

GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY STANDARDS AND SPECIFICATIONS. ALL WORK AND MATERIALS SHALL COMPLY WITH O.S.H.A. STANDARDS.
2. THE CONTRACTOR SHALL NOTIFY MISS UTILITIES AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
3. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING...

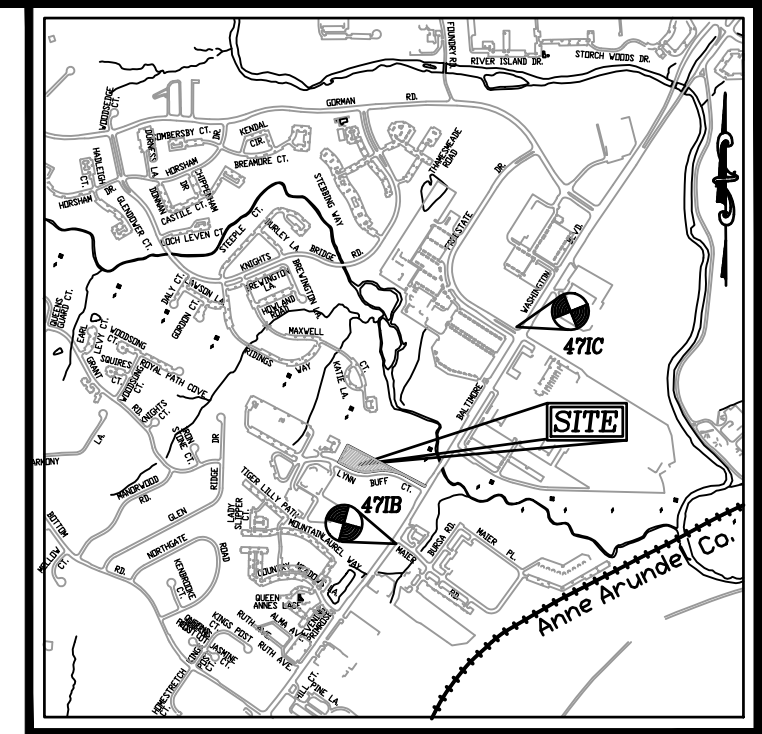
SITE ANALYSIS DATA CHART

Table with 2 columns: Description and Value. Includes items like TOTAL PARCEL AREA (1.88 AC), PRESENT ZONING (CE-CLU), USE OF STRUCTURE (HOTEL), TOTAL COVERAGE (37,402 SF), etc.

SITE DEVELOPMENT PLAN
US 1 JOINT VENTURE, PARCEL E-2
9530 LYNN BUFF COURT
LAUREL
HOWARD COUNTY, MD

BENCHMARKS

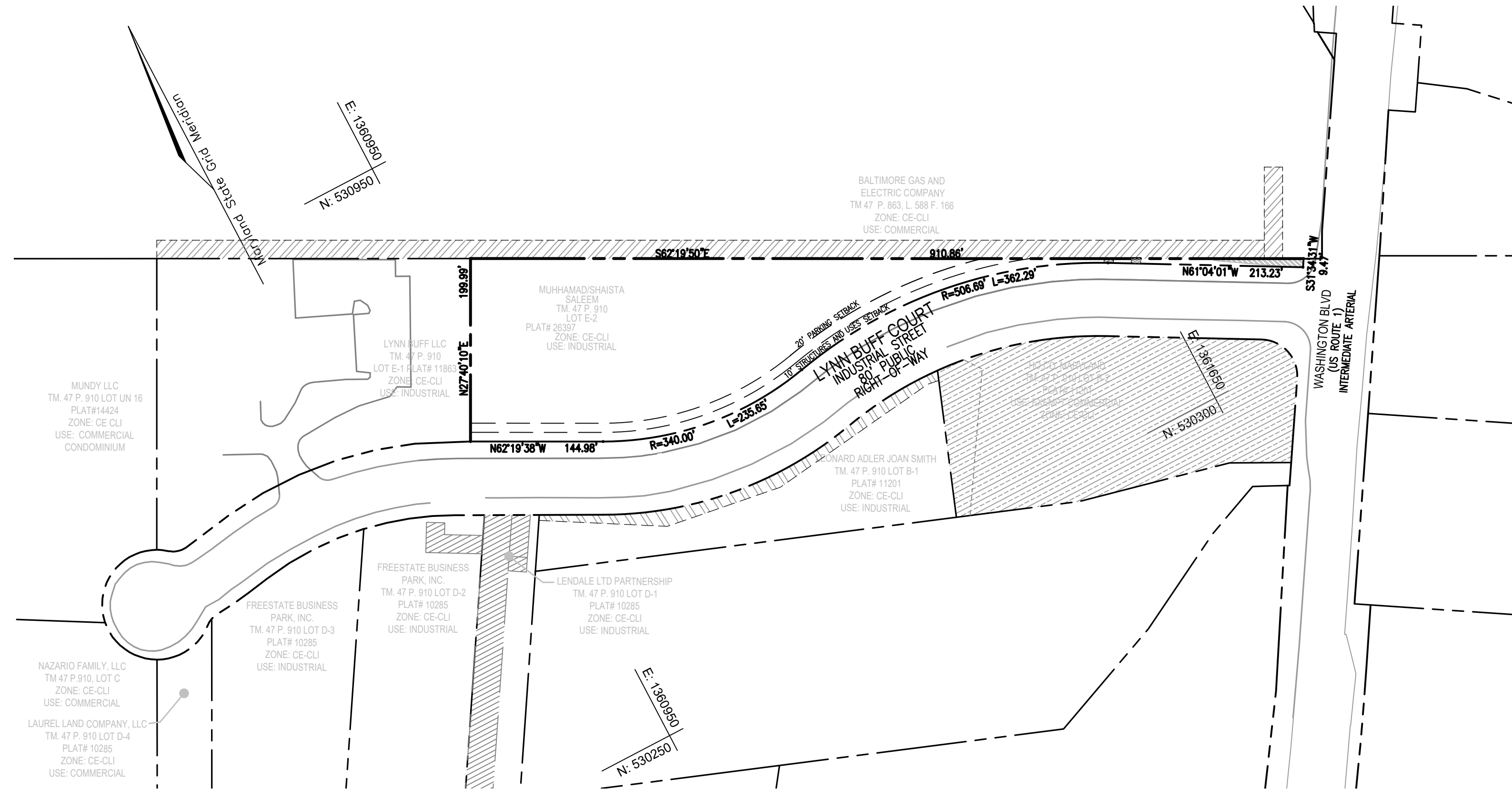
HOWARD COUNTY BENCHMARK - 4718
N 529701.56 E 1361469.75 ELEV.: 179.93
HOWARD COUNTY BENCHMARK - 471C
N 532036.87 E 1362819.07 ELEV.: 188.27



