

APPROVED: FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS  
 County Health Officer Date: \_\_\_\_\_  
 Howard County Health Department

BEFORE BEGINNING CONSTRUCTION  
 CONTRACT  
 "MISS UTILITY"  
 AT  
 1-800-257-7777  
 AT LEAST 48 HOURS  
 PRIOR TO EXCAVATION

# CHURCH OF THE RESURRECTION

## PAULSKIRK DRIVE AND CHATHAM ROAD ELLICOTT CITY, MD 21043

HORIZONTAL DATUM FOR THIS AS-BUILT SURVEY IS BASED ON THE MARYLAND STATE REFERENCE SYSTEM NAD 83 (ADJUSTED 2011). AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 171D AND 24CB. VERTICAL DATUM FOR THIS AS-BUILT SURVEY IS NORTH AMERICAN VERTICAL DATUM (NAVD83) AS PROJECTED BY THE ABOVE MENTIONED HOWARD COUNTY GEODETIC CONTROL. THIS AS-BUILT SURVEY WAS PERFORMED BY SILL ENGINEERING GROUP, LLC.

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

PAUL M. SILL PROFESSIONAL ENGINEER DATE: 1-11-24  
 LICENSE NO. 32025

- SITE INFORMATION**
- TOTAL SITE AREA: 23.63 AC
  - TOTAL NUMBER OF LOTS/PARCELS: 2 LOTS / 2 PARCELS
  - PRESENT ZONING: R-20 (RESIDENTIAL SINGLE)
  - ELECTION DISTRICT: 2
  - TAX MAP 24, GRID 5, PARCEL 456, 1117 AND 980, PLAT NO. 3476
  - PARKING: SEE SHEET 11 GENERAL NOTE 14 FOR REVISED PARKING COMPUTATIONS

THE INSTRUMENTS USED IN PERFORMING THIS AS-BUILT SURVEY: S-SECOND SOKKIA IX ROBOTIC TOTAL STATION, TOPCON RC-5 RECEIVER, AND SOKKIA 360 PRISM.

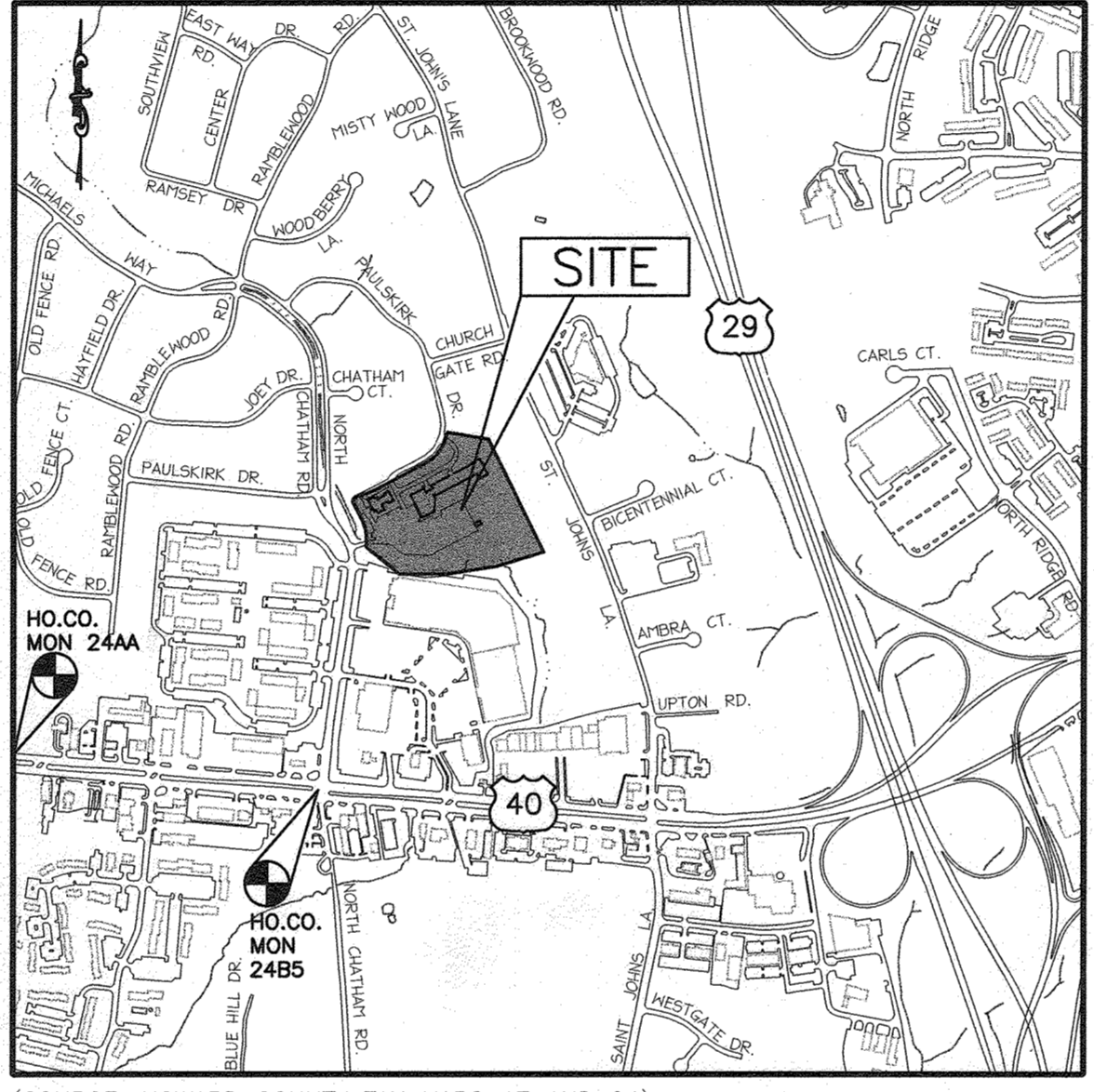
- PAVED AREA: EXISTING: 174,240 S.F. = 4.0 ACRES = 16.9%  
 PROPOSED: 190,245 S.F. = 4.37 ACRES = 18.5%  
 BUILDING COVERAGE: EXISTING: 41,382 S.F. = 0.95 ACRES = 4.0%  
 PROPOSED: 50,382 S.F. = 1.18 ACRES = 4.9%  
 TOTAL IMPERVIOUS AREA: EXISTING: 215,622 S.F. = 4.95 ACRES = 20.9%  
 PROPOSED: 248,292 S.F. = 5.70 ACRES = 24.1% (New=0.75Ac.)
- LANDSCAPE AREA: REQUIRED: 205,865 S.F. = 20%  
 PROPOSED: 784,516.0 S.F. = 76%  
 (PHASE 2 ADDITION)  
 CONSTRUCT GYMNASIUM/MULTIPURPOSE ROOM FUNCTION AS A SCHOOL ADDITION
- BUILDING USE:  
 A. EXISTING: CHURCH, SCHOOL  
 B. PROPOSED: CHURCH, SCHOOL
- BUILDING COVERAGE: 50,388 S.F.
- SITE ADDRESS:  
 CHURCH OF THE RESURRECTION  
 3175 PAULSKIRK DRIVE  
 ELLICOTT CITY, MD 21043
- BOARD OF APPEALS HISTORY:  
 CASE NO. BA 97-51E; SPECIAL EXCEPTION FOR SCHOOL TO OPERATE IN AN R-20 ZONED PROPERTY GRANTED ON MARCH 31, 1998 WITH THE FOLLOWING CONDITIONS:  
 A. THE CONDITIONS IMPOSED ON THE SPECIAL EXCEPTIONS APPROVED IN BA CASE NO. 97-51E ARE WITHDRAWN.  
 B. THE SPECIAL EXCEPTIONS SHALL APPLY ONLY TO THE USES AND STRUCTURES AS DESCRIBED IN THE PETITION AND SPECIAL EXCEPTION PLAN SUBMITTED TO THE BOARD AND DATED OCTOBER 27, 1997, AND NOT TO ANY OTHER ACTIVITIES, USES, STRUCTURES, OR ADDITIONS ON THE PROPERTY.  
 C. THE SPECIAL EXCEPTIONS' EXPANSIONS AS SHOWN ON THE SPECIAL EXCEPTION PLAN DATED OCTOBER 27, 1997, SHALL BE COMPLETED WITHIN THE FOLLOWING TIME FRAME COMMENCING ON THE DATE OF THIS DECISION AND ORDER:  
 PHASE I SHALL BE COMPLETED BY MARCH 31, 2003 (EXTENSION GRANTED BA FILE 97-51E) AND PHASE II SHALL BE COMPLETED WITHIN FIVE YEARS.  
 PHASE III SHALL BE COMPLETED WITHIN SEVEN YEARS.  
 D. THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.
- A FOREST CONSERVATION DECLARATION OF INTENT WILL BE APPLIED FOR ON THE BASIS OF THE PROPOSED CONSTRUCTION DISTURBING LESS THAN 40,000 S.F. OF FORESTED AREA.
- TOPOGRAPHIC SURVEY PERFORMED BY FREDERICK WARD ASSOC., INC. IN DECEMBER, 2000.
- APPROVED SDP 89-75 DECEMBER 12, 1989.
- F-76-69 AND PLAT 3476 APPROVED JUNE 29, 1978.
- LIMIT OF DISTURBED AREA: 69,204 S.F.
- TRASH WILL BE REMOVED BY A PRIVATE TRASH COMPANY.

**SITE INFORMATION CONTINUED**

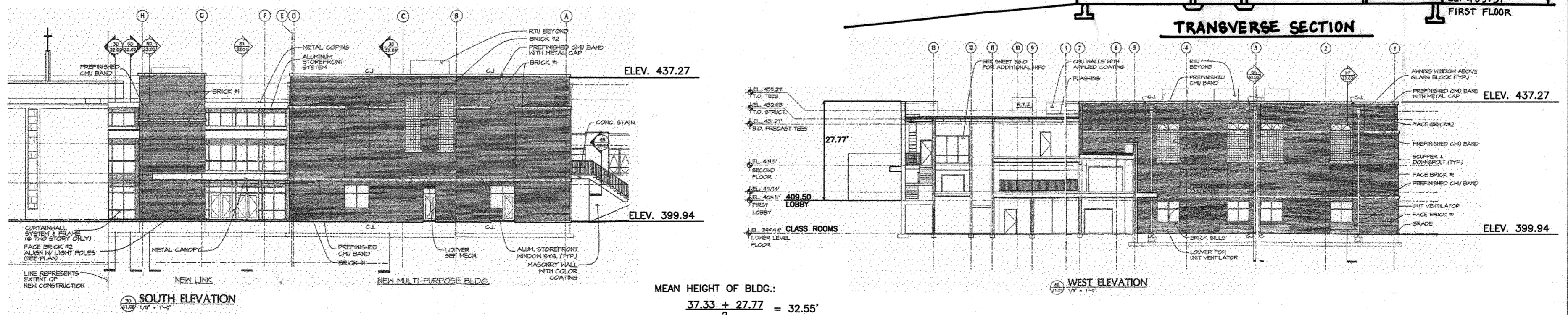
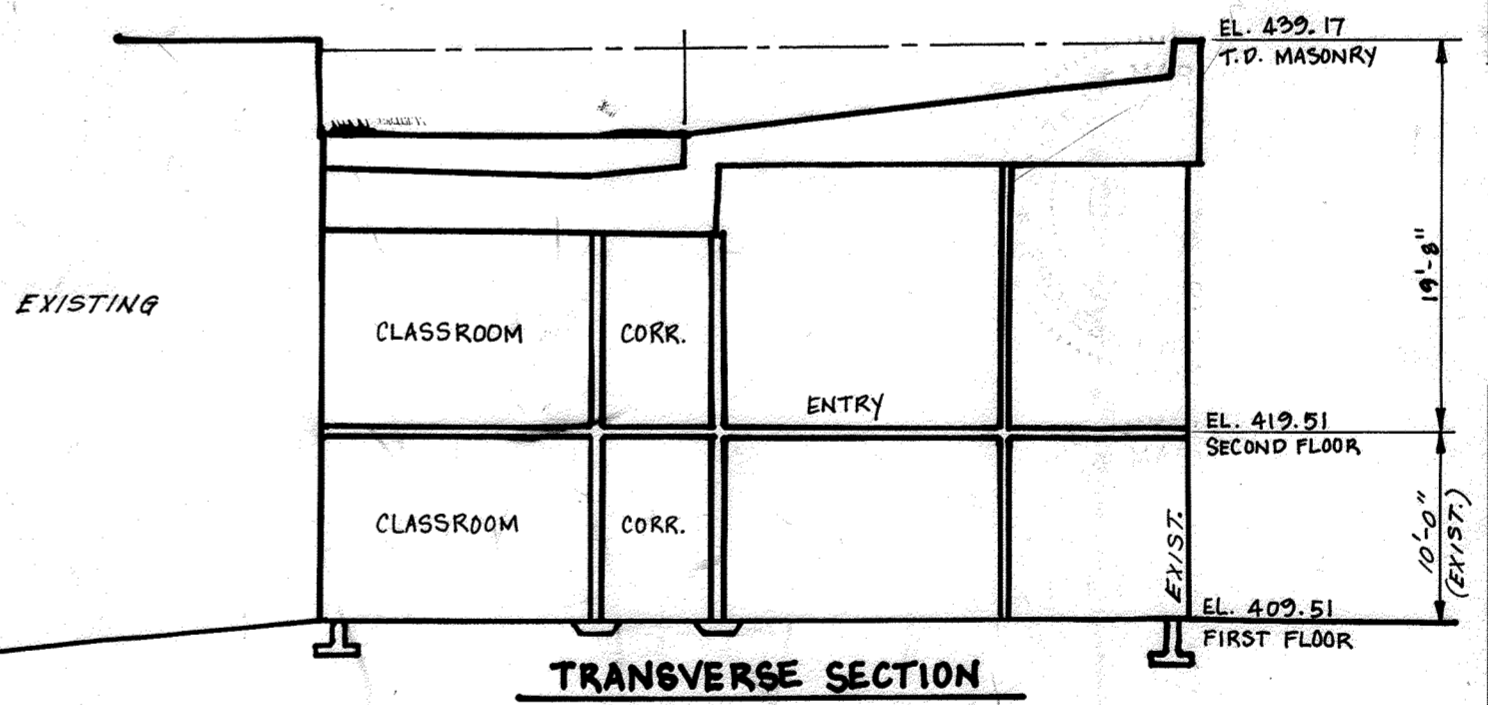
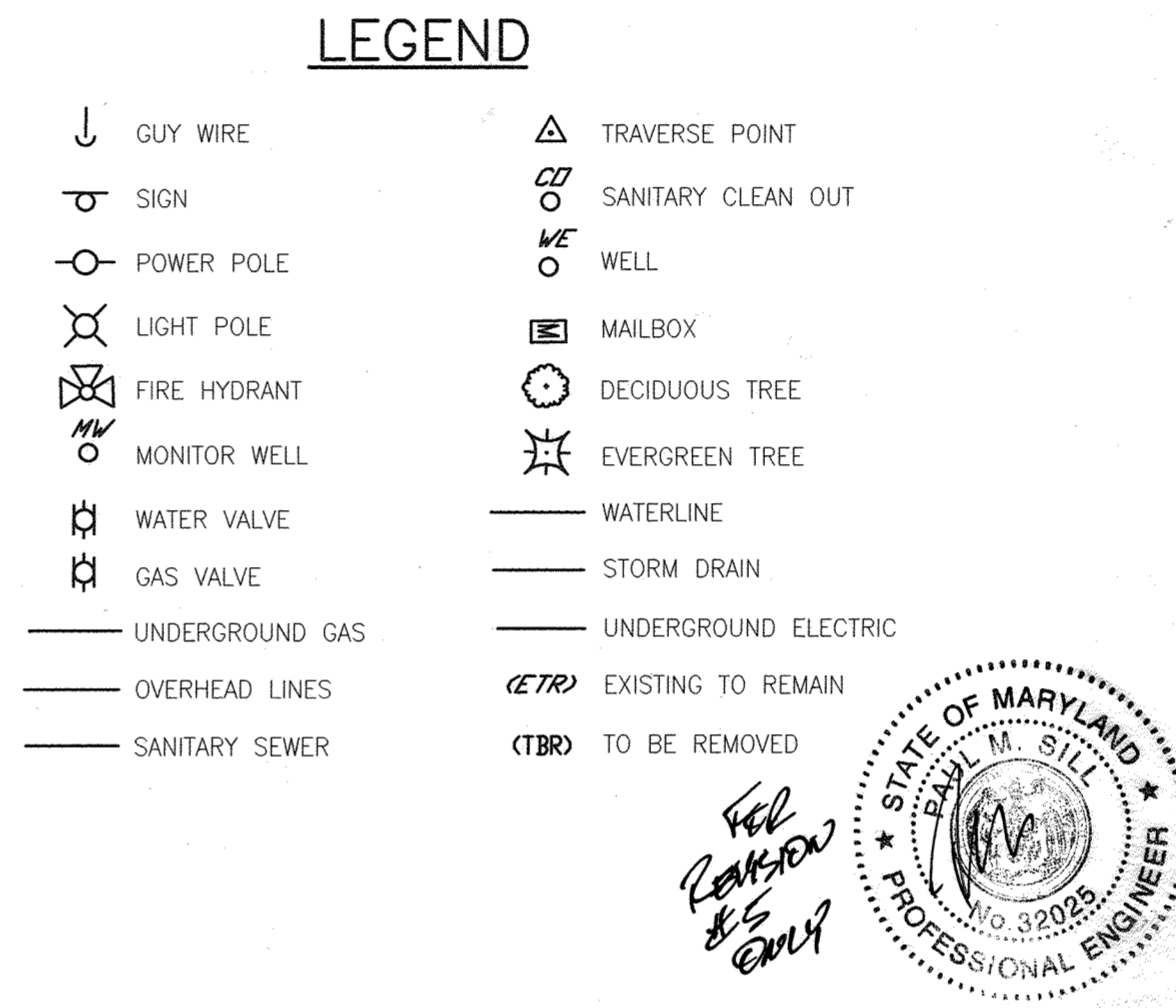
- BOARD OF APPEALS HISTORY:  
 CASE NO. BA 03-74C: CONDITIONAL USE FOR THE ENLARGEMENT OF A RELIGIOUS FACILITY WITH A 4,000 SQUARE FOOT MAINTENANCE / STORAGE BUILDING AND A 1,500 SQUARE FOOT ONE STORY BUILDING ADDITION, GRANTED ON MAY 10, 2004 WITH THE FOLLOWING CONDITION: THE GRANTED CONDITIONAL USE SHALL APPLY SOLELY TO THE PROPOSED 4,000 SQUARE FOOT MAINTENANCE / STORAGE BUILDING AND A 1,500 SQUARE FOOT ONE STORY BUILDING ADDITION, ALL AS DEPICTED ON THE CONDITIONAL USE PLAN DATED DECEMBER 2003, AND AS MAY BE REVISED BY THE HEARING EXAMINER AND TO NO OTHER STRUCTURES OR USES.

**SHEET INDEX CONTINUATION**

SHEET NO.	DESCRIPTION
11	DEMOLITION PLAN
12	OVERALL SITE AND SEDIMENT & EROSION CONTROL PLAN
13	GRADING PLAN AND SEDIMENT & EROSION CONTROL PLAN
14	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
15	STORMWATER MANAGEMENT DRAINAGE AREA MAP
16	STORMWATER MANAGEMENT PROFILES AND DETAILS
17	STORMWATER MANAGEMENT PROFILES AND DETAILS
18	STORM DRAIN & STORMWATER MANAGEMENT PROFILES AND DETAILS
19	FOREST CONSERVATION PLAN
20	FOREST CONSERVATION NOTES AND DETAILS
21	SITE & SEDIMENT CONTROL DETAILS

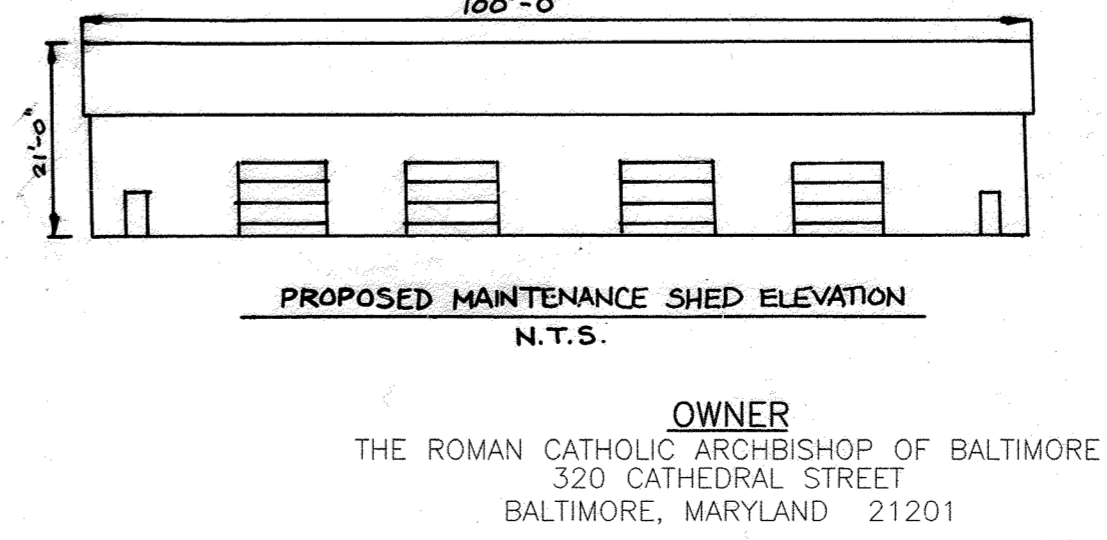


BENCHMARKS:  
 NE CORNER OF SCHOOL SMH TOP ELEVATION 408.51  
 NW CORNER OF SCHOOL SMH TOP ELEVATION 408.74



**SHEET INDEX**

- TITLE SHEET  
 EXISTING CONDITIONS AND DEMOLITION PLAN  
 SITE LAYOUT PLAN  
 SITE GRADING AND UTILITY PLAN  
 SEDIMENT AND EROSION CONTROL PLAN  
 SEDIMENT AND EROSION CONTROL NOTES AND DETAILS  
 STORM DRAIN PROFILES AND DETAILS  
 SEWER AND WATER PROFILES  
 DRAINAGE AREA MAPS AND SWM DETAILS  
 SITE LANDSCAPE PLAN  
 FOR CONTINUATION SEE THIS SHEET
- 1 OF 21
  - 2 OF 21
  - 3 OF 21
  - 4 OF 21
  - 5 OF 21
  - 6 OF 21
  - 7 OF 21
  - 8 OF 21
  - 9 OF 21
  - 10 OF 21



RELEASED FOR

- PRELIMINARY ONLY
- BIDDING
- PERMIT
- CONSTRUCTION

DATE: \_\_\_\_\_

DATE	NUMBER	REVISION DESCRIPTIONS
12/05/03	0	ISSUED BY SILL ENGINEERING GROUP
3/16/12	5	ADD SHEET INDEX CONTINUATION
4/15/11	4	ADD STORAGE SHED, MODIFY PARKING
8.31.05	3	REVISE PLANS TO INCLUDE WATER & GAS CONNECTION
2.25.04	2	ADD MAINTENANCE SHED, 1500 SF CAFETERIA EXPANSION AND STORAGE
5/28/02	1	ADDITION OF SECOND FLOOR AND VESTIBULE

**TITLE SHEET**  
**CHURCH OF THE RESURRECTION**

ADDRESS CHART

LOT/PARCEL #	STREET ADDRESS
L1/P1117	3175 PAULSKIRK DRIVE, ELLICOTT CITY, MD 21043

PERMIT INFORMATION CHART

Subdivision Name	PLAT #3476	Section/Area	N/A	Lot/Parcel No.
CHURCH OF THE RESURRECTION				L1/P1117

Plot # or L/P	Grid #	Zoning	Tax Map No.	Elect Dist	Census Tract
3476	5	R-20	24	2	6022

Water Code: F06 Sewer Code: 1404800

**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHW  
 DRAWN BY: CMH/KO  
 CHECKED BY: RHW  
 DATE: SEPT. 14, 2001  
 SCALE: (AS NOTED)  
 W.O. NO.: 2017162.00

STATE OF MARYLAND PROFESSIONAL ENGINEER  
 ROBERT H. VOGEL, PE No. 16193


C-001

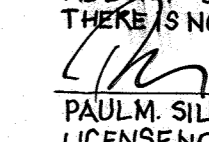
1 SHEET OF 21

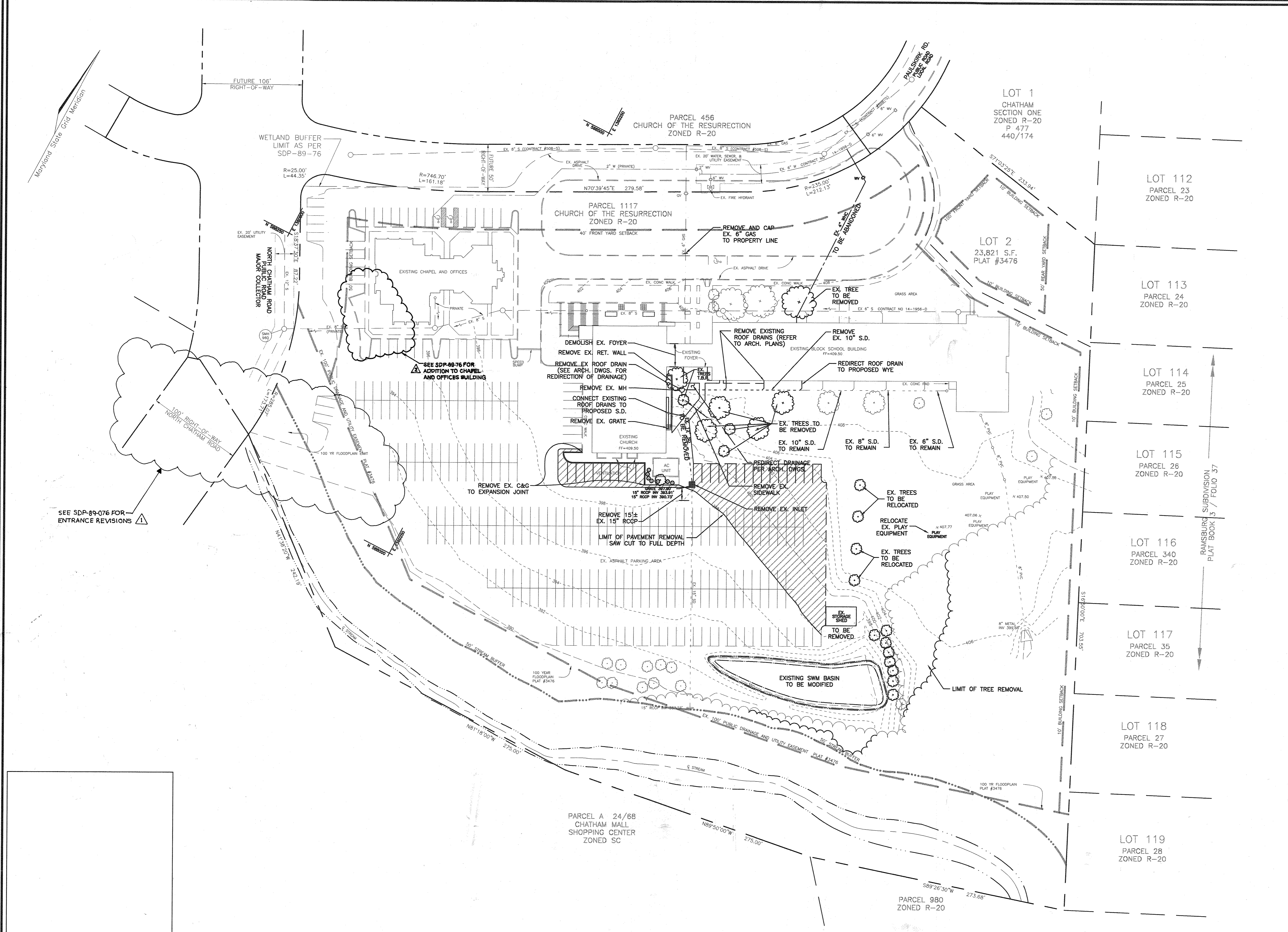
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**DEMOLITION NOTES**



1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE AND VERIFY EXISTING SITE CONDITIONS TO HIS SATISFACTION.
2. CONTRACTOR TO MEET WITH DEVELOPER ON JOB SITE TO IDENTIFY EQUIPMENT, SIGNS AND ITEMS TO BE REMOVED OR RETAINED PRIOR TO THE START OF CONSTRUCTION.
3. CONTRACTOR MUST ADHERE TO ALL SAFETY REGULATIONS GIVEN BY O.S.H.A. AND HOWARD COUNTY. PRIOR TO COMMENCING WORK CONTRACT, CONTRACTOR SHALL CONTACT MISS UTILITY.
4. ALL DEMOLISHED MATERIALS TO BE REMOVED TO AN APPROVED LOCATION.
5. ALL UTILITIES DAMAGED DURING DEMOLITION AND CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED IN KIND BY THE CONTRACTOR AT HIS OWN EXPENSE.
6. TOPOGRAPHIC AND BOUNDARY SURVEY INFORMATION SHOWN ON THIS PLAN IS FROM A SURVEY PREPARED BY FREDERICK WARD ASSOC., INC., DATED 11/7/2000.
7. REFER TO DRAWING SHEETS 5 AND 6 FOR ALL REQUIRED SEDIMENT CONTROL MEASURES.
8. REFER TO LANDSCAPE PLAN FOR EXISTING TREES TO REMAIN. EXISTING LANDSCAPING IN AREAS OF PROPOSED WORK MAY BE RELOCATED IF HEALTHY.
9. DEMOLITION, CLEARING AND GRUBBING, EXCAVATION AND BORROW SHALL BE IN ACCORDANCE WITH ARTICLE 2 SECTION 200 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION VOLUME IV.

 DENOTES LIMIT OF ASPHALT PAVEMENT REMOVAL


AS BUILT CERTIFICATION:  
THERE IS NO AS BUILT INFORMATION ON THIS SHEET  
  
PALM SILL PROFESSIONAL ENGINEER  
LICENSE NO. 32025  
1-11-21 DATE

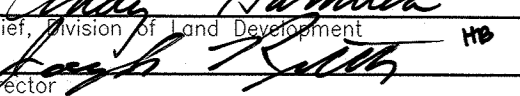


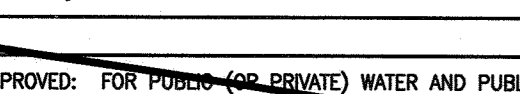
SDP-01-120

EXISTING CONDITIONS DEMOLITION PLAN CHURCH OF THE RESURRECTION				
ADDRESS CHART				
LOT/PARCEL #	STREET ADDRESS			
L1/P1117	3175 PAULSKIRK DRIVE, ELLICOTT CITY, MD 21043			
PERMIT INFORMATION CHART				
Subdivision Name CHURCH OF THE RESURRECTION	Section/Area N/A	Lot/Parcel No. L1/P1117		
Plot # or 1/4 3476	Grid # 24	Zoning R-20	Tax Map No. 2	Census Tract 6022
Water Code F06	Sewer Code 1404800			
 <b>FREDERICK WARD ASSOCIATES, INC.</b> ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia				
 DESIGN BY: RHW DRAWN BY: CMH/KO CHECKED BY: RHW DATE: SEPT. 14, 2001 SCALE: 1"=50' W.O. NO.: 2017162.00		OWNER THE ROMAN CATHOLIC ARCHBISHOP OF BALTIMORE 320 CATHEDRAL STREET BALTIMORE, MARYLAND 21201		
2 SHEET OF 21		2		

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division:  Date: 11/7/01

Chief, Planning & Land Use Division:  Date: 11/14/01

Director:  Date: 11/19/01

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APPROVED: FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS

County Health Officer: \_\_\_\_\_ Date: \_\_\_\_\_

Howard County Health Department: \_\_\_\_\_ Date: \_\_\_\_\_

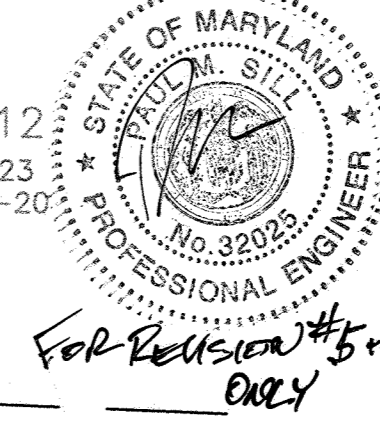
BEFORE BEGINNING CONSTRUCTION CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO EXCAVATION



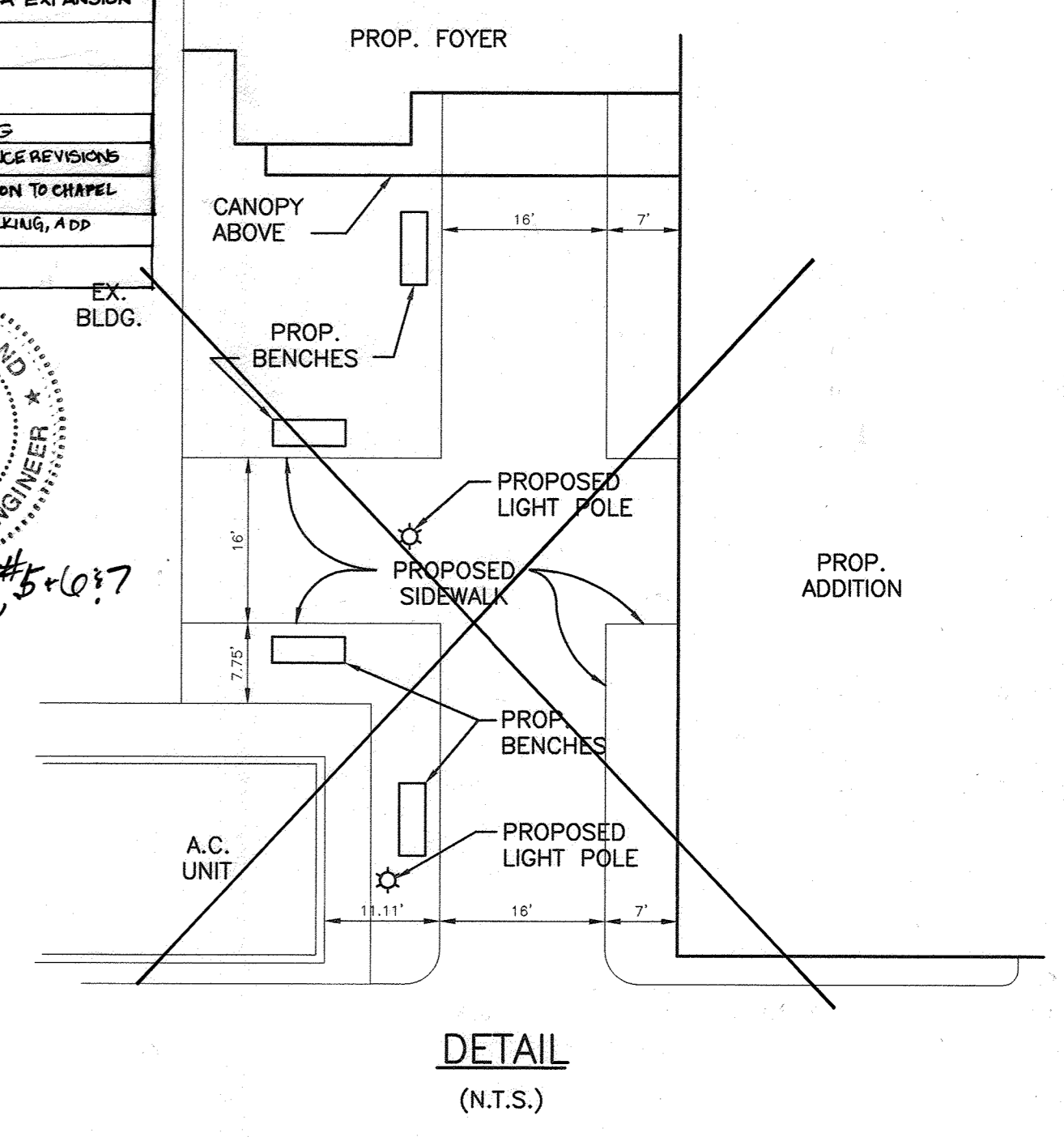
NO.	DESCRIPTION	DATE
3	AS BUILT BY PALM SILL ENGINEERING GROUP	12/05/23
1	ADD REVISIONS FOR REFERENCE TO SDP-01-120 FOR ENTRANCE REVISIONS	6/15/16
2	ADD REVISIONS FOR REFERENCE TO SDP-01-120 FOR ADDITION TO CHAPEL AND OFFICES BUILDING	03/19/20

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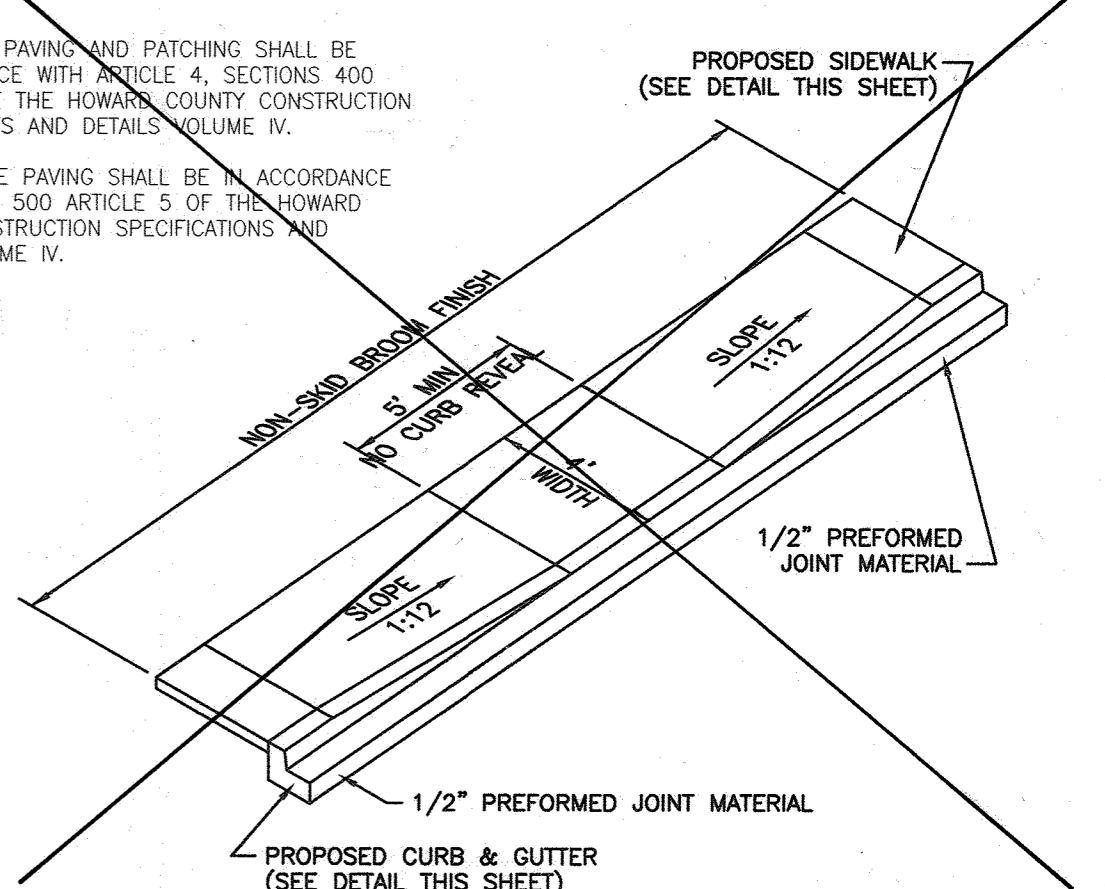
DATE	NUMBER	REVISION DESCRIPTIONS
03/1/05	3	REVISE PLANS TO INCLUDE WATER AND GAS CONNECTION
2/25/04	2	ADD MAINTENANCE SHED AND CAFETERIA EXPANSION
5/28/02	1	ADDITION OF SECOND FLOOR AND VESTIBULE
4/15/11	4	ADD STORAGE SHED AND MODIFY PARKING
6/13/18	5	ADD REVISIONS TO GABION FOREBAY FOR ENTRANCE REVISIONS
02/14/2021	6	ADD REVISIONS TO GABION FOREBAY FOR ADDITION TO CHAPEL
2/2/2022	7	ADDITIONS TO THE EXISTING BUILDING, MODIFY BREAKING, ADD SIGN #1 & 2
12/6/2023	8	AS BUILT BY SILL ENGINEER THIS LEAD



FOR REVISION #5 & 10? ONLY



- NOTES:
1. ALL ASPHALT PAVING AND PATCHING SHALL BE IN ACCORDANCE WITH ARTICLE 4, SECTIONS 400 THRU 405 OF THE HOWARD COUNTY CONSTRUCTION SPECIFICATIONS AND DETAILS VOLUME IV.
  2. ALL CONCRETE PAVING SHALL BE IN ACCORDANCE WITH SECTION 500 ARTICLE 5 OF THE HOWARD COUNTY CONSTRUCTION SPECIFICATIONS AND DETAILS VOLUME IV.



SDP-01-120

**SITE PLAN (PROPOSED CONDITIONS) CHURCH OF THE RESURRECTION**

ADDRESS CHART	
LOT/PARCEL #	STREET ADDRESS
L1/P1117	3175 PAULSKIRK DRIVE, ELLICOTT CITY, MD 21043

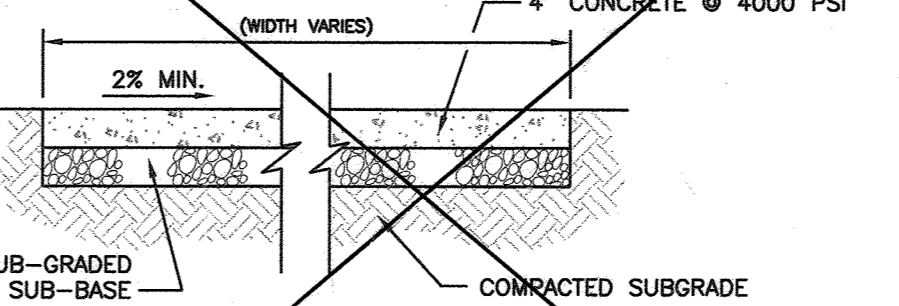
PERMIT INFORMATION CHART				
Subdivision Name	Plat #	Section/Area	N/A	Lot/Parcel No.
CHURCH OF THE RESURRECTION	3476	R-20	24	L1/P1117
Plot # or L/F	Grid #	Zoning	Tax Map No.	Elect Dist
3476	5	R-20	24	2
Water Code	F06	Sewer Code	1404800	Census Tract
				6022

**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

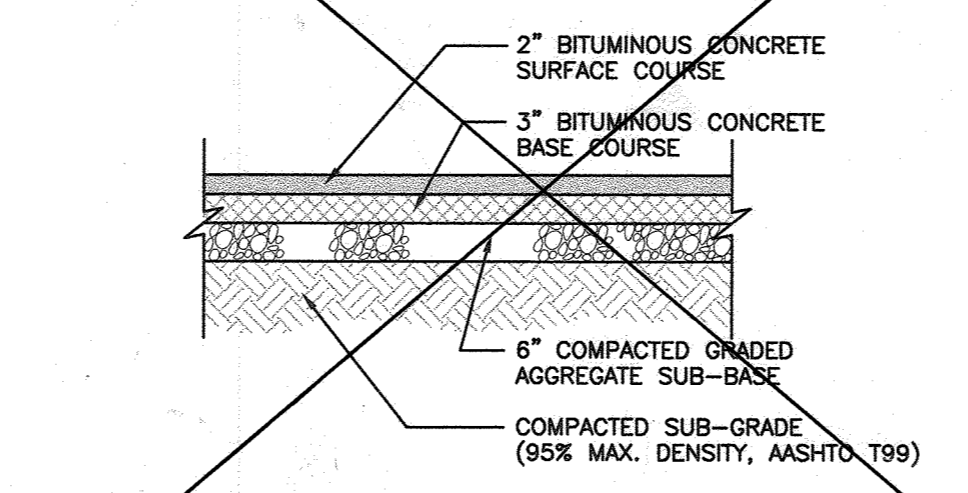
DESIGN BY: RHW		C-003
DRAWN BY: CMH/KO		
CHECKED BY: RHW		
DATE: SEPT. 14, 2001		
SCALE: 1"=50'		
W.O. NO.: 2017162.00		3 SHEET OF 21

AS BUILT CERTIFICATION:  
 THERE IS NO AS BUILT INFORMATION ON THIS SHEET  
 PAUL M. SILL PROFESSIONAL ENGINEER  
 LICENSE NO. 32025  
 DATE 1-11-24

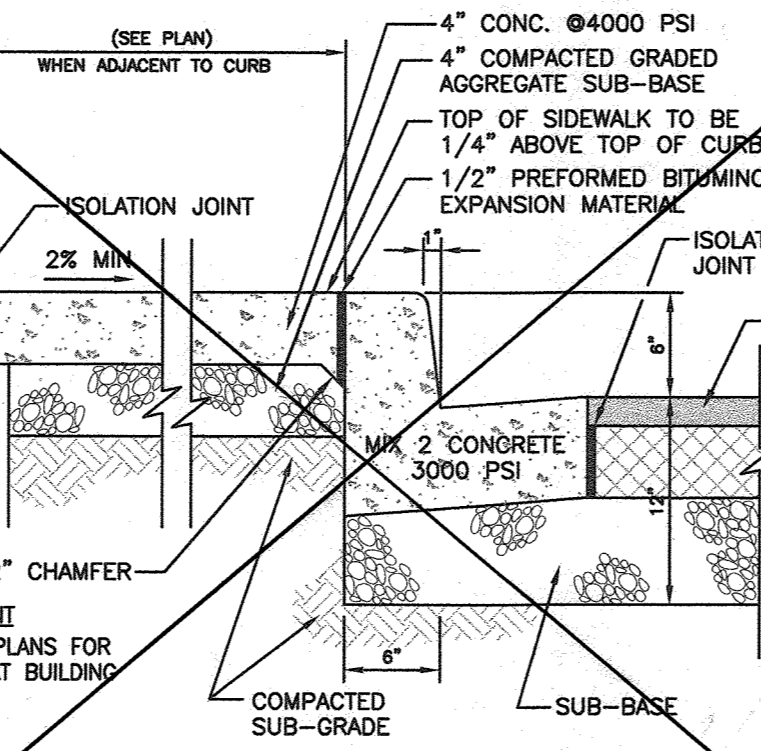
**HO. CO. STD. R-3.05 TYPICAL SIDEWALK DETAIL (N.T.S.)**



**TYPICAL BITUMINOUS PAVEMENT SECTION (ON-SITE PARKING LOT PAVEMENT) (N.T.S.)**

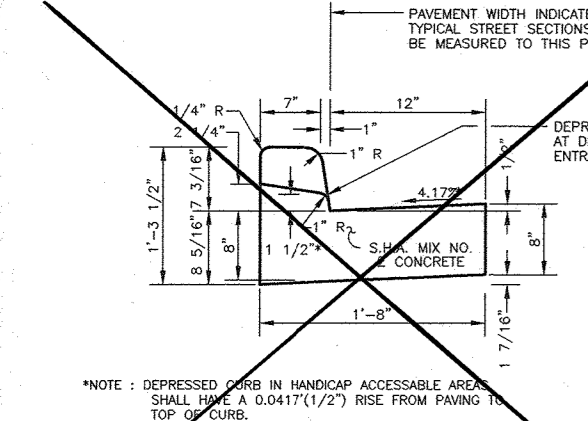
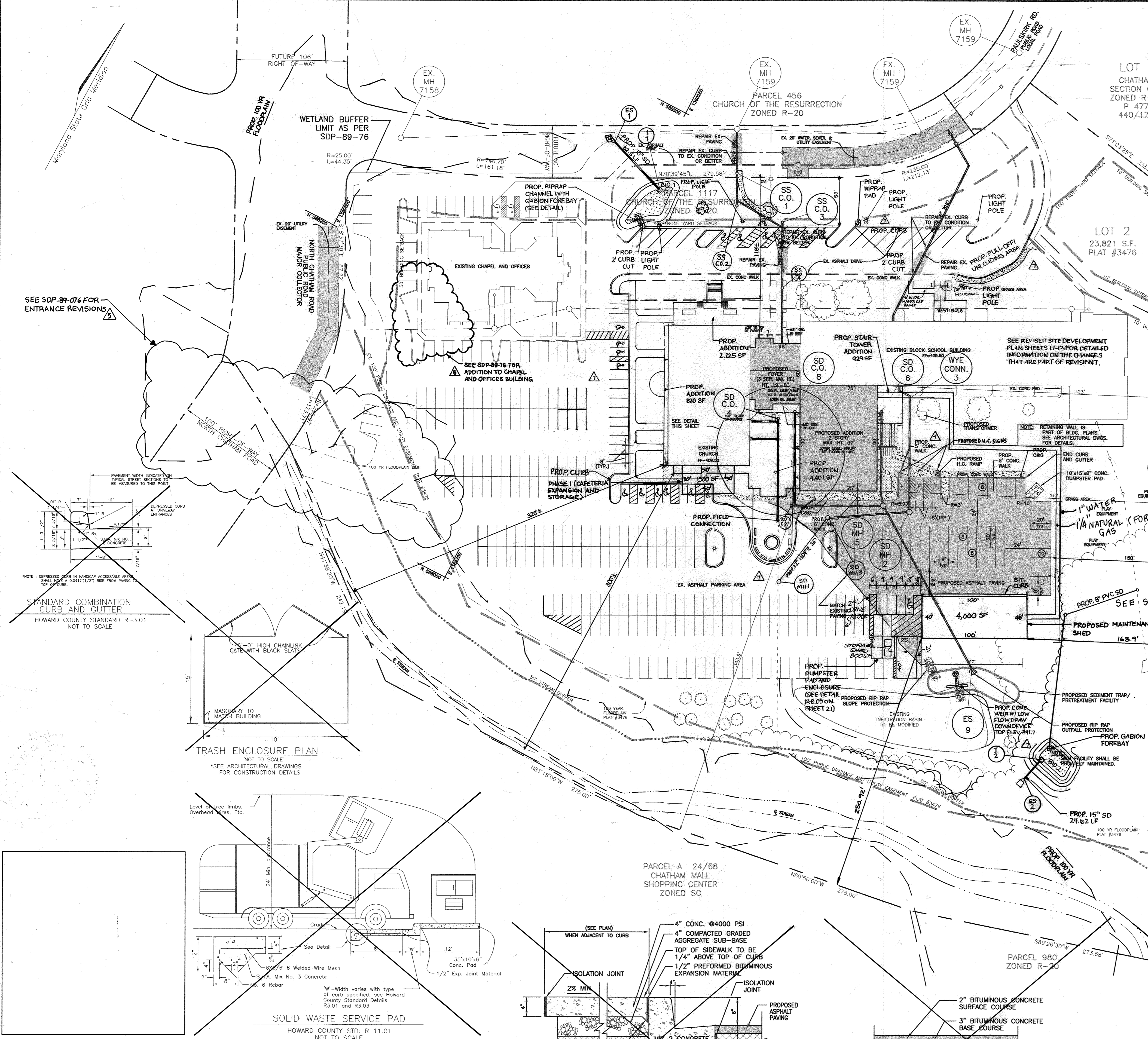