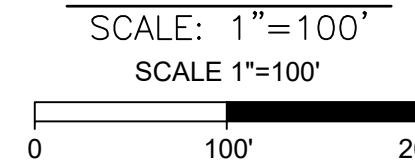
VICINITY MAP
SCALE: 1"=2,000'
ADC MAP COORDINATE: MAP 40, GRID E6

LEGEND:

- PROPERTY LINE
RIGHT-OF-WAY LINE
ADJACENT PROPERTY LINE



LOCATION MAP



GENERAL NOTES

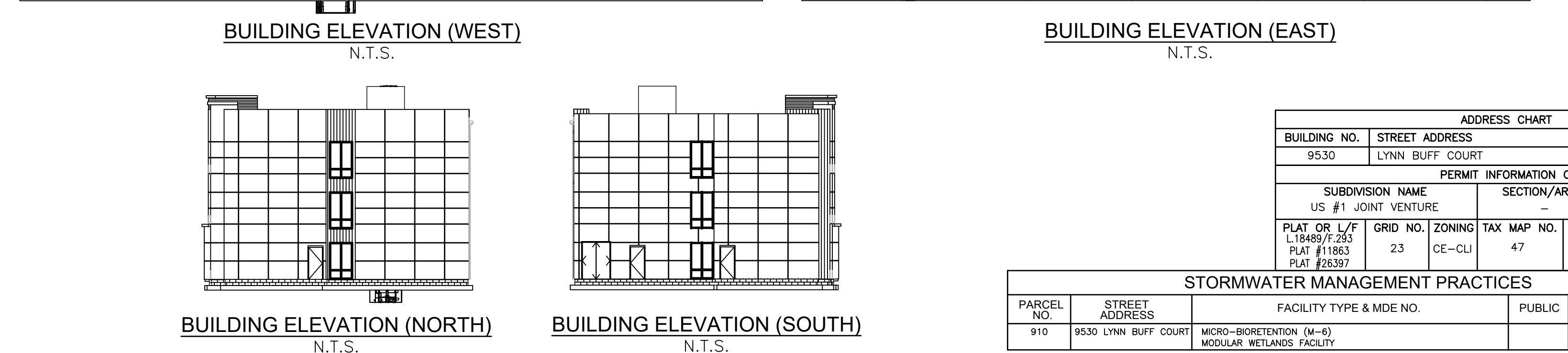
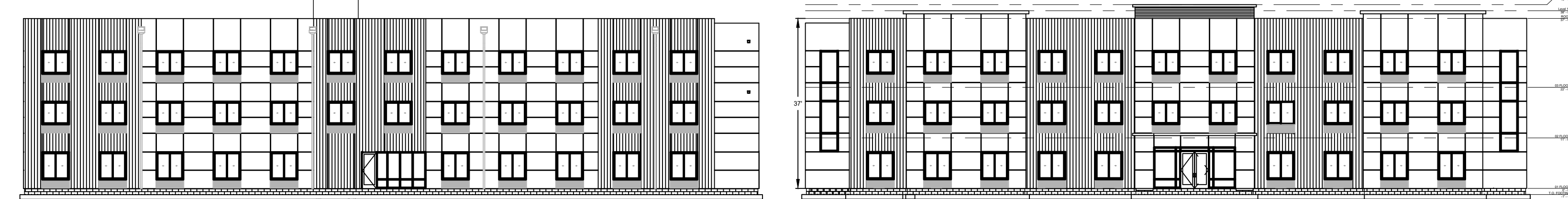
- 45. THIS PROJECT IS SUBJECT TO A DESIGN ADVISORY PANEL (DAP) REVIEW, HELD ON FEBRUARY 22, 2022. THE DESIGN ADVISORY PANEL HAD THE FOLLOWING RECOMMENDATIONS:
- THAT THE APPLICANT LOOKS AT MOVING SOME OF THE BIORETENTION DOWN BELOW THE WALL IN ORDER TO ADD SOME TREES TO THE PARKING LOT, PARTICULARLY AT THE ENTRY AND DROP OFF ZONE.
- THAT THE APPLICANT LOOKS AT GREENING UP THE RETAINING WALL BY ADDING TRAILING VINES OR OTHER PLANT MATERIALS.

PARKING TABULATION:

Table with 2 columns: PROPOSED BUILDING (3 STORY HOTEL) and REQUIRED PER CODE. Lists 61 rooms, 61 guest rooms, 61 total spaces required, and 62 total spaces provided.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: 12/12/2023
Chief, Division of Land Development: 12/7/2023
Director: 12/12/2023



ADDRESS CHART, PERMIT INFORMATION CHART, and STORMWATER MANAGEMENT PRACTICES table.

OWNER/DEVELOPER

MUHAMMAD SALEEM
SHAISTA SALEEM
4309 VALLEY STREAM AVE.
BURTONSVILLE, MD 20866
(301)370-6587

SITE DEVELOPMENT PLAN
COVER SHEET

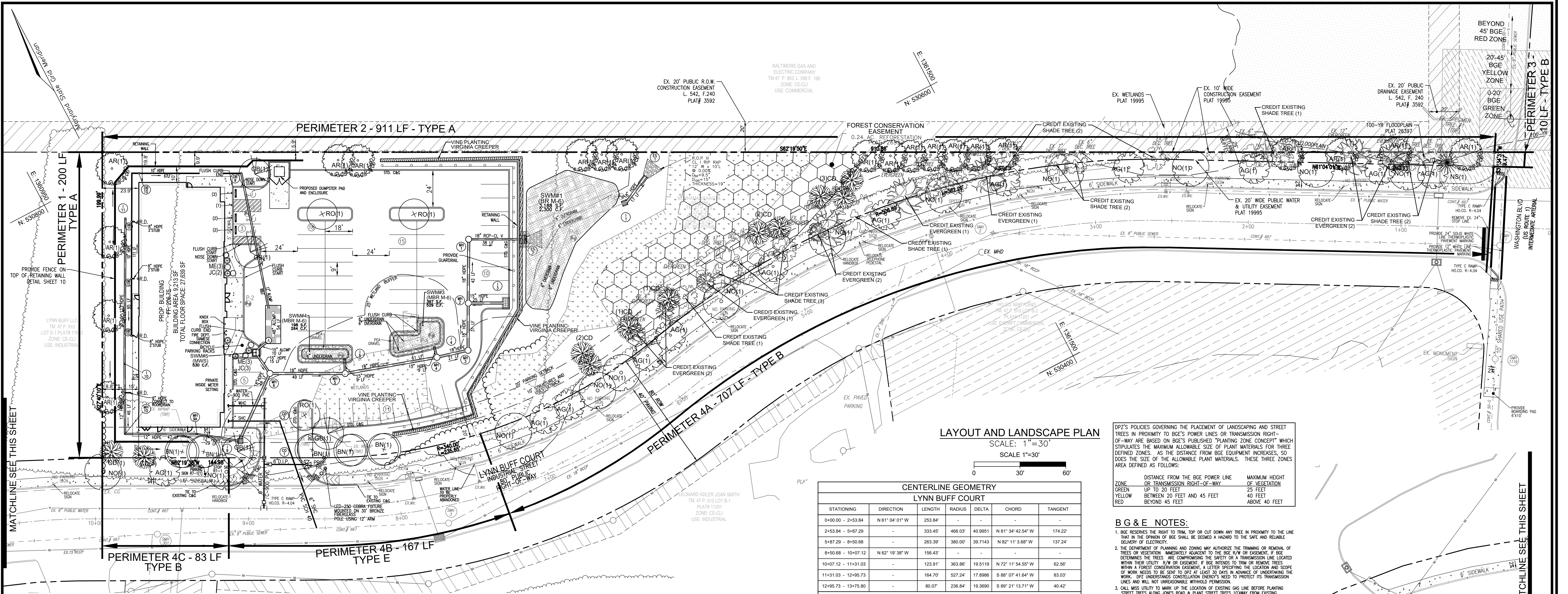
US 1 JOINT VENTURE, PARCEL E-2
9530 LYNN BUFF COURT
LAUREL, MARYLAND 20723

VOGEL ENGINEERING

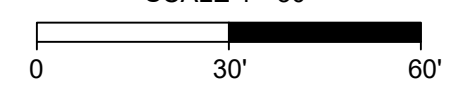
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: VETG
DRAWN BY: MH
CHECKED BY: RHV
DATE: SEPTEMBER 2023
SCALE: AS SHOWN
W.O. NO.: 43634
PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16193 EXPIRATION DATE: 09-27-2024





**LAYOUT AND LANDSCAPE PLAN**  
SCALE: 1"=30'



CENTERLINE GEOMETRY LYNN BUFF COURT						
STATIONING	DIRECTION	LENGTH	RADIUS	DELTA	CHORD	TANGENT
0+00.00 - 2+53.84	N 61° 04' 01" W	253.84'	-	-	-	-
2+53.84 - 5+87.29	-	333.45'	466.03'	40.9951'	N 81° 34' 42.54" W	174.22'
5+87.29 - 8+50.68	-	263.39'	380.00'	39.7143'	N 82° 11' 3.68" W	137.24'
8+50.68 - 10+07.12	N 62° 19' 38" W	156.43'	-	-	-	-
10+07.12 - 11+31.03	-	123.91'	363.86'	19.5119'	N 72° 11' 54.55" W	62.56'
11+31.03 - 12+495.73	-	164.70'	527.24'	17.8988'	S 88° 07' 41.64" W	83.03'
12+495.73 - 13+75.80	-	80.07'	236.84'	19.3690'	S 89° 21' 13.71" W	40.42'