**HO. CO. STD. R-3.05 TYPICAL SIDEWALK AT BUILDING (N.T.S.)**

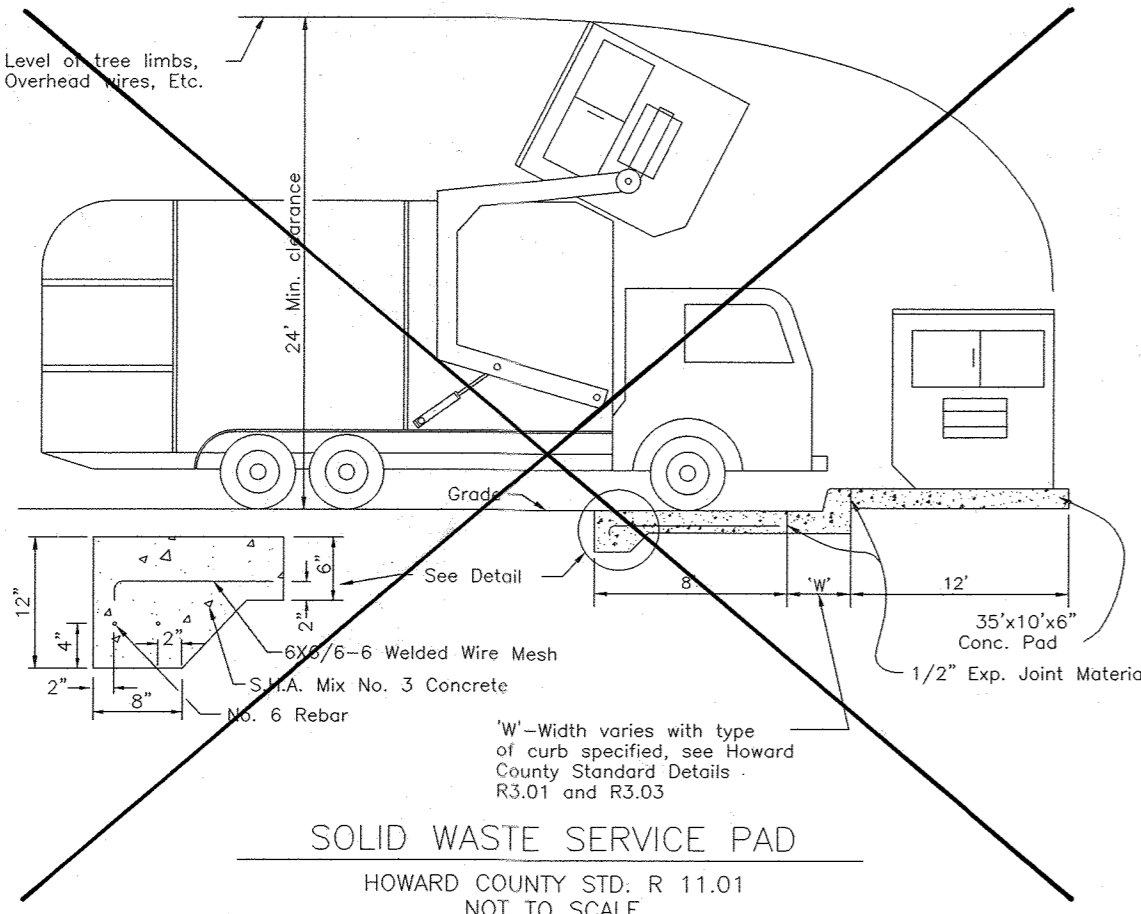
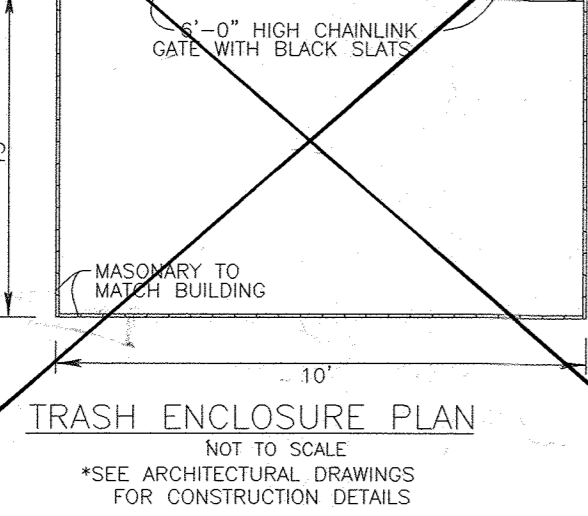


BEFORE BEGINNING CONSTRUCTION CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO EXCAVATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief Development Engineering Division  
 Chief Division of Land Development  
 County Health Officer  
 Howard County Health Department



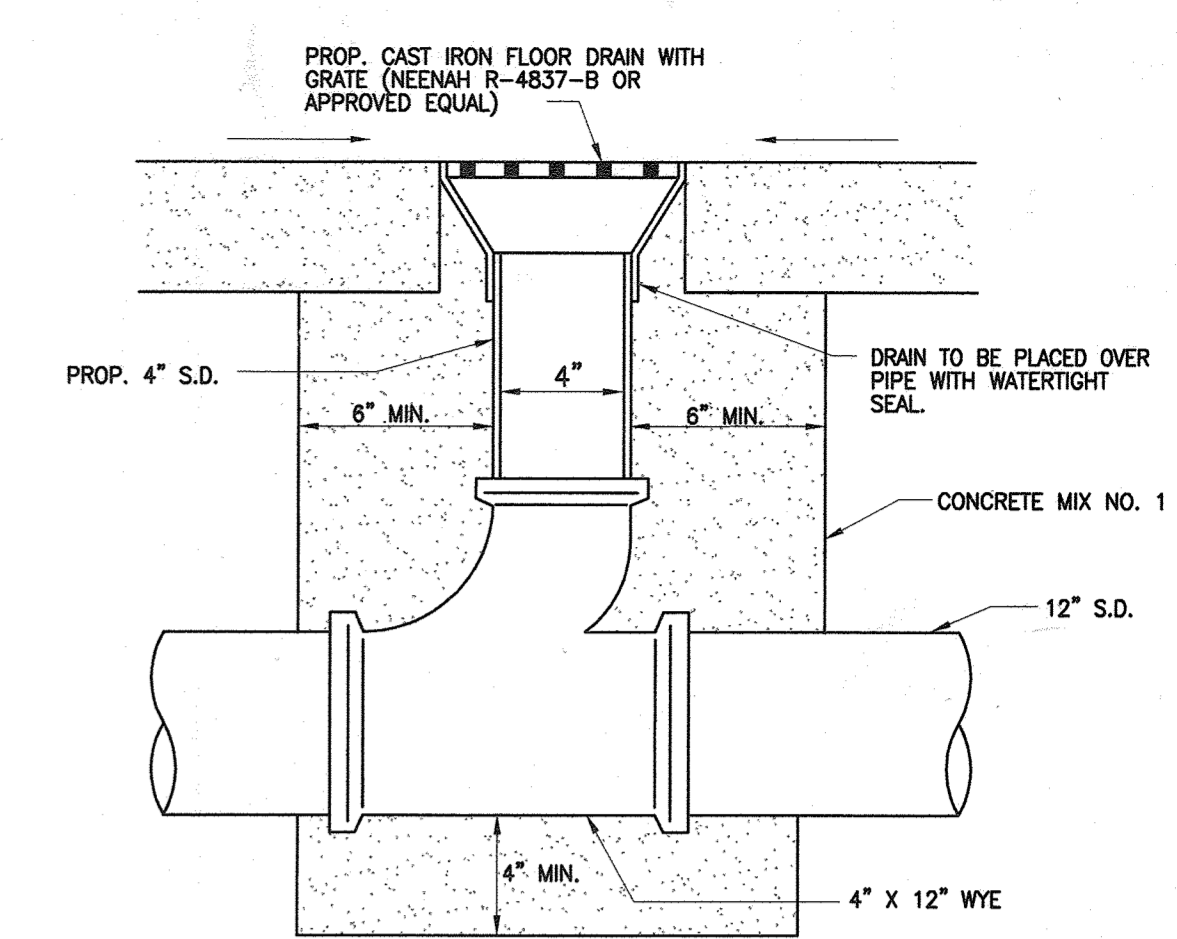
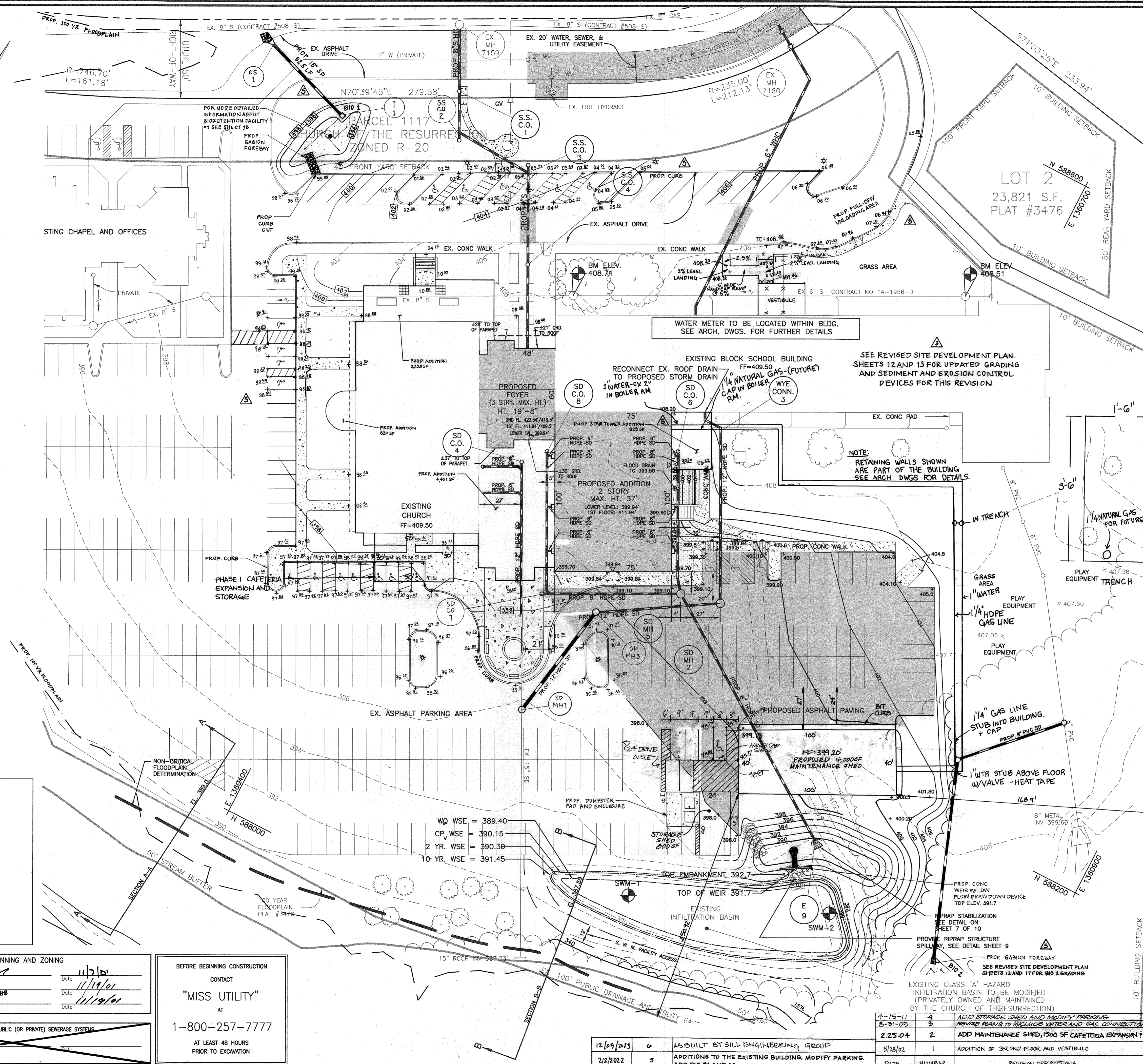
STANDARD COMBINATION CURB AND GUTTER  
 HOWARD COUNTY STANDARD R-3.01  
 NOT TO SCALE



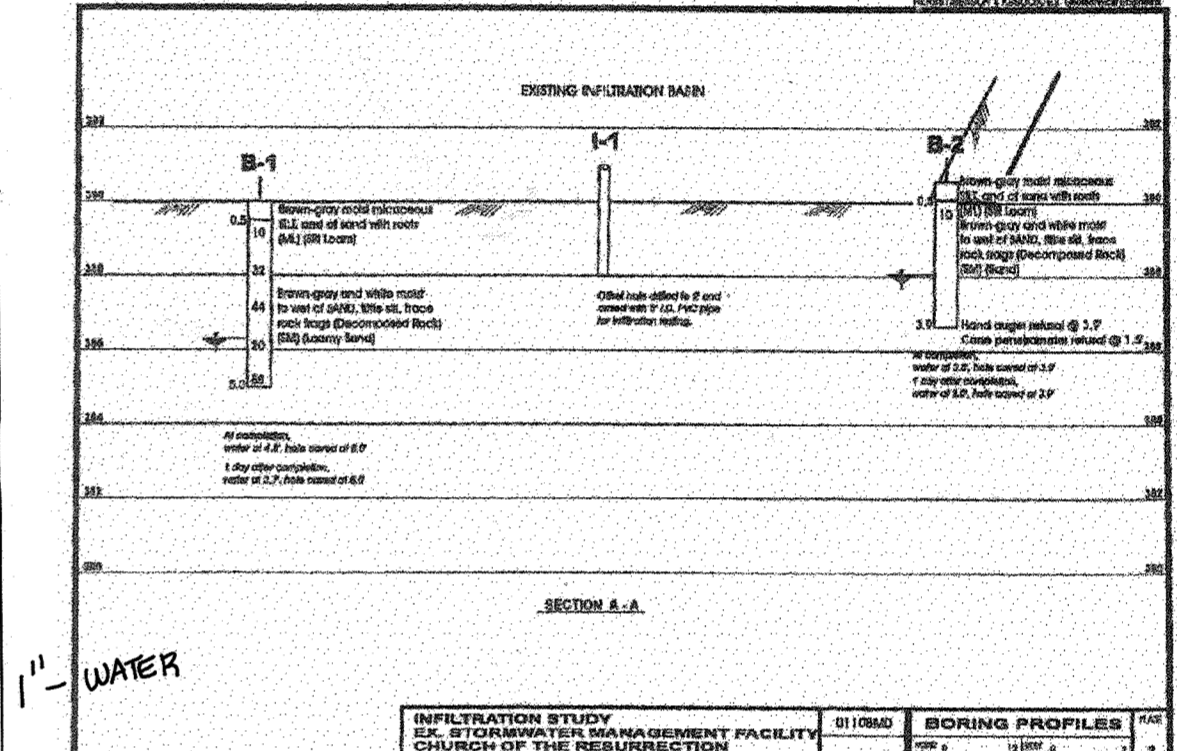
K:\PROJECTS\2017162\ENGR\dwg\SDP-01-120.dwg Thu Oct 18 09:01:56 2001 JAJ

AS-BUILT

SDP-01-120



**SLAB DRAIN BETWEEN WALL AND STORE**  
 N.T.S.  
 AS BUILT CERTIFICATION:  
 THERE IS NO AS BUILT INFORMATION ON THIS SHEET  
 PAUL M. SILL PROFESSIONAL ENGINEER  
 LICENSE NO. 32025  
 DATE 11-1-24



**GENERAL NOTES FOR GRADING:**  
 1. COMPACTION IN BUILDING AND PAVEMENT AREAS TO BE AT 95% AND COMPACTION IN LANDSCAPING AREAS TO BE AT 90%, TO MEET ASTM D-1557 REQUIREMENTS.  
 2. IT IS RECOMMENDED A GEOTECHNICAL ENGINEER BE RETAINED TO MONITOR EARTHWORK ACTIVITIES TO MAKE APPROPRIATE RECOMMENDATIONS AS NECESSARY.

SDP-01-120

**SITE GRADING AND UTILITY PLAN  
 CHURCH OF THE RESURRECTION**

ADDRESS CHART

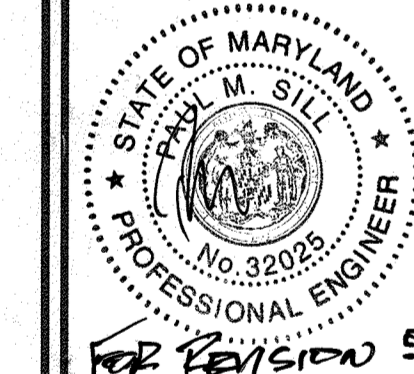
LOT/PARCEL #	STREET ADDRESS
L1/P1117	3175 PAULSKIRK DRIVE, ELLICOTT CITY, MD 21043

PERMIT INFORMATION CHART

Subdivision Name	PLAT #3476	Section/Area	N/A	Lot/Parcel No.	L1/P1117
CHURCH OF THE RESURRECTION					
Plot # or L/F	3476	Grid #	5	Zoning	R-20
		Tax Map No.	24	Elect Dist	2
		Census Tract			6022
Water Code	F06	Sewer Code	1404800		

**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY:	RHV	C-004
DRAWN BY:	CMH/KO	
CHECKED BY:	RHV	
DATE:	SEPT. 14, 2001	
SCALE:	1"=30'	4 SHEET OF 21
W.O. NO.:	2017162.00	



**APPROVED:** DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division Date 11/19/01  
 Chief, Division of Planning and Zoning Date 11/19/01  
 Director Date 11/19/01

**BEFORE BEGINNING CONSTRUCTION CONTACT**  
 "MISS UTILITY"  
 AT  
 1-800-257-7777  
 AT LEAST 48 HOURS PRIOR TO EXCAVATION

**APPROVED:** FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS  
 County Health Officer  
 Howard County Health Department

DATE	NUMBER	REVISION DESCRIPTIONS
12/09/2015	4	AS BUILT BY SILL ENGINEERING GROUP
2/22/2022	5	ADDITIONS TO THE EXISTING BUILDING, MODIFY PARKING, APP BIO #1 AND #2
4-15-11	4	ADD STORAGE SHED AND MODIFY PARKING
8-31-05	3	REVISE PLANS TO INCLUDE WATER AND GAS CONNECTION
2.25.04	2	ADD MAINTENANCE SHED, 1500 SF CAFETERIA EXPANSION + STORAGE
5/28/02	1	ADDITION OF SECOND FLOOR AND VESTIBULE

**SOILS CLASSIFICATION**

TYPE	DESCRIPTION	CLASS
MC2	MANOR LOAM	B
MD3	MANOR LOAM	B

**ESTIMATE OF SEDIMENT CONTROL QUANTITIES**

SILT FENCE: 0 L.F.  
 SILT FENCE/ASPHALT PAVING: 380 L.F.  
 SUPER SILT FENCE: 340 L.F.  
 STABILIZED CONSTRUCTION ENTRANCE: 1 EA.  
 INLET PROTECTION: 0 EA.

NOTE: THESE QUANTITIES ARE FOR SEDIMENT CONTROL USE ONLY. THE CONTRACTOR SHALL NOT RELY ON THESE QUANTITIES FOR ESTIMATING AND BIDDING PURPOSES.

- NOTES:**
1. ALL EXCAVATED MATERIAL SHALL BE DEPOSITED OFFSITE AT AN APPROVED LOCATION.
  2. PRE-TREATMENT FACILITY IS TO BE CLEANED OF ALL SEDIMENT PRIOR TO CONVERSION.
  3. INFILTRATION BASIN IS TO BE CLEANED OF ALL SEDIMENT TO ITS ORIGINAL (SDP-89-76) CONDITION.

**TRAP INFORMATION:**

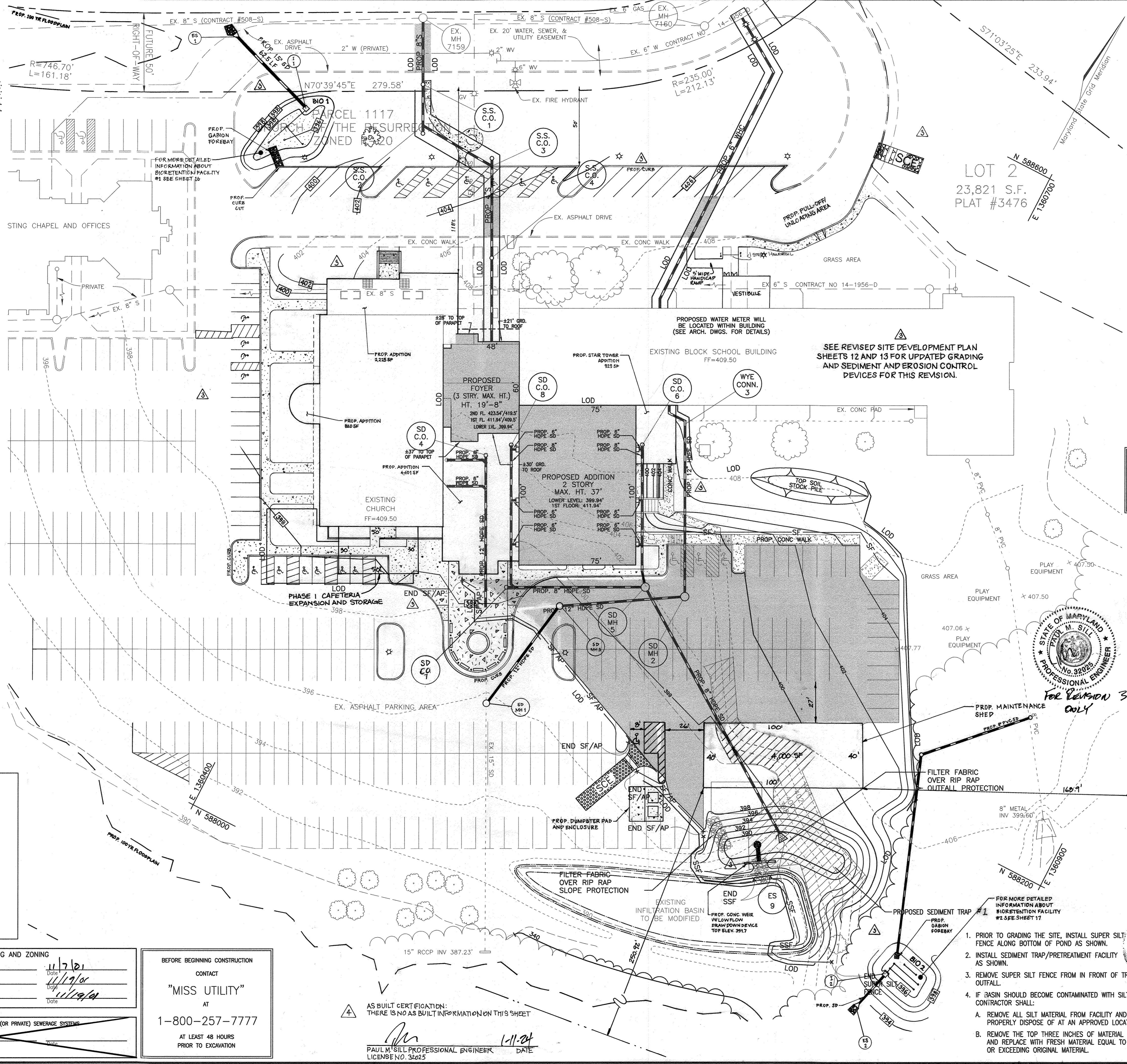
D.A.: 0.46 ACRES  
 BOTTOM TRAP: 390.00  
 TOP EMBANKMENT: 392.70  
 TOP OF WEIR: 391.7  
 STORAGE REQ'D: 1656 CU. FT.  
 STORAGE PROVIDED: 1670 CU. FT.

**LEGEND**

- SF SILT FENCE
- SF/AP SILT FENCE/ASPHALT PAVING
- SSF SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- PROPOSED ON-SITE ASPHALT
- PROPOSED CONCRETE PAVING
- STEEP SLOPE 2:1 50%

**TRAP #1 SCHEDULE:**

STONE OUTLET SEDIMENT TRAP, ST II  
 EXISTING D.A.: 0.68 AC.  
 PROPOSED D.A.: 0.46 AC.  
 STORAGE REQUIRED: 2,448 CF.  
 TOTAL STORAGE PROVIDED: 2,450 C.F.  
 DRY STORAGE: 1,225 C.F.  
 WET STORAGE: 1,225 C.F.  
 WEIR LENGTH: 9 FT.  
 EMBANKMENT ELEV.: 392.70  
 WEIR CREST ELEV.: 391.70  
 CLEAN-OUT ELEV.: 390.40  
 BOTTOM ELEV.: 390.00  
 BOTTOM DIMENSIONS: 15' x 11'



**SEQUENCE OF CONSTRUCTION**

1. OBTAIN HOWARD COUNTY GRADING PERMIT.
2. NOTIFY HOWARD COUNTY AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION.
3. INSTALL SILT FENCE, SILT FENCE/ASPHALT PAVING, SUPER SILT FENCE, STONE OUTLET SEDIMENT TRAP AND STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM AS INDICATED ON PLAN. (2 DAYS)
4. PRIOR TO COMMENCING WORK, CONSTRUCTION MUST RECEIVE PERMISSION TO PROCEED FROM SEDIMENT CONTROL INSPECTOR.
5. PERFORM DEMOLITION WORK AS INDICATED ON THE DEMOLITION PLAN AND CLEARING AND GRUBBING. (10 DAYS)
6. ROUGH GRADE SITE. CARE MUST BE TAKEN NOT TO CONTAMINATE THE EXISTING INFILTRATION BASIN WITH SILT.
7. BEGIN CONSTRUCTION OF PROPOSED GYMNASIUM AND FOYER. (120 DAYS)
8. INSTALL STORM DRAIN SYSTEM AND UTILITIES. (10 DAYS)
9. INSTALL CURB AND GUTTER, SIDEWALK, BASE AND PAVING AND OVERLAY. (15 DAYS)
10. MODIFY EXISTING INFILTRATION BASIN AND RETROFIT EXISTING SEDIMENT TRAP TO PRE-TREATMENT FACILITY. (CARE MUST BE TAKEN NOT TO CONTAMINATE EXISTING BASIN WITH SILT). (10 DAYS)
11. FINE GRADE, STABILIZE SITE AND INSTALL LANDSCAPING. (10 DAYS)
12. REMOVE SEDIMENT CONTROL MEASURES AFTER RECEIVING PERMISSION FROM SEDIMENT CONTROL INSPECTOR.

**NOTE:**

TIMES SHOWN ARE APPROXIMATE, AND FOR SEDIMENT CONTROL USE ONLY. THE SEQUENCE MAY BE MODIFIED AFTER RECEIVING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, AND AS LONG AS THE INTENTION OF THIS PLAN IS NOT COMPROMISED. IT IS THE INTENTION OF THIS PLAN THAT CONSTRUCTION BE CARRIED OUT IN AN EXPEDITIOUS AND SAFE MANNER SUCH AS TO MINIMIZE DISRUPTION OF BUSINESS WHILE MAINTAINING PROPER SEDIMENT CONTROL MEASURES.

**SITE ANALYSIS DATA**

1. TOTAL SITE AREA:	52,707.6 S.F. = 1.21 AC.±	23.63 AC.±
2. TOTAL DISTURBED AREA:	32,670 S.F. = 0.75 AC.± (Net)	
3. TOTAL IMPERVIOUS AREA:	7,811 S.F. = 0.18 AC.±	
4. AREA TO BE VEGETATIVELY STABILIZED:		
5. EARTH WORK:		
CUT	= 2300 CY±	
FILL	= 650 CY±	
TOPSOIL	= 1000 CY±	

**NOTE:** THESE QUANTITIES ARE FOR SEDIMENT CONTROL USE ONLY. CONTRACTOR SHALL NOT RELY ON THESE QUANTITIES FOR ESTIMATING AND BIDDING PURPOSES.

**NOTE:**

PROPOSED LOCATION OF STABILIZED CONSTRUCTION ENTRANCE IS RECOMMENDED. THE LOCATION MAY BE MODIFIED AS THE CONTRACTOR SEES FIT, AFTER RECEIVING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR.

**UTILITY NOTES:**

1. CONTRACTOR SHOULD OPEN UP TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWN SLOPE) THE TRENCH.
2. PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
3. ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

DATE	NUMBER	REVISION DESCRIPTIONS
12/09/25	4	AS BUILT BY GILL ENGINEERING GROUP
2/2/2022	3	ADDITIONS TO THE EXISTING BUILDING, MODIFY PARKING, ADD BIO #1 AND #2.
2.25.04	2	ADD MAINTENANCE SHED, 1500 SF CAPE, EXPANSION AND STORAGE
5/28/02	1	ADDITION OF SECOND FLOOR AND VESTIBULE

**SEDIMENT AND EROSION CONTROL PLAN**

**CHURCH OF THE RESURRECTION**

**ADDRESS CHART**

LOT/PARCEL #	STREET ADDRESS
L1/P1117	3175 PAULSKIRK DRIVE, ELLICOTT CITY, MD 21043

**PERMIT INFORMATION CHART**

Subdivision Name:	PLAT #3476	Section/Area:	N/A	Lot/Parcel No.:	L1/P1117
CHURCH OF THE RESURRECTION					
Plot # or L/F:	3476	Grid #:	5	Tax Map No.:	24
		Zoning:	R-20	Elect. Dist.:	2
				Census Tract:	6022
Water Code:	F06	Sewer Code:	1404800		

**FREDERICK WARD ASSOCIATES, INC.**

ENGINEERS: 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 Phone: 410-290-9550 Fax: 410-720-6226  
 ARCHITECTS: Bel Air, Maryland Columbia, Maryland Warrenton, Virginia  
 SURVEYORS: Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY:	RHV	C-005
DRAWN BY:	CMH/KO	
CHECKED BY:	RHV	
DATE:	SEPT. 14, 2001	
SCALE:	1"=30'	
W.O. NO.:	2017162.00	5 SHEET OF 21

**APPROVED:** DEPARTMENT OF PLANNING AND ZONING

Chief, Department of Planning and Zoning: *[Signature]* Date: 11/7/21  
 Chief, Division of Land Development: *[Signature]* Date: 11/19/01  
 Director: *[Signature]* Date: 11/19/01

**APPROVED:** FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS

County Health Officer: \_\_\_\_\_  
 Howard County Health Department

**BEFORE BEGINNING CONSTRUCTION**

CONTACT

"MISS UTILITY"  
 AT  
 1-800-257-7777

AT LEAST 48 HOURS PRIOR TO EXCAVATION

**AS BUILT CERTIFICATION:**

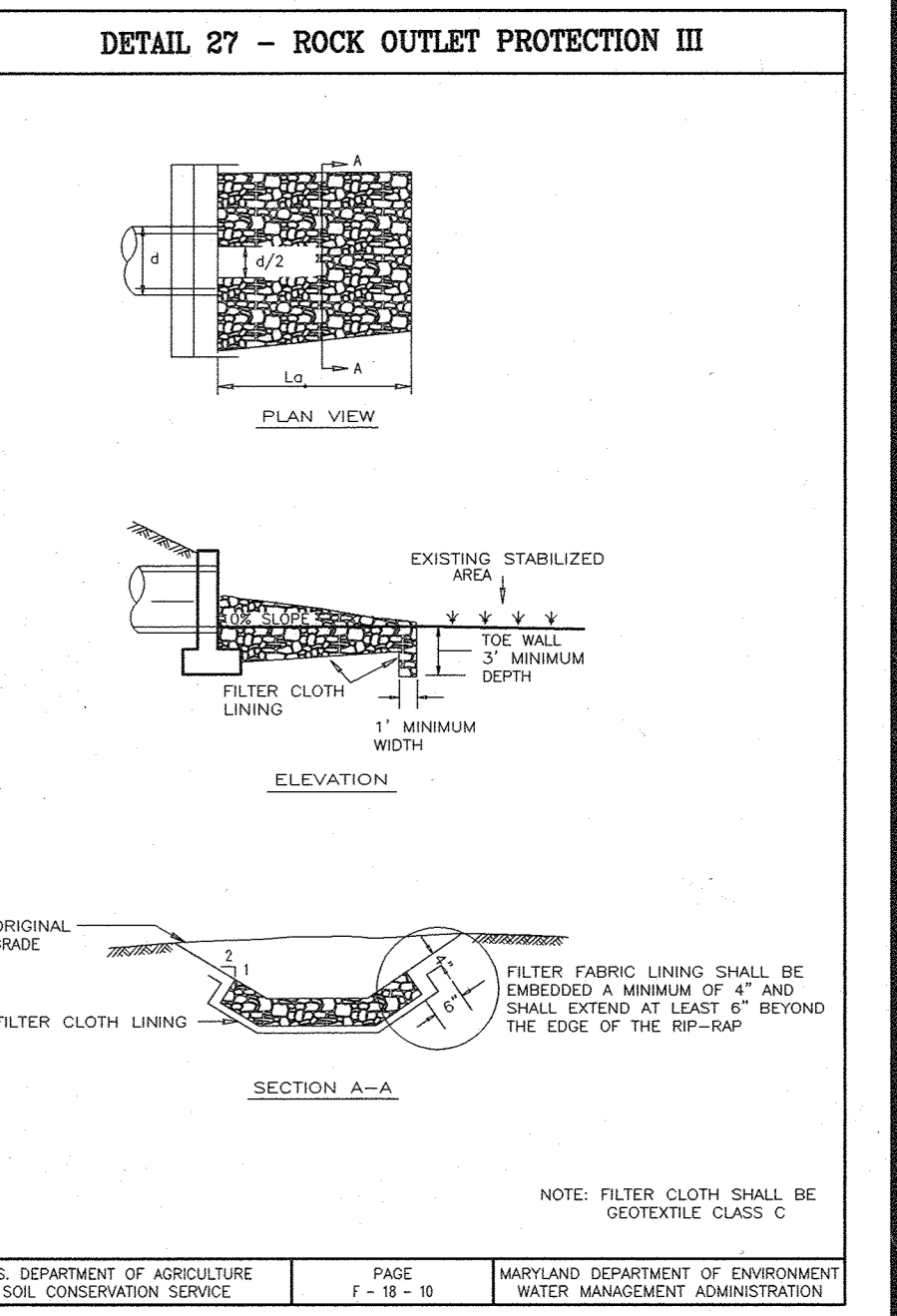
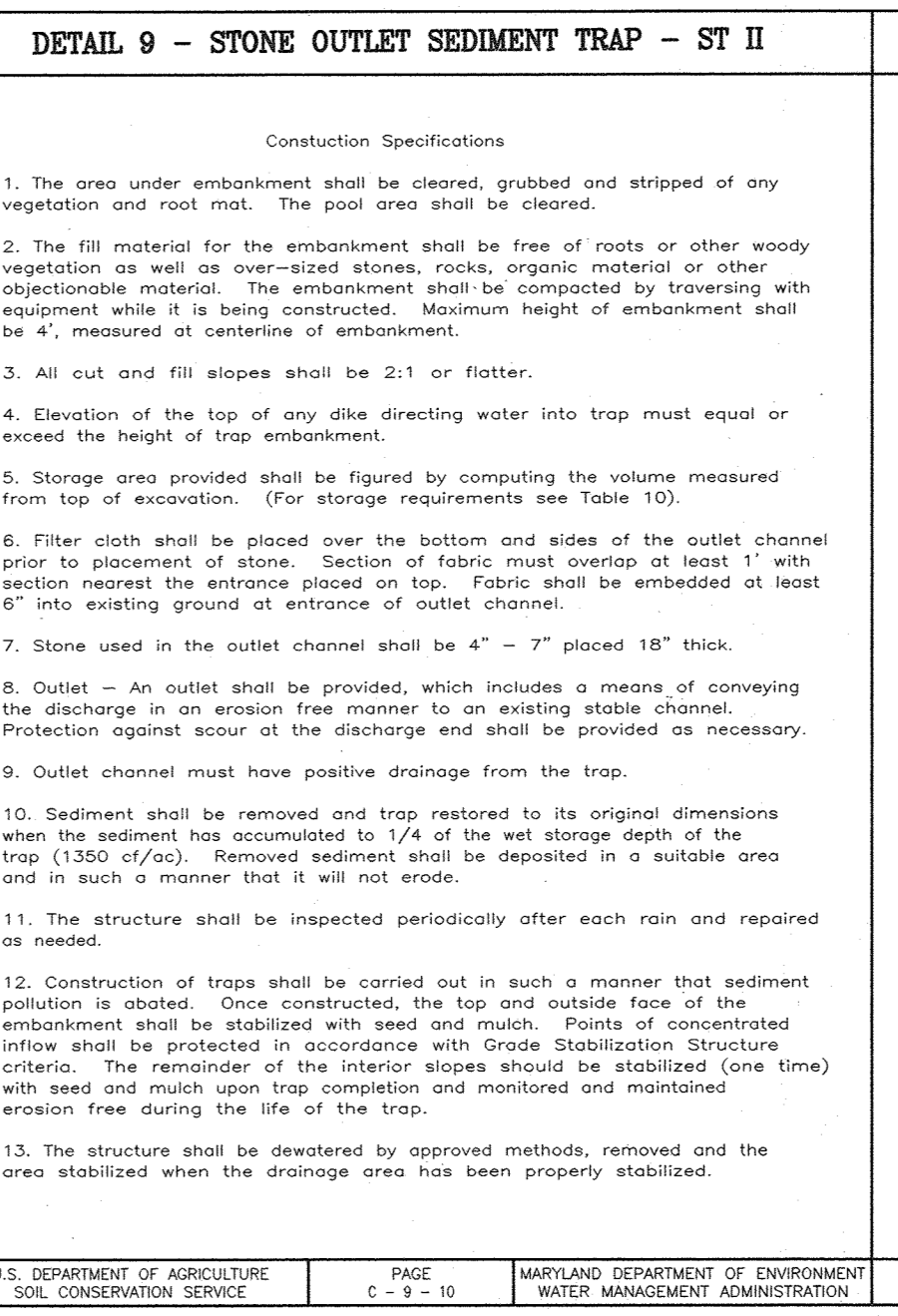
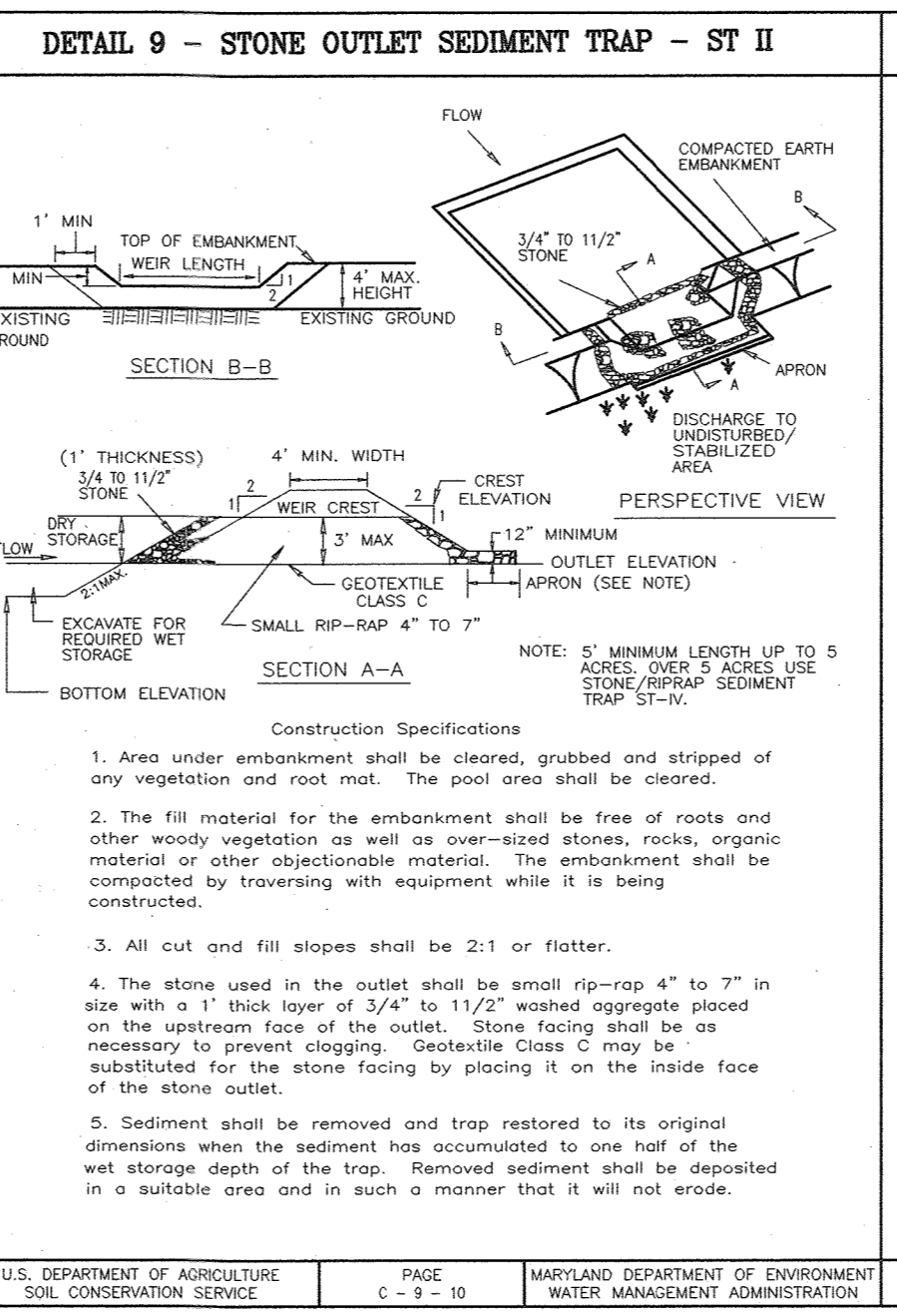
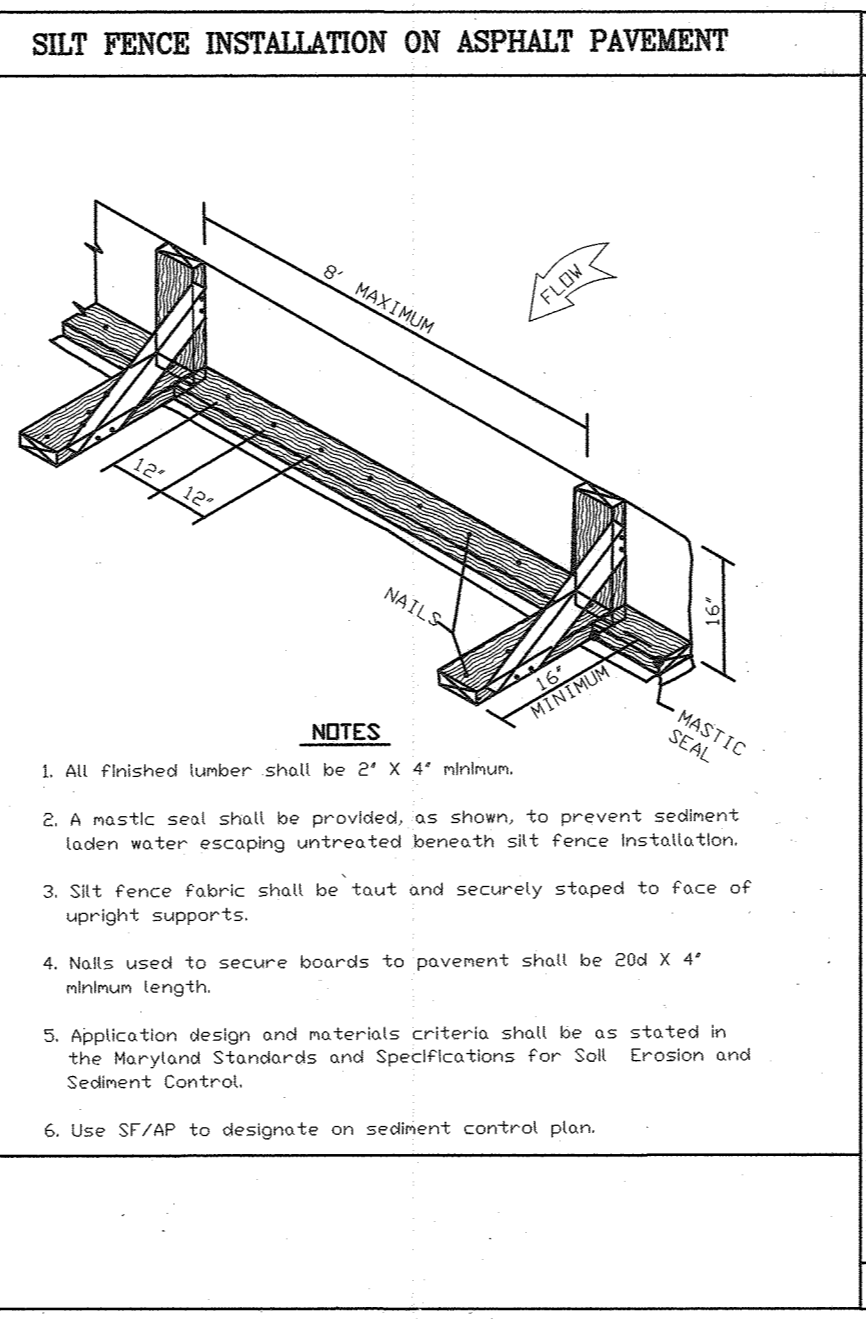
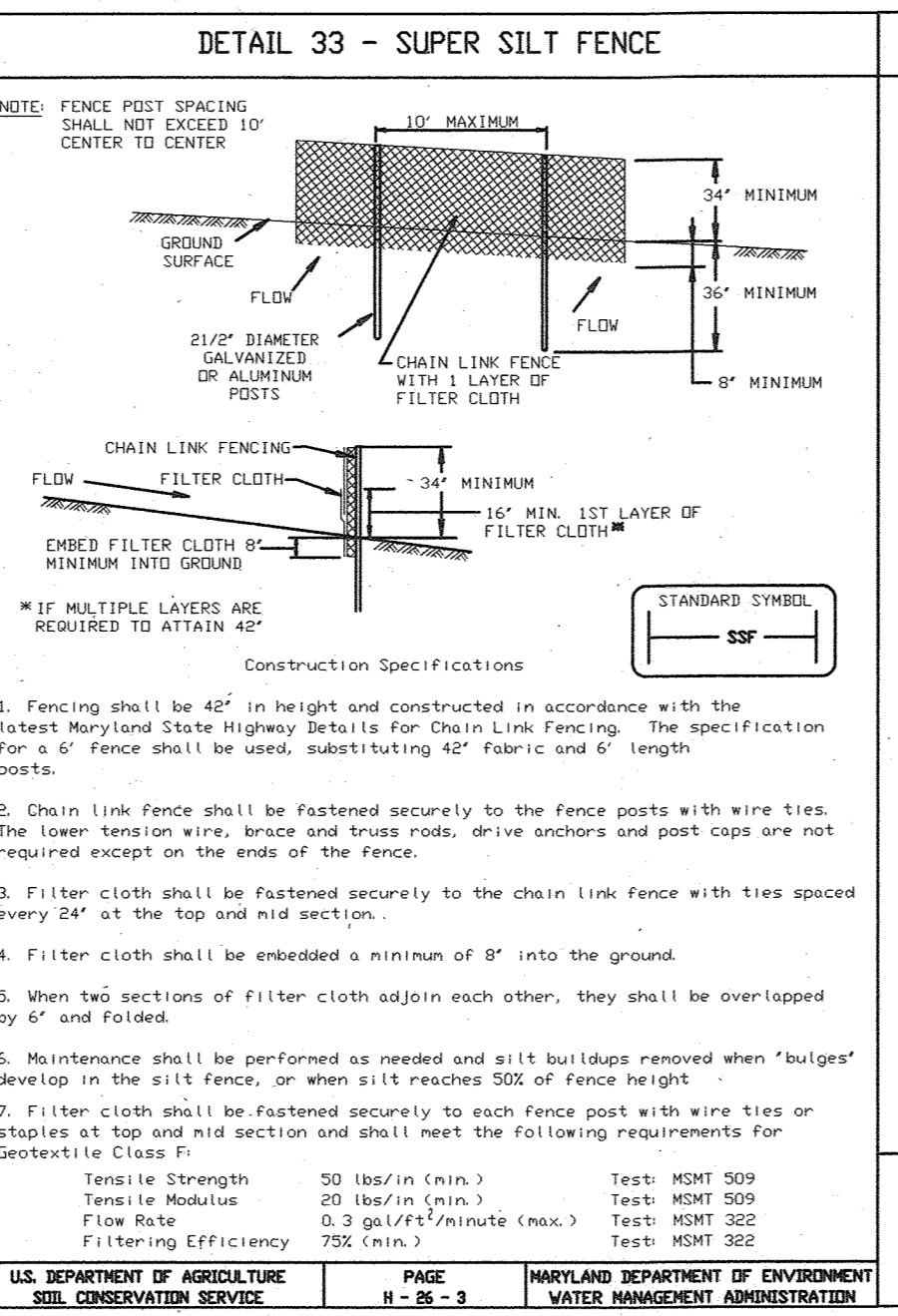
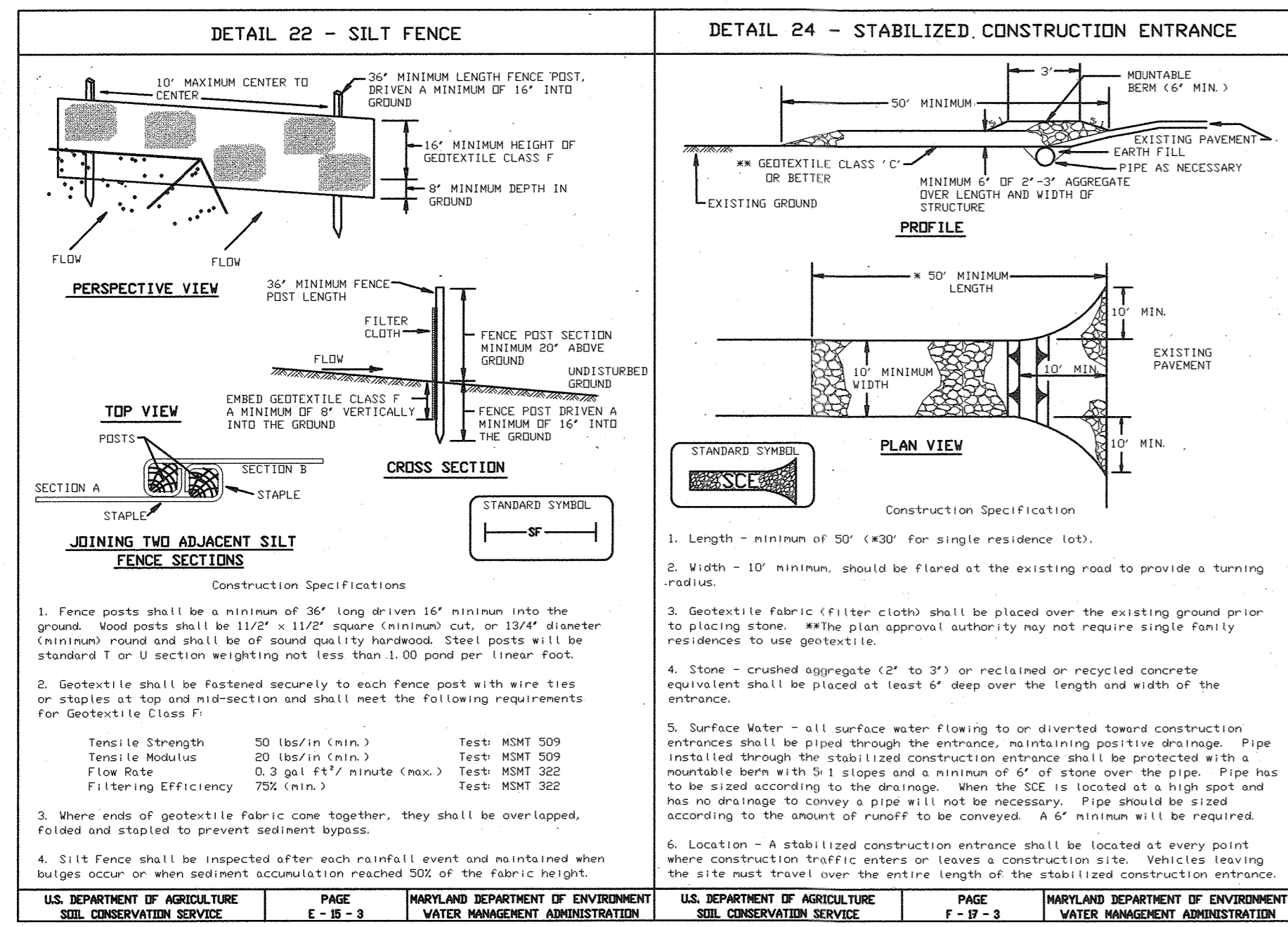
THERE IS NO AS BUILT INFORMATION ON THIS SHEET

*[Signature]* DATE: 1-11-24  
 PAUL M. GILL PROFESSIONAL ENGINEER  
 LICENSE NO. 32025

1. PRIOR TO GRADING THE SITE, INSTALL SUPER SILT FENCE ALONG BOTTOM OF POND AS SHOWN.
2. INSTALL SEDIMENT TRAP/PRE-TREATMENT FACILITY AS SHOWN.
3. REMOVE SUPER SILT FENCE FROM IN FRONT OF TRAP-OUTFALL.
4. IF BASIN SHOULD BECOME CONTAMINATED WITH SILT, CONTRACTOR SHALL:
  - A. REMOVE ALL SILT MATERIAL FROM FACILITY AND PROPERLY DISPOSE OF AT AN APPROVED LOCATION.
  - B. REMOVE THE TOP THREE INCHES OF MATERIAL AND REPLACE WITH FRESH MATERIAL EQUAL TO OR EXCEEDING ORIGINAL MATERIAL.