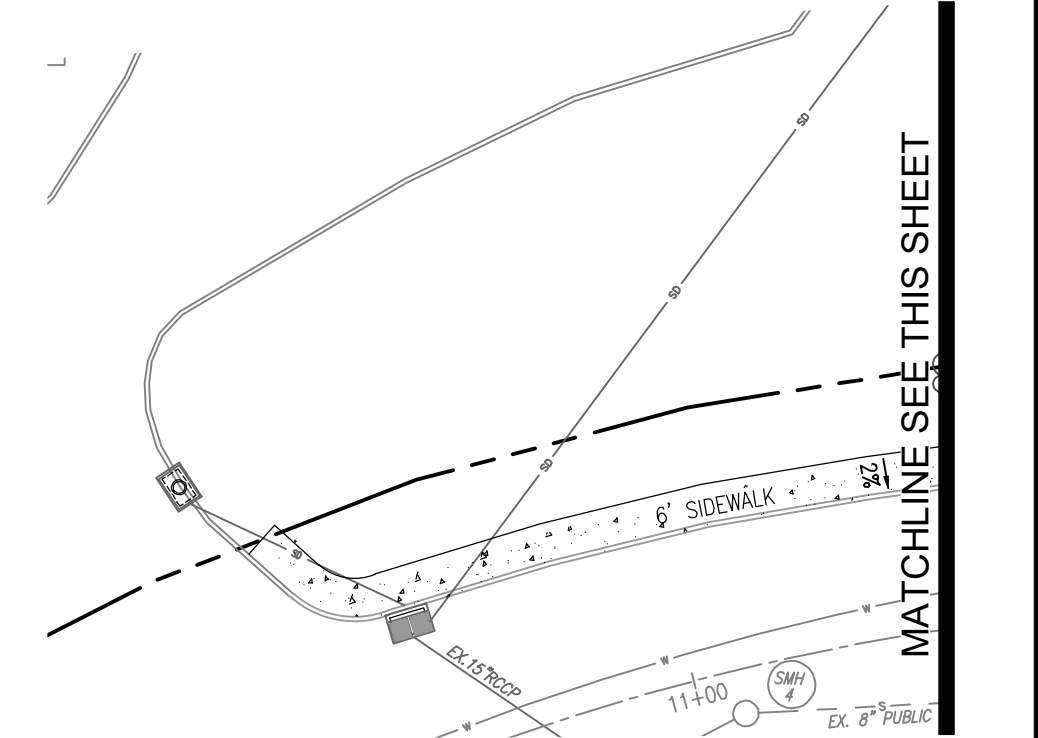
DRIVEWAY						
STATIONING	DIRECTION	LENGTH	RADIUS	DELTA	CHORD	TANGENT
8+79.85 - 0+00.00	N 27° 40' 10" E	80.00'	-	-	-	-

DPZ'S POLICIES GOVERNING THE PLACEMENT OF LANDSCAPING AND STREET TREES IN PROXIMITY TO BGE'S POWER LINES OR TRANSMISSION RIGHT-OF-WAY ARE BASED ON BGE'S PUBLISHED "PLANTING ZONE CONCEPT" WHICH STIPULATES THE MAXIMUM ALLOWABLE SIZE OF PLANT MATERIALS FOR THREE DEFINED ZONES. AS THE DISTANCE FROM BGE EQUIPMENT INCREASES, SO DOES THE SIZE OF THE ALLOWABLE PLANT MATERIALS. THESE THREE ZONES ARE DEFINED AS FOLLOWS:

ZONE	DISTANCE FROM THE BGE POWER LINE OR TRANSMISSION RIGHT-OF-WAY	MAXIMUM HEIGHT OF VEGETATION
GREEN	UP TO 20 FEET	25 FEET
YELLOW	BETWEEN 20 FEET AND 45 FEET	40 FEET
RED	BEYOND 45 FEET	ABOVE 40 FEET

**B G & E NOTES:**

- BGE RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.
- THE DEPARTMENT OF PLANNING AND ZONING MAY AUTHORIZE THE TRIMMING OR REMOVAL OF TREES OR VEGETATION, IMMEDIATELY ADJACENT TO THE BGE R/W OR EASEMENT, IF BGE DETERMINES THE TREES ARE COMPROMISING THE SAFETY OF A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR EASEMENT. IF BGE INTENDS TO TRIM OR REMOVE TREES WITHIN A FOREST CONSERVATION EASEMENT, A LETTER SPECIFYING THE LOCATION AND SCOPE OF WORK NEEDS TO BE SENT TO DPZ AT LEAST 30 DAYS IN ADVANCE OF UNdertaking THE WORK. DPZ UNDERSTANDS CONSTRUCTION ENGINEERS NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNDERSIGNABLE WITHOUT PERMISSION.
- CALL MISS UTILITY TO MARK UP THE LOCATION OF EXISTING GAS LINE BEFORE PLANTING STREET TREES ALONG JONES ROAD & PLANT STREET TREES 10' AWAY FROM EXISTING CURB AS REQUIRED.



**LANDSCAPE NOTES**

- AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN WILL RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BENCHES, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPE CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE MOST CURRENT JAN SPECIFICATIONS AND WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.
- PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION UNDER THIS SITE DEVELOPMENT PLAN. SURETY FOR THE PROPOSED LANDSCAPING SHALL BE BASED ON THE NUMBER OF PLANTINGS REQUIRED.