AS BUILT

SDP-01-120



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C-9-B-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F-17-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H-26-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C-9-B-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F-18-8A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F-18-8A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F-18-8A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### TYPICAL BASIN/TRAP ITEMS

- NOTE THAT BASINS AND TRAPS TYPICALLY NEED REMOVABLE PUMPING STATIONS (RPS) AND INFLOW PROTECTION (RRP, GM, PSD).
- TRAPS SHOULD MEET MINIMUM DIMENSIONS LISTED WITHIN TABLES 9 AND 10 OF MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. OTHERWISE PLEASE PROVIDE BAFFLE DESIGN.
- TRAP SCHEDULES SHOULD TYPICALLY INCLUDE THE FOLLOWING:
  - TRAP NUMBER
  - TRAP TYPE (DETAIL)
  - EXISTING (PRE-DISTURBANCE) DRAINAGE AREA
  - PROPOSED (POST-DISTURBANCE) DRAINAGE AREA
  - STORAGE REQUIRED (WET AND DRY)
  - STORAGE PROVIDED (WET AND DRY)
  - WEIR LENGTH OR RISER/BARREL SIZE
  - DEPTH BELOW OUTLET ELEV.
  - CHANNEL DEPTH (IF TYPE III)
  - OUTFALL LENGTH (IF TYPE IV)
  - EMBANKMENT ELEV.
  - WEIR CREST ELEV.
  - OUTLET ELEV. (=WEIR ELEV. + BOTTOM OF PERFORATED POST)
  - CLEAROUT ELEV.
  - BOTTOM ELEV.
  - BOTTOM DIMENSIONS
  - Outlet/Storage (If D.A. > A.C.)

### PERMANENT SEEDING NOTES

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

SEEDING PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL BY RACKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENEED).

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

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ FT) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS. PER ACRE 3-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ FT) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ FT) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR PERIODS MARCH 1ST THROUGH APRIL 30TH AND FROM AUGUST 15TH THROUGH NOVEMBER 15TH, SEED WITH 1 1/2 BU. PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ FT). FOR THE PERIOD MAY 1ST THROUGH AUGUST 14TH, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (0.7 LBS./1000 SQ FT). FOR THE PERIOD NOVEMBER 16TH THROUGH FEBRUARY 28TH, PROJECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70-90 LBS./1000 SQ FT) OF UNROOTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALS. PER ACRE (5 GALS./1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT OR HIGHER, USE 348 GALS. PER ACRE (8 GALS./1000 SQ FT) FOR ANCHORING.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ FT) OF UNROOTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GALS./1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GALS./1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

### ROCK OUTLET PROTECTION

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.
- Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile 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 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 geotextile. 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.

AS BUILT CERTIFICATION: THERE IS NO AS BUILT INFORMATION ON THIS SHEET.

PAUL M. SILL PROFESSIONAL ENGINEER LICENSE NO. 30225

### TEMPORARY SEEDING NOTES

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

SEEDING PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL BY RACKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENEED).

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

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ FT) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS. PER ACRE 3-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ FT) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ FT) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

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

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ FT) OF UNROOTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GALS./1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GALS./1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

### TOPSOIL CONSTRUCTION AND MATERIAL SPECIFICATIONS

TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.

TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSHELL, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

TOPSOIL APPLICATION

WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.

GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4" - 8" HIGHER IN ELEVATION.

TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4" SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SOODING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDING PREPARATION.

THESE TOPSOIL SPECIFICATIONS HAVE BEEN EDITED FROM THE 1994 EROSION AND SEDIMENT CONTROL STANDARDS TO FIT THIS PROJECT. IT IS STILL THE INTENTION TO FOLLOW THE REFERENCED 1994 EROSION AND SEDIMENT CONTROL STANDARDS IN THEIR ENTIRETY.

### HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION, PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855)
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISING THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1; B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS, POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7 OF THE "HOWARD COUNTY DESIGN MANUAL", STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G) TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:  
TOTAL AREA OF SITE = 236.3 ACRES ±  
AREA DISTURBED = 1.21 ACRES ±  
AREA TO BE ROOFED OR PAVED = 0.75 ACRES ± (New)  
AREA TO BE VEGETATIVELY STABILIZED = 0.18 ACRES ±  
TOTAL CUT = 2,300 CUBIC YARDS ±  
TOTAL FILL = 650 CUBIC YARDS ±  
TOTAL TOPSOIL = 1,000 CUBIC YARDS ±
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED OR THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

### STANDARDS AND SPECIFICATIONS FOR STABILIZATION WITH SOD

- CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOD.
  - SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF INCH, PLUS OR MINUS 25/64 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH.
  - STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
  - INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIERS WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT. BROKEN PADS AND TORN OR UNEVEN EDGES WILL NOT BE ACCEPTABLE.
  - SOD SHALL BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
  - SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED PRIOR TO ITS INSTALLATION.
- SITE PREPARATION
- FERTILIZER AND LIME APPLICATION RATES SHALL BE DETERMINED BY SOIL TEST. UNDER USUAL CIRCUMSTANCES WHERE THERE IS INSUFFICIENT TIME FOR A COMPLETE SOIL TEST, FERTILIZER AND LIME MATERIALS MAY BE APPLIED IN AMOUNTS SHOWN UNDER B. BELOW.
- A. PRIOR TO SOODING, THE SURFACE SHALL BE CLEARED OF ALL TRASH, DEBRIS, AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
- B. WHERE THE SOIL IS ACID OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 2 TONS/ACRE OR 100 POUNDS PER 1,000 SQUARE FEET IN ALL SOILS. 1000 POUNDS PER ACRE OR 25 POUNDS PER 1000 SQUARE FEET OF 10-10-10 FERTILIZER OR EQUIVALENT SHALL BE UNIFORMLY APPLIED AND MIXED INTO THE TOP 3 INCHES OF SOIL WITH THE REQUIRED LIME.
- C. ALL AREAS RECEIVING SOD SHALL BE UNIFORMLY FINE GRADED. HARD-PACKED EARTH SHALL BE SCARIFIED PRIOR TO PLACEMENT OF SOD.
- SOD INSTALLATION
- A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE THE SOIL SHALL BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD.
- B. THE FIRST ROW OF SOD SHALL BE LAIN IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY WEDGED AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. INSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR-DRYING OF THE ROOTS.
- C. ON SLOPING AREAS WHERE EROSION MAY BE A PROBLEM, SOD SHALL BE LAIN WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERED JOINTS. SECURE THE SOD BY TAMPING AND PEGGING OR OTHER APPROVED METHODS.
- D. AS SOODING IS COMPLETED IN ANY ONE SECTION, THE ENTIRE AREA SHALL BE ROLLED OR TAMPED TO INSURE SOLID CONTACT OF ROOTS WITH THE SOIL SURFACE. SOD SHALL BE WATERED IMMEDIATELY AFTER ROLLING OR TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD SHALL BE COMPLETED WITHIN EIGHT HOURS.
- SOD MAINTENANCE
- A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST TO A DEPTH OF 4 INCHES. WATERING SHOULD BE DONE DURING THE WARMER PART OF THE DAY TO PREVENT WILTING.
- B. AFTER THE FIRST WEEK, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE AND INSURE ESTABLISHMENT.
- C. FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF SHALL BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED.
- D. MAINTENANCE OF ESTABLISHED SOD SHOULD FOLLOW SPECIFICATIONS OUTLINED IN TABLE 54-1.

BY THE ENGINEER:

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

*Robert Vogel* 10/22/01  
SIGNATURE OF ENGINEER DATE  
ROBERT H. VOGEL, P.E.

BY THE DEVELOPER:

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 O. McGowan* 10-19-01  
SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

*Jim Ryan* 10/5/01  
SIGNATURE OF REVIEWER DATE  
SOIL-NATURAL RESOURCES CONSERVATION SERVICES

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

*Howard S.C.D.* 10/5/01  
SIGNATURE OF APPROVING AGENCY DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF-DIVISION OF LAND DEVELOPMENT DATE

DIRECTOR DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Walter Dammann* 10/1/01  
CHIEF, DIVISION OF PERMITS DATE

*Walter Dammann* 10/1/01  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Walter Dammann* 10/1/01  
DIRECTOR DATE

APPROVED: FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS

County Health Officer DATE  
Howard County Health Department

BEFORE BEGINNING CONSTRUCTION

CONTACT

"MISS UTILITY"

AT

1-800-257-7777

AT LEAST 48 HOURS PRIOR TO EXCAVATION

LOT/PARCEL #	STREET ADDRESS
L1/P1117	3175 PAULSKIRK DRIVE, ELICOTT CITY, MD 21043

PERMIT INFORMATION CHART			
Subdivision Name CHURCH OF THE RESURRECTION	PLAT # #3476	Section/Area N/A	Lot/Parcel No. L1/P1117
Plot # or L/F 3476	Grid # 5	Zoning R-20	Tax Map No. 24
		Elect Dist. 2	Census Tract 8022
Water Code F06		Sewer Code 1404800	

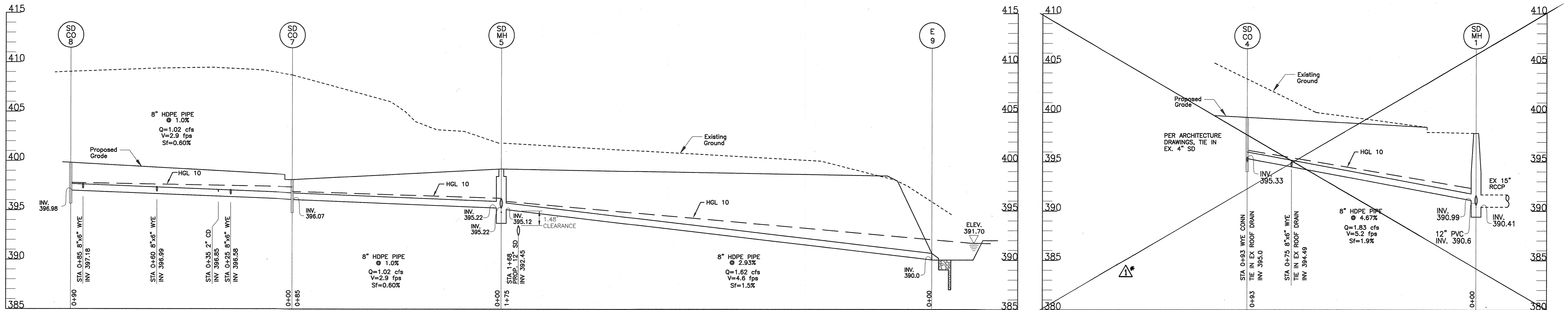
**FREDERICK WARD ASSOCIATES, INC.**

ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHW  
DRAWN BY: GPH/KO  
CHECKED BY: RHW  
DATE: SEPT. 14, 2001  
SCALE: AS SHOWN  
W.O. NO.: 2017162.00

6 SHEET OF 21

SDP-01-120

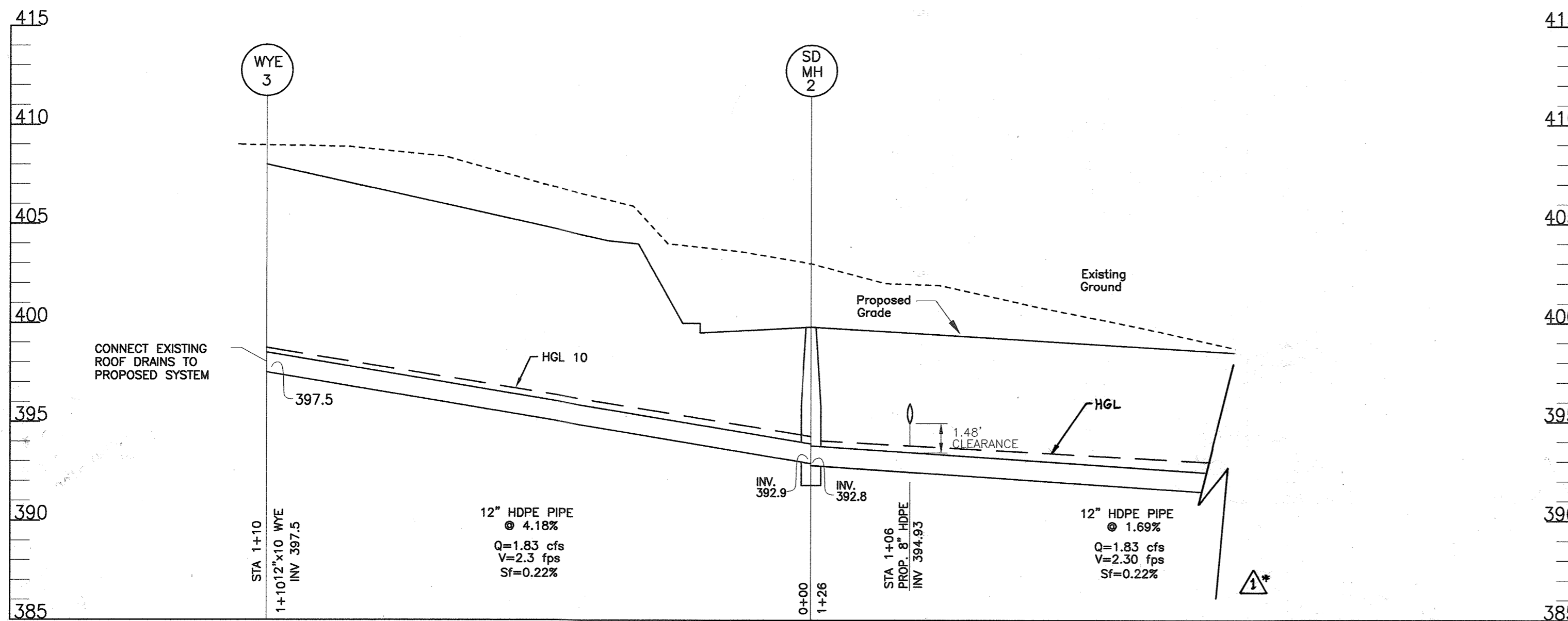


STORM DRAIN PROFILE

SCALE: HORIZONTAL - 1"=20'  
VERTICAL - 1"=5'

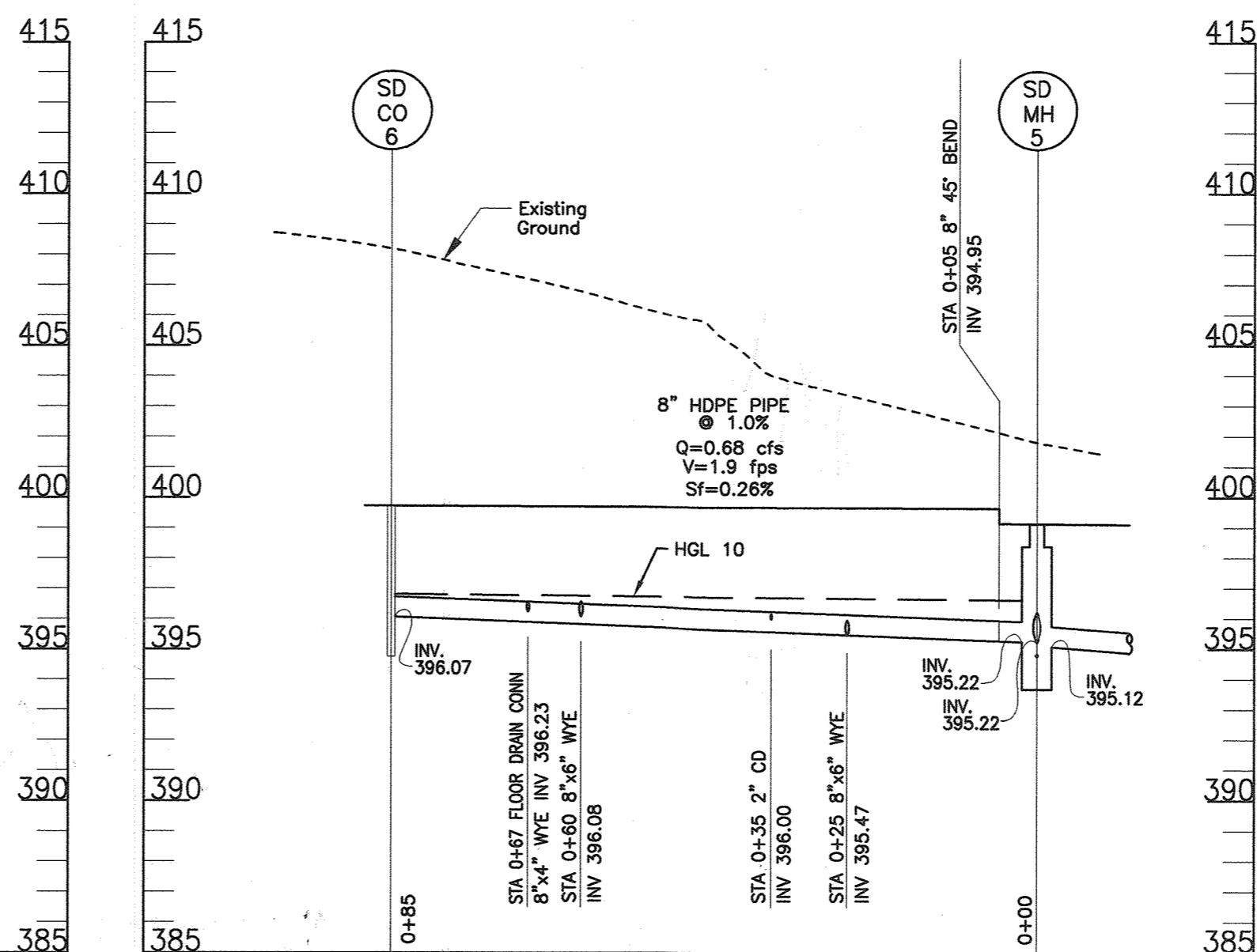
STORM DRAIN PROFILE

SCALE: HORIZONTAL - 1"=20'  
VERTICAL - 1"=5'



STORM DRAIN PROFILE

SCALE: HORIZONTAL - 1"=20'  
VERTICAL - 1"=5'



STORM DRAIN PROFILE

SCALE: HORIZONTAL - 1"=20'  
VERTICAL - 1"=5'

UTILITY STRUCTURE SCHEDULE				
NO.	DESCRIPTION	INV. IN	INV. OUT	TOP ELEV.
SD MH-2	SHALLOW MANHOLE HO. CO. STD 5.12	392.9	392.8	399.8
SD CO-4	6" STORM DRAIN CLEANOUT - SEE THIS SHEET	395.33		399.5
SD MH-5	SHALLOW MANHOLE HO. CO. STD 5.14	395.22	395.12	399.1
SD CO-6	6" STORM DRAIN CLEANOUT - SEE THIS SHEET	395.75		399.7
SD CO-7	6" STORM DRAIN CLEANOUT - SEE THIS SHEET	395.75		398.0
SD CO-8	6" STORM DRAIN CLEANOUT - SEE THIS SHEET	396.85		399.8
E-9	8" HDPE END SECTION - SEE DETAIL THIS SHEET		390.0	

NOTE: SEE SHEET 18 FOR ADDITIONAL INFO

GENERAL NOTES FOR STORM DRAIN CONSTRUCTION

- MANHOLE LIDS AND INLET GRATES SHALL BE TRAFFIC BEARING AND BICYCLE SAFE.
- ALL MANHOLE LIDS, INLET GRATES, AND CLEANOUT TOPS TO BE ADJUSTED TO MATCH CROSS-PITCH AND SLOPE OF EXISTING AND PROPOSED GRADES.
- ROOF DRAIN PIPE TO BE HDPE, OR PVC SCH. 40, UNLESS OTHERWISE NOTED.
- ALL STORM DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
- INFORMATION IS UNAVAILABLE REGARDING THE LOCATION OF PRODUCT PIPING AND ON-SITE TELEPHONE, GAS, AND ELECTRIC.

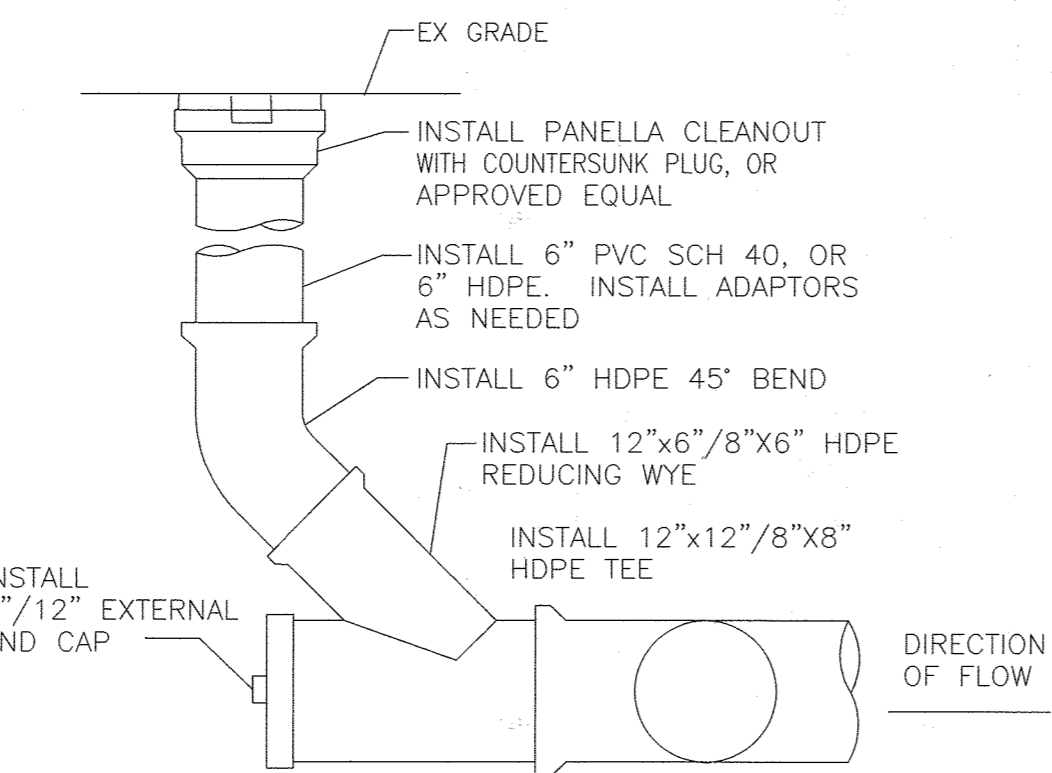
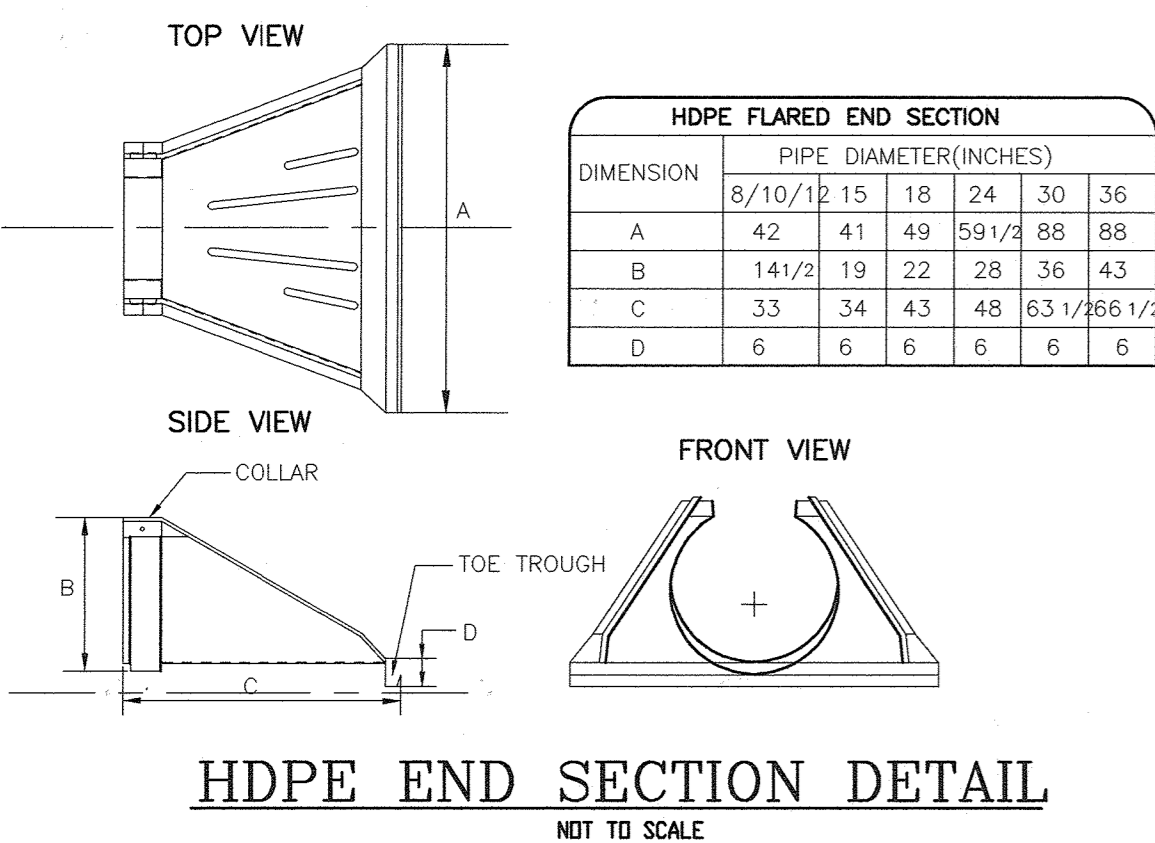
PIPE SCHEDULE

PIPE SPECIFICATION	LENGTH
8" HDPE	357'
12" HDPE	195'

NOTE: SEE SHEET 18 FOR ADDITIONAL INFO

\*SEE SHEET 18 FOR ADDITIONAL STORM DRAIN PROFILES

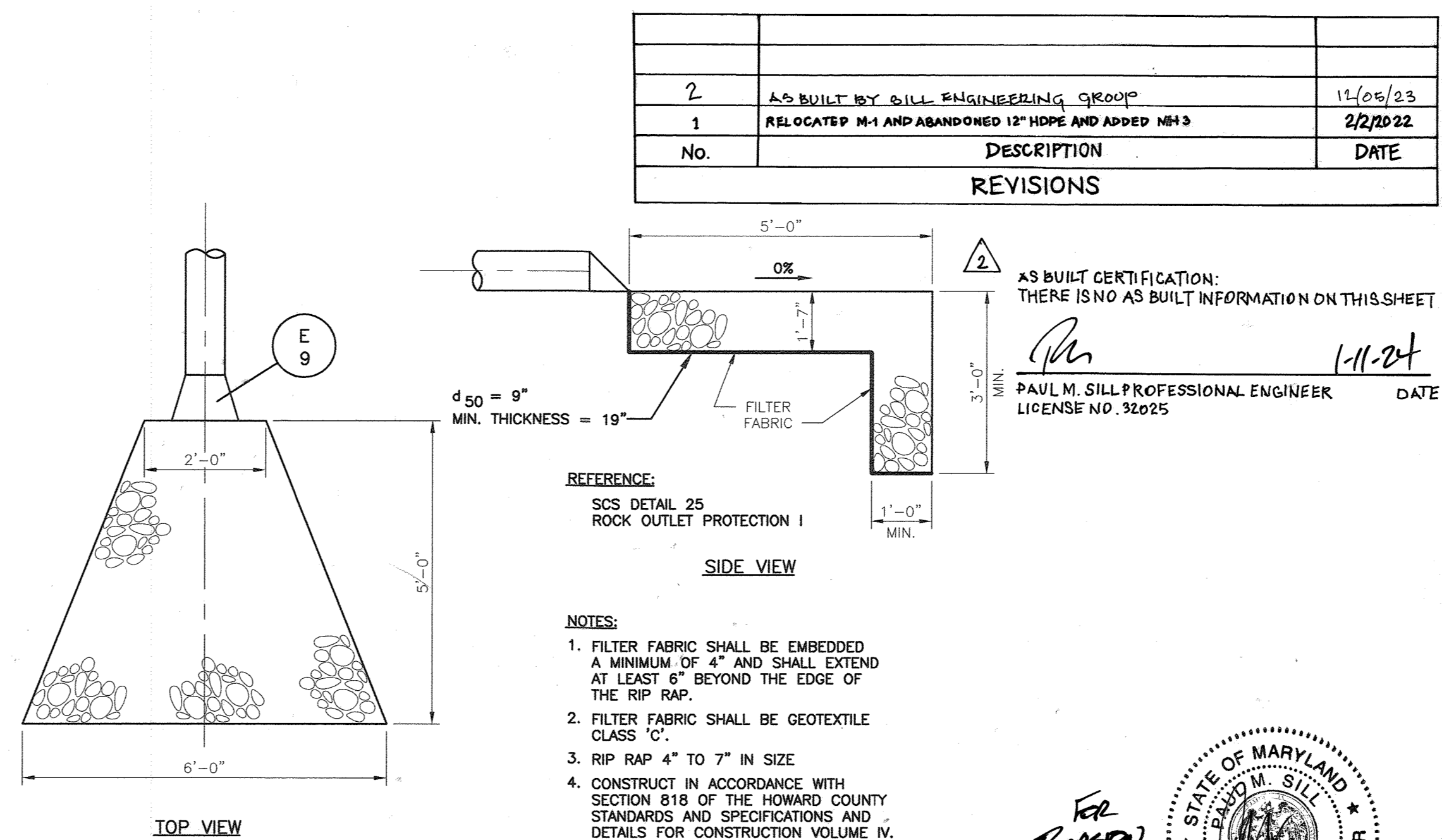
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DETAIL: CONNECTIONS AT CLEANOUTS

NOT TO SCALE

NOTE: ENCASE THE REDUCING WYE, END CAP, AND 45' BEND IN MINIMUM 3,000 PSI CONCRETE.



DETAIL: MSHA CLASS I RIP-RAP OUTFALL

NOT TO SCALE

NO.	DESCRIPTION	DATE
2	AS BUILT BY SILL ENGINEERING GROUP	11/05/23
1	RELOCATED M-1 AND ABANDONED 12" HDPE AND ADDED MHS	2/27/22

AS BUILT CERTIFICATION:  
THERE IS NO AS BUILT INFORMATION ON THIS SHEET

PAUL M. SILL PROFESSIONAL ENGINEER  
LICENSE NO. 32025

DATE: 1-11-24

- NOTES:
- FILTER FABRIC SHALL BE EMBEDDED A MINIMUM OF 4" AND SHALL EXTEND AT LEAST 6" BEYOND THE EDGE OF THE RIP RAP.
  - FILTER FABRIC SHALL BE GEOTEXTILE CLASS 'C'.
  - RIP RAP 4" TO 7" IN SIZE
  - CONSTRUCT IN ACCORDANCE WITH SECTION 818 OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS AND DETAILS FOR CONSTRUCTION VOLUME IV.



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief Development Engineering Division Date: 11/7/21

Chief Division of Land Development Date: 11/19/21

Director Date: 11/19/21

APPROVED: FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS

County Health Officer Date: \_\_\_\_\_

Howard County Health Department

BEFORE BEGINNING CONSTRUCTION CONTACT

"MISS UTILITY" AT 1-800-257-7777

AT LEAST 48 HOURS PRIOR TO EXCAVATION

STORM DRAIN PROFILES & DETAILS

CHURCH OF THE RESURRECTION

ADDRESS CHART	
LOT/PARCEL #	STREET ADDRESS
L1/P1117	3175 PAULSKIRK DRIVE, ELLICOTT CITY, MD 21043

PERMIT INFORMATION CHART			
Subdivision Name	PLAT #3476	Section/Area	N/A
CHURCH OF THE RESURRECTION			
Plot # or L/F	Grid #	Zoning	Tax Map No.
3476	5	R-20	24
Water Code	F06	Sewer Code	1404800
Lot/Parcel No.	L1/P1117		
Census Tract	6022		

FREDERICK WARD ASSOCIATES, INC.

ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354

ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226

SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHW

DRAWN BY: GPH/KO

CHECKED BY: RHW

DATE: SEPT. 14, 2001

SCALE: AS SHOWN

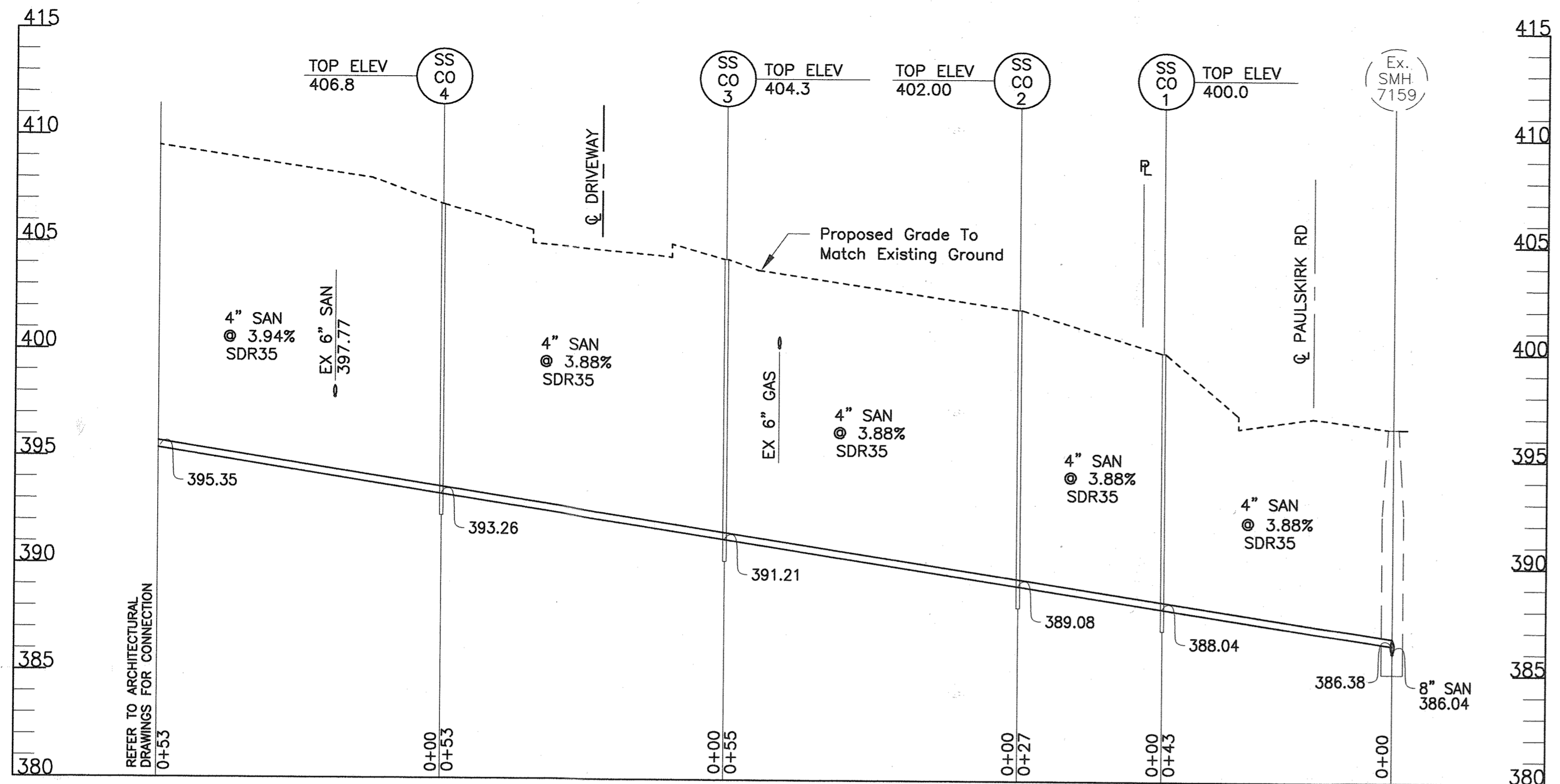
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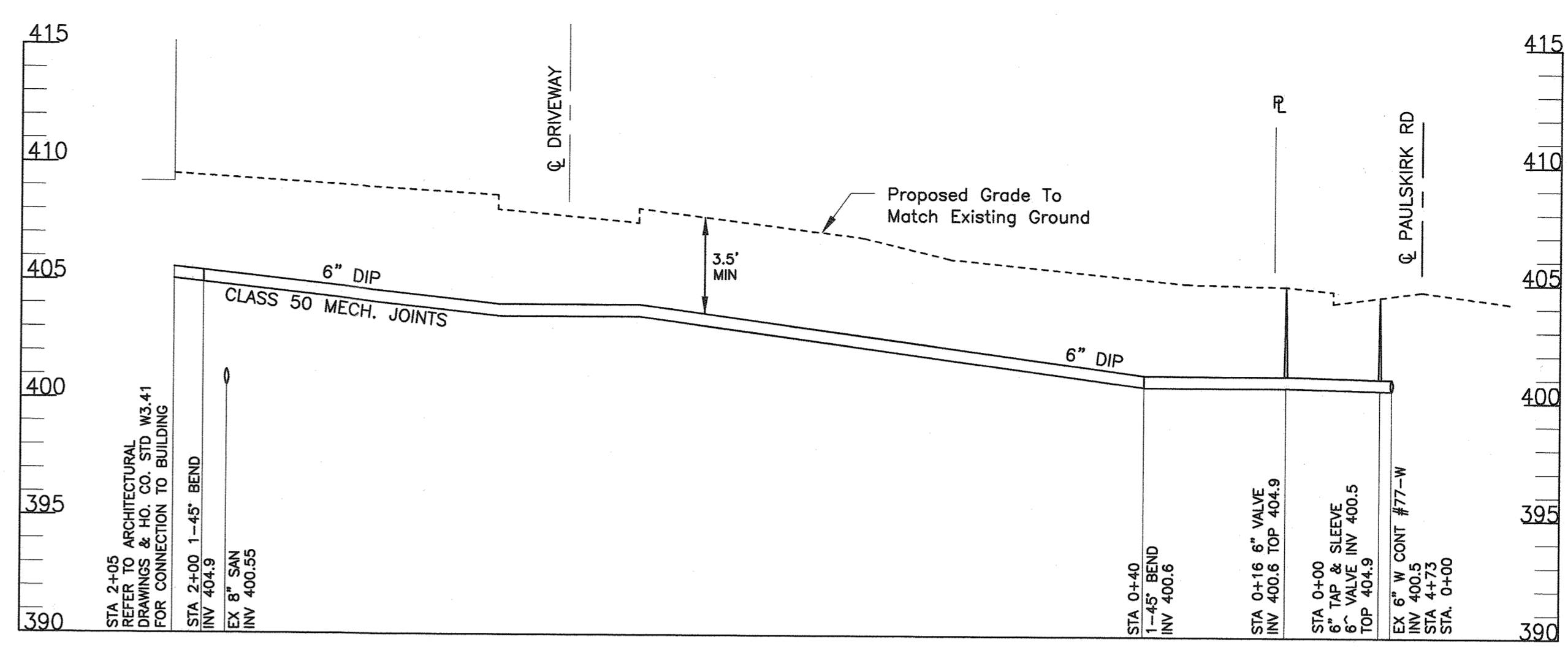
7 SHEET OF 21

AS BUILT

SDP-01-120



**SANITARY PROFILE**  
SCALE: HORIZONTAL - 1"=20'  
VERTICAL - 1"=5'



**WATER PROFILE**  
SCALE: HORIZONTAL - 1"=20'  
VERTICAL - 1"=5'

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS (F-1, F-4 AND F-5)**

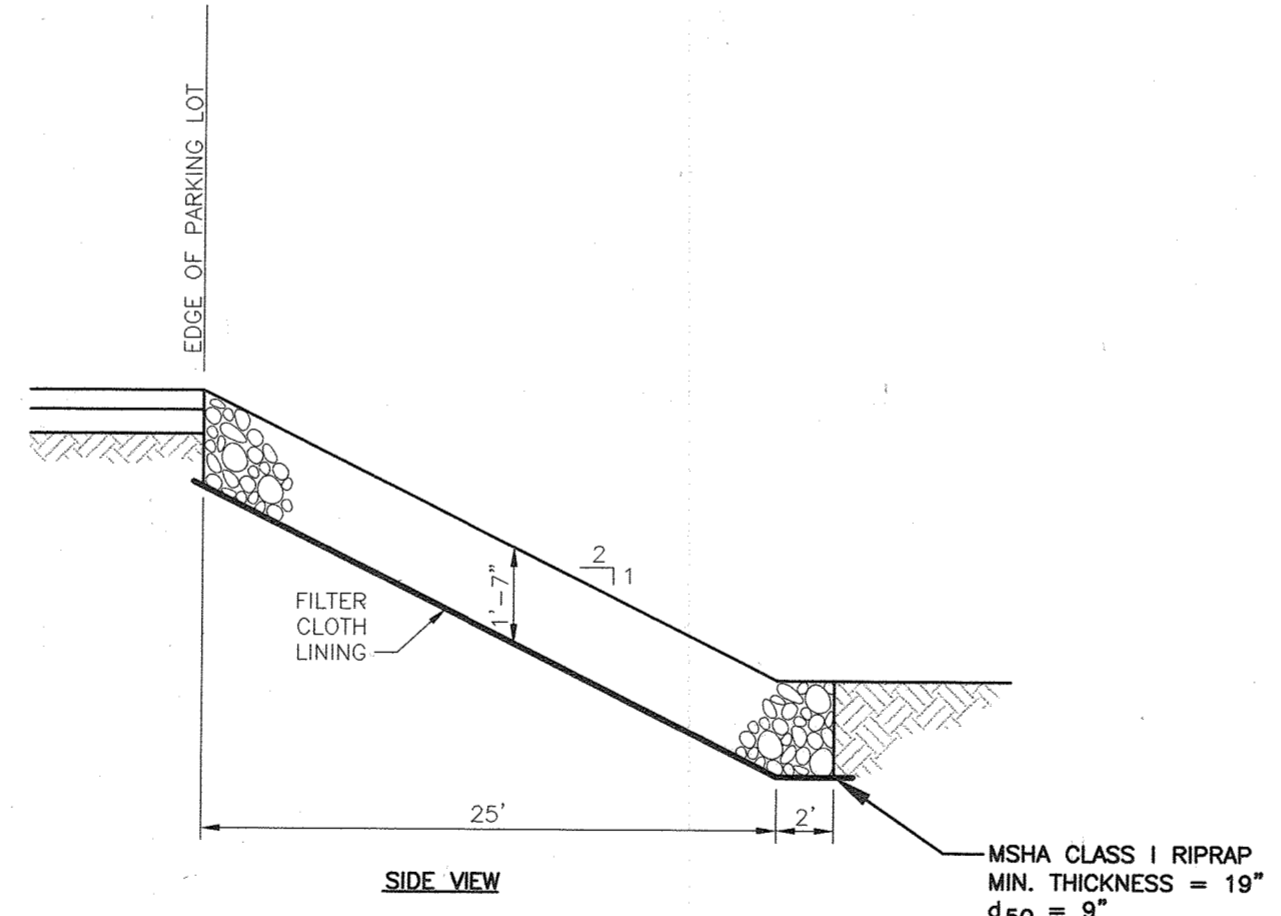
1. THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
2. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
3. 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.
4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
6. REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
7. 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.
8. A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
9. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO ENSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
10. 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.

**GENERAL NOTES FOR WATER AND SEWER CONSTRUCTION**

1. SANITARY CLEANOUT TOPS TO BE ADJUSTED TO MATCH CROWN AND SLOPE OF PROPOSED GRADES. CLEANOUT TOPS TO BE IDENTIFIED AS SANITARY CLEANOUTS, THREADED, AND CONTAIN COUNTERSUNK PLUGS.
2. UTILITIES SHALL MAINTAIN A MINIMUM 12 INCH CLEARANCE WHEN CROSSING EXISTING AND PROPOSED UTILITIES ON AND OFF SITE, UNLESS APPROVED BY ENGINEER.
3. WATER SERVICES SHALL HAVE A MINIMUM 3.5 FOOT COVER OVER CROWN OF PIPE.
4. WATER SERVICE SHALL BE TYPE 'K' SOFT ANNEALED COPPER TUBING. SANITARY SEWER PIPE SHALL BE SDR 35, OR APPROVED EQUAL.
5. WATER AND SEWER SERVICES SHALL BE COORDINATED WITH THE MECHANICAL PLANS AND BUILDING CONTRACTOR FOR HORIZONTAL AND VERTICAL ALIGNMENT AND CONNECTION.
6. ALL SANITARY SEWER CLEANOUTS TO BE 4" PIPE, AND INSTALLED IN ACCORDANCE WITH HOWARD COUNTY STD. S-2-22.
7. WATER AND SEWER TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS AND DETAILS FOR CONSTRUCTION VOLUME IV DESIGN MANUAL SECTIONS 1004 AND 1008.

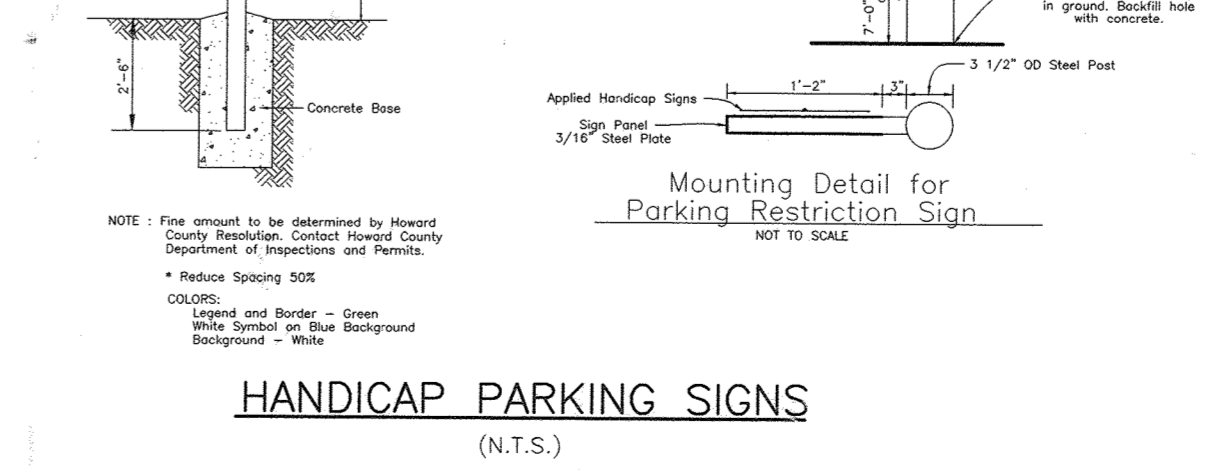
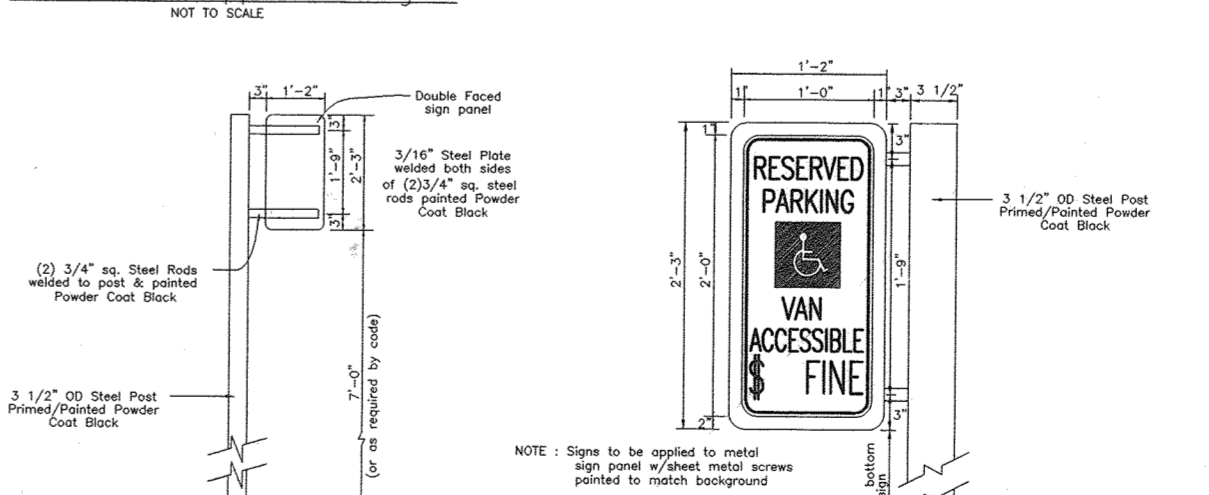
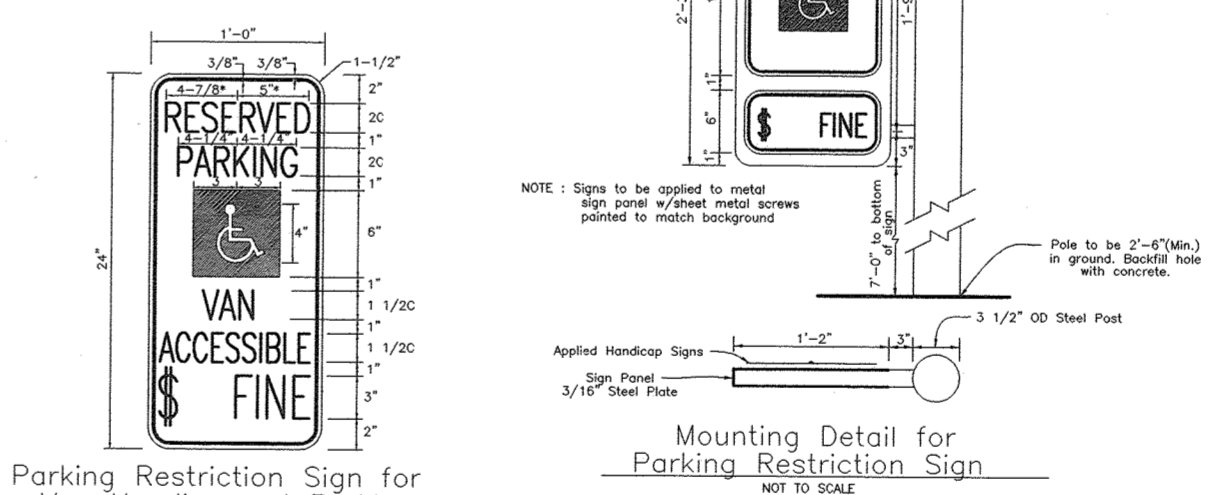
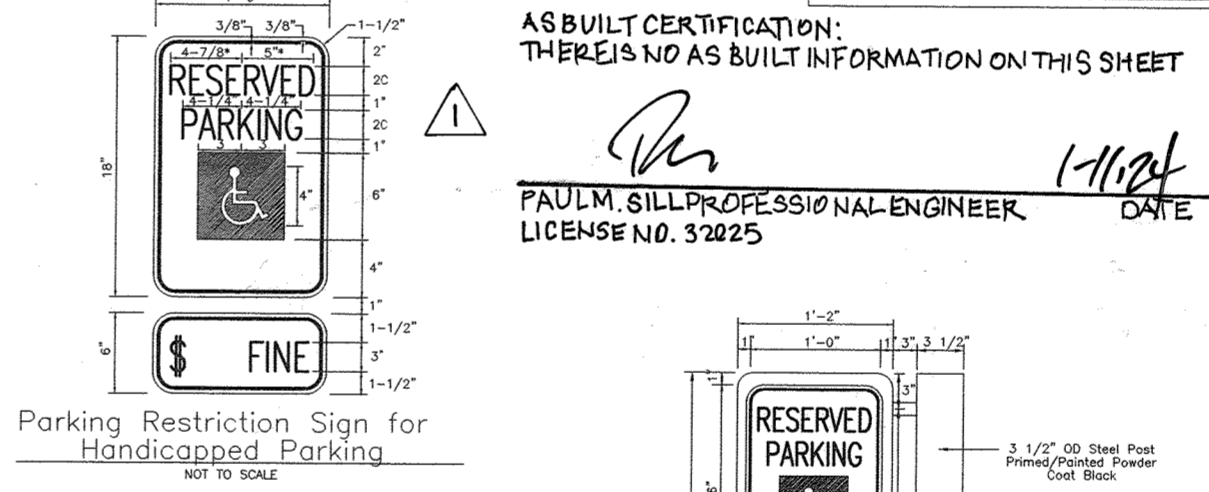
**UTILITY STRUCTURE SCHEDULE  
SANITARY SEWER**

NO.	DESCRIPTION	INV. IN	INV. OUT	TOP ELEV.
CO 1	4" SANITARY CLEANOUT HO. CO. STD S-2-22	388.04	-	400.00
CO 2	4" SANITARY CLEANOUT HO. CO. STD S-2-22	389.08	-	402.00
CO 3	4" SANITARY CLEANOUT HO. CO. STD S-2-22	391.21	-	404.3
CO 4	4" SANITARY CLEANOUT HO. CO. STD S-2-22	395.35	-	406.8



- NOTES:**
1. FILTER FABRIC SHALL BE GEOTEXTILE CLASS 'C'.
  2. FILTER FABRIC LINING SHALL BE EMBEDDED A MINIMUM OF 4" AND SHALL EXTEND AT LEAST 6" BEYOND THE EDGE OF RIP RAP.
  3. RIP RAP 4" TO 7" IN SIZE.
  4. MSHA CLASS I RIPRAP.