**SCHEDULE B PARKING LOT INTERNAL LANDSCAPING**

NUMBER OF PARKING SPACES	61
NUMBER OF TREES REQUIRED	3
NUMBER TREES PROVIDED	3
OTHER TREES (2:1 SUBSTITUTION)	-

**INTERNAL LANDSCAPING SCHEDULE**

KEY	QUAN	BOTANICAL NAME	SIZE	REM.
RO	3	QUERCUS RUBRA NORTHERN RED OAK	1 1/2"-2" CAL	B & B

**DAP LANDSCAPING SCHEDULE**

KEY	QUAN	BOTANICAL NAME	SIZE	REM.
GB	4	GINKGO BILOBA 'AUTUMN GOLD' AUTUMN GOLD GINKGO	2 1/2"-3" CAL	B & B
JC	5	JUNIPERUS CHINENSIS COMPACT PFITZER JUNIPER	1 GAL.	B & B
ME	6	EUNOMIUS KIAUTSCHOVICUS MANHATTAN EUONYMUS	3" CAL	B & B
VINES		PARTHENOCISSUS QUINQUEFOLIA VIRGINIA CREEPER	1 GAL.	-

**SCHEDULE A PERIMETER LANDSCAPE EDGE**

CATEGORY	1	2	3	4A	4B	4C	4D	TOTAL
PERIMETER FRONTAGE DESIGNATION	1	2	3	4A	4B	4C	4D	
LANDSCAPE TYPE	1	2	3	4A	4B	4C	4D	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	YES	NO	NO	NO	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED	160 = 4	160 = 15	160 = 1	160 = 12	140 = 4	160 = 1	160 = 2	37
SHADE TREES	-	-	-	-	-	-	-	21
EVERGREEN TREES	-	-	-	-	-	-	-	21
SHRUBS	-	-	-	-	-	-	-	21
NUMBER OF PLANTS PROVIDED	4	15	1	9*	4	1	2	25*
SHADE TREES	-	-	-	-	-	-	-	12*
EVERGREEN TREES	-	-	-	-	-	-	-	12*
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-	-	-	-	-
EX SPECIMEN TREES TO REMAIN DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED	-	-	-	-	-	-	-	-

\* - CREDIT 12 EXISTING SHADE TREES AND 9 EXISTING EVERGREEN TREES

**PERIMETER LANDSCAPE EDGE LANDSCAPE SCHEDULE**

KEY	QUAN	BOTANICAL NAME	SIZE	REM.
AR	20	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL	B & B
BN	5	QUERCUS PALUSTRIS PIN OAK	2 1/2"-3" CAL	B & B
NS	1	ILEX 'NELLIE R. STEVENS' NELLIE R. STEVENS HOLLY	6"-8" HGT.	B & B
CD	11	ILEX OPECA AMERICAN HOLLY	6"-8" HGT.	B & B

NOTE: WITH PERMISSION FROM HOWARD COUNTY, PLANTINGS SPECIFIED HEREON MAY BE SUBSTITUTED WITH APPROVED SPECIES LISTED IN APPENDIX C OF THE HOWARD COUNTY LANDSCAPE MANUAL.

**STREET TREE CALCULATIONS**

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
LYNN BUFF COURT	956/40	24	24

**STREE TREE PLANTINGS SCHEDULE**

KEY	QUAN	BOTANICAL NAME	SIZE	REM.
AG	12	AMUR MAPLE ACER GINMALA	2 1/2"-3" CAL	B & B
NO	12	QUERCUS RUBRA NORTHERN RED OAK	2 1/2"-3" CAL	B & B

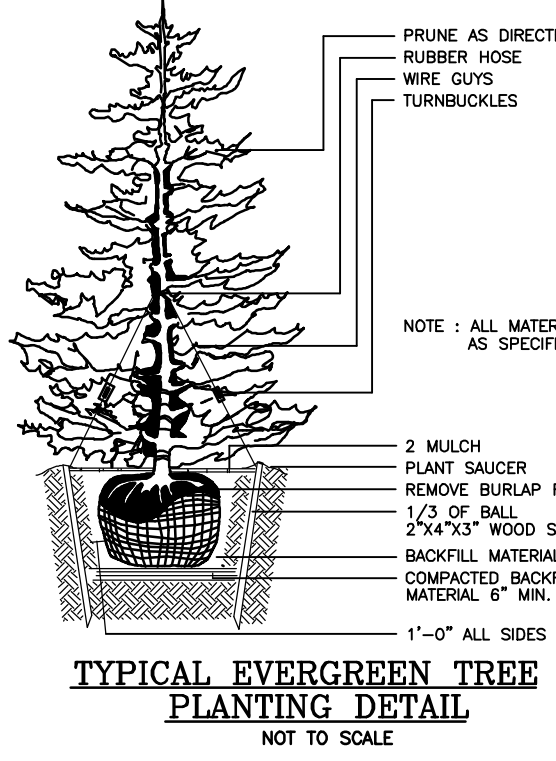
NOTE: WITH PERMISSION FROM HOWARD COUNTY, PLANTINGS SPECIFIED HEREON MAY BE SUBSTITUTED WITH APPROVED SPECIES LISTED IN APPENDIX B OF THE HOWARD COUNTY LANDSCAPE MANUAL.

**GENERAL NOTES**

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$10,830 FOR THE REQUIRED LANDSCAPING SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT. PERIMETER LANDSCAPING: REQUIRED 25 SHADE TREES \$7,500, AND 12 EVERGREEN TREES \$1,800 INTERNAL LANDSCAPING: 3 SHADE TREES \$900 DAP LANDSCAPING: 4 SHADE TREES \$1,200, 11 SHRUBS \$330
- PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(c)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. FINANCIAL SURETY (\$7,200) SHALL BE POSTED AS PART OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS COST ESTIMATE FOR THE REQUIRED 24 STREET TREES.
- IN A LETTER AND PLAN PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED FEBRUARY 23, 2021 MR. JOHN CANOLES IDENTIFIED THE ON-SITE FOREST, WETLANDS AND STREAMS. - NO SPECIMEN TREES WERE IDENTIFIED.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN.

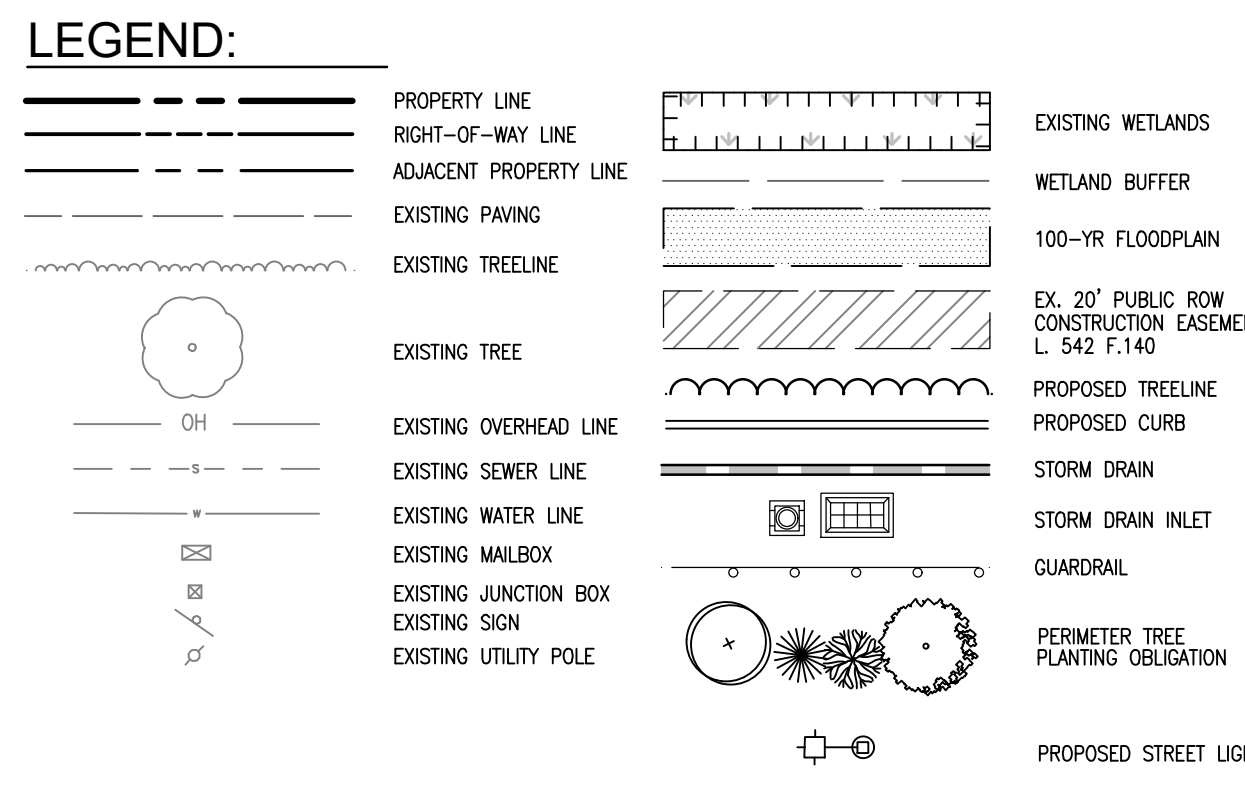
**LANDSCAPE SCHEDULE NOTES:**

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT JAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HED PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.



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

NOTE: PLANTING SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD FROM THE LANDSCAPE CONTRACTORS ASSOCIATION OF MD, DC AND VA.



**OWNER/DEVELOPER**  
MUHAMMAD SALEEM  
SHAISTA SALEEM  
4309 VALLEY STREAM AVE.  
BURTONSVILLE, MD 20866  
(301)370-6587

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN  
LAYOUT AND LANDSCAPE PLAN**

**US 1 JOINT VENTURE, PARCEL E-2**  
9530 LYNN BUFF COURT  
LAUREL, MARYLAND 20723

TAX MAP: 47 BLOCK: 23  
6TH ELECTION DISTRICT

ZONED: CE-CLU  
PARCEL: 910  
HOWARD COUNTY, MARYLAND

**VOGEL ENGINEERING**

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

PROFESSIONAL CERTIFICATE  
HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2024