**ROCK INLET PROTECTION (N.T.S.)**



**HANDICAP PARKING SIGNS (N.T.S.)**

STEP	REQUIREMENT	VOLUME REQUIRED	NOTES
1.	WATER QUALITY VOLUME, WQV	0.11 AC.FT. 4878 CU.FT.	WATER QUALITY VOLUME PROVIDED IN EXISTING INFILTRATION BASIN
2.	RECHARGE VOLUME Rev	0.029 AC.FT. 1288 CU.FT.	RECHARGE VOLUME PROVIDED IN EXISTING INFILTRATION BASIN
3.	CHANNEL PROTECTION VOLUME, CPV	7319 CU.FT. 0.17 AC.FT. 6461 CU.FT. ADJ. 0.15 AC.FT. ADJ.	CPV WILL BE PROVIDED IN THE EXISTING INFILTRATION BASIN. THE ENTIRE VOLUME WILL BE INFILTRATED.
4.	OVERBANK FLOOD PROTECTION, OFP	0.397 AC.FT. 17,326 CU.FT.	N/A
5.	EXTREME FLOOD VOLUME, OFOP	0.62 AC.FT. 27,212 CU.FT.	N/A
6.	PRETREATMENT BASIN	2438 CU.FT. 2440 CU.FT. (PROVIDED)	RUNOFF FROM PROPOSED ROOF TOP AND PAVING WILL DISCHARGE INTO FACILITY DUE TO THE FACT THAT THE PRETREATMENT FACILITY WILL BE UTILIZED AS A SEDIMENT TRAP.

AS BUILT CERTIFICATION:  
THERE IS NO AS BUILT INFORMATION ON THIS SHEET

*Paul M. Gill*  
PAUL M. GILL PROFESSIONAL ENGINEER  
LICENSE NO. 32025

DESCRIPTION	DATE
AS BUILT BY GILL ENGINEERING GROUP	12/05/15
REVISIONS	

SDP-01-120

**WATER AND SEWER PROFILES & DETAILS  
CHURCH OF THE RESURRECTION**

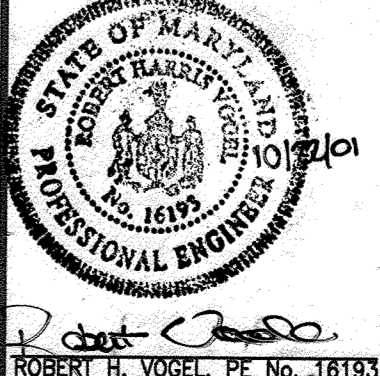
ADDRESS CHART

LOT/PARCEL #	STREET ADDRESS
L1/P1117	3175 PAULSKIRK DRIVE, ELLICOTT CITY, MD 21043

PERMIT INFORMATION CHART

Subdivision Name	PLAT #	Section/Area	Lot/Parcel No.
CHURCH OF THE RESURRECTION	3476	N/A	
Plat # or L/F	Grid #	Zoning	Tax Map No.
3476	5	R-20	24
Water Code	F06	Sewer Code	1404800
Elect Dist	2	Census Tract	6022

**FREDERICK WARD ASSOCIATES, INC.**  
7125 Riverwood Drive Columbia, Maryland 21046-2354  
Phone: 410-290-9550 Fax: 410-720-6226  
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia



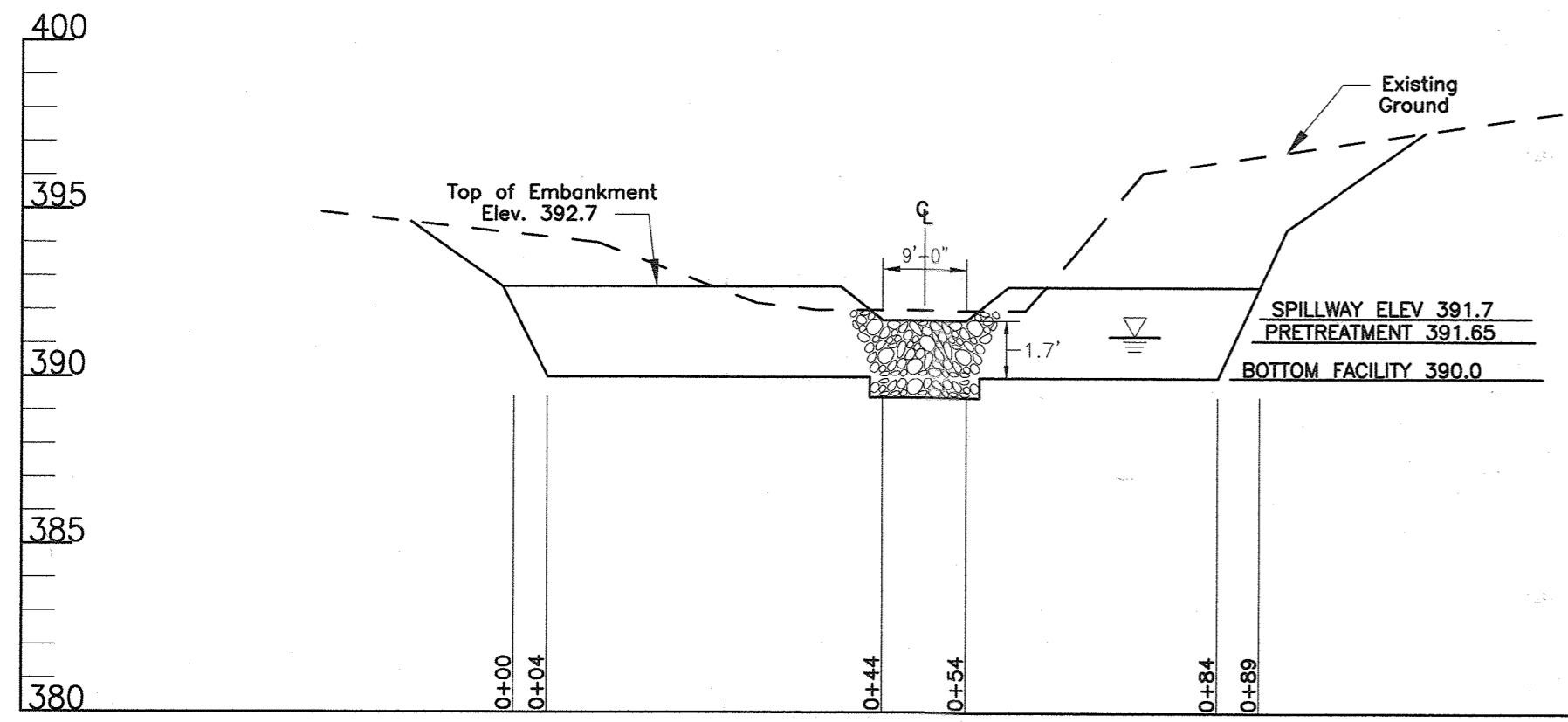
DESIGN BY: RHW  
DRAWN BY: GPH/KO  
CHECKED BY: RHW  
DATE: SEPT. 14, 2001  
SCALE: AS SHOWN  
W.D. NO.: 2017162.00

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Chief, Development Engineering Division: *[Signature]* Date: 11/7/01  
Chief, Planning Division: *[Signature]* Date: 11/19/01  
Director: *[Signature]* Date: 11/19/01

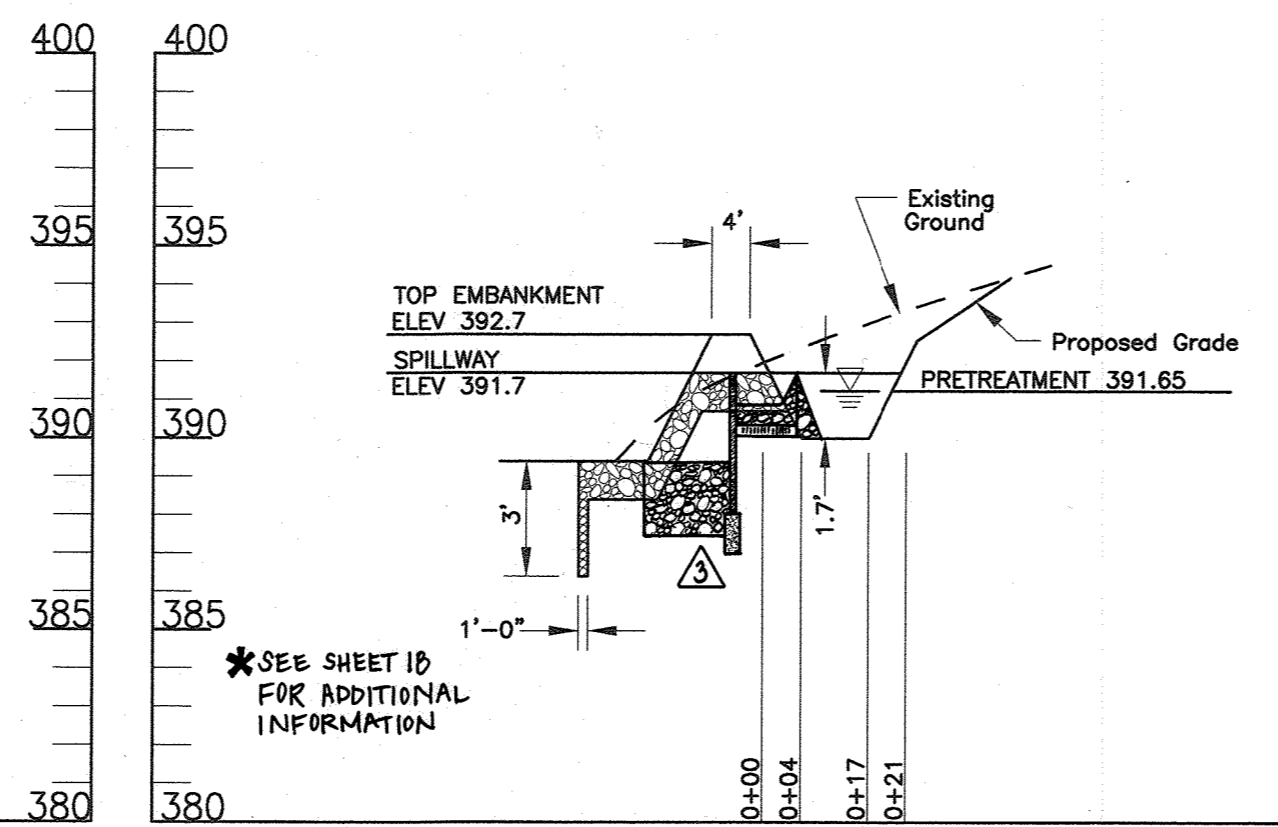
APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS  
County Health Officer: \_\_\_\_\_ Date: \_\_\_\_\_  
Howard County Health Department

BEFORE BEGINNING CONSTRUCTION CONTACT  
"MISS UTILITY"  
AT  
1-800-257-7777  
AT LEAST 48 HOURS PRIOR TO EXCAVATION

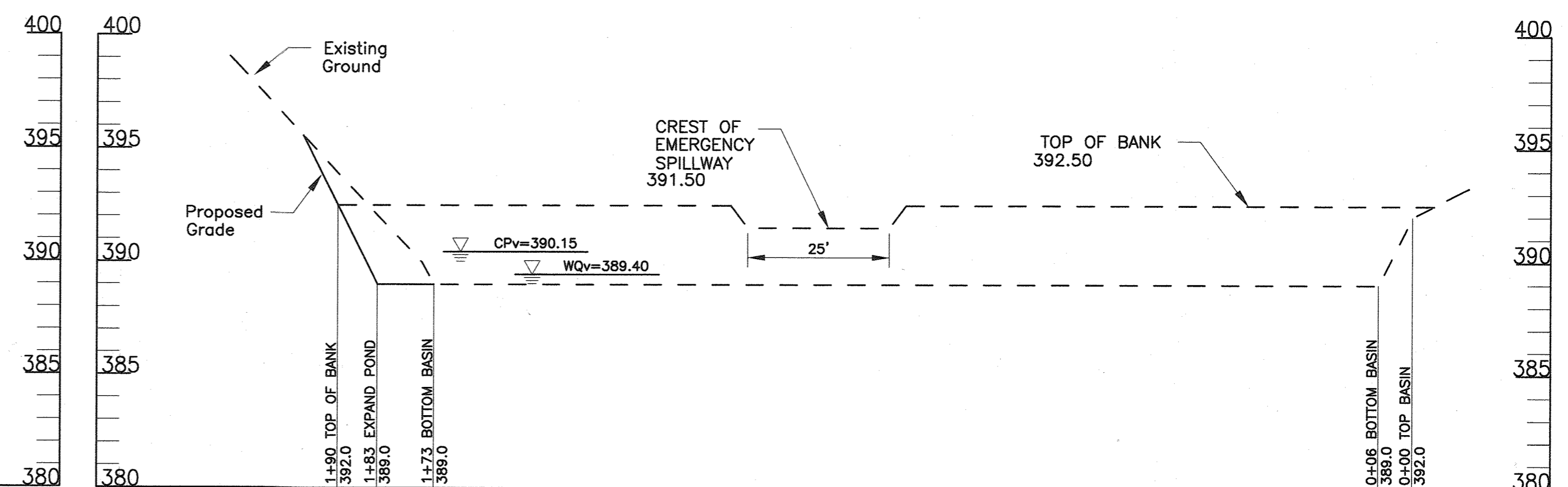




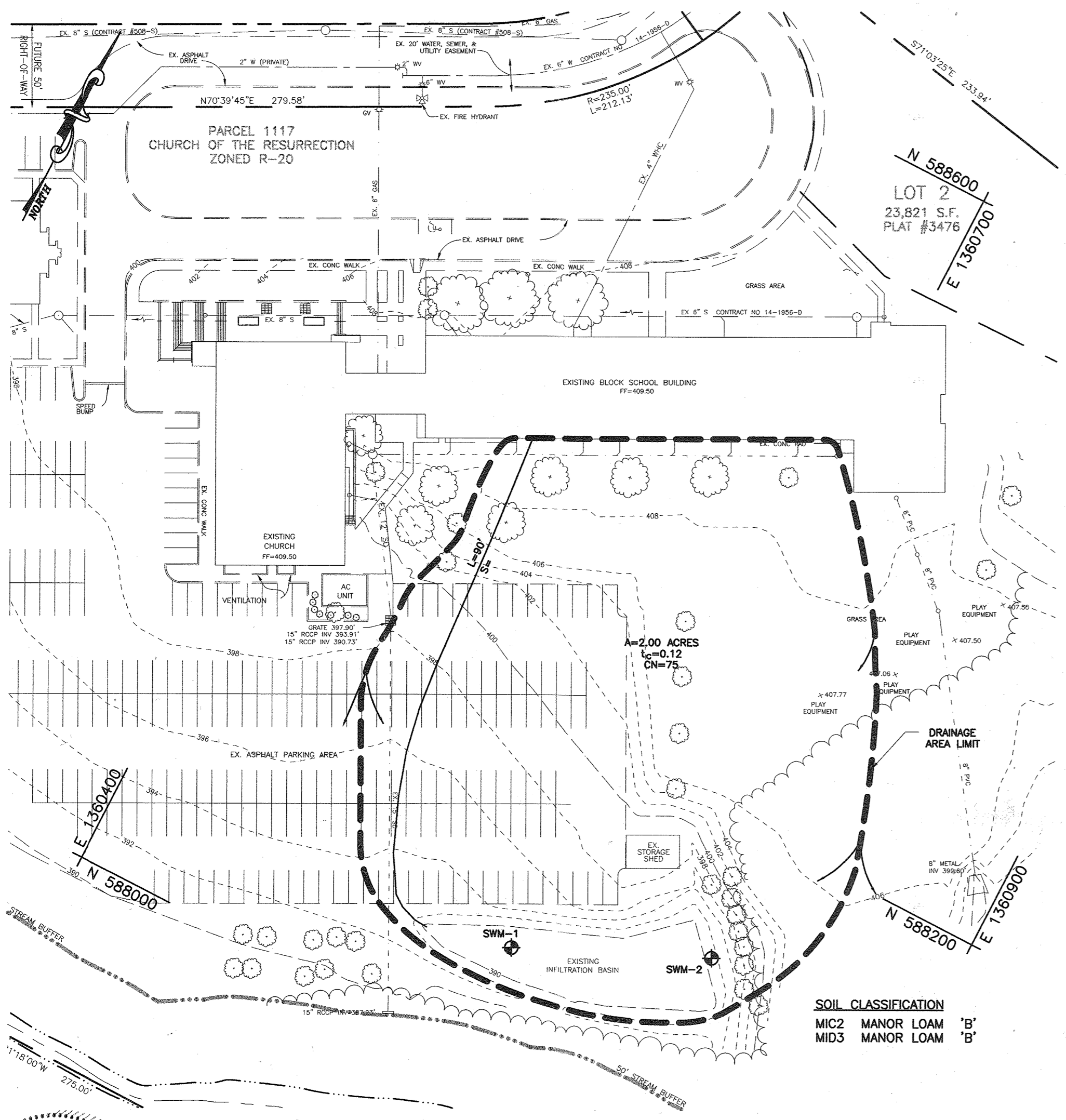
\* PRE-TREATMENT BASIN  
SCALE: HORIZONTAL - 1"=20'  
VERTICAL - 1"=5'



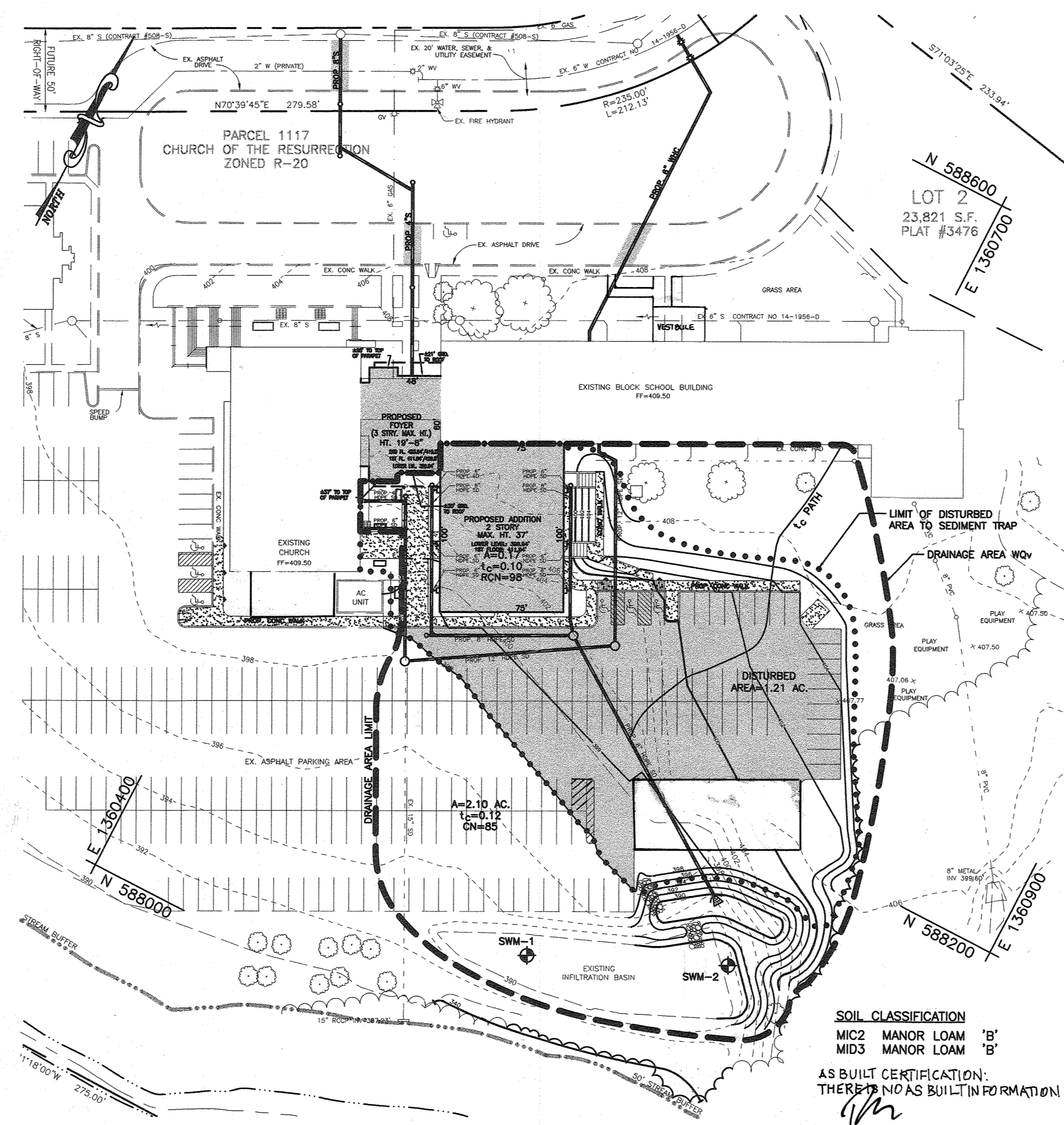
\* PRE-TREATMENT BASIN  
SCALE: HORIZONTAL - 1"=20'  
VERTICAL - 1"=5'



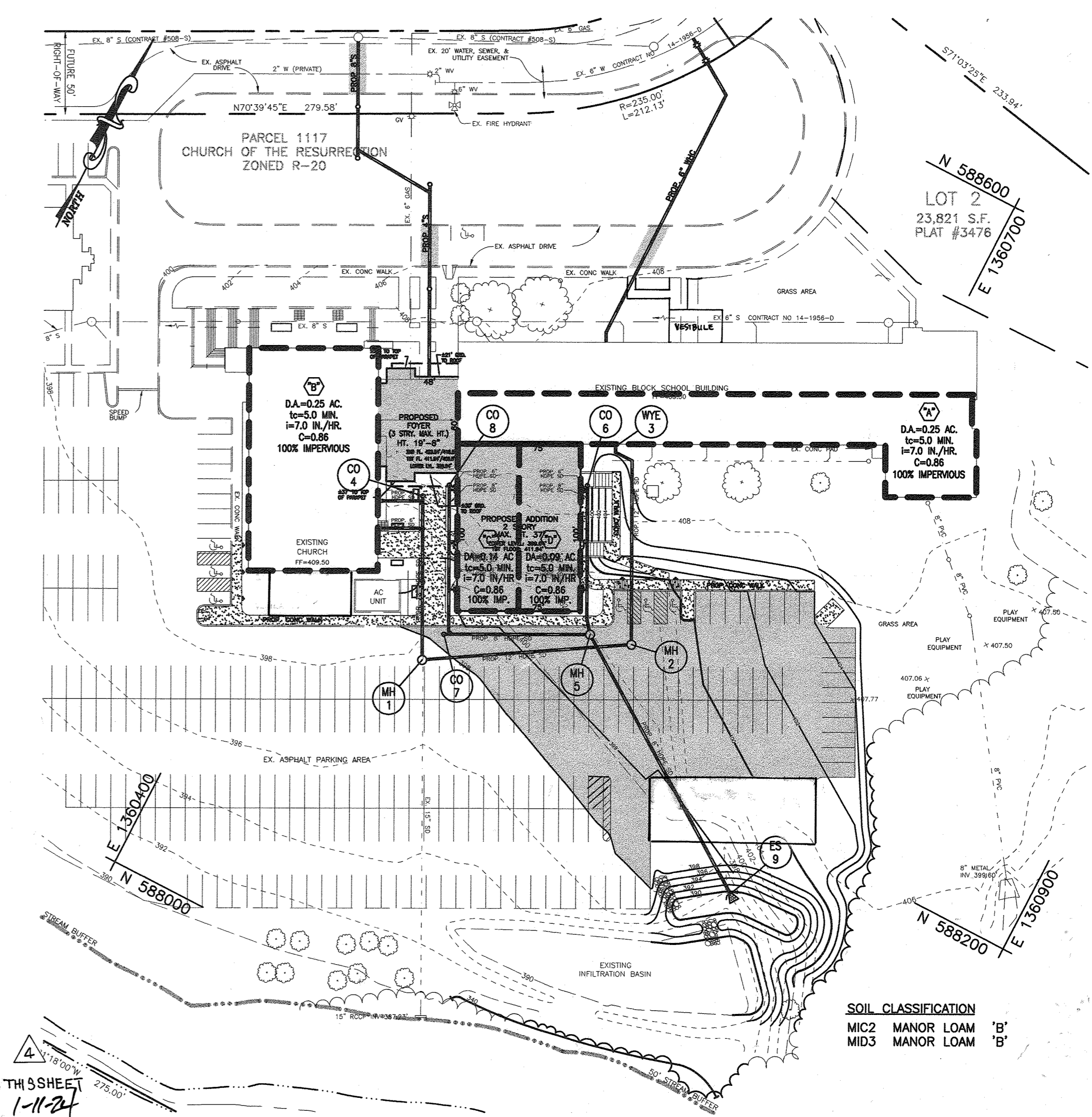
\* SWM INFILTRATION BASIN  
SCALE: HORIZONTAL - 1"=20'  
VERTICAL - 1"=5'



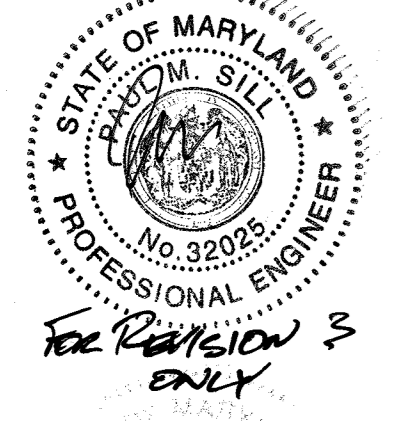
EXISTING CONDITIONS DRAINAGE AREA MAP  
SCALE: 1"=60'



PROPOSED CONDITIONS DRAINAGE AREA MAP  
SCALE: 1"=60'



STORM DRAIN SYSTEM DRAINAGE AREA MAP  
SCALE: 1"=60'

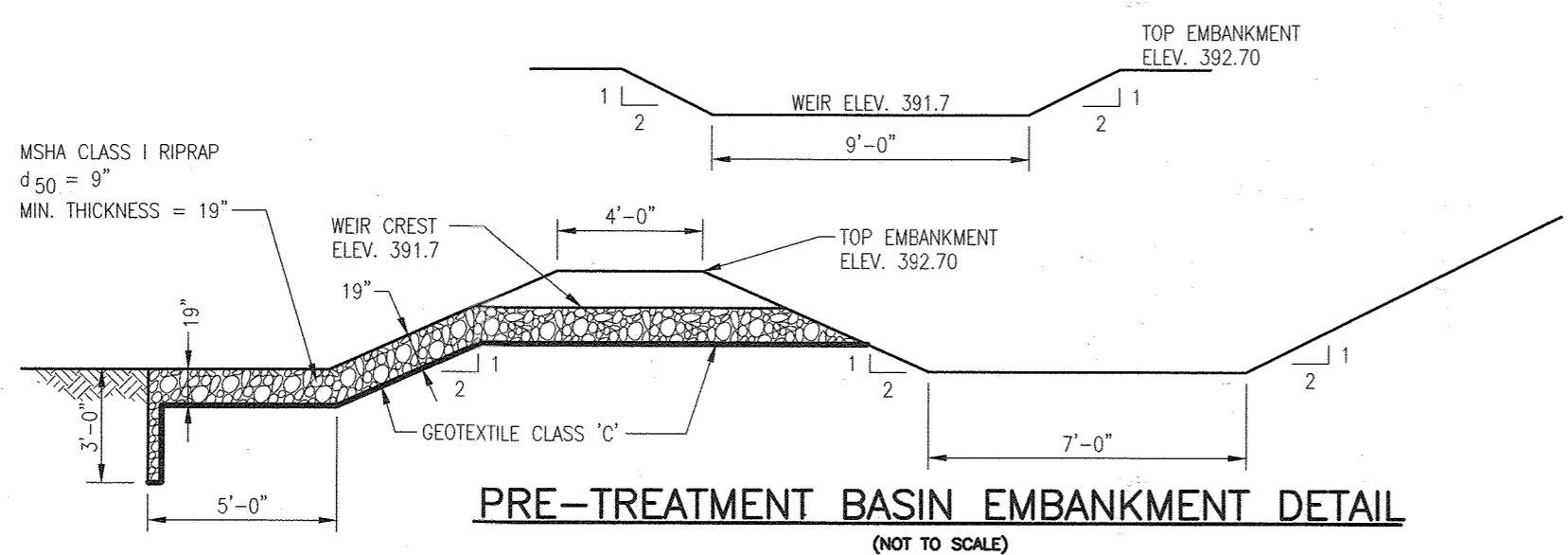


\*SEE SHEET 15 FOR UPDATED CONDITIONS

PAUL M. SILL PROFESSIONAL ENGINEER  
LICENSE NO. 31025

B.2.B INFILTRATION BASINS NOTES AND SPECIFICATIONS

- AN INFILTRATION BASIN MAY NOT RECEIVE RUN-OFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE BASIN HAS RECEIVED FINAL STABILIZATION.
1. THE SEQUENCE OF VARIOUS PHASES OF BASIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE OVERALL PROJECT CONSTRUCTION SCHEDULE. A PROGRAM SHOULD SCHEDULE ROUGH EXCAVATION OF THE BASIN WITH THE ROUGH GRADING PHASE OF THE PROJECT TO PERMIT USE OF THE MATERIAL AS FILL IN EARTHWORK AREAS. THE PARTIALLY EXCAVATED BASIN, HOWEVER, CANNOT SERVE AS A SEDIMENTATION BASIN. SPECIFICATIONS FOR BASIN CONSTRUCTION SHOULD STATE: (1) THE EARLIEST POINT IN PROGRESS WHEN STORM DRAINAGE MAY BE DIRECTED TO THE BASIN, AND (2) THE MEANS BY WHICH THIS DELAY IN USE IS TO BE ACCOMPLISHED. DUE TO THE WIDE VARIETY OF CONDITIONS ENCOUNTERED AMONG PROJECTS, EACH SHOULD BE SEPARATELY EVALUATED IN ORDER TO POSTPONE USE AS LONG AS IS REASONABLY POSSIBLE.
2. INITIAL BASIN EXCAVATION SHOULD BE CARRIED TO WITHIN 2 FEET OF THE FINAL ELEVATION OF THE BASIN FLOOR. FINAL EXCAVATION TO THE FINISHED GRADE SHOULD BE DEFERRED UNTIL ALL DISTURBED AREAS ON THE WATERSHED HAVE BEEN STABILIZED OR PROTECTED. THE FINAL PHASE EXCAVATION SHOULD REMOVE ALL ACCUMULATED SEDIMENT. RELATIVELY LIGHT TRACKED EQUIPMENT IS RECOMMENDED FOR THIS OPERATION TO AVOID COMPACTION OF THE BASIN FLOOR. AFTER THE FINAL GRADING IS COMPLETED, THE BASIN SHOULD PROVIDE A WELL-AERATED, HIGHLY POROUS SURFACE TEXTURE.
3. INFILTRATION BASIN MAY BE LINED WITH A 6" TO 12" LAYER OF FILTER MATERIAL SUCH AS COARSE SAND (ASHTO-M-43, SIZES 9 OR 10) HELP PREVENT THE BUILDUP OF IMPERVIOUS DEPOSITS ON THE SOIL SURFACE. THE FILTER LAYER CAN BE REPLACED OR CLEANED WHEN IT BECOMES CLOGGED. WHEN A 6" LAYER OF COARSE ORGANIC MATERIAL IS SPECIFIED FOR DISCING (SUCH AS HULLS, LEAVES, STEMS, ETC.) OR SPADING INTO THE BASIN FLOOR TO INCREASE THE PERMEABILITY OF THE SOILS, THE BASIN FLOOR SHOULD BE SOAKED OR INUNDATED FOR A BRIEF PERIOD, THEN ALLOWED TO DRY SUBSEQUENT TO THIS OPERATION. THIS INDUCES THE ORGANIC MATERIAL TO DECAY RAPIDLY, LOOSENING THE UPPER SOIL LAYER.
4. ESTABLISHING DENSE VEGETATION ON THE BASIN SIDE SLOPES AND FLOOR IS RECOMMENDED. A DENSE VEGETATIVE STAND WILL NOT ONLY PREVENT EROSION AND SLOUGHING, BUT WILL ALSO PROVIDE A NATURAL MEANS OF MAINTAINING RELATIVELY HIGH INFILTRATION RATES. EROSION PROTECTION OF INFLOW POINTS TO THE BASIN SHALL ALSO BE PROVIDED.
5. SELECTION OF SUITABLE VEGETATIVE MATERIALS FOR THE SIDE SLOPE AND ALL OTHER AREAS TO BE STABILIZED WITH VEGETATION AND APPLICATION OF SOIL AMENDMENTS (E.G., LIME, FERTILIZER, ETC.) SHALL BE DONE IN ACCORDANCE WITH THE NRS STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
6. GRASSES OF THE FESCUE FAMILY ARE RECOMMENDED FOR SEEDING PRIMARILY DUE TO THEIR ADAPTABILITY TO DRY SANDY SOILS, DROUGHT RESISTANCE, HARDINESS, AND ABILITY TO WITHSTAND BRIEF INUNDATIONS. THE USE OF FESCUES WILL ALSO PERMIT LONG INTERVALS BETWEEN MOWINGS. THIS IS IMPORTANT DUE TO THE RELATIVELY STEEP SLOPES WHICH MAKE MOWING DIFFICULT. MOWING TWICE A YEAR, ONCE IN JUNE AND AGAIN IN SEPTEMBER, IS GENERALLY SATISFACTORY. REAPPLICATION WITH 10-6-4 RATIO FERTILIZER AT A RATE OF 500 LB. PER ACRE (11 LB. PER 1000 SQ. FT.) MAY BE REQUIRED THE SECOND YEAR AFTER SEEDING.



PRE-TREATMENT BASIN EMBANKMENT DETAIL  
(NOT TO SCALE)

APPROVED: *[Signature]* DEPARTMENT OF PLANNING AND ZONING  
Date: 11/7/01  
Chief Development Engineering Division  
Date: 11/17/01  
Chief Division of Land Development  
Date: 11/19/01

APPROVED: FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS  
County Health Officer: Howard County Health Department

BEFORE BEGINNING CONSTRUCTION  
CONTACT  
"MISS UTILITY"  
AT  
1-800-257-7777  
AT LEAST 48 HOURS  
PRIOR TO EXCAVATION

DATE	NUMBER	REVISION DESCRIPTIONS
12/05/05	4	AS BUILT BY BILL ENGINEERING GROUP
2/2/02	3	NOTE ADDED TO EACH PROFILE REFERRING TO UPDATES ON SHEET 15, AND A NOTE REFERRING TO THE UPDATED CONDITIONS DRAINAGE AREA MAP
2.25.04	2	ADD MAINTENANCE SHED, CAPE, EXPANSION & STORAGE
5/28/02	1	ADDITION OF SECOND FLOOR AND VESTIBULE

OWNER  
THE ROMAN CATHOLIC ARCHBISHOP OF BALTIMORE  
320 CATHEDRAL STREET  
BALTIMORE, MARYLAND 21201

LOT/PARCEL #	STREET ADDRESS
L1/P1117	3175 PAULSKIRK DRIVE, ELLICOTT CITY, MD 21043

PERMIT INFORMATION CHART				
Subdivision Name	PLAT #3476	Section/Area	N/A	Lot/Parcel No
	CHURCH OF THE RESURRECTION			L1/P1117
Plot # or L/F	Grid #	Zoning	Tax Map No.	Elect Dist
3476	5	R-20	24	2
Water Code	F06	Sewer Code	1404800	Census Tract
				6022

SDP-01-120

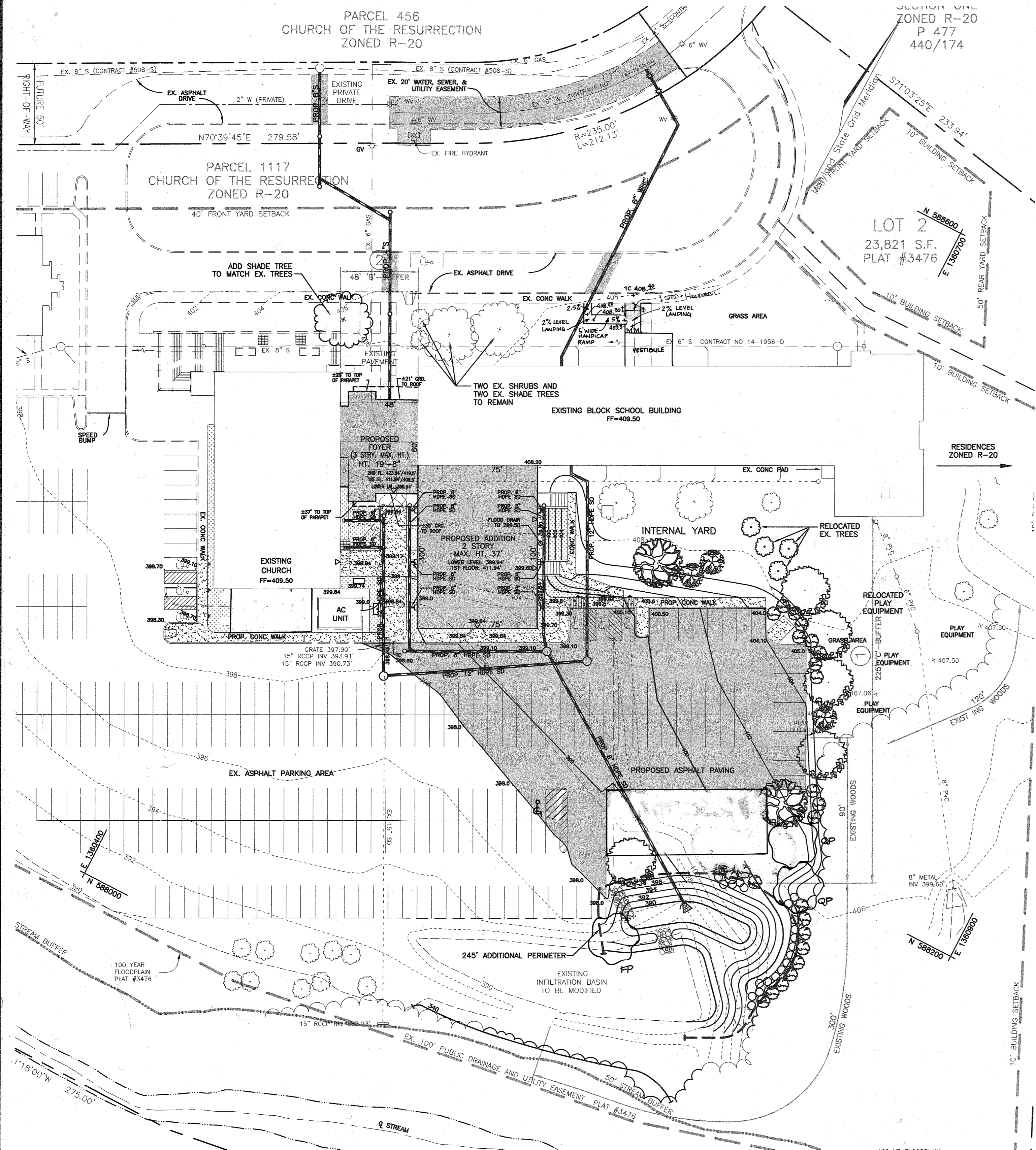
DRAINAGE AREA MAPS  
AND SWM DETAILS  
CHURCH OF THE RESURRECTION

FREDERICK WARD ASSOCIATES, INC.  
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHV  
DRAWN BY: GPH/KO  
CHECKED BY: RHV  
DATE: SEPT. 14, 2001  
SCALE: (AS NOTED)  
W.O. NO.: 2017162.00

AS-BUILT  
SDP-01-120

C-009  
9 SHEET OF 21



- GENERAL PLANTING NOTES
- ALL PLANT MATERIAL SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE "USA STANDARD FOR NURSERY STOCK" LATEST EDITION.
  - ALL PLANTING SHALL BE IN ACCORDANCE WITH STANDARD AMERICAN ASSOCIATION OF NURSERMEN PROCEDURES AND SPECIFICATIONS.
  - CONTRACTOR AND OWNER'S REPRESENTATIVE SHALL VERIFY THE CORRECT LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO INSTALLATION OF ANY PLANT MATERIALS.
  - PLANT MATERIAL LOCATION TO BE STAKED IN THE FIELD AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
  - ALL PLANT BEDS AND PLANTING AREAS TO BE MULCHED TO A DEPTH OF 3" SHREDDED HARDWOOD BARK UNLESS OTHERWISE NOTED ON DRAWINGS OR SPECIFICATIONS.
  - ALL AREAS DISTURBED BY PLANTING OPERATIONS SHALL BE FINE GRADED AND SEEDED.
  - OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE BEFORE MAKING ANY SUBSTITUTIONS OR CHANGES.
  - ALL PLANT BEDS SHALL BE CONTAINED WITH A SPACED EDGE UNLESS OTHERWISE NOTED ON DRAWINGS.
  - QUANTITIES SHOWN ON PLANT LIST ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY AND ARE NOT GUARANTEED TO BE ACCURATE. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLAN AND QUANTITIES SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN SHALL APPLY.
  - THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
  - GENERAL CONTRACTOR IS TO PROVIDE ALL MATERIALS AND LABOR, INCLUDING PLANTS, PLANTER FILL MATERIALS, MULCHES, SOIL PREPARATION, DECORATIVE ITEMS, INSPECTION, TRANSPORTATION, WARRANTY, ETC.
  - TOPSOIL TO A DEPTH OF 4" IN ALL AREAS TO BE SEEDED OR SODDED.
  - EACH PLANTING BED AREA IS TO RECEIVE A MINIMUM OF 6" OF PREPARED SOIL CULTIVATED TO A 2" DEPTH. PREPARED SOIL SHALL BE MIXED AS FOLLOWS: 2/3 SANDY LEAM TOPSOIL FREE OF ROOTS, ROCKS, WEEDS, AND OTHER DEBRIS AND 1/3 PEAT MOSS OR APPROVED ORGANIC MULCH.
  - SOIL ADDITIVES TO BE GRANULAR FERTILIZER OF 1:3:1 RATIO. SOIL OUTSIDE RANGE OF 5.0 - 7.0 pH SHALL BE TREATED APPROPRIATELY TO CORRECT FOR HIGH ALKALINITY OR ACIDITY.
  - THE USE OF ON-SITE TOPSOIL MUST BE APPROVED IN ADVANCE BY LANDSCAPE ARCHITECT.
  - ALL BEDS TO BE TREATED WITH GRANULAR PREEMERGENT WEED CONTROL PER MANUFACTURER'S SPECIFICATIONS. LANDSCAPE FABRIC TO BE INSTALLED BENEATH MULCH IN ALL PLANTING BEDS EXCLUDING GRASS-COVERED AND PEDESTAL AREAS. USE TREFLAN OR EQUAL AS APPROVED BY LANDSCAPE ARCHITECT.
  - SODDED AND SEEDED AREAS SHALL BE PROPERLY PREPARED, FINISH GRADED AND HAND ROLLED PRIOR TO SOIL PLACEMENT OR SEEDING. SEEDED AREAS SHALL BE RE-SEEDED AS NECESSARY TO PROVIDE AN EVEN STAND OF GRASS.
  - PROVIDE A WARRANTY IN ALL WORK FOR A MINIMUM OF ONE YEAR INCLUDING ONE CONTINUOUS GROWING SEASON. COMMENCE WARRANTY ON THE DATE IDENTIFIED IN THE CERTIFICATE OF SUBSTANTIAL COMPLETION. WARRANTY TO INCLUDE COVERAGE OF PLANTS FROM DEATH OR UNHEALTHY CONDITIONS. REPLACEMENT PLANTS SHALL BE THE SAME SIZE AND SPECIES AS SPECIFIED, PLANTED IN THE NEXT GROWING SEASON WITH A NEW WARRANTY COMMENCING WITH THE DATE OF THE REPLACEMENT.
  - MAINTAIN PLANT LIFE IMMEDIATELY AFTER PLACEMENT AND CONTINUE MAINTENANCE UNTIL TERMINATION OF WARRANTY. MAINTENANCE TO INCLUDE WEEDING, APPLICATIONS OF PESTICIDES, WATERING, TRIMMING AND PRUNING, DISEASE CONTROL, AND MAINTENANCE OF PLANT BRACING EQUIPMENT.
- AREAS TO BE TOP DRESSED
- PRIOR TO ALL SOIL PREPARATION WORK, ALL CONSTRUCTION AND PLANTING IN THE AREA SHALL HAVE BEEN COMPLETED.
  - CLEARING PRIOR TO APPLICATION OF TOP DRESS MATERIAL, THE GROUND SURFACE SHALL BE WELL BRANED AND CLEAR OF ALL DEBRIS OR ANY OTHER MATERIAL WHICH MAY HINDER THE PROPER APPLICATION OF SUBSEQUENT MAINTENANCE OPERATIONS.
  - PRECAUTIONS: DO NOT WORK SOIL WHILE FROZEN OR WET. DO NOT WORK SOIL IN A DUSTY CONDITION, BUT MUSTEN TO PREVENT A DUST NUISANCE.
  - AERATE ALL THE TOP DRESSED AREAS, USING A CORE REMOVING AERATOR.
  - ANY BARE AREAS LARGER THAN 1 SQ. FT. SHOULD BE RESTORED TO FINISHED GRADE WITH SCREENED COMPOSTED SLUDGE OR FINE GRADE TOPSOIL (COUNT SAMPLE FOR APPROVAL). USE EQUIPMENT AND METHODS COMMON TO SUCH WORK AND TILL SOIL TO THOROUGHLY INCORPORATE THE SCREENED COMPOSTED SLUDGE INTO EXISTING SOIL.
  - SCREENED COMPOSTED SLUDGE: UNIFORMLY APPLY SCREENED COMPOSTED SLUDGE OVER AREAS TO BE TOP DRESSED AT THE RATE OF 1 1/2 CUBIC YARDS PER 1000 SQ. FT. NO COMPOSTED SLUDGE WHICH IS SO WET THAT IT WILL CLUD OR CAKE SHALL BE SPREAD.
  - FERTILIZER: FOLLOWING THE AERATION PROCESS, APPLY A STARTER FERTILIZER EVENLY AT THE RATE OF 1 CY/1000 SQ. FT. INTO THE TOP 2 INCHES OF SOIL BY CROSS DISKING OR OTHER APPROPRIATE METHOD.
  - SEED ONLY AFTER THE SCREENED SOIL AMENDMENT AND FERTILIZER HAVE BEEN APPLIED AND THOROUGHLY SETTLED BY RAINFALL OR WATERING. OVERSEED LAWN AREAS EVENLY AT A RATE OF 1 LB./1000 SQ. FT. SEED WITH EQUIPMENT THAT PROVIDES A MULTI-DIRECTIONAL SEEDING PATTERN TO ENSURE PROPER SEEDING RATE AND UNIFORMITY OF SEEDING.
  - MULCHING AFTER SEEDING, COVER BARE AREAS THAT HAVE BEEN REPAIRED WITH CLEAN WHEAT STRAW - A MINIMUM OF 50% OF THE SOIL SURFACE SHALL BE COVERED UNTIL GERMINATION HAS OCCURRED.

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES		ADJACENT TO ROADWAYS	
	F	C	Z	B
Perimeter/Frontage Designation				
Landscape Type				
Linear Feet of Roadway Frontage/Perimeter		225		48
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)	Yes*	90'	No	No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet Describe below if needed)	No		No	No
Number of Plants Required	(135)		(150)	
Shade Trees	1:40	3	1:40	1
Evergreen Trees	1:20	7	1:40	1
Shrubs	-	-	-	-
Number of Plants Provided				
Shade Trees	10		1	
Evergreen Trees	-		2**	
Other Trees (2:1 Substitution)	3		-	
Shrubs (10:1 Substitution)	12		-	
Describe Plant Substitution Credits Below if needed)				

\* Existing Woods to Remain \*\* Two existing shrubs next to walk to remain (and two existing trees)

NOTE:  
Financial Surety for the required landscaping must be posted as part of the Grading Permit in the amount of \$3,300.00 for 7 shade trees and 8 evergreen trees.

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
AG	3	Acer griseum Paperbark Maple	1 1/2"-2" Col.	B & B
IG	21	Ilex glabra Inkberry	24"-30" Ht.	B & B or cont.
FP	5	Fraxinus p. 'Patmore' Patmore Ash	2 1/2"-3" Col.	B & B
QP	4	Quercus Palustris Pin Oak	2 1/2"-3" Col.	B & B
VT	24	Viburnum trilobum American Highbush Cranberry	24"-30" Ht.	B & B or cont.