DESIGN BY: VETG  
DRAWN BY: IMH  
CHECKED BY: RHW  
DATE: SEPTEMBER 2023  
SCALE: AS SHOWN  
W.O. NO.: 43634

2 SHEET OF 16

SDP-22-048

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *Chad Edmondson* 12/12/2023

Chief, Division of Land Development: *Linda Eschenberg* 12/12/2023

Director: *Linda Eschenberg*

**DEVELOPER'S/BUILDER'S CERTIFICATE**

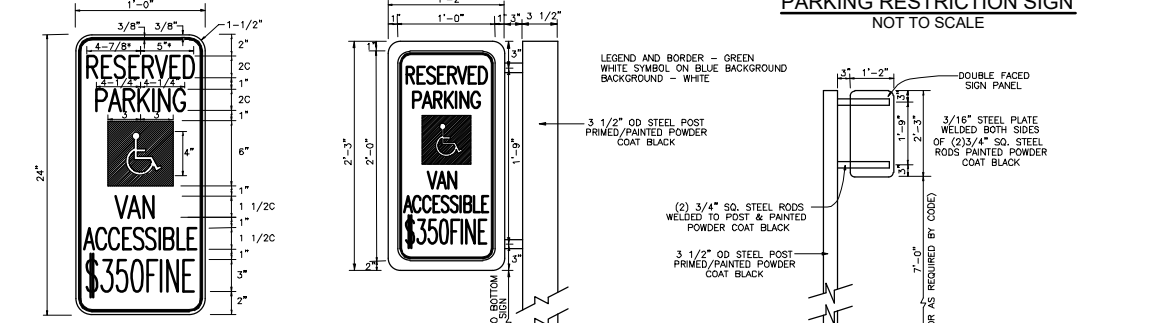
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE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