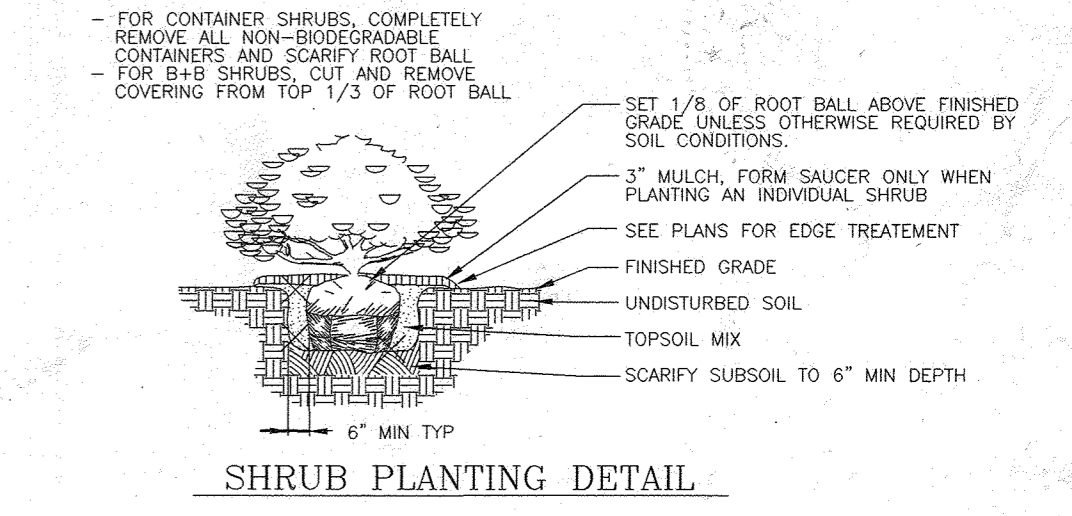
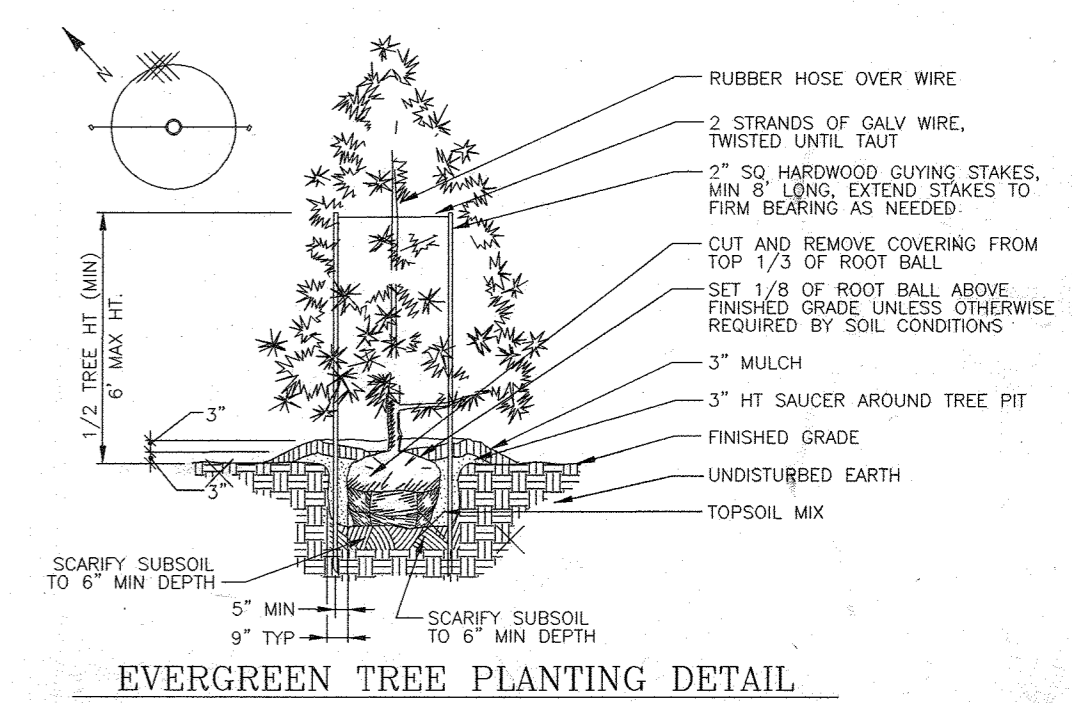
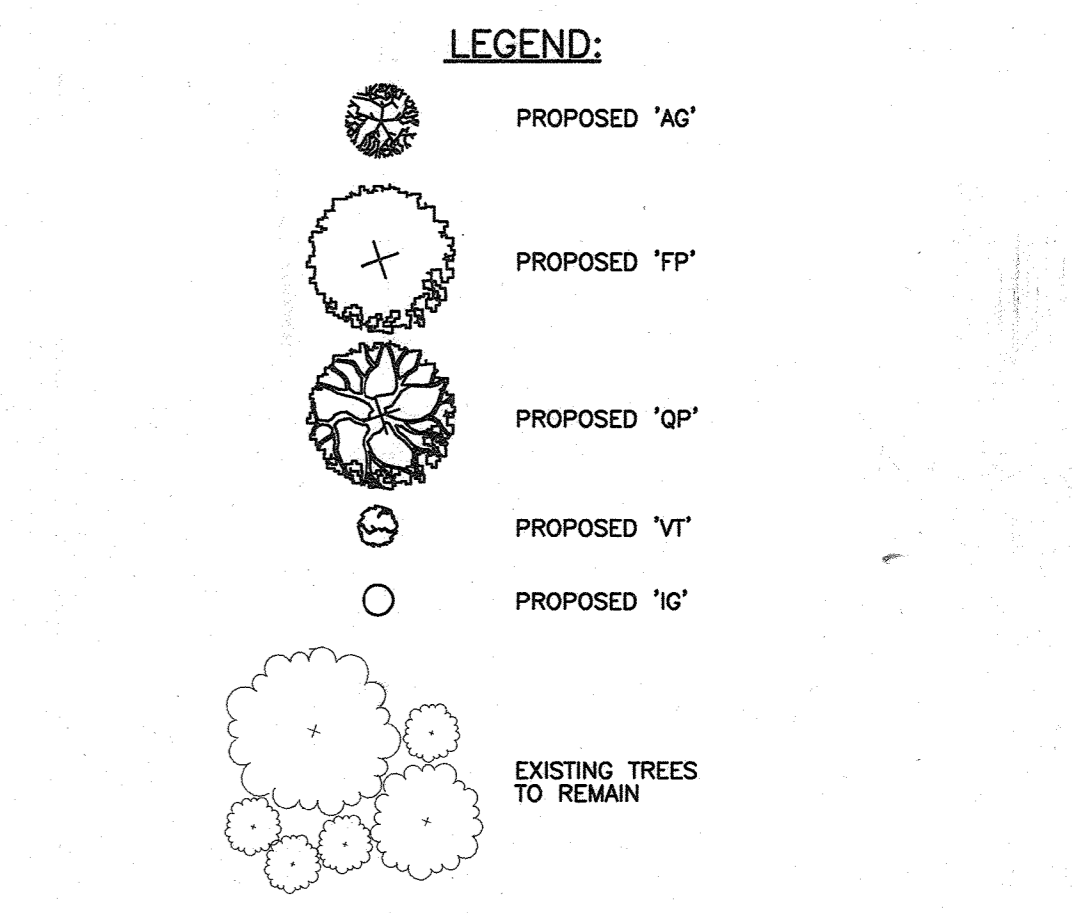
SCHEDULE 'B': PARKING LOT INTERNAL LANDSCAPING\*

Number of parking spaces (net increase)	56
Number of trees and parking lot islands required (1:20)	3
Number of trees and parking lot islands provided	3
Shade Trees	-
Other Trees (2:1 Substitution)	-

\* TREES RELOCATED OUTSIDE LOT TO ACCOMMODATE RECREATIONAL USE.

SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF ADDITIONAL PERIMETER	295 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	YES, 300 LF
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	N/A
NUMBER OF TREES REQUIRED	(0)
SHADE TREES 1:40	0 SHADE TREES
EVERGREEN TREES 1:20	0 EVERGREEN TREES
NUMBER OF TREES PROVIDED	3 SHADE TREES
SHADE TREES	0 EVERGREEN TREES
EVERGREEN TREES	0 TREES (0 SUBSTITUTION TREES)
OTHER TREES (2:1 SUBSTITUTION)	9 SHRUBS



SITE LANDSCAPE PLAN  
CHURCH OF THE RESURRECTION

ADDRESS CHART

LOT/PARCEL #	STREET ADDRESS
L1/P1117	3175 PAULSKIRK DRIVE, ELLICOTT CITY, MD 21043

PERMIT INFORMATION CHART

Subdivision Name	PLAT #3476	Section/Area	N/A	Lot/Parcel No.	L1/P1117
CHURCH OF THE RESURRECTION					
Plot # or L/F	3476	Grid #	5	Zoning	R-20
		Tax Map No.	24	Elect Dist	2
		Census Tract			6022
Water Code	F06	Sewer Code	1404800		

FREDERICK WARD ASSOCIATES, INC.  
7125 Riverwood Drive Columbia, Maryland 21046-2354  
Phone: 410-290-9550 Fax: 410-720-6226  
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHW  
DRAWN BY: CMH/KO  
CHECKED BY: RHW  
DATE: SEPT. 14 2001  
SCALE: 1"=40'  
W.O. NO.: 2017162.00

10 SHEET OF 21

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Department of Planning and Zoning  
Date: 11/19/01

Chief, Planning and Zoning  
Date: 11/19/01

APPROVED: FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS

County Health Officer  
Date: 11/19/01

DEVELOPER'S BUILDER'S CERTIFICATE

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

James C. Mc Govern  
DATE: 10-19-01

BEFORE BEGINNING CONSTRUCTION

"MISS UTILITY"

AT

1-800-257-7111

AT LEAST 48 HOURS PRIOR TO EXCAVATION

DATE	NUMBER	REVISION DESCRIPTIONS
12/05/03	3	AS BUILT BY SILL ENGINEERING GROUP
2/5/04	2	ADD MAINTENANCE SHED, CAFE, EXPANSION & STORAGE
5/28/02	1	ADDITION OF SECOND FLOOR AND VESTIBULE

OWNER  
THE ROMAN CATHOLIC ARCHBISHOP OF BALTIMORE  
320 CATHEDRAL STREET  
BALTIMORE, MARYLAND 21201

REVISIONS		
NO.	DESCRIPTION	DATE
1	AS BUILT BY SILL ENGINEERING, C.ROOP	12/06/23

LEGEND	
EXISTING CONTOUR	--- 382
PROPOSED CONTOUR	--- 382
EXISTING DOWNSPOUT	○ DS
EXISTING STORM DRAIN CLEANOUT	⊕
EXISTING SIGN	⊕
EXISTING HANDICAP PARKING SIGN	⊕
EXISTING TREE	⊕
EXISTING TREE TO BE REMOVED	⊕
EXISTING TREELINE	---
LIGHT POLES	⊕ POST TOP    ⊕ OVERHEAD    ⊕ BOLLARD
EXISTING STREAM	---
EXISTING FLOODPLAIN PER HOWARD COUNTY GIS DATA	---
EXISTING WATER	---
EXISTING GAS	---
EXISTING 100' STREAM BUFFER	SB
EXISTING 25' WETLAND BUFFER	WB
SILT FENCE	SF
LIMIT OF DISTURBANCE TO BE REMOVED	LDB
PROPOSED FLOODPLAIN PER HOWARD COUNTY LETTER OF MAP REVISION DATED JAN. 14, 2021	---

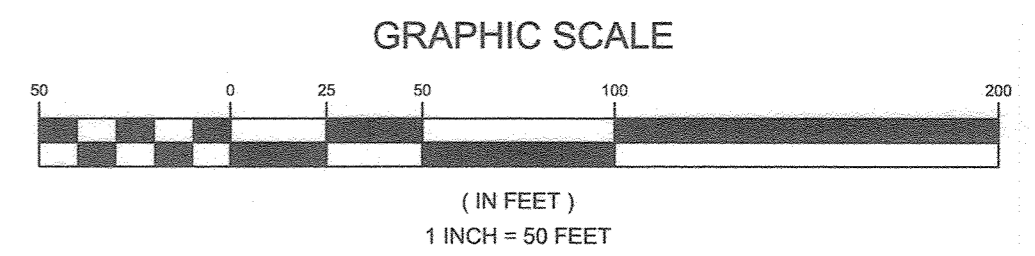
**GENERAL NOTES**

- SUBJECT PROPERTY ZONED R-20 IN ACCORDANCE WITH THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- THE BOUNDARY SHOWN HEREON IS BASED ON TAX MAP INFORMATION AND EXISTING PLATS.
- THE TOPOGRAPHY AND PLANIMETRIC DATA SHOWN WITHIN THE LOD IS BASED ON A SURVEY BY SHANBERGER & LANE IN FEBRUARY 2019 AND DECEMBER 2021. THE TOPOGRAPHY AND PLANIMETRIC DATA SHOWN OUTSIDE OF THE LOD IS FROM HOWARD COUNTY GIS DATA.
- INDIVIDUAL TREES HAVE NOT BEEN LOCATED WITHIN THE EXISTING TREELINES SHOWN HEREON. CONTRACTOR TO DETERMINE NUMBER OF EXISTING TREES TO BE REMOVED WITHIN THE LIMIT OF DISTURBANCE.
- A GEOTECHNICAL REPORT FOR THE SITE WAS PREPARED BY D.W. KOZERA, INC. ON MAY 14, 2021.
- TOPOGRAPHY AND PLANIMETRIC DATA SHOWN WITHIN THE LIMIT OF DISTURBANCE TO BE ADJUSTED TO PROPOSED GRADE OR FLOOR ELEVATION.
- FOR THE WORK ALONG THE PARKING AREAS INSIDE THE LIMIT OF DISTURBANCE SEDIMENT AND EROSION CONTROL WILL BE ACHIEVED BY UTILIZING SILT FENCE ON PAVEMENT PER MARYLAND DEPARTMENT OF THE ENVIRONMENT DETAIL E-2 SILT FENCE ON PAVEMENT.
- ANY DISTURBANCE ALONG THE CONSTRUCTION VEHICLE PATH SHALL BE STABILIZED THE SAME DAY.
- ALL CONSTRUCTION VEHICLES THAT ENTER THE LIMIT OF DISTURBANCE MUST TRAVEL THE STABILIZED CONSTRUCTION ENTRANCE OR UTILIZE THE EQUIPMENT CLEANING AREA PRIOR TO LEAVING THE SITE.
- ALL DISTURBED AREAS NOT DRAINING TO A SEDIMENT CONTROL MEASURE SHALL BE STABILIZED THE SAME DAY.
- FOR GRADING OF THE HANDICAP PARKING AREAS AROUND THE BUILDING SEE SHEET 13.
- FOR DETAILS OF BIO 1 SEE SHEET 16.
- FOR DETAILS OF BIO 2 SEE SHEET 17.
- CONTRACTOR TO TEST PIT UTILITIES WELL BEFORE CONSTRUCTION AND INFORM ENGINEER OF ANY CONFLICTS.
- PARKING:
  - REQUIRED SPACES:
    - RELIGIOUS FACILITY = 10 SPACES PER 1,000 SF OF ASSEMBLY AREA. 10,082 SF / 1,000 X 10 = 101 SPACES
    - SCHOOL = 1 SPACE PER 6 STUDENTS = 700 STUDENTS / 6 = 117 SPACES
    - 700 STUDENTS IS THE MAX. NUMBER OF STUDENTS ALLOWED PER BA-97-51E)
    - OFFICE = 3.3 SPACES PER 1,000 SF = 9,040 SF / 1,000 X 3.3 = 30 SPACES
    - TOTAL REQUIRED: 248 SPACES
  - TOTAL EXISTING SPACES: 347 SPACES, INCLUDING 13 HANDICAP SPACES.
  - TOTAL PROPOSED SPACES WITH RESTRICTION: 342 SPACES, INCLUDING 24 HANDICAP SPACES.
- ALL EXTERIOR LIGHT FIXTURES SHALL BE ORIENTED TO DIRECT LIGHT UPWARDS AND DOWNWARDS ON-SITE AWAY FROM ALL ADJOINING PUBLIC ROADS AND ADJACENT RESIDENTIAL LOTS IN ACCORDANCE SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
- CONTRACTOR TO REFER TO THE CURRENT VERSION OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION" FOR CURRENT DETAILS, AND INFORM ENGINEER OF ANY DISCREPANCIES.
- THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION AND THE FOREST CONSERVATION MANUAL BY ON-SITE RETENTION, AND AFFORESTATION/REFORESTATION OF 0.5 ACRES OF FOREST. FINANCIAL SURETY FOR THE 0.1 ACRES (4,356 SF) TO BE IN AFFORESTATION/REFORESTATION WILL BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT AT \$0.50 PER SQUARE FOOT, OR \$2,178.00.

AS BUILT CERTIFICATION:  
THERE IS NO AS BUILT INFORMATION ON THIS SHEET

*[Signature]*  
PAUL M. SILL, PROFESSIONAL ENGINEER

1-11-24  
DATE



PURPOSE STATEMENT:  
THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO EXPAND THE CHURCH BUILDING AND INCLUDE ASSOCIATED SITE IMPROVEMENTS.

**DEMOLITION PLAN**  
**CHURCH OF THE RESURRECTION**  
3175 PAULSKIRK DRIVE  
TAX MAP 24 GRID 4  
2ND ELECTION DISTRICT

PARCEL 1117 LOT 1 & LOT 2  
HOWARD COUNTY, MARYLAND

	<b>SILL ENGINEERING GROUP, LLC</b> 16005 Frederick Road, 2nd Floor Woodline, Maryland 21797 Phone: 443.325.5076 Fax: 410.696.2022 Email: info@sillengineering.com Civil Engineering for Land Development	DESIGN BY: PS
		DRAWN BY: JDB
		CHECKED BY: PS
		DATE: MAY 31, 2022
PROJECT #: 18-088		SCALE: AS SHOWN
SHEET #: 11 OF 21		DATE: MAY 31, 2022

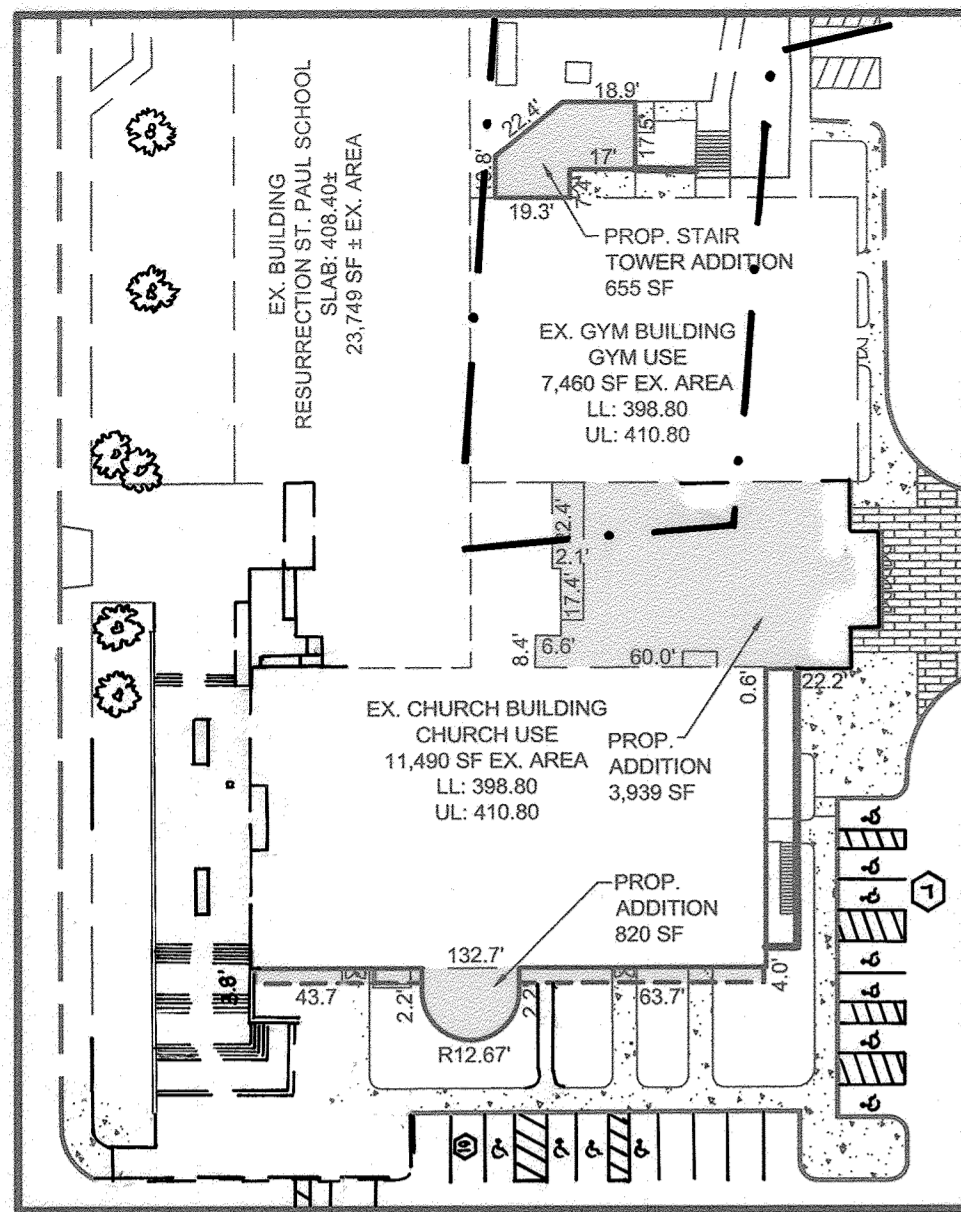
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 32025. EXPIRATION DATE JUNE 30, 2023.

**C-011**



PLAN VIEW  
SCALE: 1"=50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING <i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	7-25-22 DATE
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY <i>[Signature]</i> COUNTY HEALTH OFFICER	3/19/22 DATE
APPROVED: DIVISION OF LAND DEVELOPMENT <i>[Signature]</i> DIRECTOR	10-4-22 DATE



**BUILDING DIMENSIONS**

SCALE: 1"=50'

REVISIONS		
NO.	DESCRIPTION	DATE
1	AS BUILT BY SILL ENGINEERING GROUP	12/05/23

LEGEND	
EXISTING CONTOUR	--- 382
PROPOSED CONTOUR	--- 382
EXISTING DOWNSPOUT	○ DS
EXISTING STORM DRAIN CLEANOUT	○
EXISTING SIGN	+
EXISTING HANDICAP PARKING SIGN	+
EXISTING TREE	⊗
EXISTING TREELINE	—
PROPOSED TREELINE	—
LIGHT POLES	☆ POST TOP    ○ OVERHEAD    * BOLLARD
PROPOSED BUILDING ADDITION	▭
EXISTING STREAM	—
EXISTING FLOODPLAIN PER HOWARD COUNTY GIS DATA	—
EXISTING WATER	—
EXISTING GAS	— SB
EXISTING 100' STREAM BUFFER	— SB
EXISTING 25' WETLAND BUFFER	— WB
SILT FENCE	— SF
SILT FENCE ON PAVEMENT	— SFOP
LIMIT OF DISTURBANCE	— LOD
PROPOSED FLOODPLAIN PER HOWARD COUNTY LETTER OF MAP REVISION DATED JAN. 14, 2021	—
PROPOSED FULLY DEPRESSED CURB	—
PROPOSED WHEEL STOPS	—



**DEVELOPER'S CERTIFICATE**  
 "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."  
*John G. DeGuzman* 5-26-2022  
 SIGNATURE OF DEVELOPER DATE

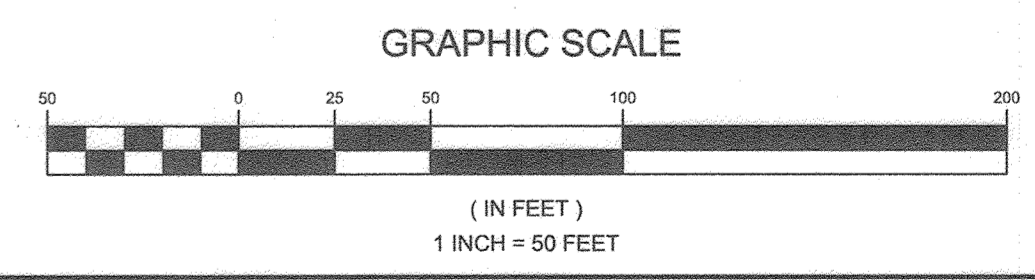
**ENGINEER'S CERTIFICATE**  
 "I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
*Paul M. Sill*  
 SIGNATURE OF ENGINEER DATE  
 PAUL M. SILL, P.E.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
*Amanda Butcher* 05/25/22  
 HOWARD SCD DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Cheryl* 7-25-22  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Steve* 10-4-22  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
 DIRECTOR

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY  
*Michael J. Davis* 7/19/22  
 COUNTY HEALTH OFFICER  
 HOWARD COUNTY HEALTH DEPARTMENT

AS BUILT CERTIFICATION:  
 THERE IS NO AS BUILT INFORMATION ON THIS SHEET  
*Paul M. Sill* 1-11-24  
 PAUL M. SILL PROFESSIONAL ENGINEER DATE  
 LICENSE NO. 32025



**OVERALL SITE AND SEDIMENT & EROSION CONTROL PLAN**  
**CHURCH OF THE RESURRECTION**  
 3175 PAULSKIRK DRIVE

TAX MAP 24 GRID 4 2ND ELECTION DISTRICT  
 PARCEL 1117 LOT 1 & LOT 2 HOWARD COUNTY, MARYLAND



**SILL ENGINEERING GROUP, LLC**  
 16005 Frederick Road, 2nd Floor  
 Woodbridge, Maryland 21797  
 Phone: 443.325.5076  
 Fax: 410.696.2022  
 Email: info@sillengineering.com  
 Civil Engineering for Land Development

DESIGN BY: PS  
 DRAWN BY: JDB  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: MARCH 18, 2022  
 PROJECT #: 18-088  
 SHEET #: 12 OF 21

**OWNER**  
 CHURCH OF THE RESURRECTION  
 ROMAN CATHOLIC CONGREGATION INC  
 C/O RANDY CURLETT  
 3175 PAULSKIRK DRIVE  
 ELLICOTT CITY, MARYLAND 21042  
 410.845.4017  
 RCURLETT@RES-EC.ORG

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. 32025, EXPIRATION DATE: JUNE 30, 2025.

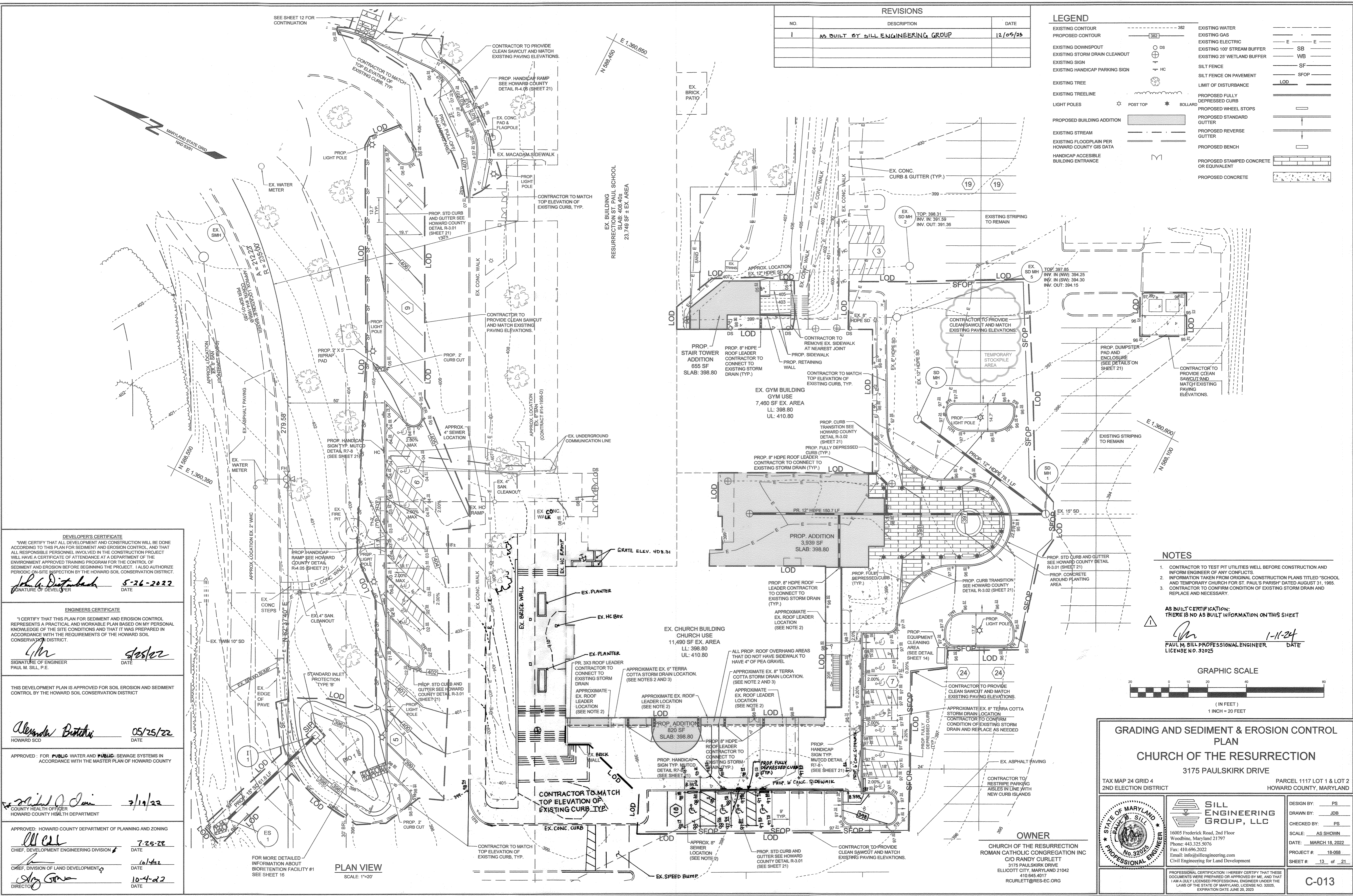
**C-012**

**PLAN VIEW**

SCALE: 1"=50'

REVISIONS		
NO.	DESCRIPTION	DATE
1	AS BUILT BY SILL ENGINEERING GROUP	12/05/23

LEGEND	
EXISTING CONTOUR	--- 382
PROPOSED CONTOUR	--- 382
EXISTING DOWNSPOUT	⊙ DS
EXISTING STORM DRAIN CLEANOUT	⊙ SD
EXISTING SIGN	⊙ HC
EXISTING HANDICAP PARKING SIGN	⊙ HC
EXISTING TREE	⊙
EXISTING TREELINE	⊙
LIGHT POLES	⊙ POST TOP ⊙ BOLLARD
PROPOSED BUILDING ADDITION	▭
EXISTING STORM	---
EXISTING FLOODPLAIN PER HOWARD COUNTY GIS DATA	---
HANDICAP ACCESSIBLE BUILDING ENTRANCE	M
EXISTING WATER	---
EXISTING GAS	---
EXISTING ELECTRIC	---
EXISTING 100' STREAM BUFFER	---
EXISTING 25' WETLAND BUFFER	---
SILT FENCE	---
SILT FENCE ON PAVEMENT	---
LIMIT OF DISTURBANCE	---
PROPOSED FULLY DEPRESSED CURB	---
PROPOSED WHEEL STOPS	---
PROPOSED STANDARD GUTTER	---
PROPOSED REVERSE GUTTER	---
PROPOSED BENCH	---
PROPOSED STAMPED CONCRETE OR EQUIVALENT	---
PROPOSED CONCRETE	---



**DEVELOPER'S CERTIFICATE**  
 "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."  
 Signature: *John G. Disturbach* DATE: 5-26-2022

**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."  
 Signature: *Paul M. Sill* DATE: 10-4-22

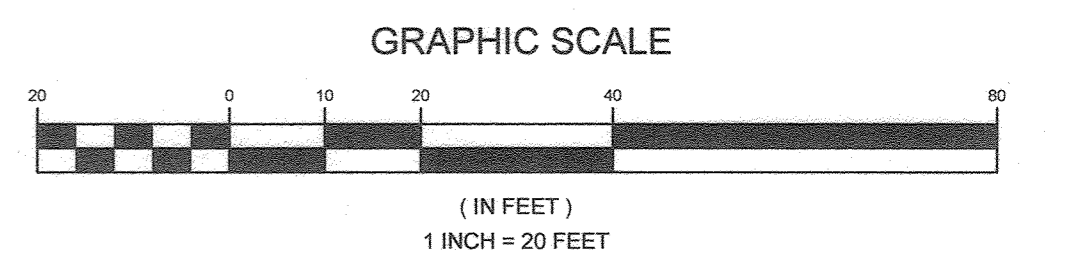
APPROVED FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY  
 Signature: *Alexander Butcher* DATE: 05/25/22  
 HOWARD SCD

APPROVED FOR COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT  
 Signature: *Michael J. Jami* DATE: 3/19/22

APPROVED FOR CHIEF, DIVISION OF LAND DEVELOPMENT  
 Signature: *Ally Gama* DATE: 10-4-22

- NOTES**
- CONTRACTOR TO TEST PIT UTILITIES WELL BEFORE CONSTRUCTION AND INFORM ENGINEER OF ANY CONFLICTS.
  - INFORMATION TAKEN FROM ORIGINAL CONSTRUCTION PLANS TITLED "SCHOOL AND TEMPORARY CHURCH FOR ST. PAUL'S PARISH" DATED AUGUST 31, 1965.
  - CONTRACTOR TO CONFIRM CONDITION OF EXISTING STORM DRAIN AND REPLACE AS NECESSARY.

**AS BUILT CERTIFICATION:**  
 THERE IS NO AS BUILT INFORMATION ON THIS SHEET  
 Signature: *Paul M. Sill* DATE: 1-11-24  
 PAUL M. SILL PROFESSIONAL ENGINEER  
 LICENSE NO. 32925



**GRADING AND SEDIMENT & EROSION CONTROL PLAN**

**CHURCH OF THE RESURRECTION**

3175 PAULSKIRK DRIVE

TAX MAP 24 GRID 4 PARCEL 1117 LOT 1 & LOT 2  
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

	DESIGN BY: PS
	DRAWN BY: JDB
	CHECKED BY: PS
	SCALE: AS SHOWN
	DATE: MARCH 18, 2022
PROJECT #: 18-068	
SHEET #: 13 of 21	

**SILL ENGINEERING GROUP, LLC**  
 16005 Frederick Road, 2nd Floor  
 Woodbine, Maryland 21797  
 Phone: 443.325.5076  
 Fax: 410.696.2022  
 Email: info@sillengineering.com  
 Civil Engineering for Land Development

**OWNER**  
 CHURCH OF THE RESURRECTION  
 ROMAN CATHOLIC CONGREGATION INC  
 C/O RANDY CURLETT  
 3175 PAULSKIRK DRIVE  
 ELLICOTT CITY, MARYLAND 21042  
 410.845.401  
 RCURLETT@RES-ORG

**C-013**

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

**DEFINITION**  
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

**PURPOSE**  
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

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

**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 SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT SUCH AS DISC HARROWS OR CHISEL PLOW OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT AFTER THE SOIL IS LOOSENEED, IT MUST NOT BE ROLLED OR DRAGGED SOUTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE CONFORMED TO THE RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.

b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLAN.

c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

- SOIL PH IS BETWEEN 5.0 AND 7.0
- SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM)
- SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 20 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVGRASS WILL BE PLANTED, THEN A SANDY SOIL LESS THAN 30 PERCENT SILT PLUS CLAY WOULD BE ACCEPTABLE.
- SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.

v. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION

b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED TO ADEQUATE SOIL DO NOT MEET THE ABOVE CONDITIONS.

c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN. THE SCARIFIED OR OTHER SURFACE GRADING SHALL BE TO THE GRADE AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.

d. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE. REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SOIL APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SURFACE TO BE PREPARED TO RECEIVE TURF OR RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRAGMENTED. SEEDING LOOSENESS MAY BE UNNECESSARY ON NEWLY DISTURBED AREA.

**B. TOPSOILING**

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOOK TO PLANT, AND UNACCEPTABLE SOIL QUALITY.

2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SURVEY PUBLISHED BY USDA-NRCS.

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

- THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH
- THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
- THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
- THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 SHOULD BE TOPSOILED IN AREAS WITH A MINIMUM OF 100 SQUARE FEET PER 100 SQUARE FEET OF DISTURBED AREA.

a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APROPRIATE AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURES AND SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CONCRETE, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIAL LARGER THAN 1/2 INCHES IN DIAMETER.

b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERBERIS GRASS, QUACK GRASS, JOHNSON GRASS, NETTLE, POISON IVY, THISLE, OR OTHERS AS SPECIFIED. TOPSOIL MUST BE FREED OF WEEDS, INSECTS, AND OTHER HARMFUL ORGANISMS.

c. TOPSOIL MUST BE APPROVED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE AUTHORITY. MAY BE USED IN LIEU OF NATURAL TOPSOIL.

**C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)**

1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER. TESTS ON AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ANALYSIS MUST BE TAKEN FROM THE SAME DEPTH AND NUMBER OF SAMPLES AS DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.

2. LIME MATERIALS MUST BE GRADE A, HIGH PURITY, AND MUST BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE) AND MUST BE GRINDING TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH AND 95 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.

3. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

4. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GRADUALLY LIMESTONE AT THE RATE OF 1 TO 4 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE APPLICATION OF TOPSOIL.

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

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

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

**CONDITIONS WHERE PRACTICE APPLIES**  
TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

**CRITERIA**

**A. SEEDING**

1. SPECIFICATIONS

- ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND SEED LAW. ALL SEED MUST BE SUBJECT TO TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED MUST BE THOROUGHLY 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 THE TYPE OF SEED AND RATE.
- MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAW.
- INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN THE SEED IS VERY IMPORTANT TO KEEP INOCULANT AS CLEAN AS POSSIBLE UNTIL USE. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
- SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISPERSION OF PHYTO TOXIC MATERIAL.

2. APPLICATION

a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DRAP OR BROADCAST SPREADERS.

- INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1. PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
- FOR SLOPES OR OTHER AREAS HAVING STEEP SLOPES, SEED SHOULD BE PLACED ON THE DOWN HILL SIDE OF EACH SECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO CONTACT.
- DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL. CULTIPACKING DEVICES ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDING MUST BE FIRMS AFTER PLANTING.
- APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
- HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
- IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P2O5 (PHOSPHORUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.
- LIME: ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE) MAY BE APPLIED HYDROSEEDING. NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT LIME. HYDRATED LIME IS ACCEPTABLE.
- MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTING. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

b. MULCHING

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

- STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MOIST, MOLLY, CAJED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE SPECIES OF GRASS OR OTHER VEGETATION ARE OF CONCERN.
- WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBRIL PHYSICAL STATE.
- WCFM IS TO BE GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORM SPREAD. UNIFORM DISTRIBUTION INCLUDING THICKNESS IS NOT FEASIBLE.
- WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND LIME. WCFM IS TO BE UNIFORM AND HOMOGENEOUS SURFACE. THE MULCH MATERIAL MUST FORM A BUTTER-LIKE GROUND COVER, OR APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
- WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
- WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF 1/8 INCHES TO 1/4 INCHES; DIAMETER APPROXIMATELY 1 MILLIMETER; RANGE OF 4.0 TO 6.5; ASH CONTENT OF 1.8 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

2. APPLICATION

- APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
- WHEN APPLIED IN AREAS 2 TO 4 INCHES DEEP AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 2 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL OR OTHER EQUIPMENT, THE MULCH SHOULD BE APPLIED TO A UNIFORM DEPTH OF 2 TO 2 INCHES. MULCH ANCHORING TOOL OR OTHER EQUIPMENT CAN OPERATE SAFELY IF USED ON SLOPING LAND. THIS PRACTICE SHOULD FOLLOW THE COURSE OF THE WOOD CELLULOSE FIBER MULCH AND NOT BE APPLIED TO THE WOOD CELLULOSE FIBER MULCH AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER MULCH WITH THE SOIL WITHOUT INTERRUPTING. USE 50 POUNDS OF WOOD CELLULOSE FIBER MULCH PER 100 GALLONS OF WATER.
- ANCHORING
- WHEN MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS LISTED BY PREFERENCE:
  - MULCH ANCHORING TOOL: A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 1/2 INCHES. THIS PRACTICE IS MOST EFFECTIVE WHEN APPLIED TO SLOPES OF 2:1 OR FLATTER. STAGGER LATERAL JOINTS AND OPERATE SAFELY IF USED ON SLOPING LAND. THIS PRACTICE SHOULD FOLLOW THE COURSE OF THE WOOD CELLULOSE FIBER MULCH AND NOT BE APPLIED TO THE WOOD CELLULOSE FIBER MULCH AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER MULCH WITH THE SOIL WITHOUT INTERRUPTING. USE 50 POUNDS OF WOOD CELLULOSE FIBER MULCH PER 100 GALLONS OF WATER.
  - SYNTHETIC BINDERS SUCH AS ACRYLIC GLUE (AC-109) OR TERRA TACK OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS PRESCRIBED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEED BE HEAVIER AT THE EDGES WHERE WIND CATCHES AND LIGHTER AT THE CORNERS AND IN CURVES. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
  - WEEDING: LIGHTWEEDING MAY BE DONE OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

### B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

**DEFINITION**  
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

**PURPOSE**  
TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

**CONDITIONS WHERE PRACTICE APPLIES**  
WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

**CRITERIA**

**A. SEED MIXTURES**

1. GENERAL USE

- SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE SOIL TYPE AND GRADE OR TERRACE. SEEDING RATES ARE TO BE BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURES, APPLICATION RATES, AND SEEDING DATES TO BE USED IN THE SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PROJECT PLAN AND APPROVED BY THE INSPECTOR. THE SEEDING SUMMARY IS TO BE KEPT ON THE PROJECT PLAN AND APPROVED BY THE INSPECTOR.
- ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN THE SEEDING SUMMARY. THE SUMMARY IS TO BE KEPT ON THE PROJECT PLAN AND APPROVED BY THE INSPECTOR.
- FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY TABLE B.3.
- FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
- URFURFUR MIXTURES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE
- SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURES, APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PROJECT PLAN AND APPROVED BY THE INSPECTOR.
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- SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE

**SWM SUMMARY**

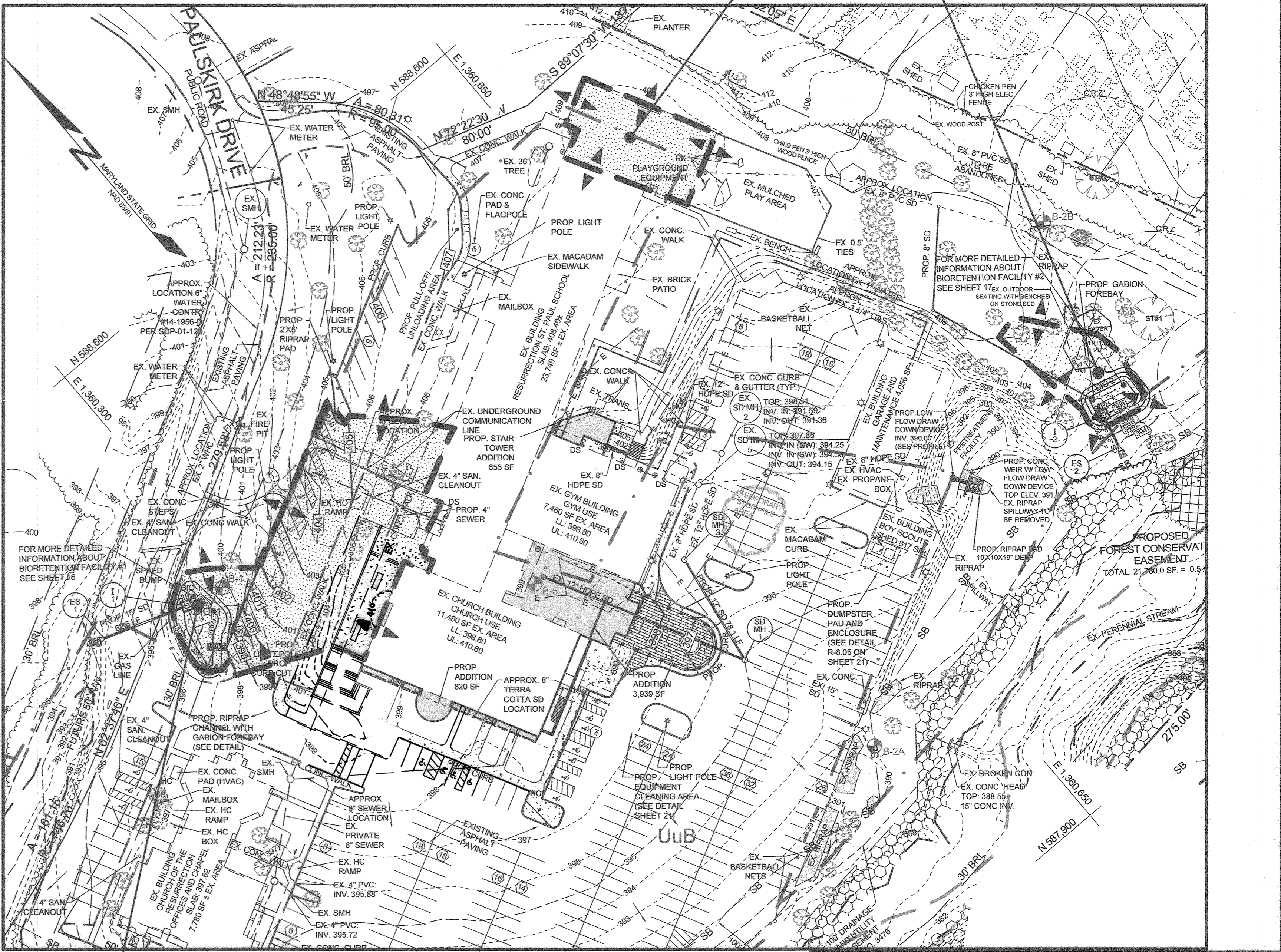
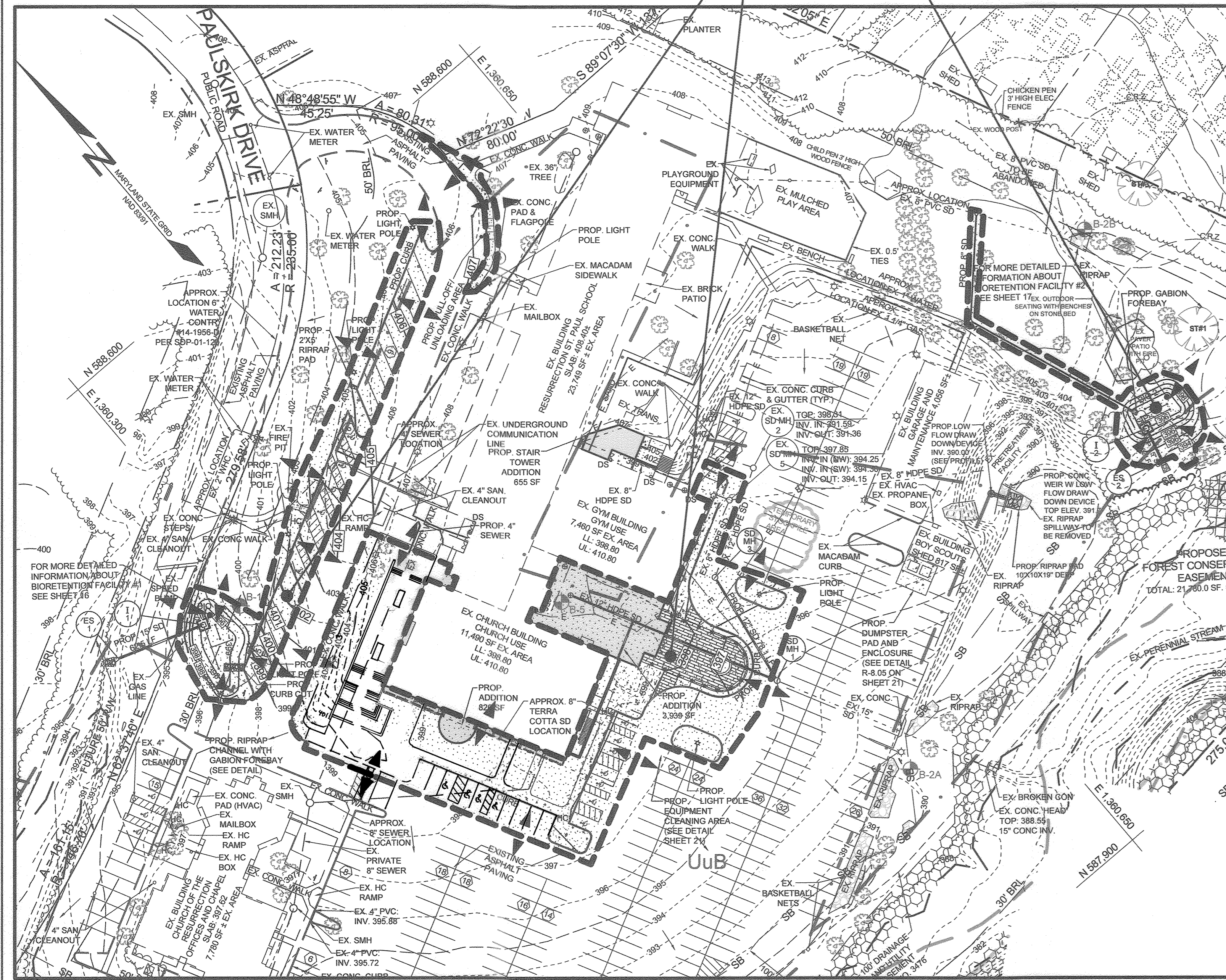
ESD Required =	2029 cf			
Rev Required =	122 cf			
PE =	1.16			
Name	DA (SF)	ESDv Prov'd (CF)	Rev Prov'd (CF)	Pe Prov'd
Bio1	19465	1216	70	1.3
Bio2	9398	819	61	2.5
		2035	131	1.69
<b>10 AND 100 YEAR STORMS</b>				
	Flow Rate - Total Site (CFS)		Flow Rate - DA 5 (CFS)	
	10 year	100 year	EC Storm	10 year
Existing Condition	42.51	81.55	95.36	1.16
Developed Condition	42.38	80.96	94.73	0.36
				1.94
				2.44
				0.52

**STORMWATER MANAGEMENT NOTES & DESIGN NARRATIVE**

- BELOW IS A LIST TO DESCRIBE THE STORMWATER MANAGEMENT REQUIREMENTS AND ACHIEVEMENTS FOR THE SITE PER THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II, AS AMENDED BY THE STORMWATER MANAGEMENT ACT OF 2007.
- THE SITE WAS ANALYZED FOR ITS STORMWATER MANAGEMENT OBLIGATIONS. THE SITE IS CURRENTLY DEVELOPED AND THE AMOUNT OF EXISTING IMPERVIOUS AREA WITHIN THE SITE AREA IS 64%, WHICH IS GREATER THAN 40% AND QUALIFIES THE PROJECT TO BE A REDEVELOPMENT PROJECT. PLEASE NOTE THAT THE SITE AREA EQUALS THE LIMIT OF DISTURBANCE. THE SWM PLAN WILL PROVIDE TREATMENT FOR 50% OF THE EXISTING IMPERVIOUS AREA (17,788 SF) AS REDEVELOPMENT WITH A PE OF 1.0 AND 100% TREATMENT FOR NEW HARD SURFACES (4,371 SF) AT A PE OF 1.8. THE TOTAL SWM REQUIREMENT FOR THE SITE HAS BEEN CALCULATED TO BE A SITE PE OF 1.16 AND AN ESDV OF 2,029 CF BASED ON THE LIMITS OF DISTURBED (SITE AREA). THE STORMWATER MANAGEMENT OBLIGATIONS FOR THIS PROJECT WILL BE MET BY VARIOUS ESD PRACTICES. THE TOTAL ESDV PROVIDED IS 2,035 CF WHICH EXCEEDS THE REQUIRED ESDV. THE PROJECT AREA IS LOCATED AT THE HIGH POINT OF THE SITE AND STORMWATER RUNOFF DISCHARGES IN MULTIPLE DIRECTIONS. AS SUCH, THE NEW SWM DEVICES WILL BE LOCATED TO BEST INTERCEPT STORMWATER RUNOFF FOR EXISTING AND PROPOSED IMPERVIOUS SURFACES.
  - QUANTITY MANAGEMENT FOR THE 10-YEAR AND 100-YEAR STORM AND THE 3.5 HOUR 6.6 INCH STORM EVENTS, A.K.A. 2016 ELLICOTT CITY STORM (EC STORM), IS REQUIRED FOR SITES LOCATED IN THE PLUMTREE WATERSHED. WE HAVE UTILIZED THE EXISTING INFILTRATION POND FOREBAY AND MODIFIED THE RELEASE STRUCTURE TO PROVIDE THE REQUIRED STORMWATER STORAGE AND ATTENUATION. A PRE AND POST DEVELOPMENT RUNOFF RATE IS LESS THAN THE EXISTING, THAN STORMWATER MANAGEMENT HAS BEEN ACHIEVED. COMPUTATIONS SHOW THAT BY MODIFYING THE RELEASE STRUCTURE THAT STORMWATER MANAGEMENT FOR THE REQUIRED DESIGN STORMS HAS BEEN ACHIEVED. A SUMMARY TABLE HAS BEEN ADDED TO THIS SHEET TO SHOW THE PRE AND POST DEVELOPMENT RUNOFF RATES.
  - ENVIRONMENTALLY SENSITIVE AREAS HAVE BEEN AVOIDED WHERE POSSIBLE. THE LIMIT OF DISTURBANCE AND ALL DEVELOPMENT ACTIVITY IS OUTSIDE OF THE 100 YEAR FLOODPLAIN, STREAM BUFFERS AND WETLAND AREAS.
  - TO THE GREATEST EXTENT PRACTICABLE THE NATURAL FLOW PATTERNS OF THE SITE HAVE BEEN MAINTAINED.
  - THE STORMWATER MANAGEMENT OBLIGATIONS FOR THIS PROJECT HAS BEEN MET BY THE USE OF MICRO-BIORETENTION FACILITIES (M-6).

**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING DOWNSPOUT
- EXISTING STORM DRAIN CLEANOUT
- EXISTING SIGN
- EXISTING HANDICAP PARKING SIGN
- EXISTING TREE
- EXISTING TREELINE
- PROPOSED TREELINE
- LIGHT POLES
- PROPOSED BUILDING ADDITION
- EXISTING STREAM
- EXISTING FLOODPLAIN PER HOWARD COUNTY GIS DATA
- PROPOSED FLOODPLAIN PER HOWARD COUNTY LETTER OF MAP REVISION DATED JAN. 14, 2021
- DRAINAGE DIVIDE
- SOIL BOUNDARY



**ESD DRAINAGE AREA MAP**  
SCALE: 1"=50'

**SWM DRAINAGE AREA MAP**  
SCALE: 1"=50'

**STORMWATER MANAGEMENT DRAINAGE AREA MAP**  
**CHURCH OF THE RESURRECTION**  
3175 PAULSKIRK DRIVE

TAX MAP 24 GRID 4  
2ND ELECTION DISTRICT

PARCEL 1117 LOT 1 & LOT 2  
HOWARD COUNTY, MARYLAND

**STATE OF MARYLAND**  
**PAUL M. SILL**  
**PROFESSIONAL ENGINEER**  
No. 32025

**SILL ENGINEERING GROUP, LLC**  
16005 Frederick Road, 2nd Floor  
Woodbine, Maryland 21797  
Phone: 443.325.5076  
Fax: 410.696.2022  
Email: info@sillengineering.com  
Civil Engineering for Land Development

**OWNER**  
CHURCH OF THE RESURRECTION  
ROMAN CATHOLIC CONGREGATION INC  
C/O CINDY DESROCHERS  
3175 PAULSKIRK DRIVE  
ELLICOTT CITY, MARYLAND 21042  
410.845.4017  
CDESROCHERS@RES-EC.ORG

**DESIGN BY:** PS  
**DRAWN BY:** JDB  
**CHECKED BY:** PS  
**SCALE:** AS SHOWN  
**DATE:** MAY 31, 2022  
**PROJECT #:** 19-088  
**SHEET #:** 15 of 21

**C-015**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 7-25-22  
CHIEF, DEVELOPMENT ENGINEERING DIVISION F

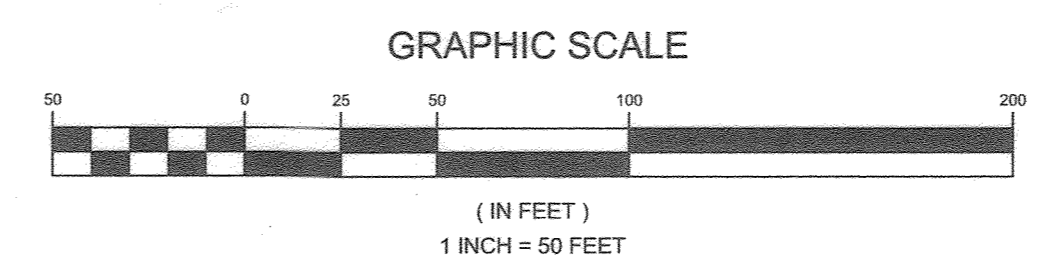
*[Signature]* 10/4/22  
CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 10-4-22  
DIRECTOR

NO.	AS BUILT BY SILL ENGINEERING GROUP	DESCRIPTION	DATE
1			12/05/23

**AS BUILT CERTIFICATION:**  
THERE IS NO AS BUILT INFORMATION ON THIS SHEET

*[Signature]* 1-11-24  
**PAUL M. SILL** PROFESSIONAL ENGINEER  
LICENSE NO. 32025



**B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDENS, LANDSCAPE INFILTRATION & INFILTRATION BERMS**

- MATERIAL SPECIFICATIONS**  
THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.
- FILTERING MEDIA OR PLANTING SOIL**  
THE SOIL SHALL BE A UNIFORM MIX, 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-BIORETENTION 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 SAND (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.

- 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 TIRE TYPES. 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 REFRACATURE 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.

- BACKFILLING**  
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 12" 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.

- PLANT MATERIAL**  
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

- PLANT INSTALLATION**  
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY 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.**

- UNDERDRAINS**  
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:  
• PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS28, 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 1/2" (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 (3/4" 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".

- MISCELLANEOUS**  
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).

- OTHER PRACTICES**  
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

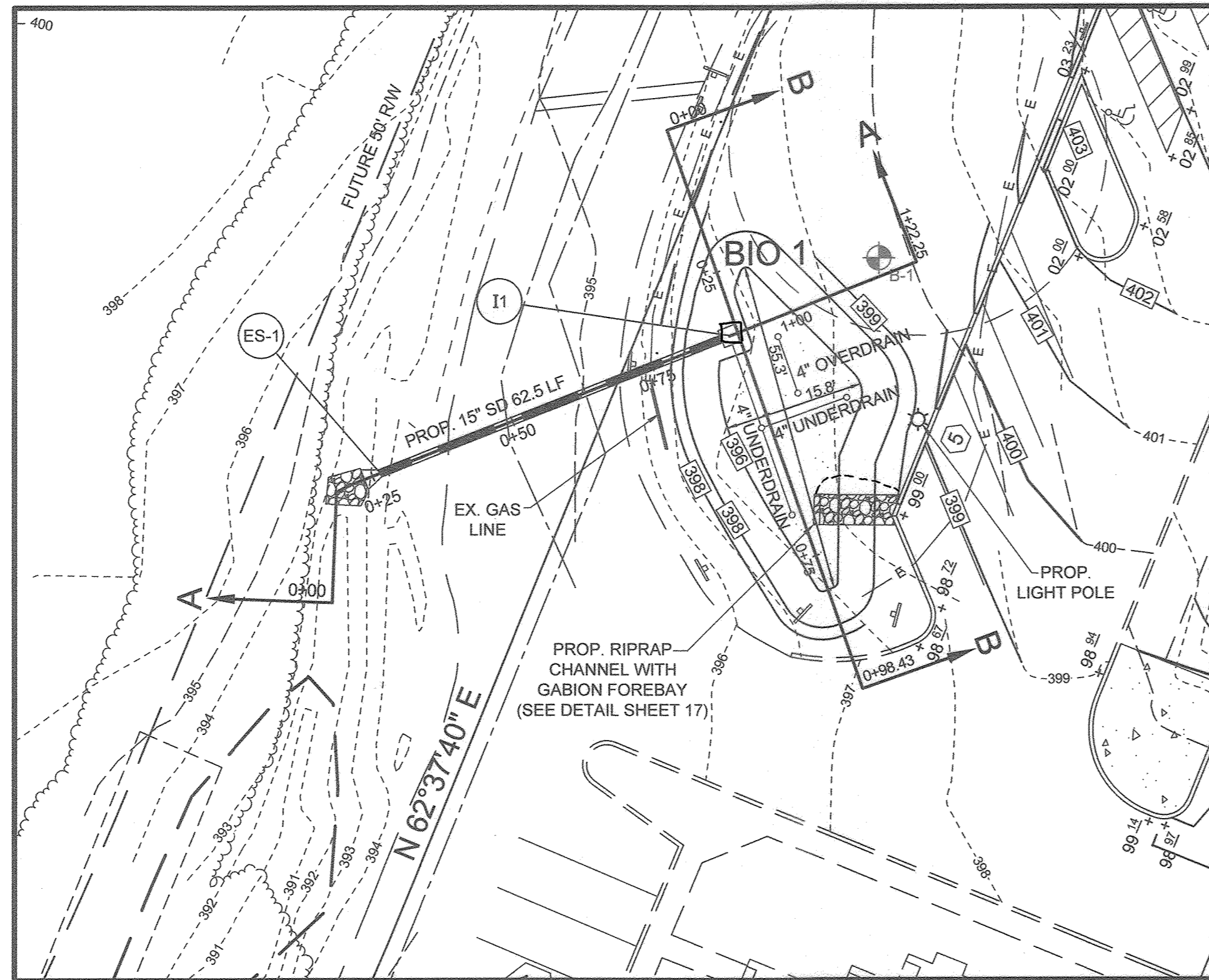
**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITIES**

- 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 OR 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 BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

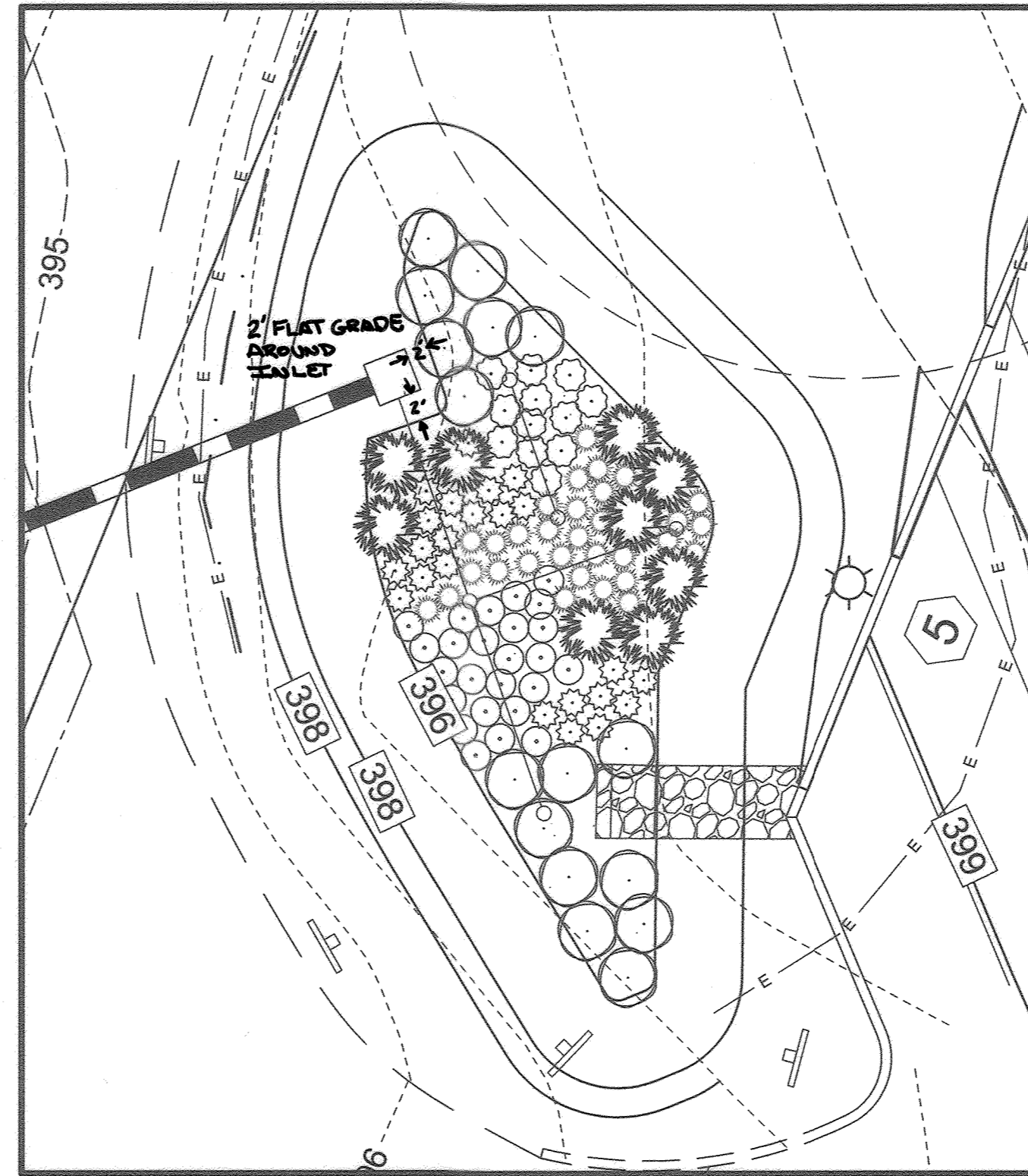
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 7/25/22  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 10/4/22  
DIRECTOR  
DATE: 10-4-22

NO.	DESCRIPTION	DATE
1	AS BUILT BY SILL ENGINEERING GROUP	12/09/23



PLAN VIEW - MICRO-BIORETENTION FACILITY #1

SCALE: 1"=20'



PLAN VIEW - MICRO-BIORETENTION FACILITY #1 LANDSCAPE PLAN

SCALE: 1"=10'

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE PLANT LIST THIS SHEET	N/A	PLANTINGS ARE SITE-SPECIFIC. SEE PLANT LIST THIS SHEET
PLANTING SOIL (2'-4" 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 (IF REQUIRED)	ORNAMENTAL STONE: WASHED COBBLES	STONE: 2" TO 5"	
GEOTEXTILE		N/A	PE TYPE 1 NONWOVEN
UNDERDRAIN GRAVEL	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" PERFOR. @ 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" GALVANIZED HARDWARE CLOTH.
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MX NO. 3, F <sub>c</sub> = 3500 PSI @ 28 DAYS, NORMAL WEIGHT, AIR-ENTRAINED, REINFORCING TO MEET ASTM-615-60	N/A	ON-SITE TESTING OF POURED-IN-PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST-IN-PLACE OR PRE-CAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND. DESIGN TO INCLUDE MEETING ACI CODE 309 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.

SIZE	TYPE	LENGTH
4" PERFORATED	SCH 40 PVC	55 LF
15" SOLID	HDPE	62.5 LF

SHRUBS AND PERENNIALS						
LEGEND	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QTY. BIO.1
○	ILEX VERTICILLATA	WINTERBERRY	AS SHOWN (MIN. 4' O.C.)	24" - 36" HT.	ONE MALE PER GROUPING, IN CENTER	16 ✓
●	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS SHENANDOAH	AS SHOWN (MIN. 4' O.C.)	24" - 36" HT.		9 ✓
○	ECHINCEA	PURPLE CONE FLOWER	2' O.C.	1 GAL.		25 ✓
○	RUBRICKIA	BLACK EYED SUSAN	2' O.C.	1 GAL.		31 ✓
○	LIATRIS SPICATA	BLAZING STAR	2' O.C.	1 GAL.		23 ✓
○	ASCLEPIAS INCARNATA	PINK MILKWEEED	3' O.C.	1 GAL.		12 ✓

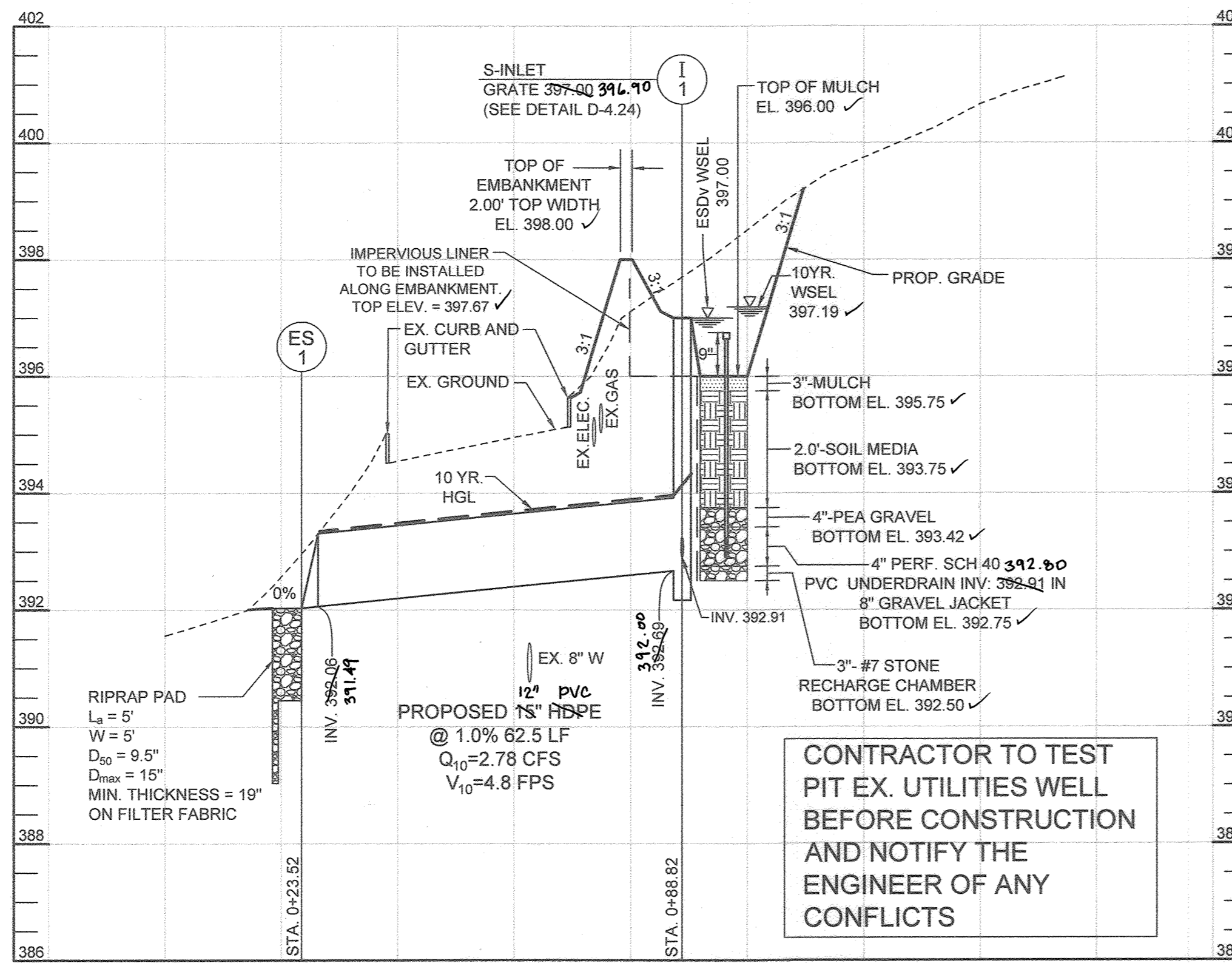
NOTE: IF THERE IS A CONFLICT BETWEEN THE PLANT LIST AND THE PLANS, THE LARGER NUMBER PREVAILS.  
NOTE: PLANT MATERIAL MUST COVER 50% OF THE MULCH AREA AT MATURE GROWTH.  
INTERPERSE PLANTINGS THROUGHOUT BIORETENTION FILTER AREA  
BIO.1 - BIORETENTION AREA = 903.1 S.F.

**AS-BUILT CERTIFICATION**

I HEREBY CERTIFY, BY MY SEAL THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS 'AS-BUILT' PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.

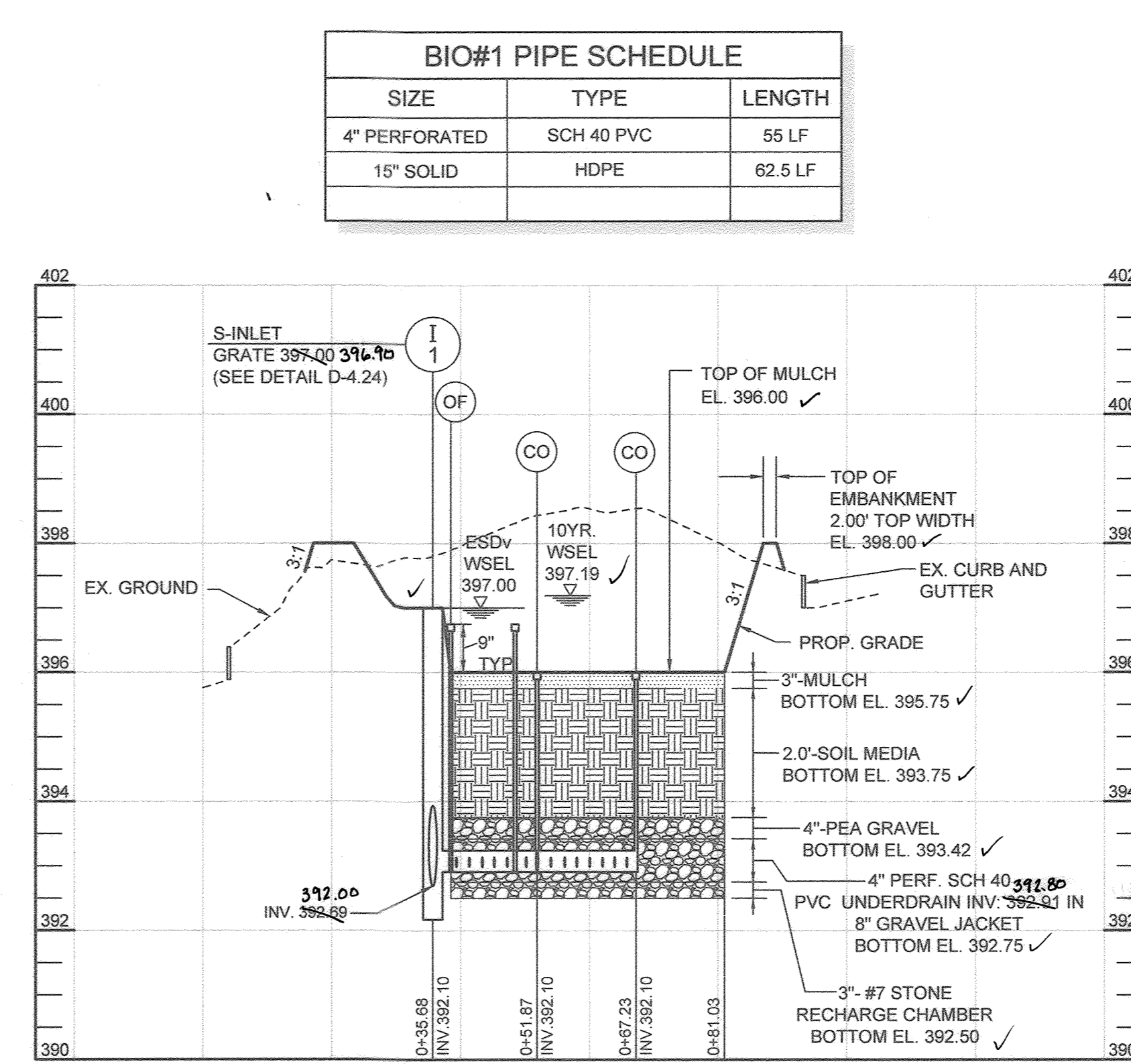
PAUL M. SILL, PROFESSIONAL ENGINEER  
LICENSE NO. 342025

11-24  
DATE



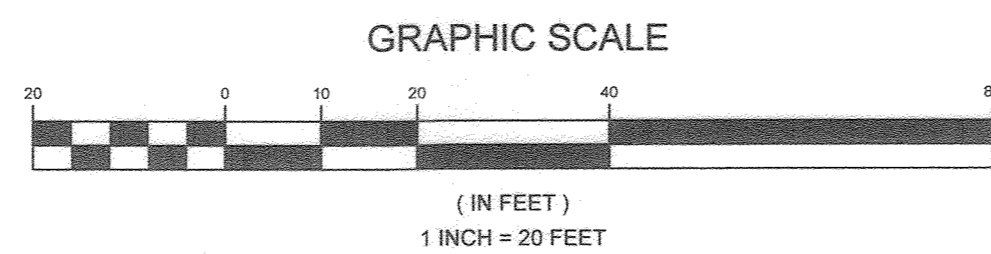
PROFILE VIEW - BIORETENTION FACILITY #1 SECTION A-A

HORIZONTAL SCALE: 1"=20'  
VERTICAL SCALE: 1"=2'



PROFILE VIEW - BIORETENTION FACILITY #1 SECTION B-B

HORIZONTAL SCALE: 1"=20'  
VERTICAL SCALE: 1"=2'



PURPOSE STATEMENT:  
THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO EXPAND THE CHURCH BUILDING AND INCLUDE ASSOCIATED SITE IMPROVEMENTS.

OWNER  
CHURCH OF THE RESURRECTION  
ROMAN CATHOLIC CONGREGATION INC  
C/O CINDY DESROCHERS  
3175 PAULSKIRK DRIVE  
ELLCOTT CITY, MARYLAND 21042  
410.845.4017  
CDESROCHERS@RES-EC.ORG

**STORMWATER MANAGEMENT PROFILES AND DETAILS**  
**CHURCH OF THE RESURRECTION**

3175 PAULSKIRK DRIVE

TAX MAP 24 GRID 4  
2ND ELECTION DISTRICT

PARCEL 1117 LOT 1 & LOT 2  
HOWARD COUNTY, MARYLAND



SILL ENGINEERING GROUP, LLC  
16905 Frederick Road, 2nd Floor  
Woodbine, Maryland 21797  
Phone: 443.325.5076  
Fax: 410.696.2022  
Email: info@sillengineering.com  
Civil Engineering for Land Development

DESIGN BY: PS  
DRAWN BY: JDB  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: MAY 31, 2022  
PROJECT #: 18-068  
SHEET #: 18 OF 21

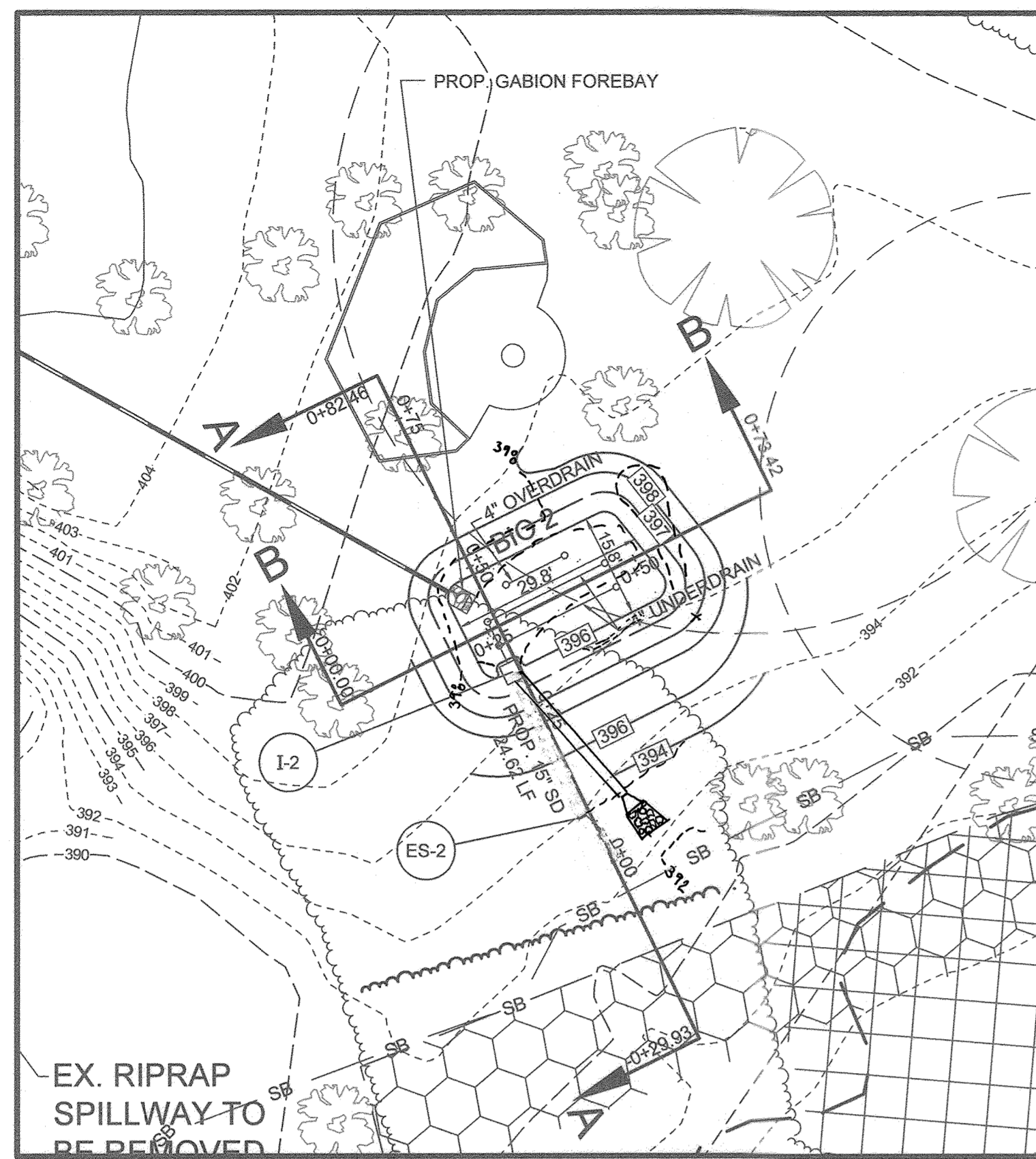
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 30, 2025.

C-016

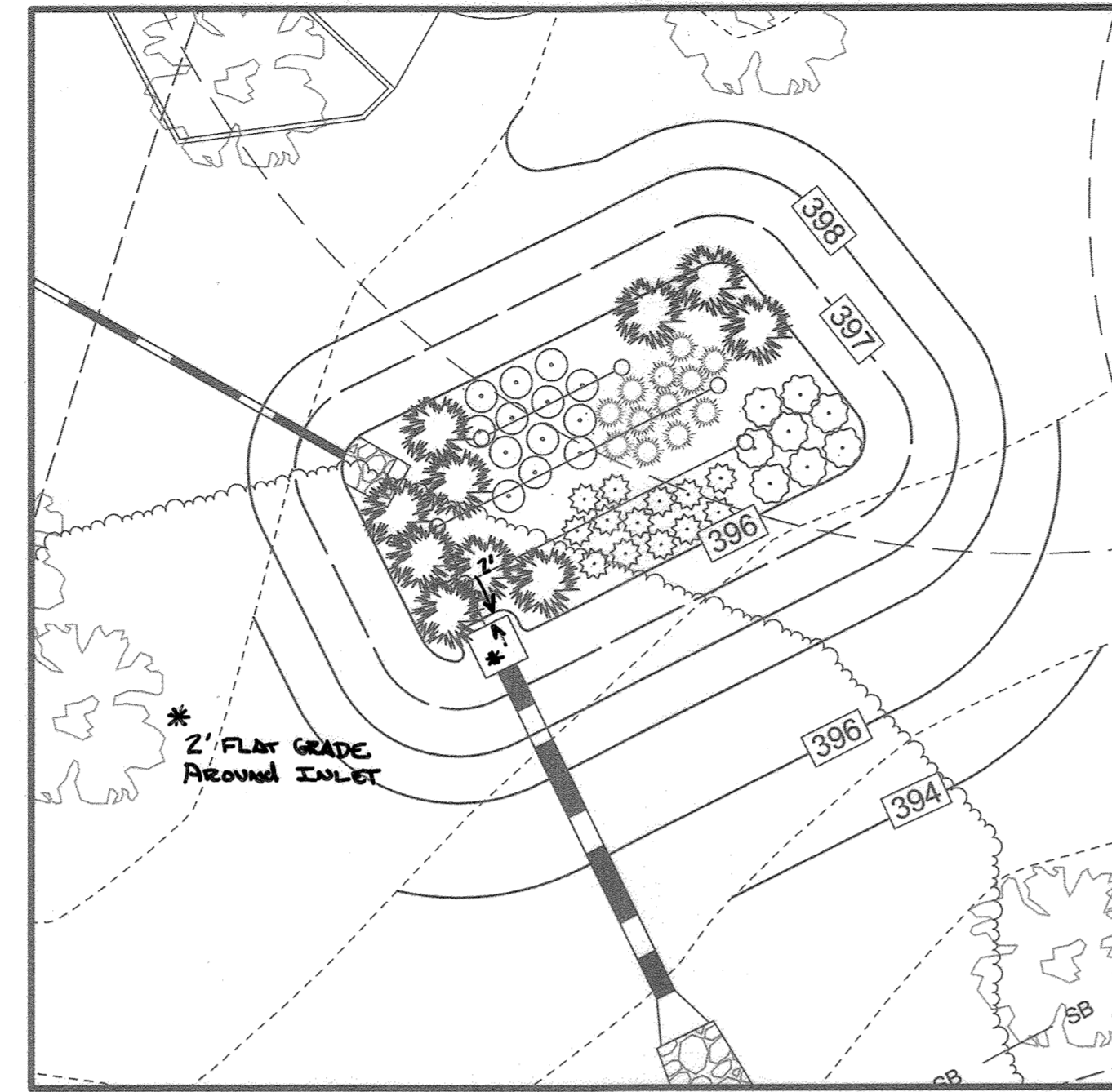
AS-BUILT

SDP-01-120

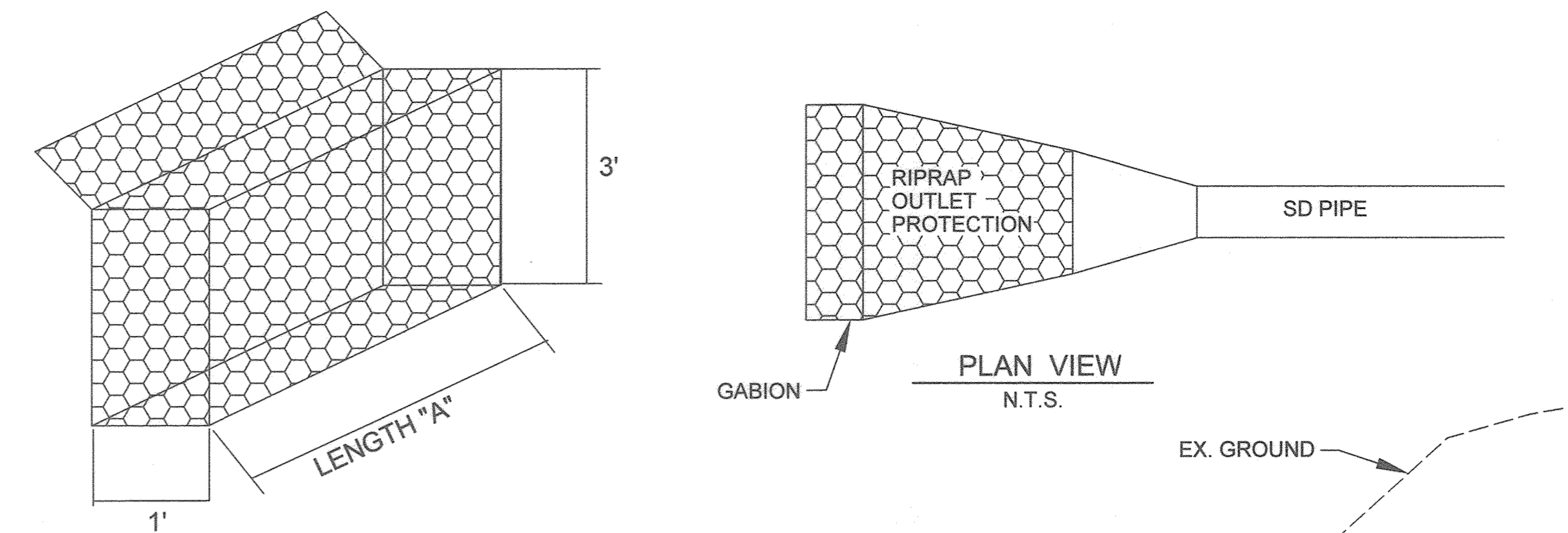




PLAN VIEW - MICRO-BIORETENTION FACILITY #2  
SCALE: 1"=20'



PLAN VIEW - MICRO-BIORETENTION FACILITY #2 LANDSCAPE PLAN  
SCALE: 1"=10'

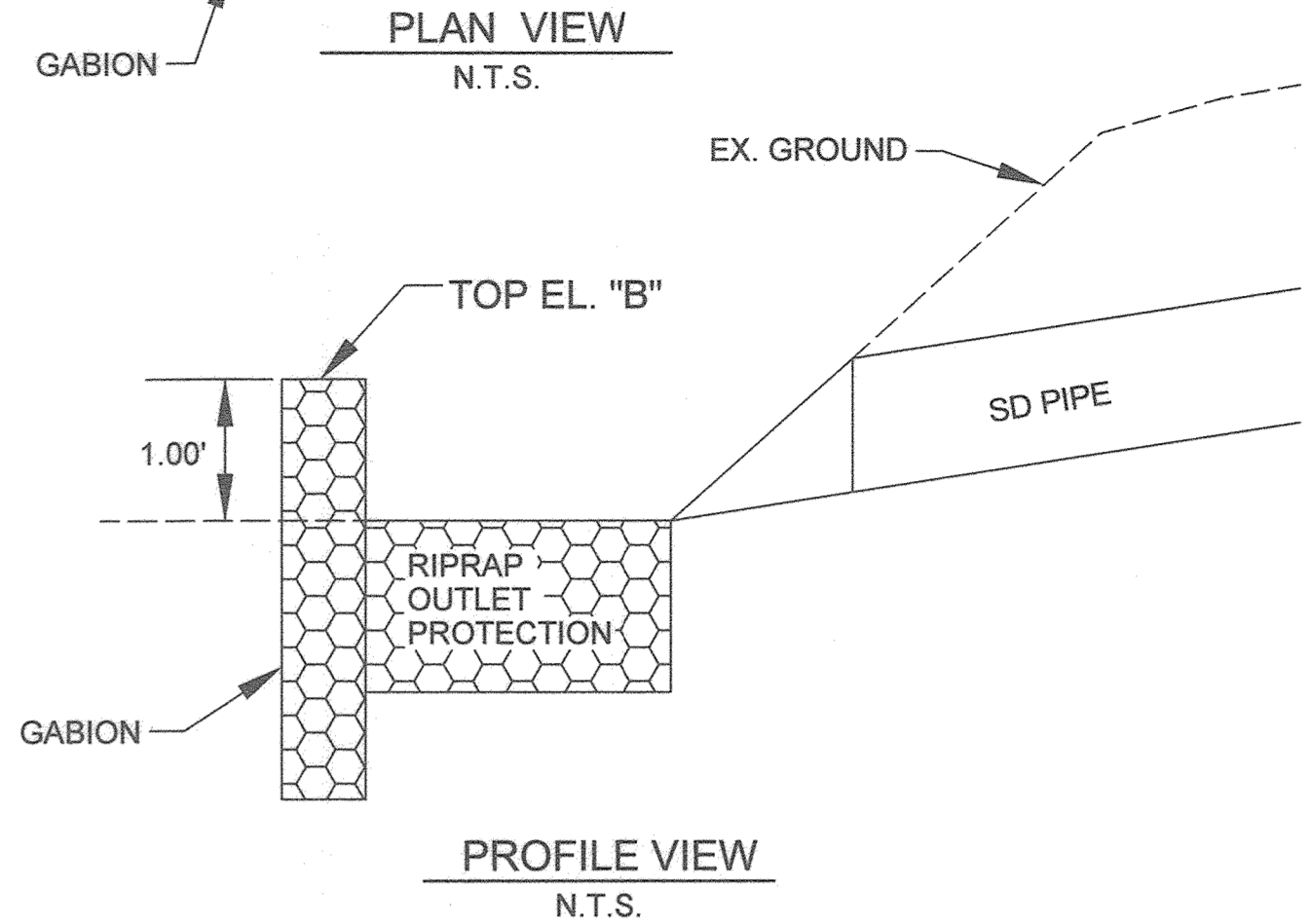


- GABION BASKET TO BE FILLED WITH 4"-8" STONE.
- GABION TO BE PLACED ON COMPACTED SUBGRADE.

GABION-ISOMETRIC VIEW  
N.T.S.

BIO#	A (FT.)	B (FT.)
1	4	397.00
2	3	397.00

GABION FOREBAY TABLE

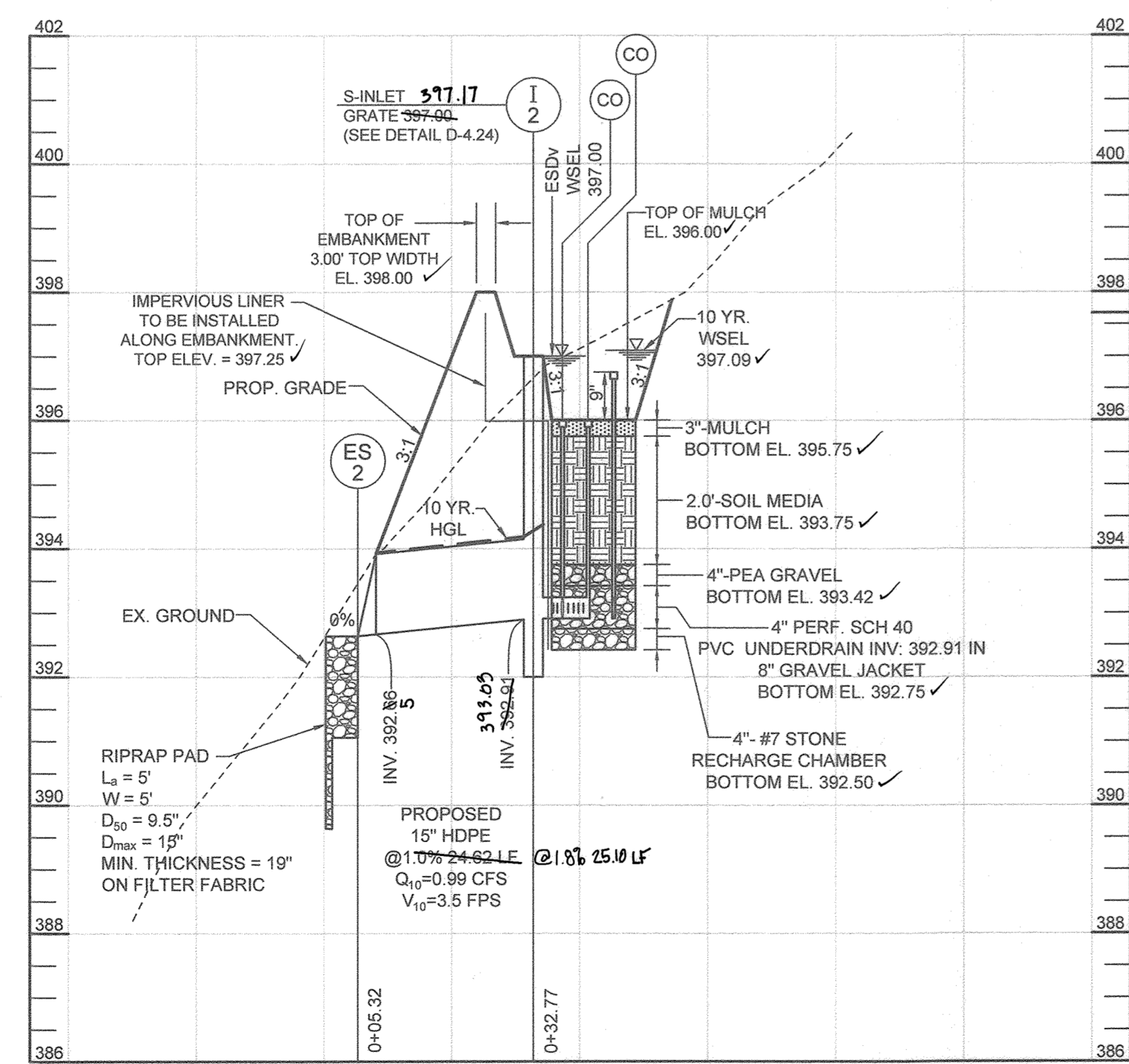


GABION FOREBAY DETAIL  
N.T.S.

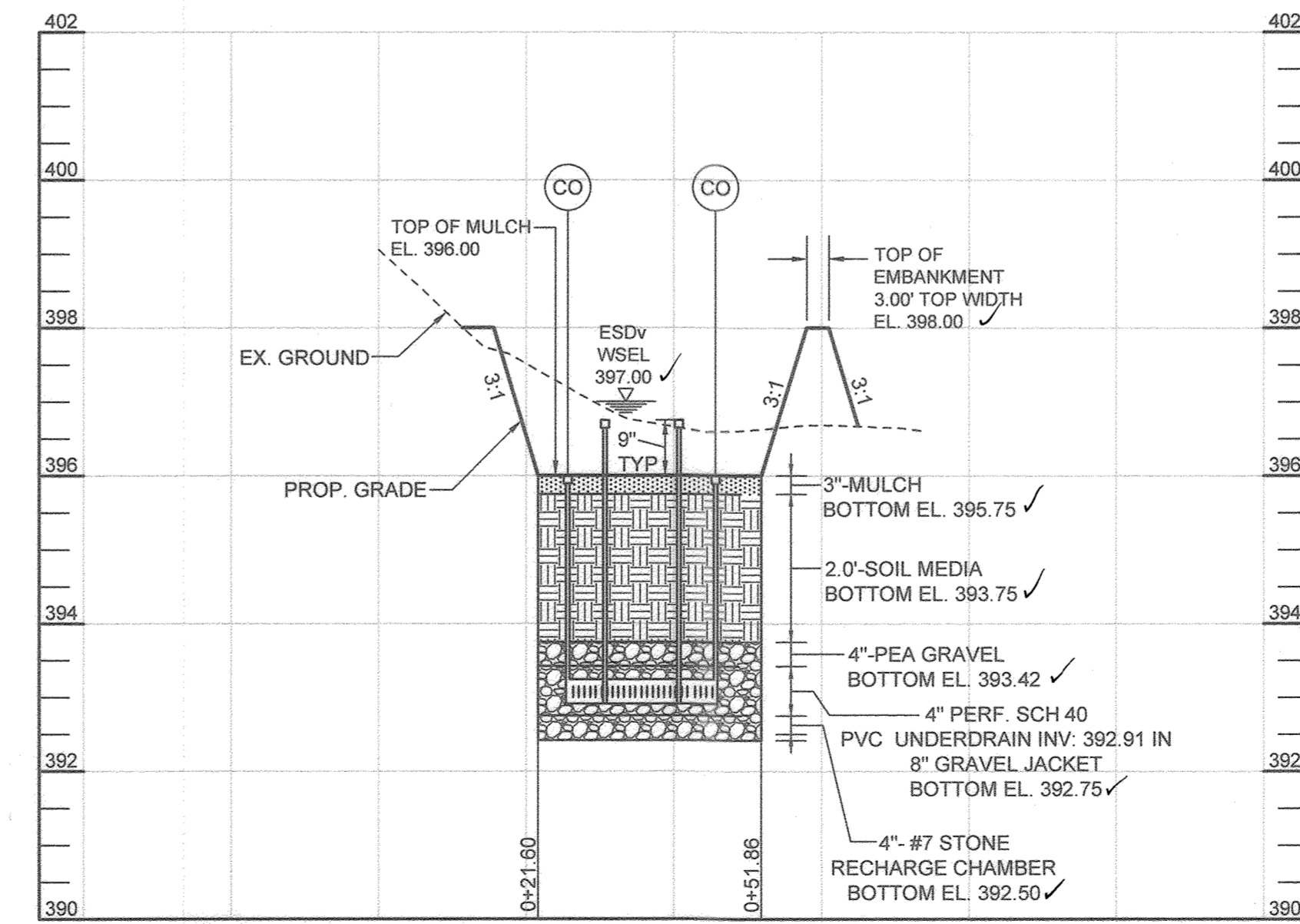
F-6 BIORETENTION PLANT LIST						
SHRUBS AND PERENNIALS						
LEGEND	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	REMARKS	QTY. BIO 2
○	ILEX VERTICILLATA	WINTERBERRY	AS SHOWN (MIN. 4' O.C.)	24"-36" HT.	ONE MALE PER GROUPING, IN CENTER	0
☼	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS 'SHENANDOAH'	AS SHOWN (MIN. 4' O.C.)	24"-36" HT.		10
⊙	ECHINCEA	PURPLE CONE FLOWER	2' O.C.*	1 GAL.		13
☼	RUDBECKIA	BLACK EYED SUSAN	2' O.C.*	1 GAL.		12
☼	LIATRIS SPICATA	BLAZING STAR	2' O.C.*	1 GAL.		13
☼	ASCLEPIAS INCARNATA	PINK MILKWEED	3' O.C.*	1 GAL.		8

NOTE: IF THERE IS A CONFLICT BETWEEN THE PLANT LIST AND THE PLANS, THE LARGER NUMBER PREVAILS.  
NOTE: PLANT MATERIAL MUST COVER 50% OF THE MULCH AREA AT MATURE GROWTH.  
\*INTERPERSE PLANTINGS THROUGHOUT BIORETENTION FILTER AREA  
BIO 2 - BIORETENTION AREA = 593.2 S.F.

BIO#2 PIPE SCHEDULE		
SIZE	TYPE	LENGTH
4" PERFORATED	SCH 40 PVC	57 LF
15" SOLID	HDPE	24.62 LF



PROFILE VIEW - BIORETENTION FACILITY #2  
SECTION A-A  
HORIZONTAL SCALE: 1"=20'  
VERTICAL SCALE: 1"=2'



PROFILE VIEW - BIORETENTION FACILITY #2  
SECTION B-B  
HORIZONTAL SCALE: 1"=20'  
VERTICAL SCALE: 1"=2'

**AS-BUILT CERTIFICATION**  
I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.

*Paul M. Sill*  
PAUL M. SILL PROFESSIONAL ENGINEER  
LICENSE NO. 32025  
1-11-24  
DATE

PURPOSE STATEMENT:  
THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO EXPAND THE CHURCH BUILDING AND INCLUDE ASSOCIATED SITE IMPROVEMENTS.

**STORMWATER MANAGEMENT PROFILES AND DETAILS**  
**CHURCH OF THE RESURRECTION**  
3175 PAULSKIRK DRIVE  
TAX MAP 24 GRID 4  
2ND ELECTION DISTRICT  
PARCEL 1117 LOT 1 & LOT 2  
HOWARD COUNTY, MARYLAND

**OWNER**  
CHURCH OF THE RESURRECTION  
ROMAN CATHOLIC CONGREGATION INC  
C/O CINDY DESROCHERS  
3175 PAULSKIRK DRIVE  
ELLCOTT CITY, MARYLAND 21042  
410.545.4017  
CDESROCHERS@RES-EC.ORG

**GRAPHIC SCALE**  
(IN FEET)  
1 INCH = 20 FEET

**APPROVED:** HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Cheryl Chalk*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 7-25-22

**APPROVED:** CHIEF, DIVISION OF LAND DEVELOPMENT  
*Shay Arner*  
DIRECTOR  
DATE: 10-4-22

NO.	DESCRIPTION	DATE
1	AS BUILT BY SILL ENGINEERING GROUP	12/05/23

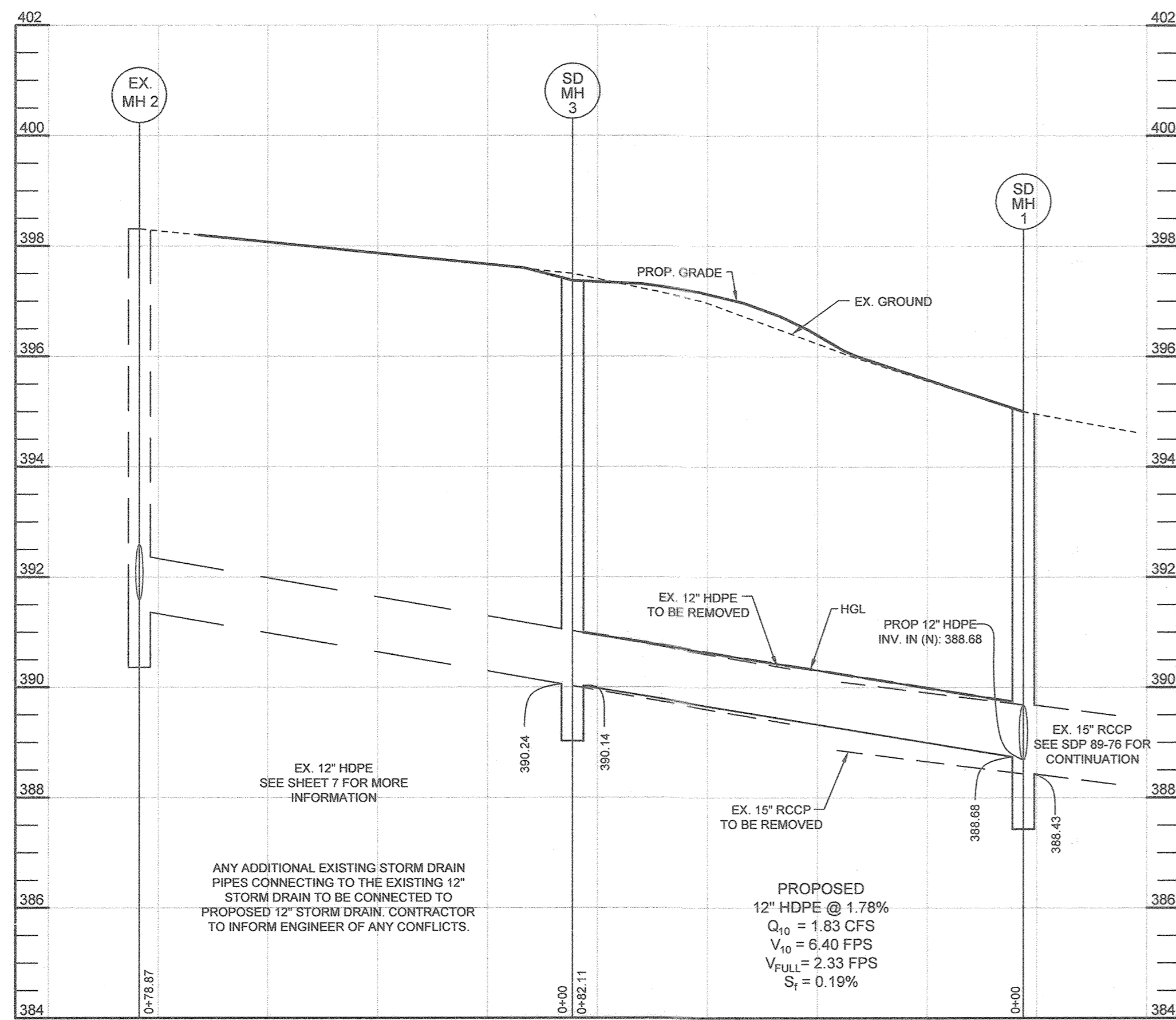
**REVISIONS**

DRAWN BY: PS  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: MAY 31, 2022  
PROJECT #: 18-068  
SHEET #: 17 of 21

**C-017**

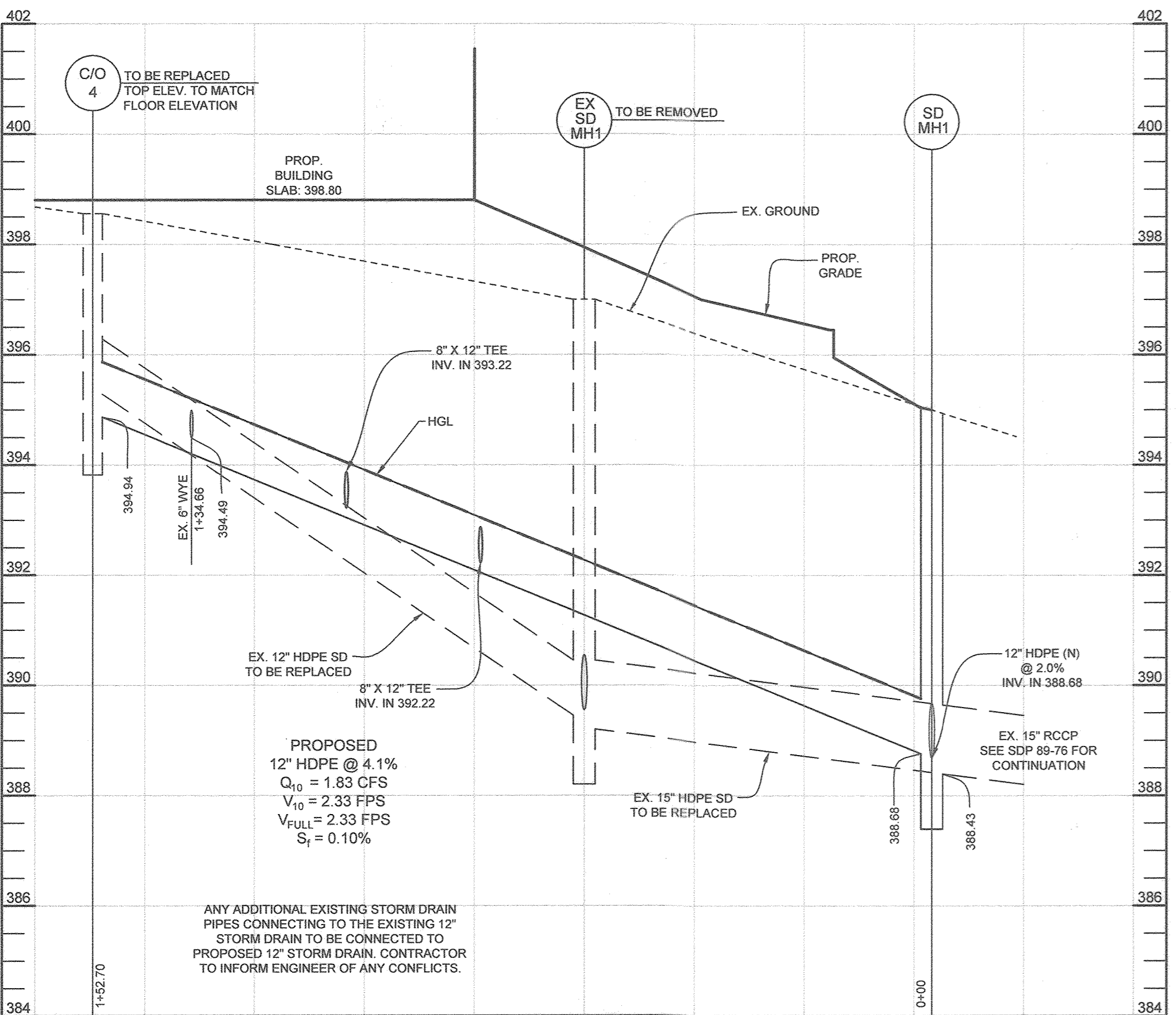
SDP-01-120

AS BUILT



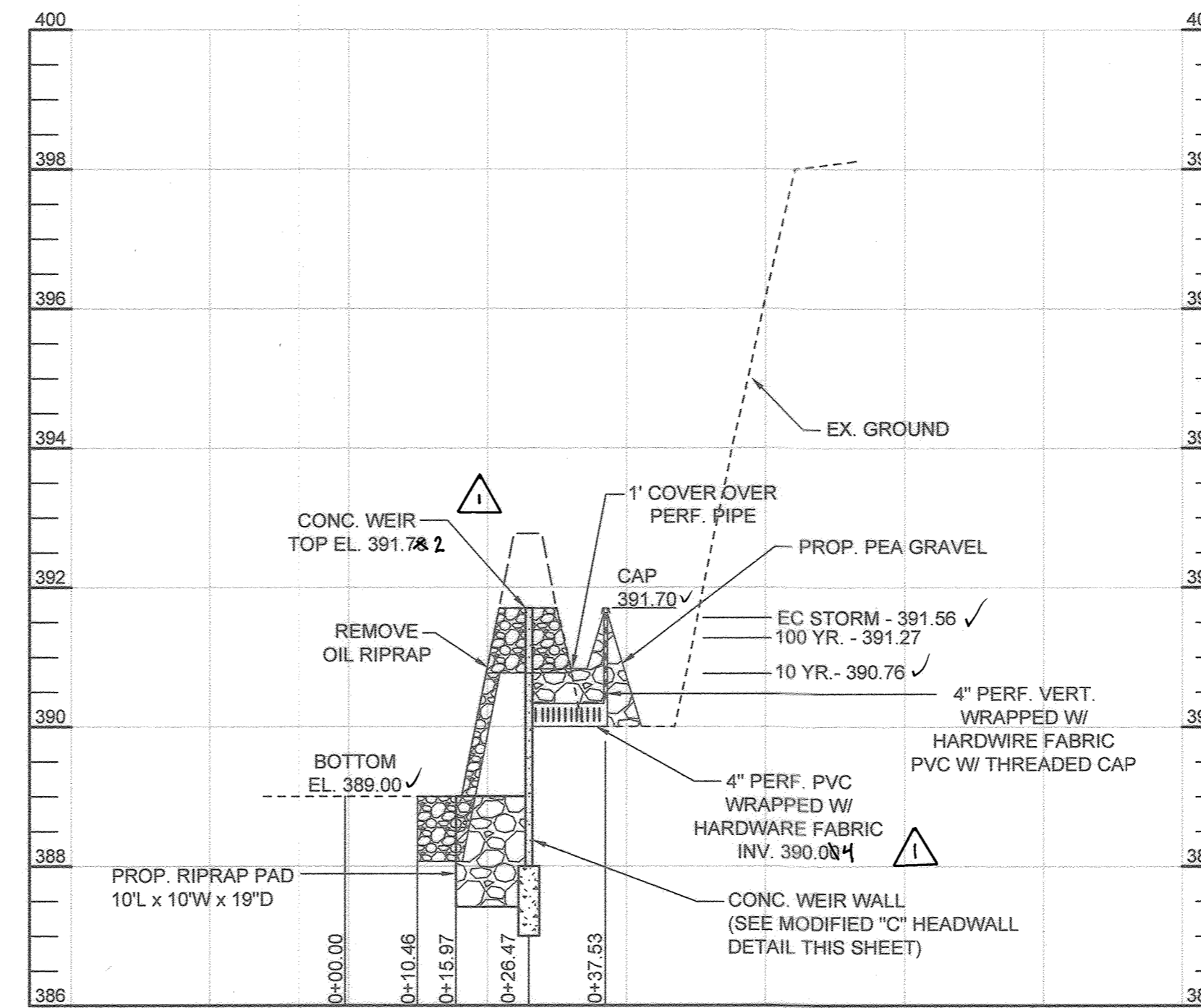
**STORMDRAIN PROFILE MH-2 TO MH-3**

HORIZONTAL SCALE: 1"=20'  
VERTICAL SCALE: 1"=2'



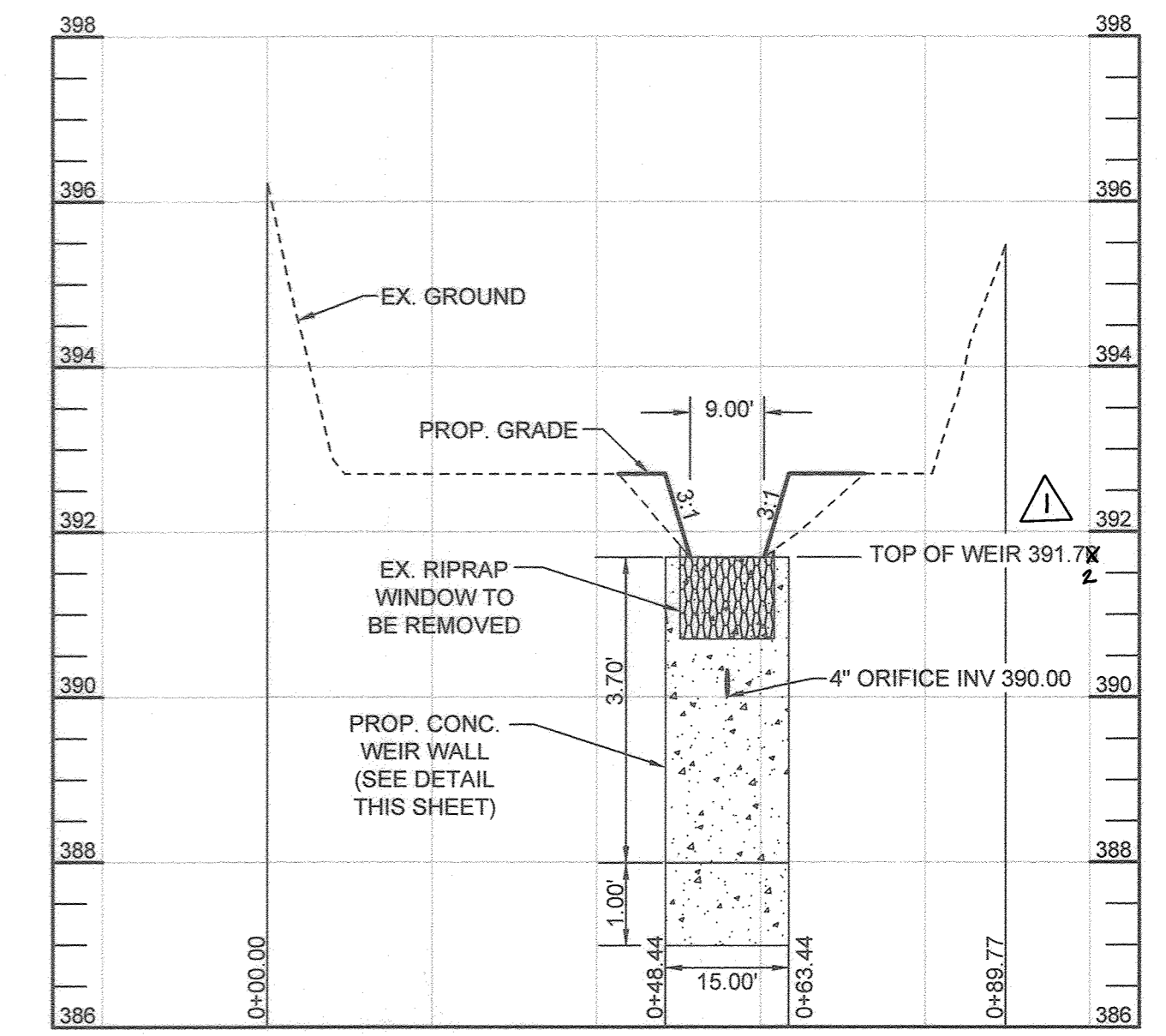
**STORMDRAIN PROFILE C/O-4 TO MH-1**

HORIZONTAL SCALE: 1"=20'  
VERTICAL SCALE: 1"=2'



**PROFILE VIEW - LOW FLOW DRAWDOWN DEVICE FOR PRE-TREATMENT FACILITY**

SECTION A-A  
HORIZONTAL SCALE: 1"=20'  
VERTICAL SCALE: 1"=2'



**PROFILE VIEW - LOW FLOW DRAWDOWN DEVICE FOR PRE-TREATMENT FACILITY**

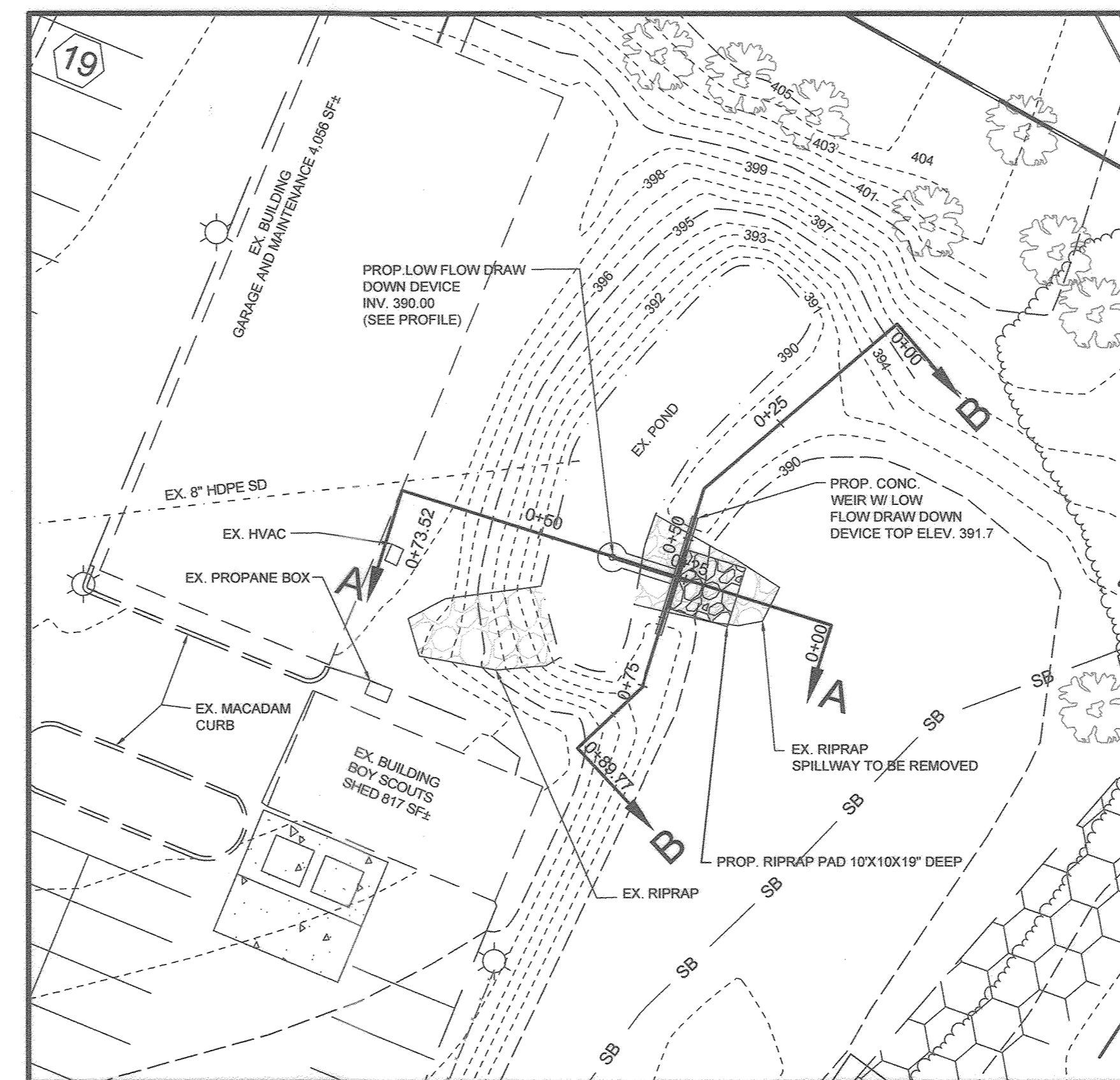
SECTION B-B  
HORIZONTAL SCALE: 1"=20'  
VERTICAL SCALE: 1"=2'

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	NOTES
MH-1	4' PRECAST MANHOLE	N 588,139.89 E 1,360,535.73	395.00	12" - 388.68 12" - 388.68	388.43	G-5.12
MH-3	4' PRECAST MANHOLE	N 588,220.93 E 1,360,548	397.37	390.23	390.14	G-5.12

- NOTES:
- TOP ELEVATIONS FOR PRECAST MANHOLES ARE TO THE CENTER TOP OF MANHOLE COVER.
  - TOP SLOPE OF STRUCTURES TO CONFORM TO SLOPE OF PAVING/GROUND.
  - LOCATION COORDINATES ARE CENTER OF STRUCTURE FOR MANHOLES AND INLETS.
  - MANHOLE LIDS AND INLET GRATES SHALL BE TRAFFIC BEARING AND BICYCLE SAFE.
  - ALL STORM DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.

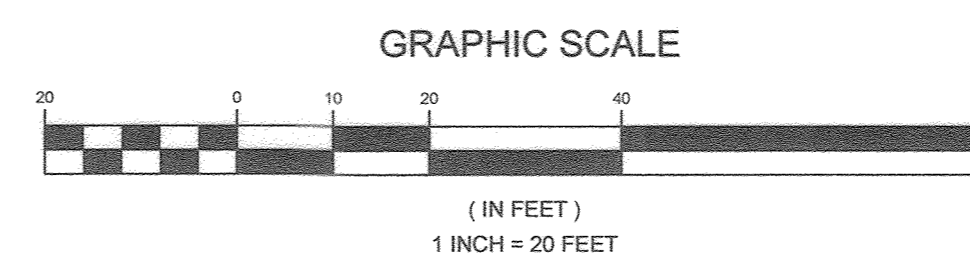
SIZE	TYPE	LENGTH
12" PRIVATE	HDPE	234.81 LF

SIZE	TYPE	LENGTH
4" PERFORATED	SCH 40 PVC	14 LF



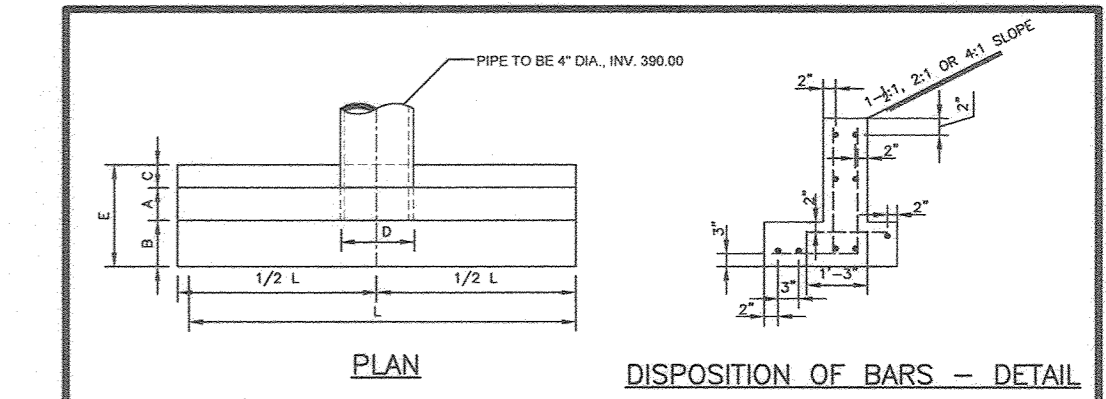
**PLAN VIEW - LOW FLOW DRAWDOWN DEVICE PRE-TREATMENT FACILITY**

SCALE: 1"=20'



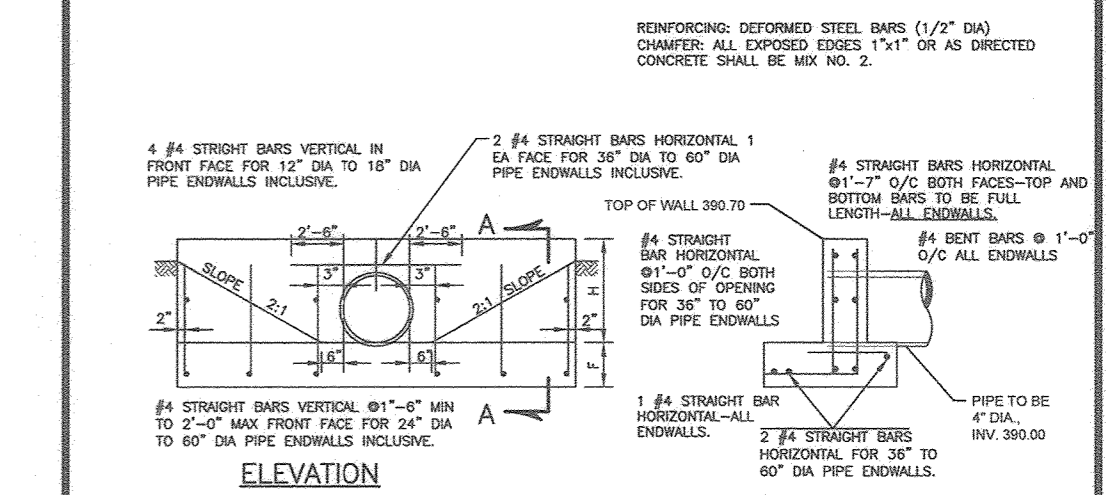
OWNER

CHURCH OF THE RESURRECTION  
ROMAN CATHOLIC CONGREGATION INC  
C/O CINDY DESROCHERS  
3175 PAULSKIRK DRIVE  
ELLCOTT CITY, MARYLAND 21042  
410.545.4017  
CDESROCHERS@RES-EC.ORG



PLAN

DISPOSITION OF BARS - DETAIL



ELEVATION

SECTION A-A

OPENING	QUANTITY	DESCRIPTION	QUANTITY	DESCRIPTION
0	0	CONC	0	CONC
12	12	4\"/>		

STRUCTURAL ENGINEER TO VERIFY FOR CONSTRUCTION

Howards County, Maryland Department of Public Works Approved: <i>[Signature]</i> Chief, Bureau of Engineering	MODIFIED Type 'C' Endwall Circular Pipe	Detail D-5.21
--	---	------------------

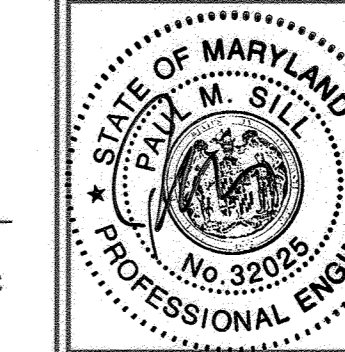
PURPOSE STATEMENT:  
THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO EXPAND THE CHURCH BUILDING AND INCLUDE ASSOCIATED SITE IMPROVEMENTS.

**STORM DRAIN & STORMWATER MANAGEMENT PROFILES AND DETAILS**  
**CHURCH OF THE RESURRECTION**

3175 PAULSKIRK DRIVE

TAX MAP 24 GRID 4  
2ND ELECTION DISTRICT

PARCEL 1117 LOT 1 & LOT 2  
HOWARD COUNTY, MARYLAND



**SILL ENGINEERING GROUP, LLC**  
16005 Frederick Road, 2nd Floor  
Woodbine, Maryland 21797  
Phone: 443.325.5076  
Fax: 410.696.2022  
Email: info@sillengineering.com  
Civil Engineering for Land Development

DESIGN BY: PS  
DRAWN BY: JDB  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: MAY 31, 2022  
PROJECT #: 18-088  
SHEET #: 18 OF 21

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. 32025. EXPIRATION DATE: JUNE 29, 2023.

C-018

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 7-25-22  
*[Signature]*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 10-4-22  
*[Signature]*  
DIRECTOR

NO.	DESCRIPTION	DATE
1	AS BUILT BY SILL ENGINEERING GROUP	12/05/23

AS-BUILT CERTIFICATION:

I HEREBY CERTIFY BY MY SEAL THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.

*[Signature]*  
PAUL M. SILL PROFESSIONAL ENGINEER  
LICENSE NO. 32025  
DATE: 1-11-24

AS BUILT

SDP-01-120

SPECIMEN TREE TABLE										
KEY	DBH	SPECIES	CRZ RADIUS (FEET)	CRZ SF (AREA)	CRZ SF (IMPACT)	CRZ PERCENT (IMPACT)	REMARKS/CONDITION	RETAINED/REMOVED	MITIGATION REQUIREMENT	AGE (YEARS)
ST-1	41"	BLACK CHERRY	61.5	11,876	250	2%	GOOD	TO BE RETAINED	0	205
ST-2	30"	PIN OAK	45	6,359	49	LESS THAN 1%	FAIR CONDITION SOME DIEBACK IN CANOPY	TO BE RETAINED	0	90
ST-3	38"	BLACK CHERRY	57	10,202	84	LESS THAN 1%	POOR CONDITION WITH NOTABLE DIEBACK	TO BE RETAINED	0	190
								MITIGATION REQUIREMENT	0	

### LEGEND

Moderate Slopes (0% - 24.99%)

Steep Slopes (25% - 100%)

NOTE: SLOPES SHOWN ARE THOSE CONTAINED WITHIN THE CONDITIONAL USE AREA.

EXISTING CONTOUR  
PROPOSED CONTOUR

EXISTING SPOT ELEVATION  
PROPOSED SPOT ELEVATION

DIRECTION OF FLOW

EXISTING TREE

EXISTING SPECIMEN TREE

EXISTING TREELINE  
PROPOSED TREELINE

LIMIT OF DISTURBANCE

WETLAND BUFFER

STREAM BUFFER

EXISTING STREAM

TREE PROTECTION FENCE

SOIL BOUNDARY

FOREST CONSERVATION SIGN

FOREST CONSERVATION EASEMENT

REFORESTATION AREA

EXISTING 100-YEAR FLOODPLAIN  
PROPOSED FLOODPLAIN

PER HOWARD COUNTY LETTER OF MAP REVISION DATED JAN. 14, 2021

### FOREST CONSERVATION EASEMENTS

EASEMENTS ARE A LEGAL MEANS OF PROVIDING PERMANENT PROTECTION OF FORESTS, FARMLAND AND OPEN SPACE IN ACCORDANCE WITH THE CRITERIA OUTLINED IN THE HOWARD COUNTY FOREST CONSERVATION MANUAL. A FOREST CONSERVATION EASEMENT WILL BE RECORDED FOR THE RETENTION AREAS THE SUBJECT PROPERTY. SUBMISSION OF THE EASEMENTS FOR RECORDATION WILL OCCUR PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

FOREST CONSERVATION WORKSHEET FOR PARCEL 1117 LOT 1

Net Tract Area	A = 11.9
Total (Gross) Tract Area	B = 2.7
Area within 100-year Floodplain	C = 5.7
Other Deductions (Identify: EXISTING IMPERVIOUS)	D = 3.5

Land Use Category

Insert the number "1" under the appropriate land use (limit to only one entry)

Rural LD	Rural MD	Suburban	Linear	Office	Mixed Use/PUD
0	0	1	0	0	0

E. Afforestation Threshold (Net Tract Area x 15%) E = 0.5  
F. Reforestation Threshold (Net Tract Area x 20%) F = 0.7

Existing Forest Cover

G. Existing Forest Cover within the Net Tract Area	G = 0.8
H. Area of Forest above Afforestation Threshold	H = 0.0
I. Area of Forest above Reforestation Threshold	I = 0.0

Break Even Point

J. Break Even Point	J = 0.0
K. Forest Clearing Permitted without Mitigation	K = 0.0

Proposed Forest Clearing

L. Total Area of Forest to be Cleared	L = 0.0
M. Total Area of Forest to be Retained	M = 0.4

Planting Requirements Inside Watershed

N. Reforestation for Clearing above the Reforestation Threshold	N = 0.0
P. Reforestation for Clearing below the Reforestation Threshold	P = 0.0
Q. Credit for Retention above the Reforestation Threshold	Q = 0.0
R. Total Reforestation Required	R = 0.0
S. Total Afforestation Required	S = 0.1
T. Total Reforestation and Afforestation Requirement	T = 0.1
U. 75% of Total Obligation (Retention + Planting)	U = 0.4
V. Planting Required Onsite to meet 75% Obligation	V = 0.0

Planting Requirements Outside Watershed

W. Total Planting within Development Site Watershed	W = 0.0
X. Total Afforestation Required	X = 0.1
Y. Remaining Planting within Watershed for Reforestation Credit	Y = 0.0
Z. Reforestation for Clearing above the Reforestation Threshold	Z = 0.0
AA. Reforestation for Clearing below the Reforestation Threshold	AA = 0.0
BB. Credit for Retention above the Reforestation Threshold	BB = 0.0
CC. Total Reforestation Required	CC = 0.0
DD. Total Afforestation and Reforestation Requirement	DD = 0.1

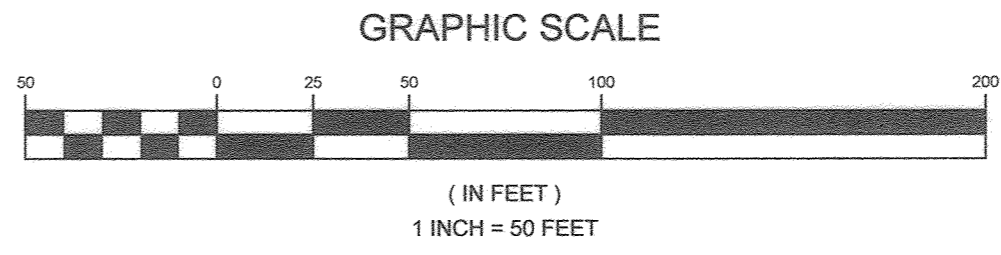
PROPOSED FOREST CONSERVATION EASEMENT  
TOTAL 1.5 ACRES  
0.1 AC = 4,356 SF. REFORESTATION  
0.4 AC = 17,424 SF. RETENTION  
1.0 AC NON CREDITED  
PLAT NO. 20153

AS BUILT CERTIFICATION:  
THERE IS NO AS BUILT INFORMATION ON THIS SHEET

PAUL M. SILL PROFESSIONAL ENGINEER  
LICENSE NO. 32025

DATE: 12/13/21

PURPOSE STATEMENT:  
THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO EXPAND THE CHURCH BUILDING AND INCLUDE ASSOCIATED SITE IMPROVEMENTS.



OWNER  
CHURCH OF THE RESURRECTION  
ROMAN CATHOLIC CONGREGATION INC  
C/O CINDY DESROCHERS  
3175 PAULSKIRK DRIVE  
ELLICOTT CITY, MARYLAND 21042  
410.945.4017  
CDESROCHERS@RES-EC.ORG

FOREST CONSERVATION PLAN  
CHURCH OF THE RESURRECTION  
3175 PAULSKIRK DRIVE  
TAX MAP 24 GRID 4  
2ND ELECTION DISTRICT  
PARCEL 1117 LOT 1 & LOT 2  
HOWARD COUNTY, MARYLAND

STATE OF MARYLAND PROFESSIONAL ENGINEER

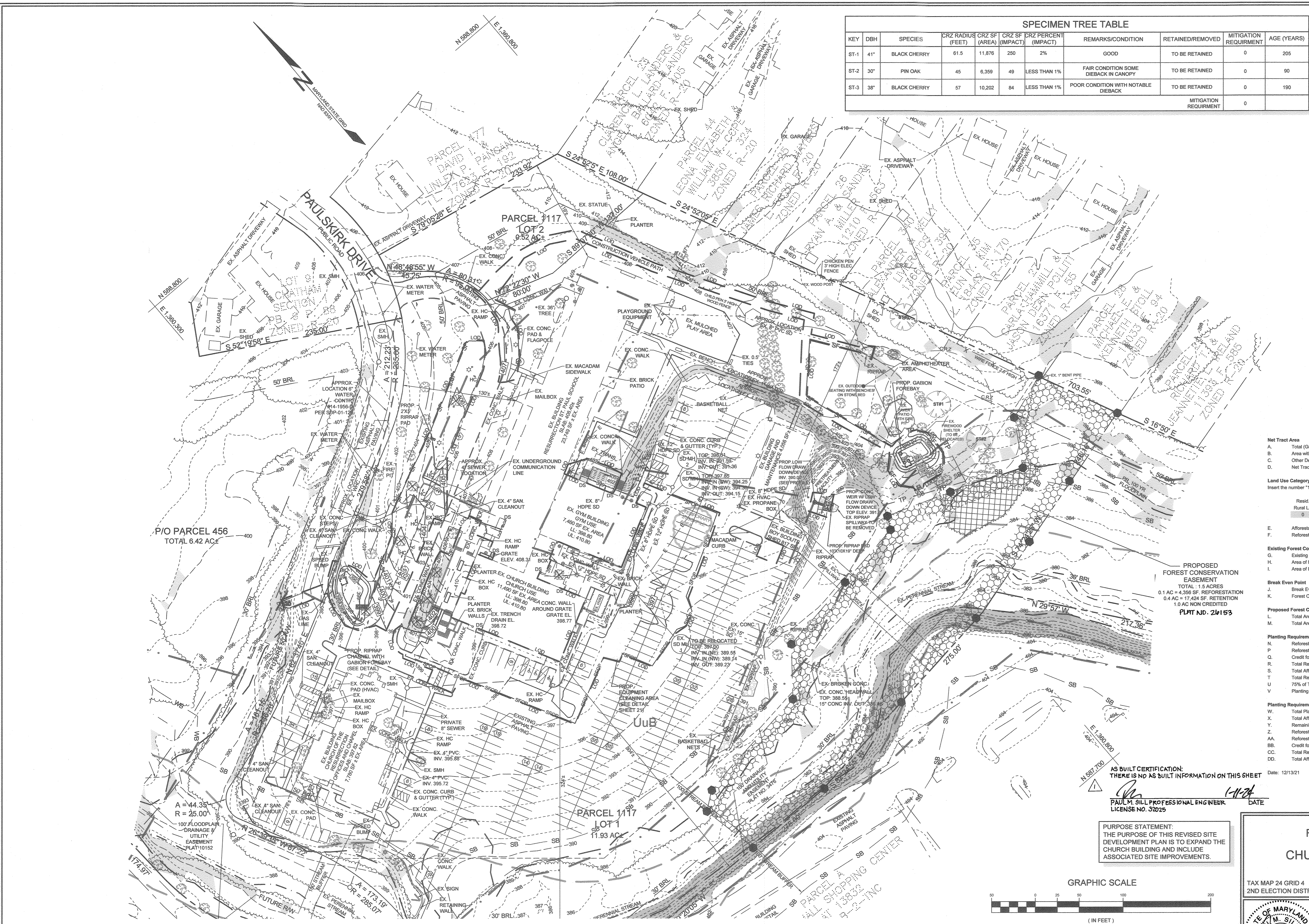
PAUL M. SILL

16005 Frederick Road, 2nd Floor  
Woodbine, Maryland 21797  
Phone: 443.325.5076  
Fax: 410.696.2022  
Email: info@sillengineering.com  
Civil Engineering for Land Development

DESIGN BY: PS  
DRAWN BY: JDB  
CHECKED BY: PS  
SCALE: AS SHOWN  
DATE: MAY 31, 2022  
PROJECT #: 18-068  
SHEET #: 19 OF 21

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. 32025. EXPIRATION DATE: JUNE 30, 2025.

C-019



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
7-25-22  
DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY  
3/19/22  
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT  
10-4-22  
DATE

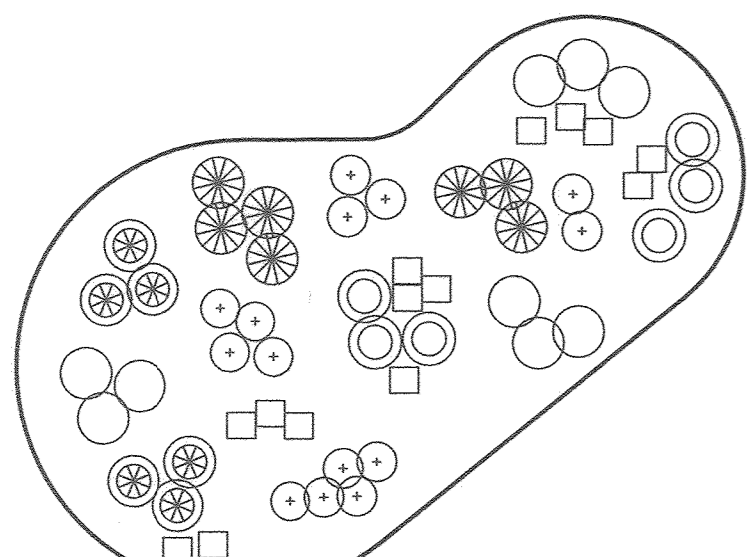
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
10-4-22  
DATE

PLAN VIEW  
SCALE: 1"=50'

NO.	DESCRIPTION	DATE
1	AS BUILT BY SILL ENGINEERING GROUP	12/09/20

PLAN VIEW  
SCALE: 1"=50'

JOANNE CAREY, R.L.A. 4148  
MD DNR QUALIFIED PROFESSIONAL

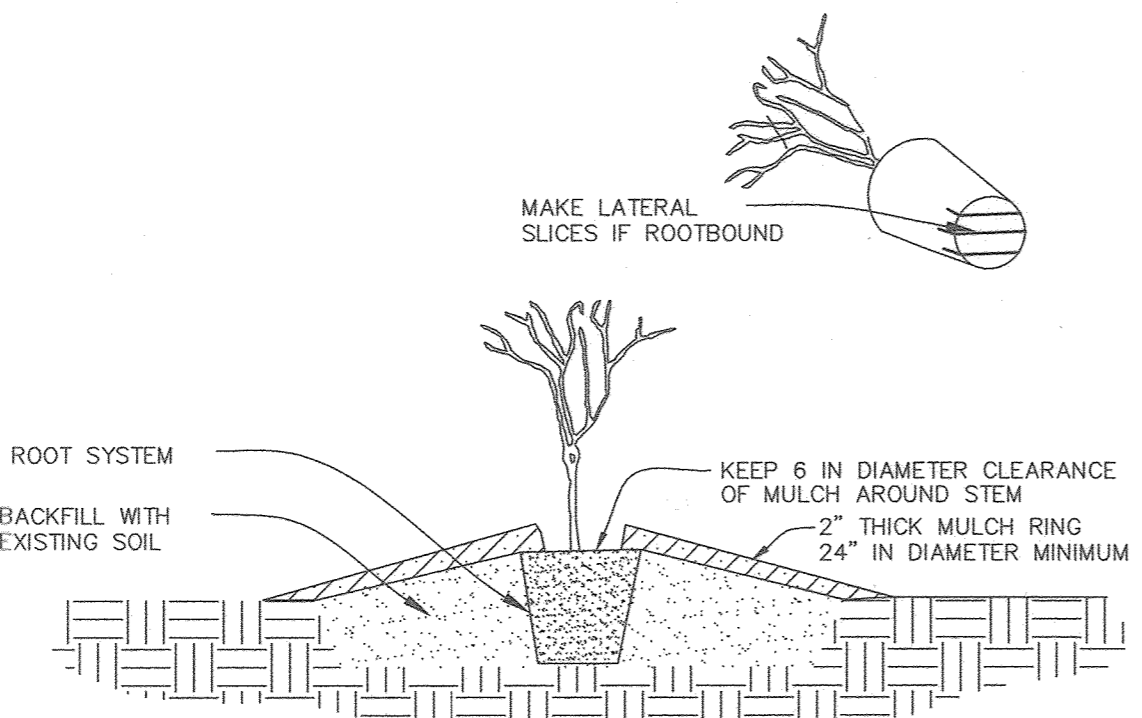


- OVERSTORY SPECIES 1
- OVERSTORY SPECIES 2
- OVERSTORY SPECIES 3
- UNDERSTORY SPECIES 1
- UNDERSTORY SPECIES 2
- UNDERSTORY SPECIES 3

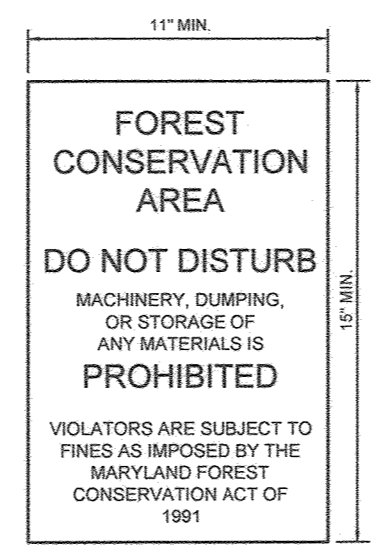
THIS DIAGRAM SHOWS A TYPICAL DISPERSAL OF SPECIES WITHIN PLANTING AREA. THE SPACING SHALL BE IN ACCORDANCE WITH THE APPROVED PLANTING SCHEDULE. WHERE THE SIZE OF THE PLANTING STOCK VARIES, THE PLANTING UNITS SHALL BE INSTALLED AT AVERAGE SPACING TO PROVIDE APPROXIMATELY UNIFORM COVERAGE.

**REFORESTATION RANDOM PLANTING DISTRIBUTION PLAN**  
NOT TO SCALE

- PLANTING PROCEDURE FOR CONTAINER GROWN PLANTS
1. REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER
  2. USE A KNIFE TO CUT THROUGH BOTTOM HALF OF THE ROOT BALL.
  3. PLANT SHRUBS ON FORMED UP MOUNDS 4" ABOVE THE EXISTING GRADE WHEN HIGH WATER TABLE CONDITIONS EXIST, OTHERWISE PLANT FLUSH WITH EXISTING GRADE.
  4. PLANTING HOLE TO BE 2-3 TIMES THE DIAMETER OF THE CONTAINER.
  5. INSERT FERTILIZER TABLET, BACKFILL 2/3 OF THE ROOT BALL AND WATER.
  6. AFTER WATER PERCOLATES, BACKFILL HOLE TO TOP OF ROOT BALL AND GENTLY TAMP SOIL TO FIRM CONTACT WITH PLANT.
  7. APPLY MULCH RING AROUND PLANT KEEPING A 6" IN CLEARANCE FROM STEM.



**CONTAINER PLANTING DETAIL**  
NOT TO SCALE



**FOREST CONSERVATION SIGN DETAIL**  
NOT TO SCALE

- NOTES:
1. BOTTOM OF SIGN TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
  2. SIGNS TO BE PLACED APPROXIMATELY 50' - 100' APART. CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
  3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
  4. SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.

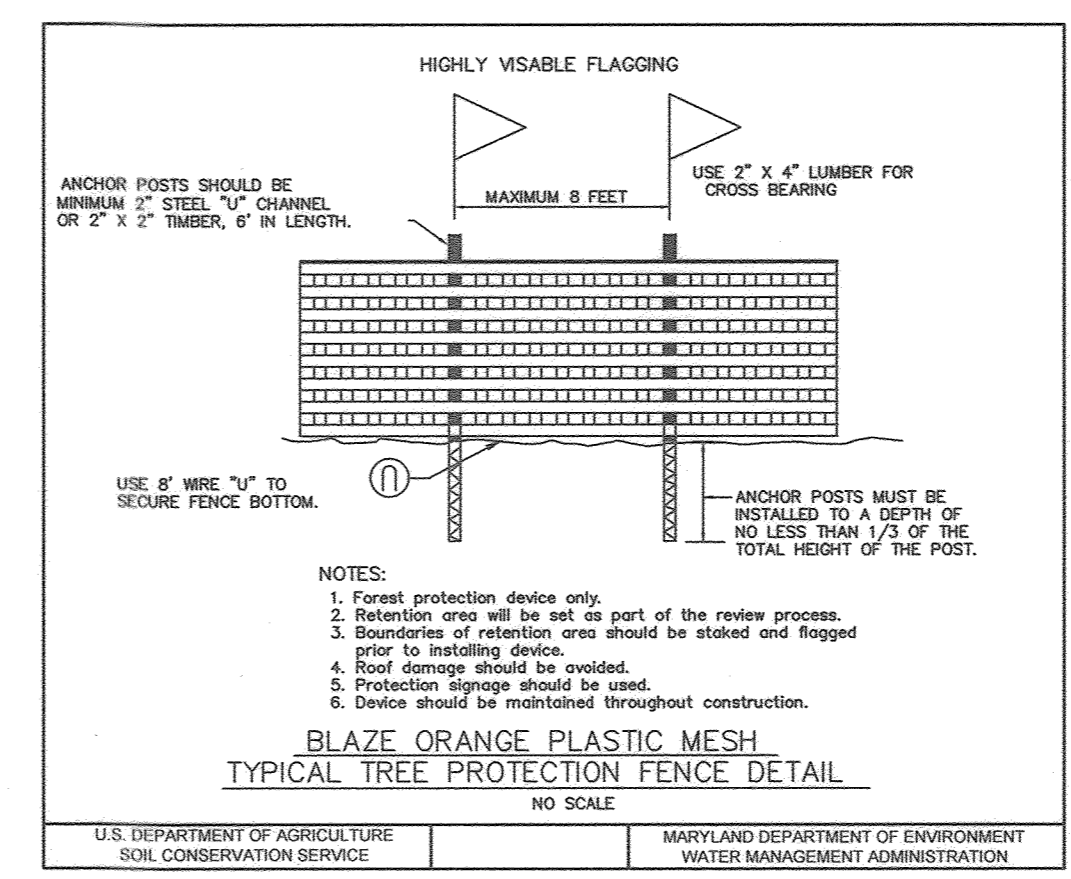
**REFORESTATION PLANTING SCHEDULE**

4,356 SF, OR 0.1 ACRE  
PLANTING UNITS REQUIRED: 40  
PLANTING UNITS PROVIDED: 40

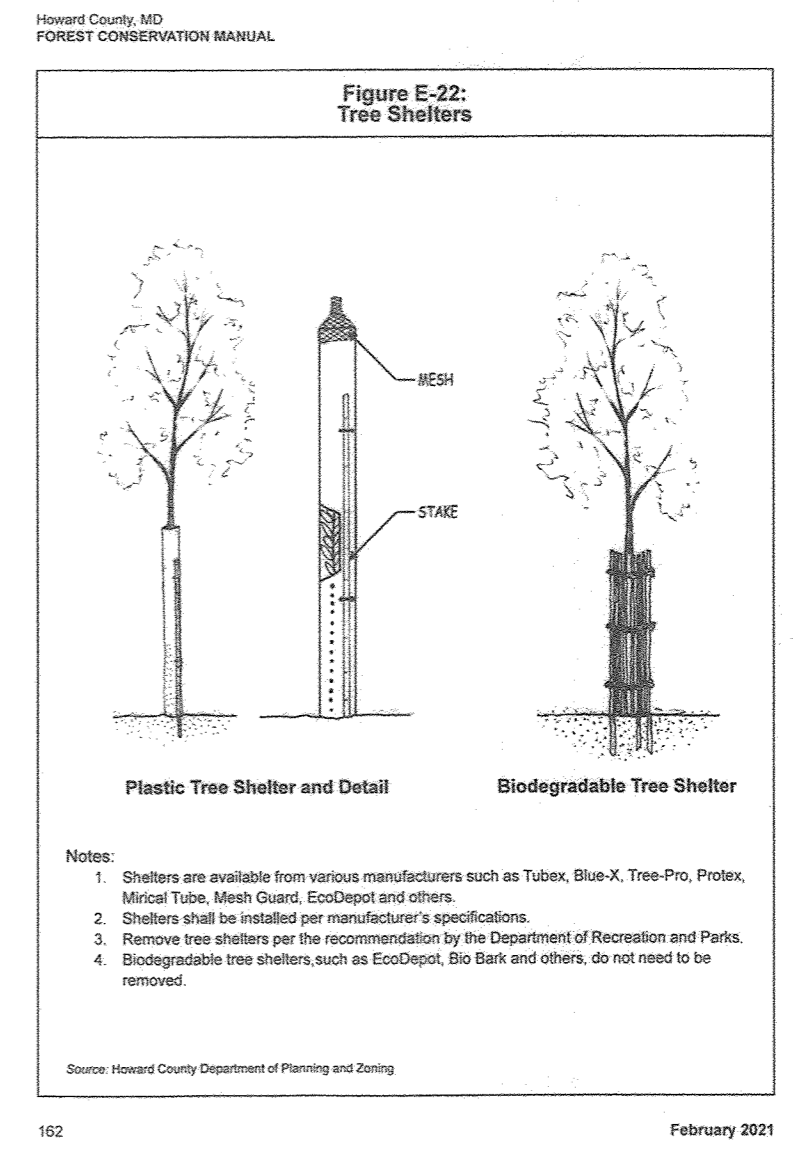
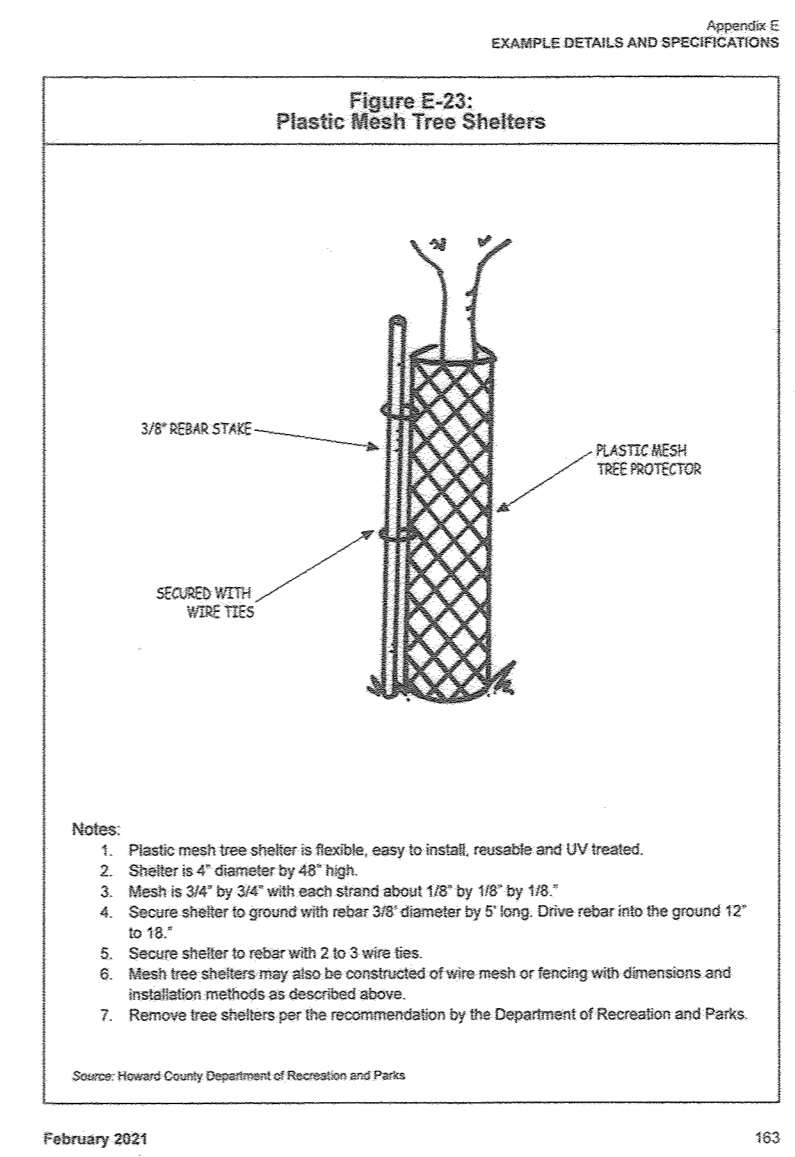
QUANTITY	SPECIES	SIZE	SPACING	EQUIVALENT AREA/TREE	TOTAL FCA
8	ACER RUBRUM - RED MAPLE	1 GAL.	10' x 10'	108.9 sftree	871.2
8	LIRIODENDRON TULIPIFERA - TULIP POPLAR	1 GAL.	10' x 10'	108.9 sftree	871.2
8	PRUNUS SEROTINA - BLACK CHERRY	1 GAL.	10' x 10'	108.9 sftree	871.2
8	QUERCUS ALBA - WHITE OAK	1 GAL.	10' x 10'	108.9 sftree	871.2
8	CORNUS FLORIDA - DOGWOOD	1 GAL.	10' x 10'	108.9 sftree	871.2
40	TOTAL 1 GAL. TREES				
				TOTAL CREDIT	4,356 SF.

**PLANTING NOTES:**

- PLANTING DENSITY BASED ON 400 PLANTING UNITS PER ACRE, 1 GAL., 10' X 10' SPACING, OR 100 SQ. FT. PER PLANT.
- PLANTING SHALL BE MADE IN A CURVILINEAR FASHION ALONG CONTOUR. THE PLANTING SHOULD AVOID A GRID APPEARANCE BUT SHOULD BE SPACED TO FACILITATE MAINTENANCE.
- MULTIFLORA ROSE/HEAVY BRUSH REMOVAL/CONTROL MAY BE REQUIRED PRIOR TO INSTALLATION OF PLANTING.
- ALL 1 GAL. CONTAINER TREES ARE REQUIRED TO BE INSTALLED WITH TREE SHELTERS PER HOWARD COUNTY FCA REQUIREMENTS.
- 1 GALLON CONTAINERS HAVE BEEN SELECTED TO ACCOMMODATE THE VOLUNTEER BOY SCOUTS THAT WILL BE PLANTING TREES.



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



**FOREST CONSERVATION NOTES**

1. THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION AND THE FOREST CONSERVATION MANUAL BY ON-SITE RETENTION, AND AFFORESTATION/REFORESTATION OF 0.5 ACRES OF FOREST. FINANCIAL SURETY FOR THE 0.1 ACRES (4,356 SF) TO BE IN AFFORESTATION/REFORESTATION WILL BE POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT AT \$0.50 PER SQUARE FOOT, OR \$2,178.00.
2. NO RARE, THREATENED OR ENDANGERED SPECIES, OR THEIR HABITATS, WERE OBSERVED ON THE PROPERTY.
3. SURROUNDING LAND USE IS RESIDENTIAL AND RETAIL. WITH THE BULK OF THE SUBJECT PROPERTY INCLUDES THE CHURCH/SCHOOL BUILDINGS, PARKING LOTS, MAINTENANCE FACILITIES WITH LAWN AREAS AND STORMWATER MANAGEMENT FACILITIES.
4. FOREST IS PRESENT WITHIN THE LIMITS OF THE SUBJECT PROPERTY.
5. A PERENNIAL STREAM CHANNEL IS PRESENT ALONG THE SOUTHERN EDGE OF LOT 1. IT IS AN UNNAMED TRIBUTARY TO PLUMTREE RUN AND IS WITHIN A USE IV-P WATERSHED OF THE LITTLE PATUXENT RIVER (02-13-11).
6. THERE ARE NO KNOWN CEMETERIES OR HISTORIC ELEMENTS KNOWN TO OCCUR ON THE PROPERTY.
7. A 100-YEAR FLOODPLAIN IS PRESENT ON THE PROPERTY.
8. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS, UNLESS ALTERNATIVE COMPLIANCE HAVE BEEN APPROVED OR ACTIVITIES HAVE BEEN DETERMINED ESSENTIAL BY THE DEPARTMENT OF PLANNING AND ZONING.
9. THERE SHALL BE NO CLEARING, CONSTRUCTION OR DISTURBANCE OF VEGETATION WITH AREAS DEFINED AS FOREST CONSERVATION EASEMENTS.
10. NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS NON-DISTURBANCE AREAS.
11. TEMPORARY FENCING, SUPER SILT FENCE, SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. SUPER SILT FENCE SHALL BE INSTALLED ALONG LIMITS OF DISTURBANCE OCCURRING WITHIN 50 FEET OF THE PROPOSED FOREST RETENTION LIMITS. PERMANENT SIGNAGE SHALL BE INSTALLED ALONG THE FOREST CONSERVATION EASEMENT BOUNDARY TO PREVENT FUTURE ENCRoACHMENT INTO THE AREA. SIGNAGE SHALL BE PLACED AT 50-100 FOOT INTERVALS ALONG THE BOUNDARY.

**FOREST PROTECTION GENERAL NOTES**

1. ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY DEMOLITION, LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
2. THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES.
3. ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
4. ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
5. INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
6. THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS.
7. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
8. THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS. ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE, LIMIT OF GRADINGS, OR TREE PROTECTIVE FENCING WITHIN AND ADJACENT TO ALL SPECIMEN TREES AND EASEMENT AREAS TO BE PRESERVED, AS NECESSARY. ALL POSSIBLE PRECAUTIONS SHALL BE TAKEN TO NOT DAMAGE ROOTS ADJACENT TO DEMOLITION AREAS WHEN BUILDING WALLS OR FOUNDATIONS ARE BEING REMOVED, AND ESPECIALLY WITH PAVEMENT REMOVAL, WHERE ROOTS LIKELY EXIST WITHIN SUBBASE GRAVEL.

AS BUILT CERTIFICATION:  
THERE IS NO AS BUILT INFORMATION ON THIS SHEET

*Paul M. Sill*  
PAUL M. SILL PROFESSIONAL ENGINEER  
LICENSE NO. 32025

1-11-24  
DATE

**DEER PROTECTION DETAILS**  
NOT TO SCALE

PURPOSE STATEMENT:  
THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO EXPAND THE CHURCH BUILDING AND INCLUDE ASSOCIATED SITE IMPROVEMENTS.

OWNER  
CHURCH OF THE RESURRECTION  
ROMAN CATHOLIC CONGREGATION INC  
C/O CINDY DESROCHERS  
3175 PAULSKIRK DRIVE  
ELLCOTT CITY, MARYLAND 21042  
410.545.4017  
CDESROCHERS@RES-EC.ORG

**FOREST CONSERVATION NOTES AND DETAILS**  
**CHURCH OF THE RESURRECTION**

3175 PAULSKIRK DRIVE  
TAX MAP 24 GRID 4  
2ND ELECTION DISTRICT  
PARCEL 1117 LOT 1 & LOT 2  
HOWARD COUNTY, MARYLAND

	<b>SILL ENGINEERING GROUP, LLC</b> 16005 Frederick Road, 2nd Floor Woodbine, Maryland 21797 Phone: 443.325.5076 Fax: 410.696.2022 Email: info@sillengineering.com Civil Engineering for Land Development	DESIGN BY: PS
		DRAWN BY: JDB
		CHECKED BY: PS
		SCALE: AS SHOWN
		DATE: MAY 31, 2022
		PROJECT #: 18-068
		SHEET #: 20 of 21

AS BUILT | SDP-01-120

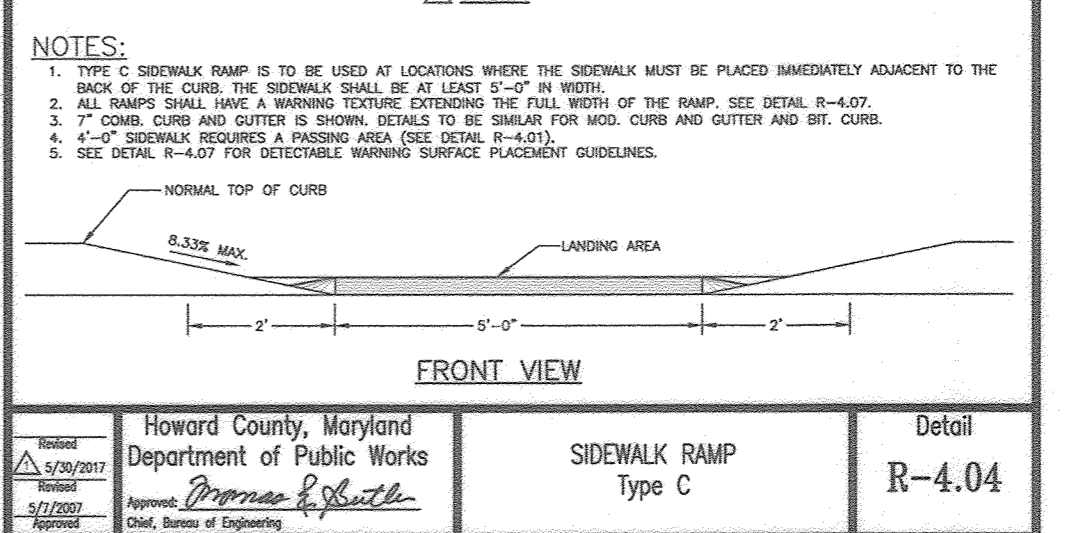
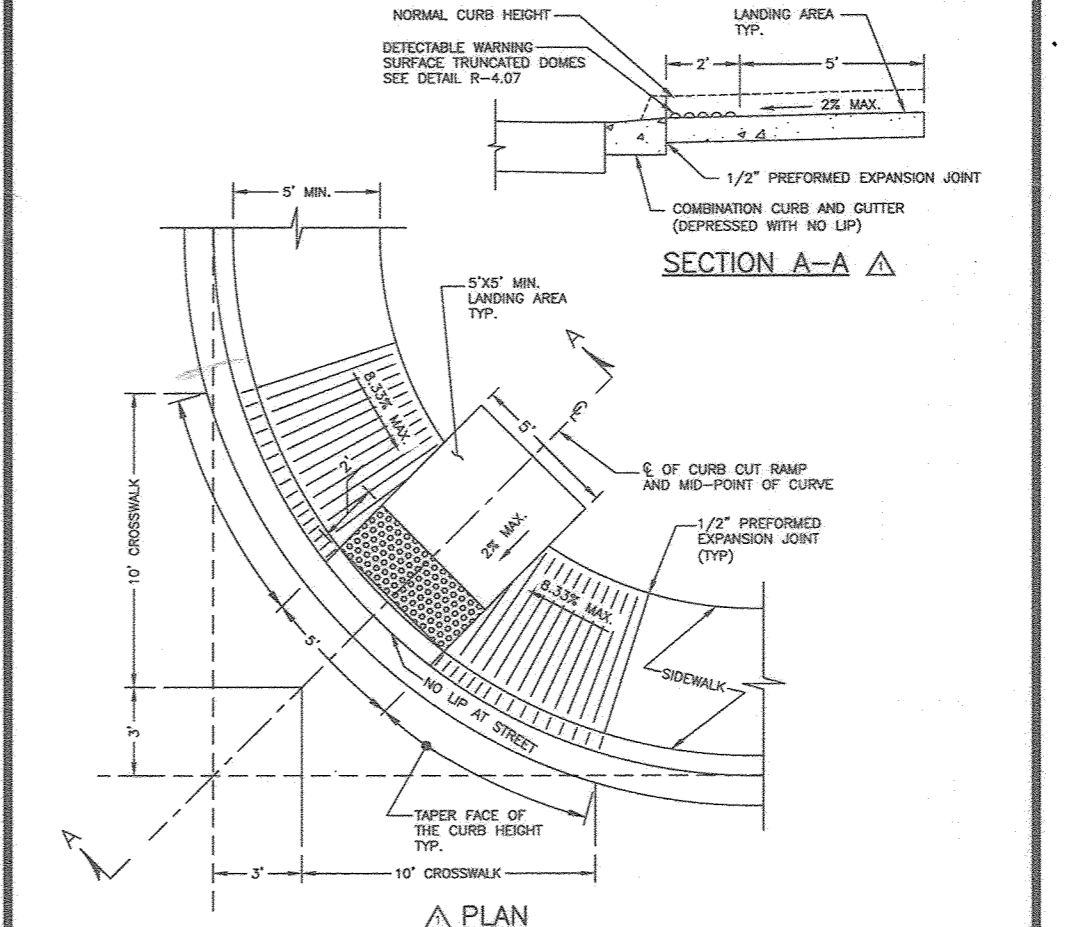
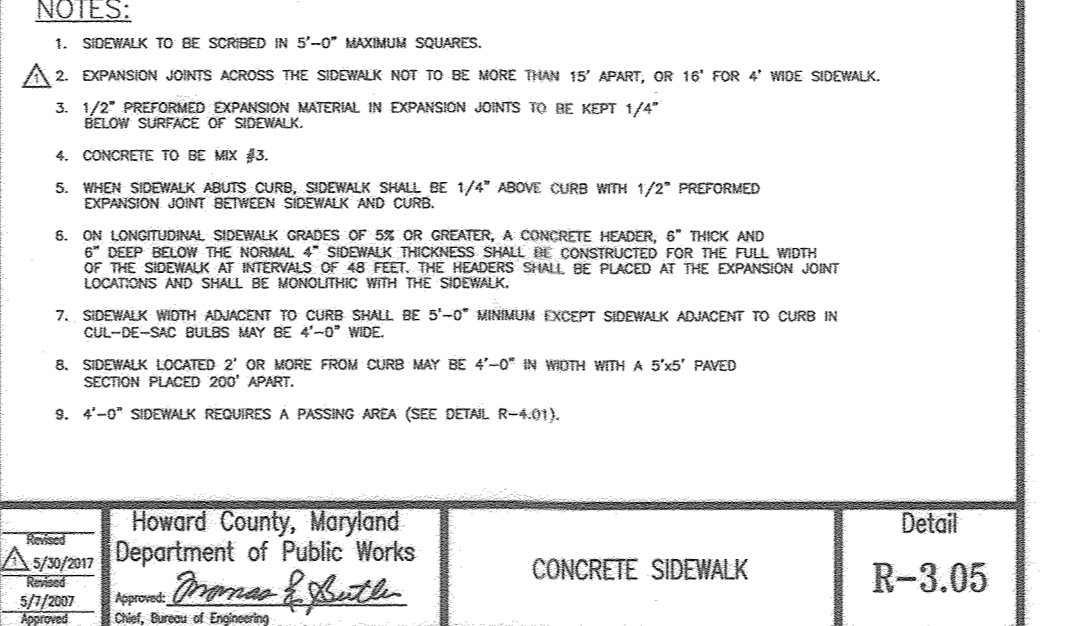
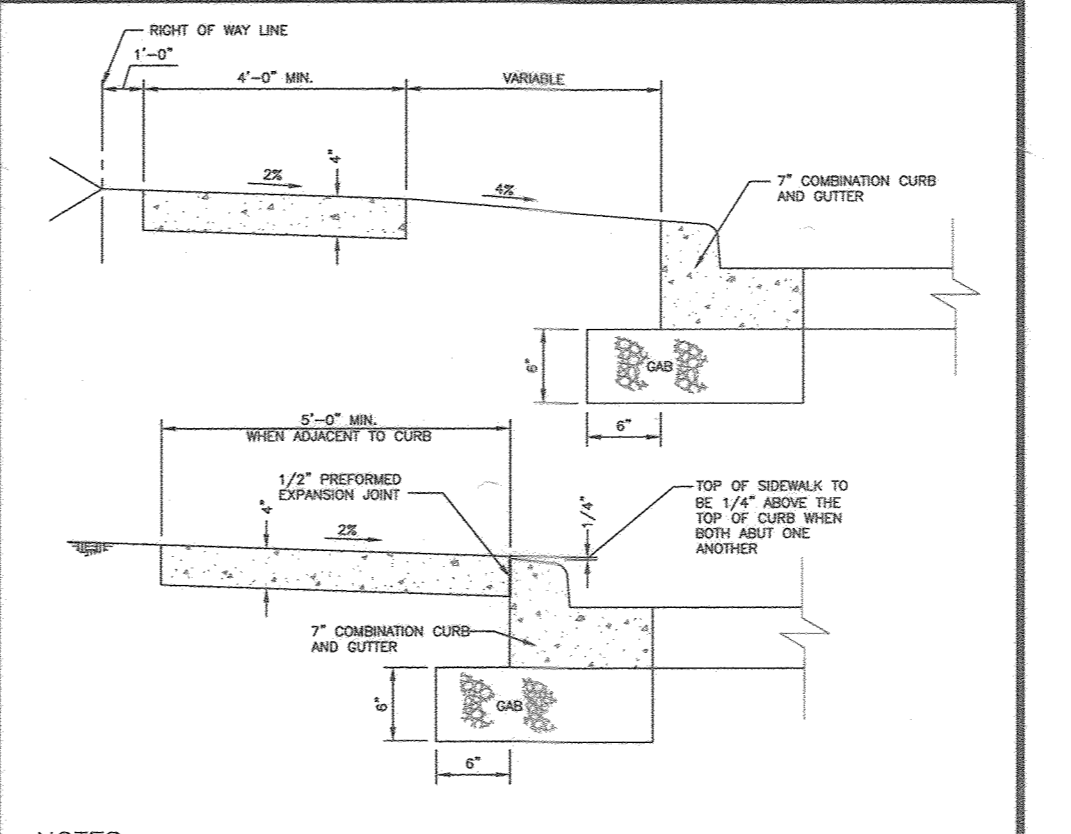
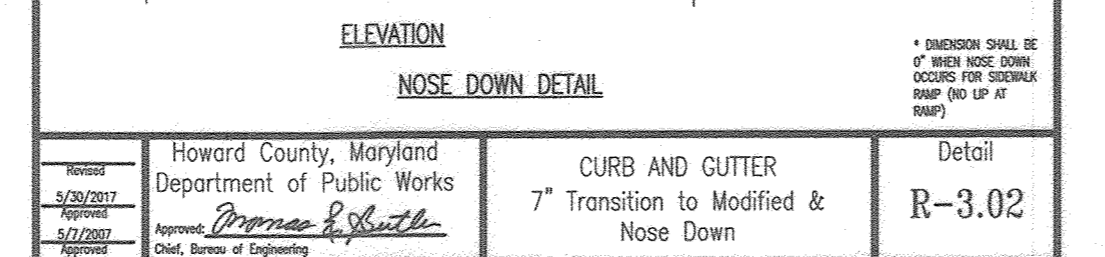
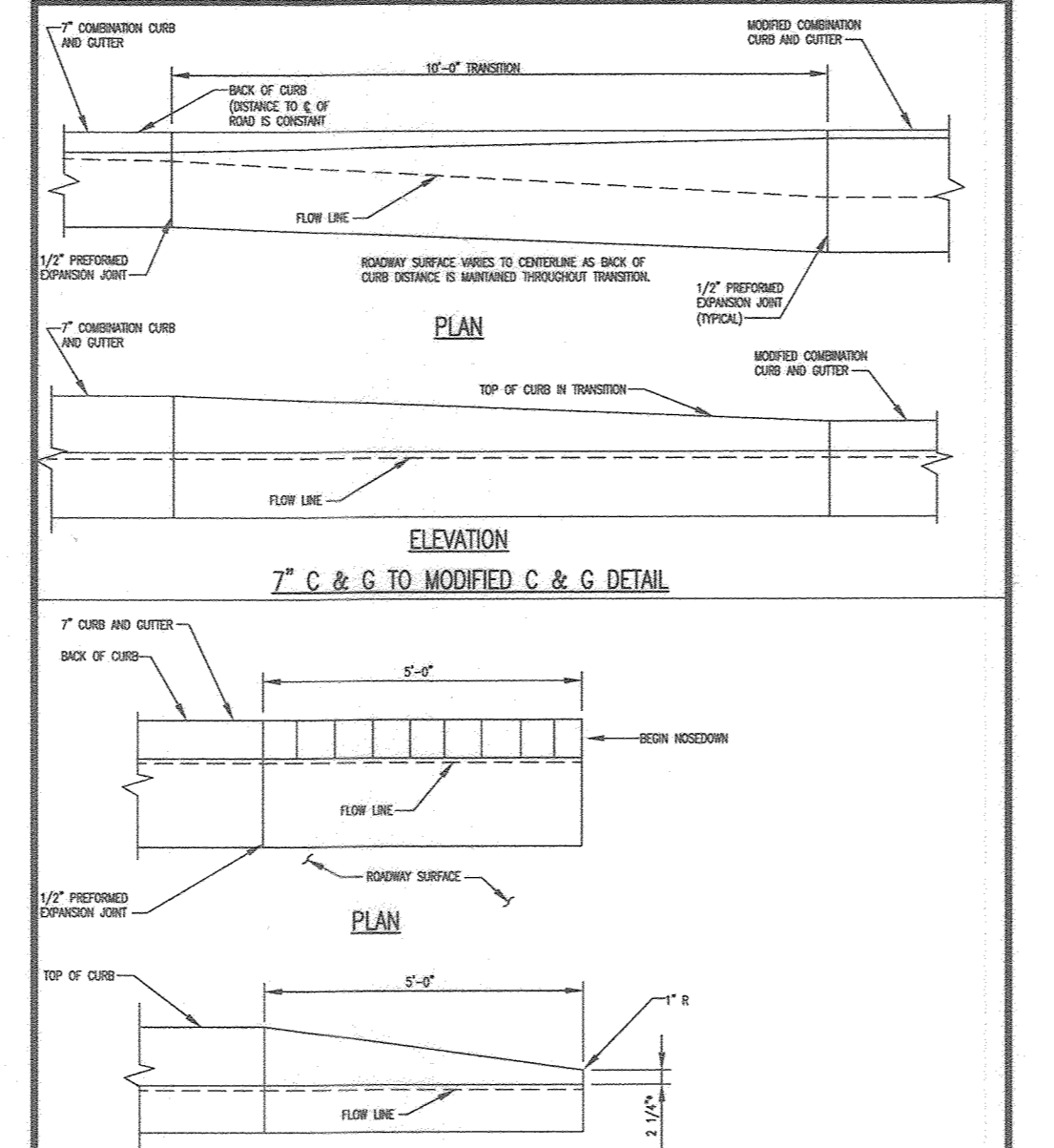
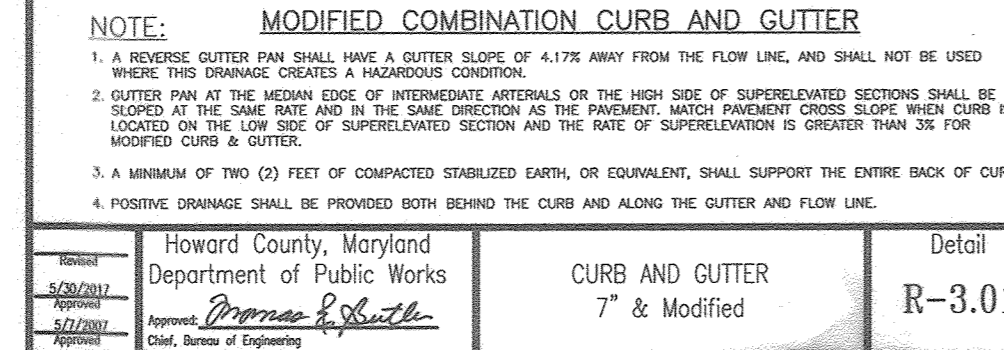
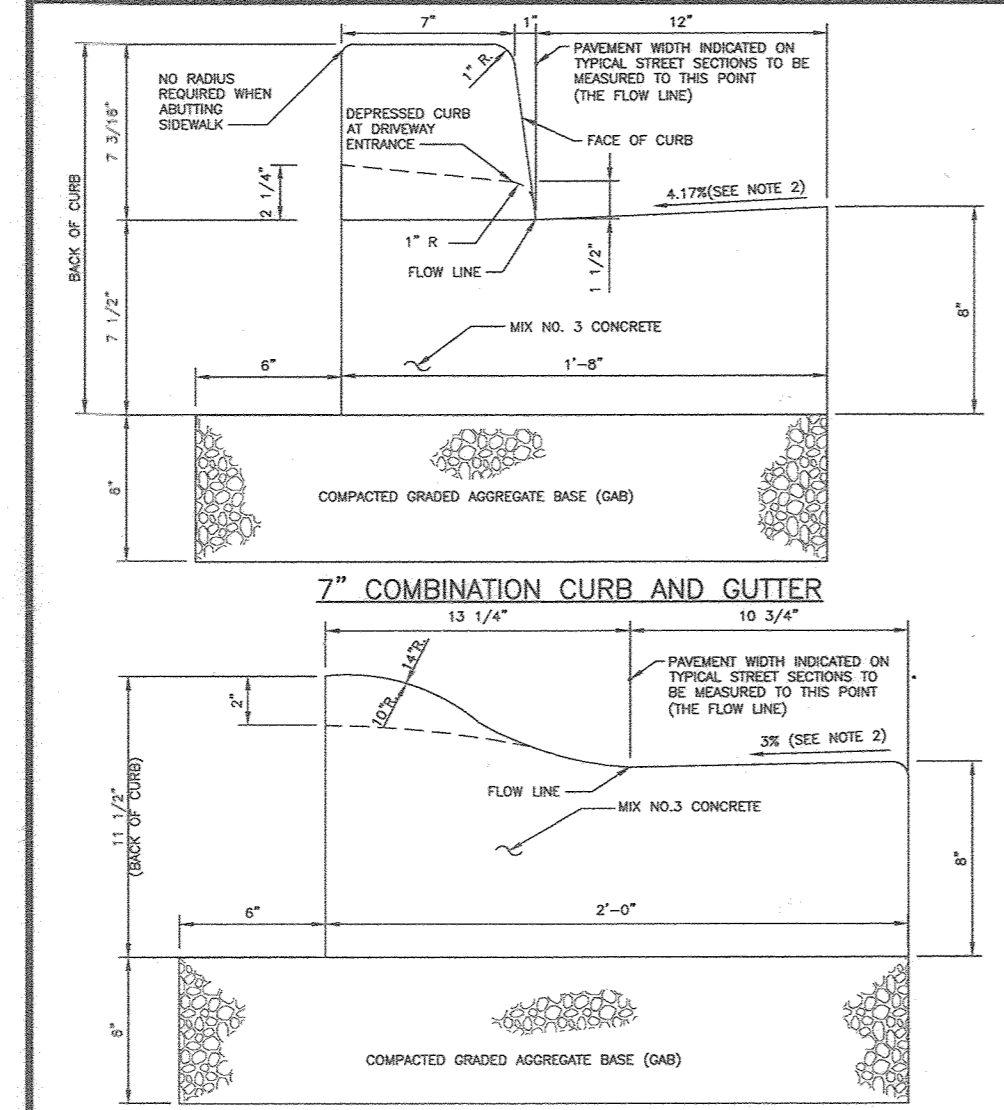
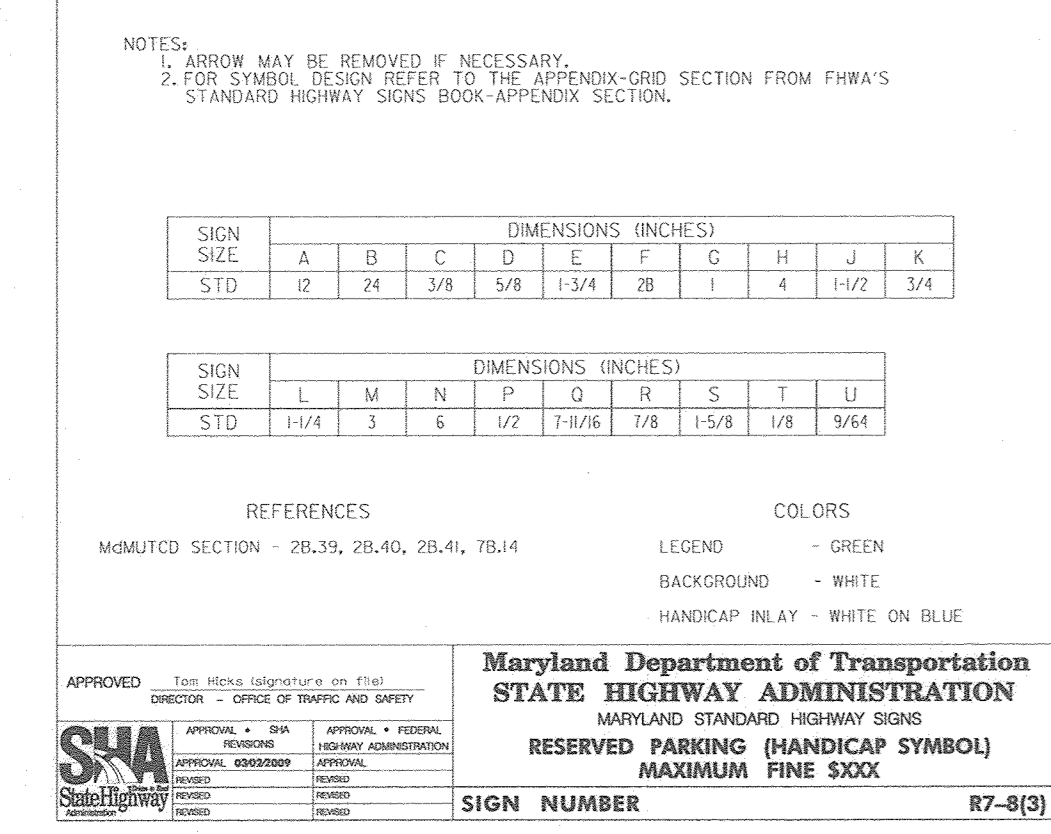
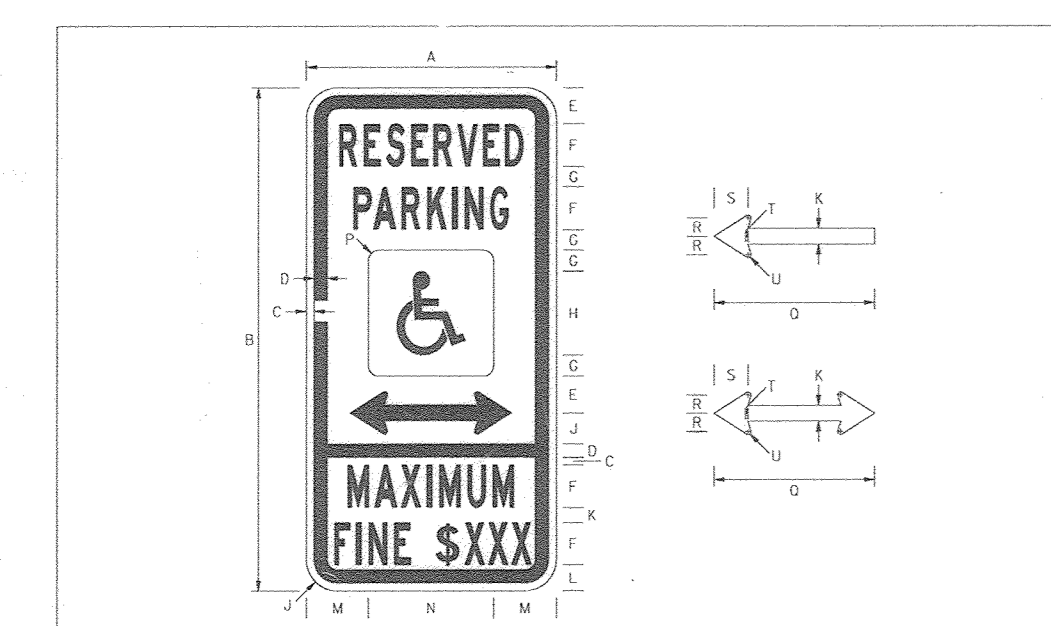
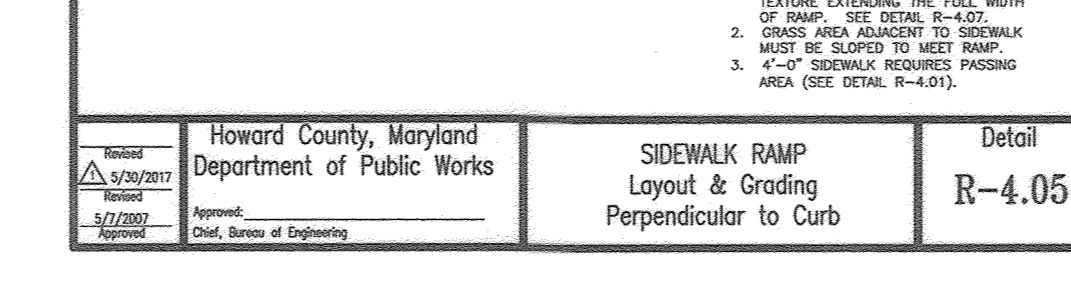
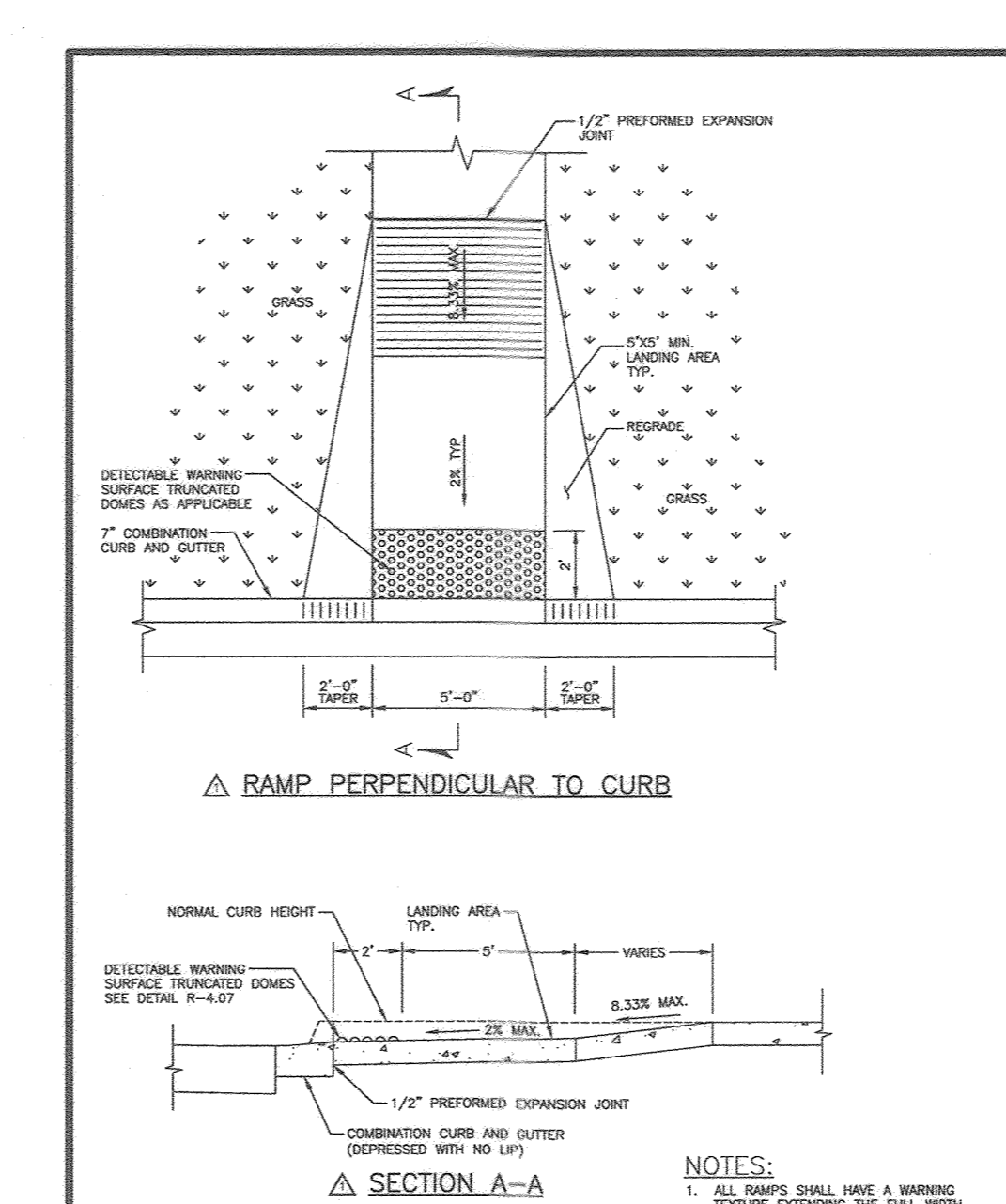
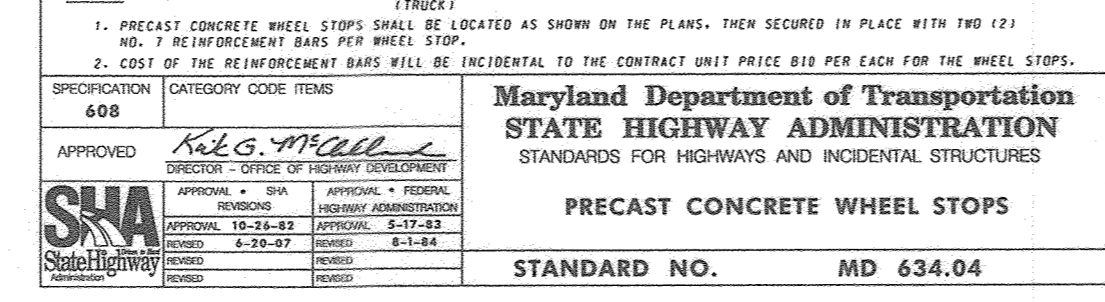
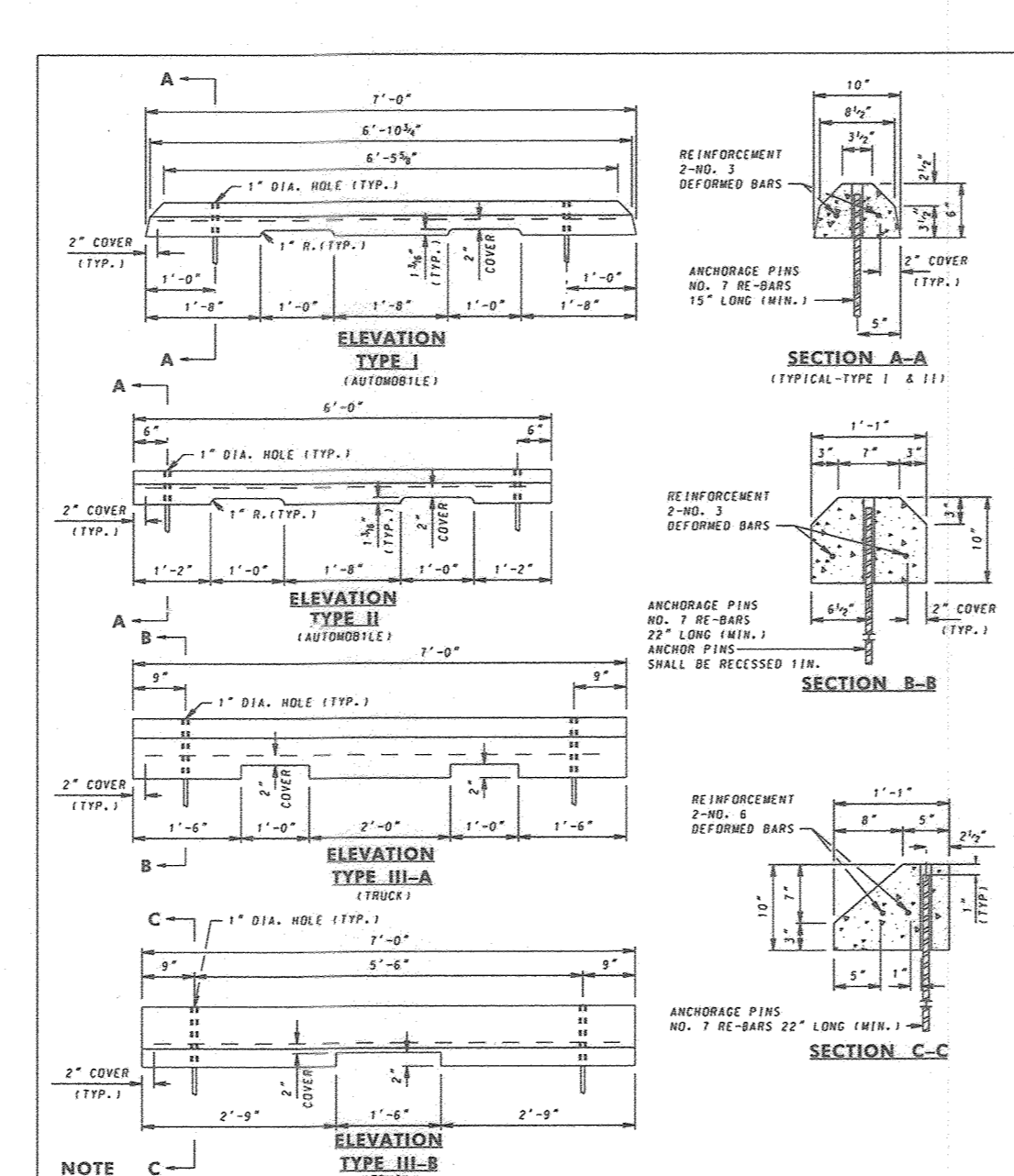
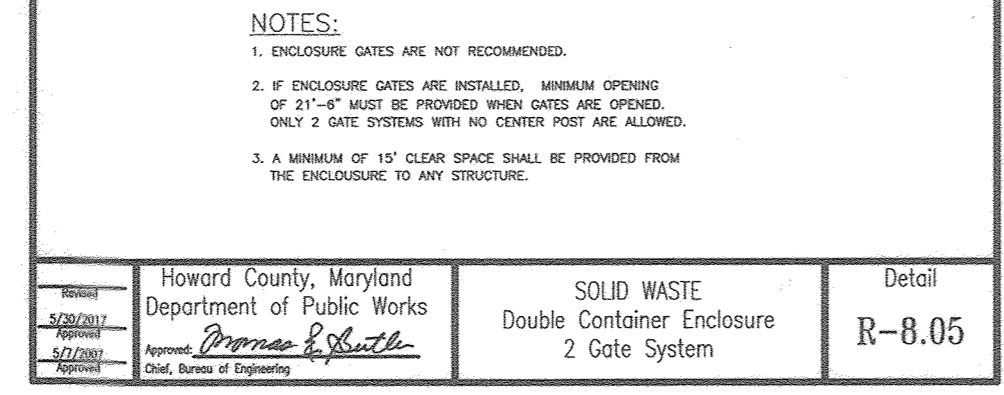
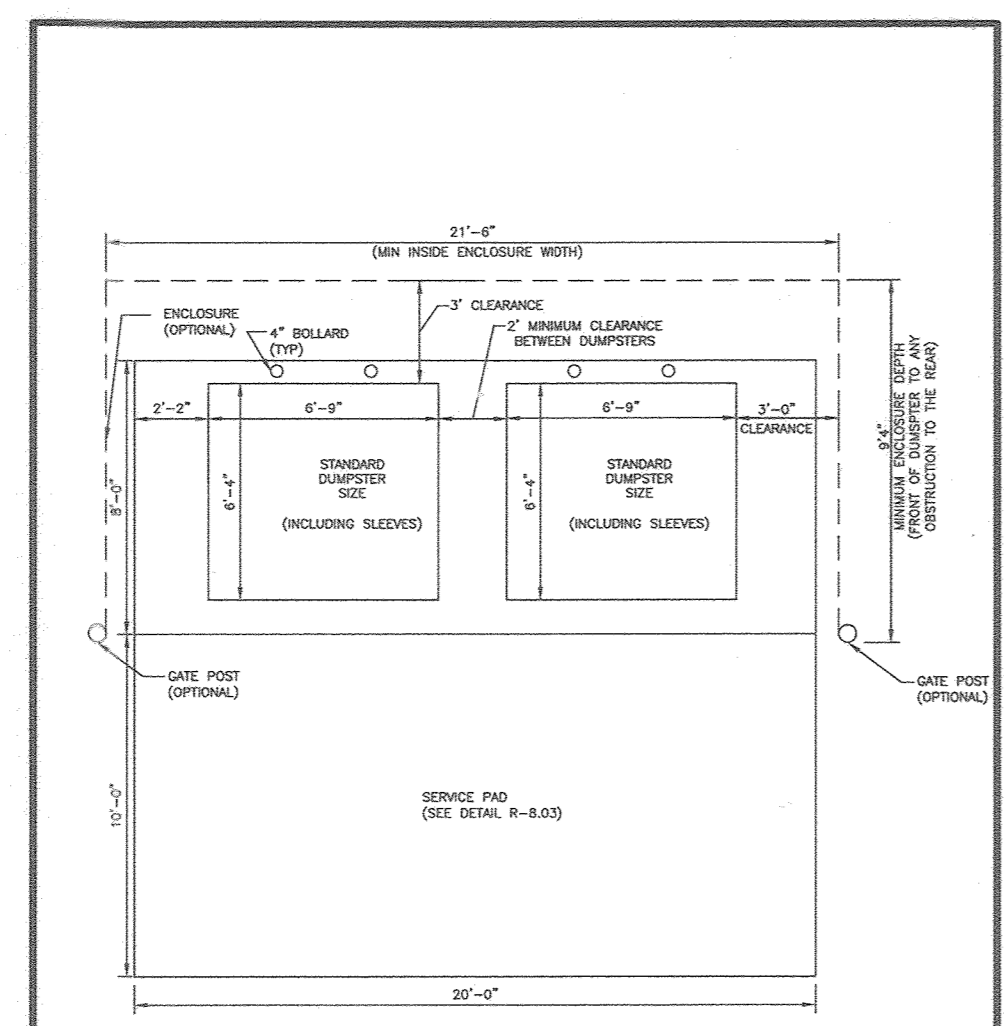
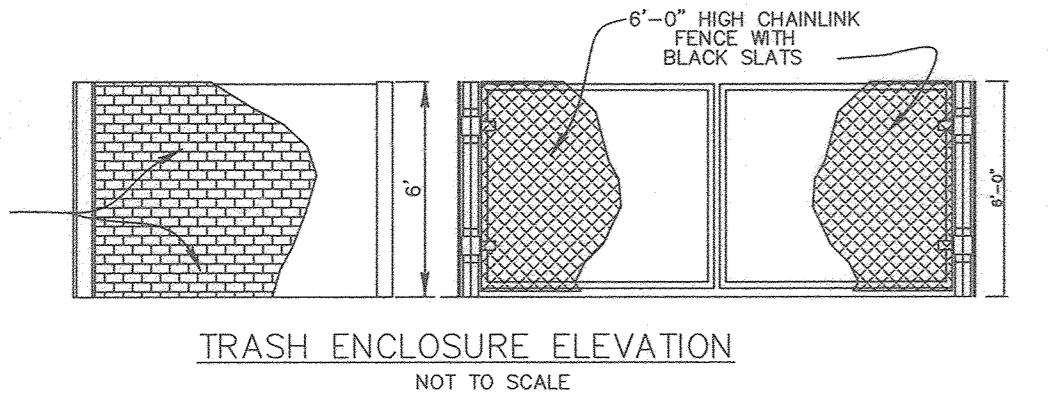
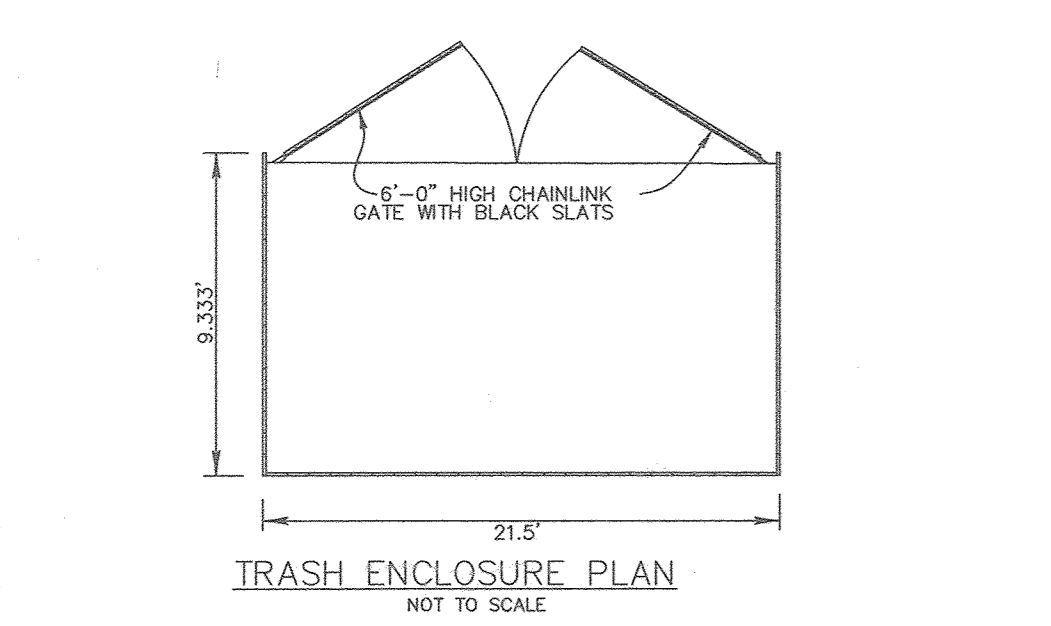
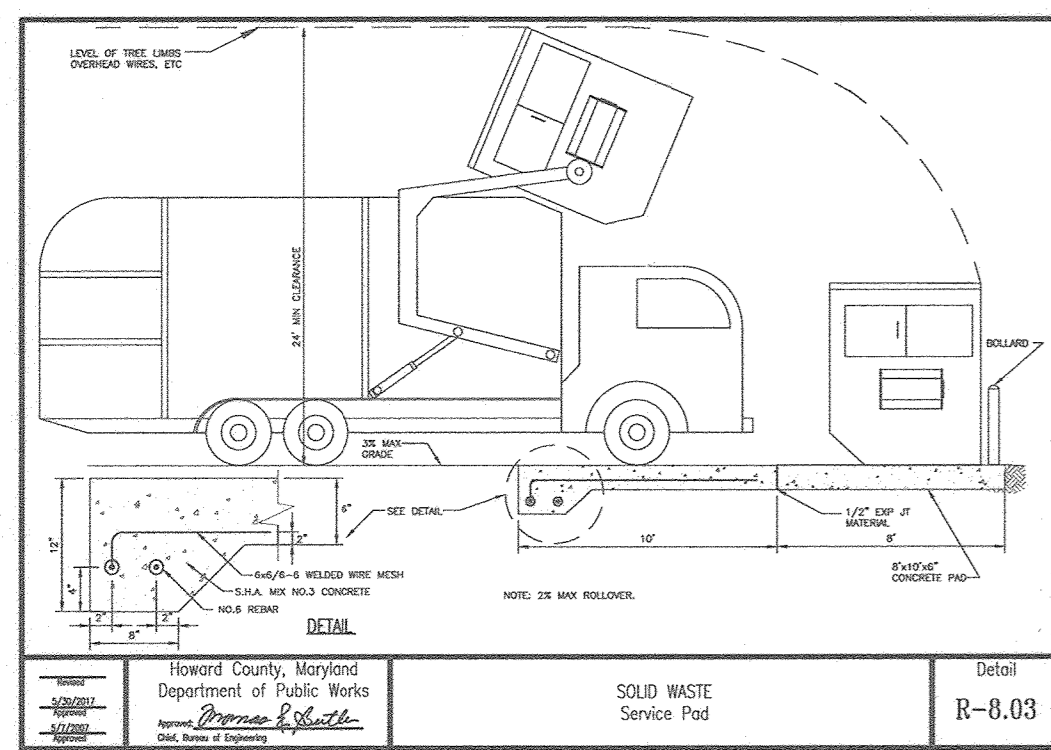
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Paul R. L.*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 7-25-22

*Allyson*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 10/4/22

*Allyson*  
DIRECTOR  
DATE: 10-4-22

NO.	DESCRIPTION	DATE
1	AS BUILT BY SILL ENGINEERING GROUP	12/09/25
	REVISIONS	

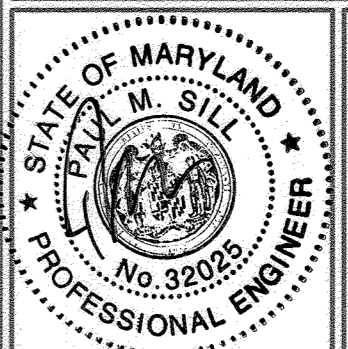


APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DIRECTOR

NO.	DESCRIPTION	DATE
1	AS BUILT BY SILL ENGINEERING GROUP	12/01/25
REVISIONS		

PURPOSE STATEMENT:  
 THE PURPOSE OF THIS REVISED SITE DEVELOPMENT PLAN IS TO EXPAND THE CHURCH BUILDING AND INCLUDE ASSOCIATED SITE IMPROVEMENTS.

SITE & SEDIMENT CONTROL DETAILS  
 CHURCH OF THE RESURRECTION  
 3175 PAULSKIRK DRIVE  
 TAX MAP 24 GRID 4  
 2ND ELECTION DISTRICT  
 PARCEL 1117 LOT 1 & LOT 2  
 HOWARD COUNTY, MARYLAND



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 16005 Frederick Road, 2nd Floor  
 Woodbine, Maryland 21797  
 Phone: 443.325.5076  
 Fax: 410.696.2022  
 Email: info@sillengineering.com  
 Civil Engineering for Land Development

DESIGN BY: PS  
 DRAWN BY: JDB  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: MAY 31, 2022  
 PROJECT #: 18-088  
 SHEET #: 21 of 21

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE JUNE 20, 2023.