Muhammad Saleem 11/2/2023  
SIGNATURE OF DEVELOPER DATE

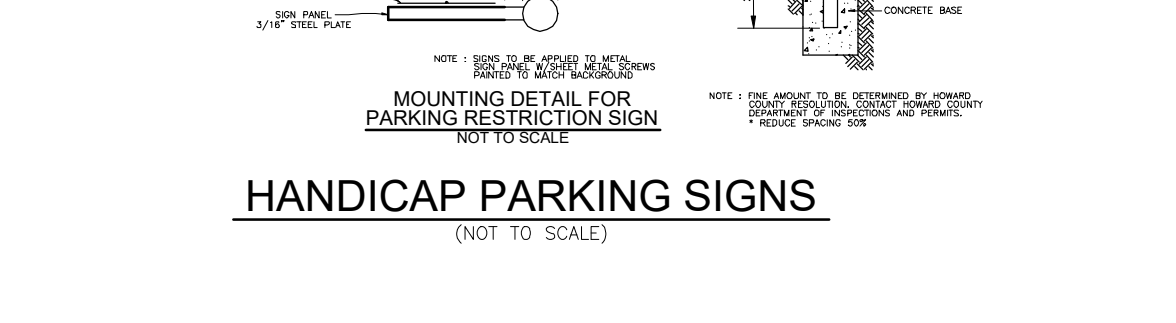




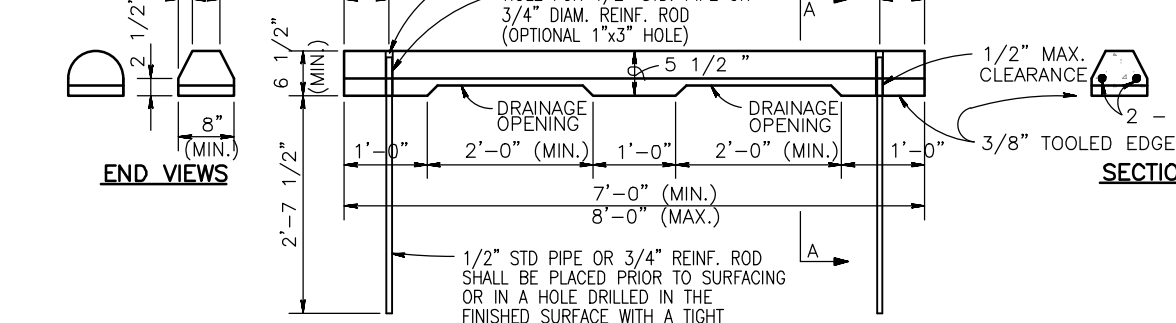
PARKING RESTRICTION SIGN FOR HANDICAPPED ACCESSIBLE SYMBOL (1) NOT TO SCALE



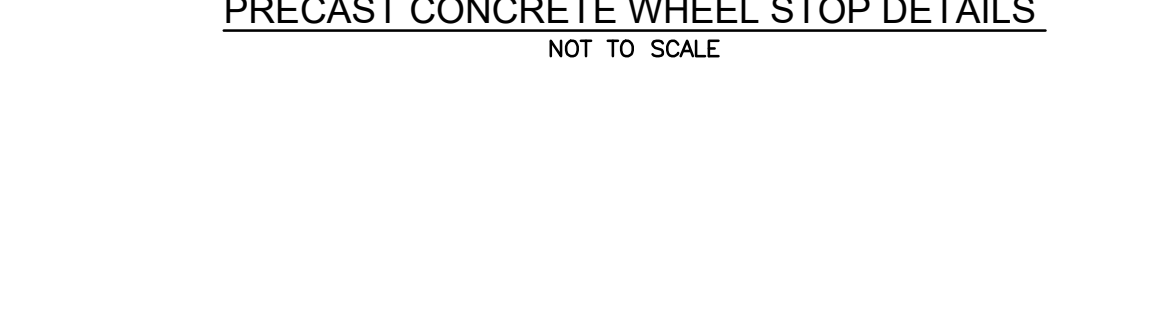
PARKING RESTRICTION SIGN FOR HANDICAPPED ACCESSIBLE SYMBOL (2) NOT TO SCALE



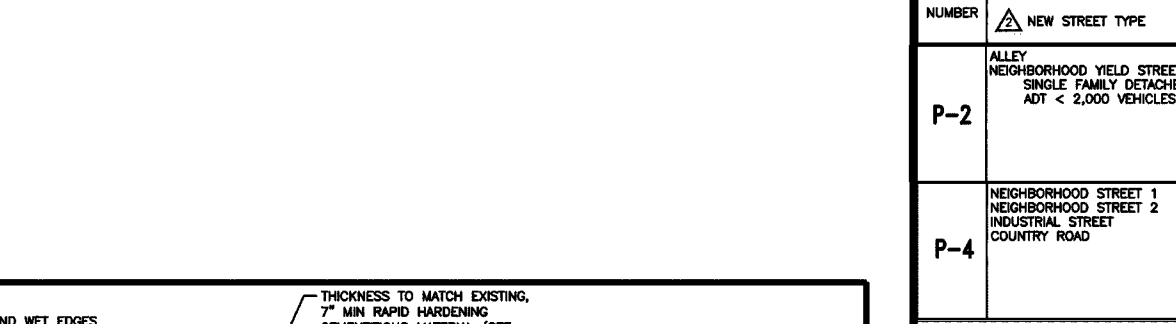
PARKING RESTRICTION SIGN FOR VAN ACCESSIBLE \$350 FINE NOT TO SCALE



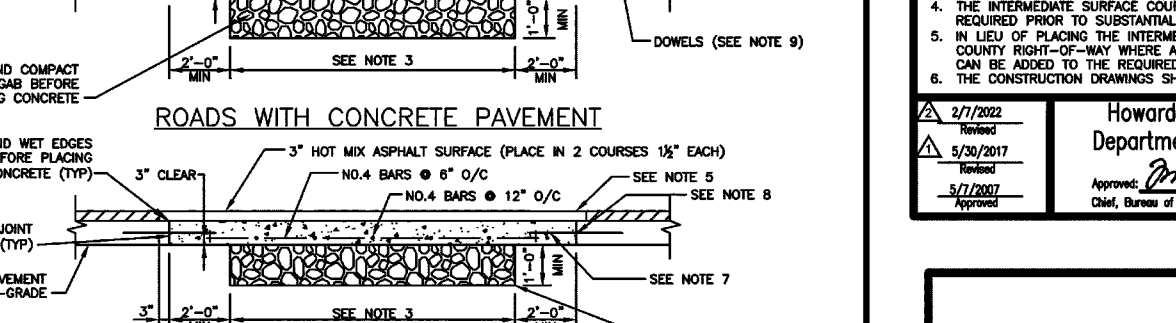
MOUNTING DETAIL FOR PARKING RESTRICTION SIGN NOT TO SCALE



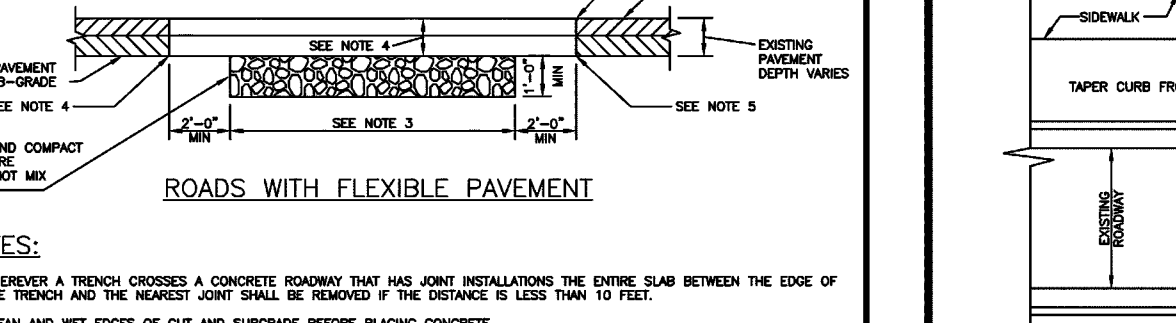
HANDICAP PARKING SIGNS (NOT TO SCALE)



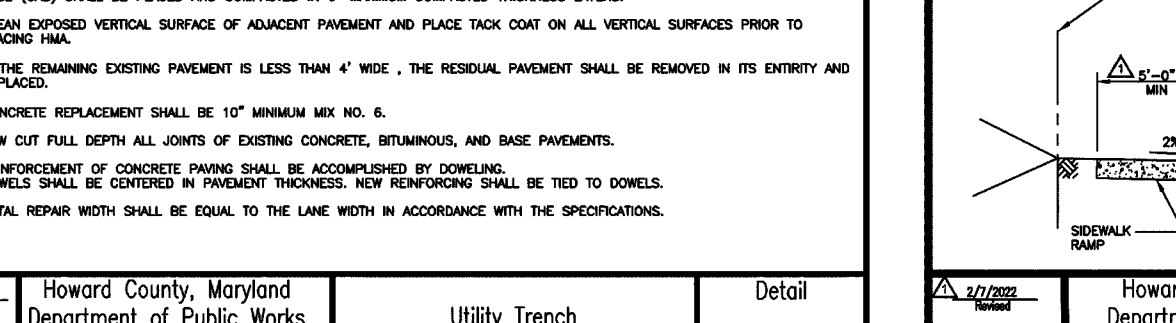
ELEVATION PRECAST CONCRETE WHEEL STOP DETAILS NOT TO SCALE



ROADS WITH CONCRETE PAVEMENT



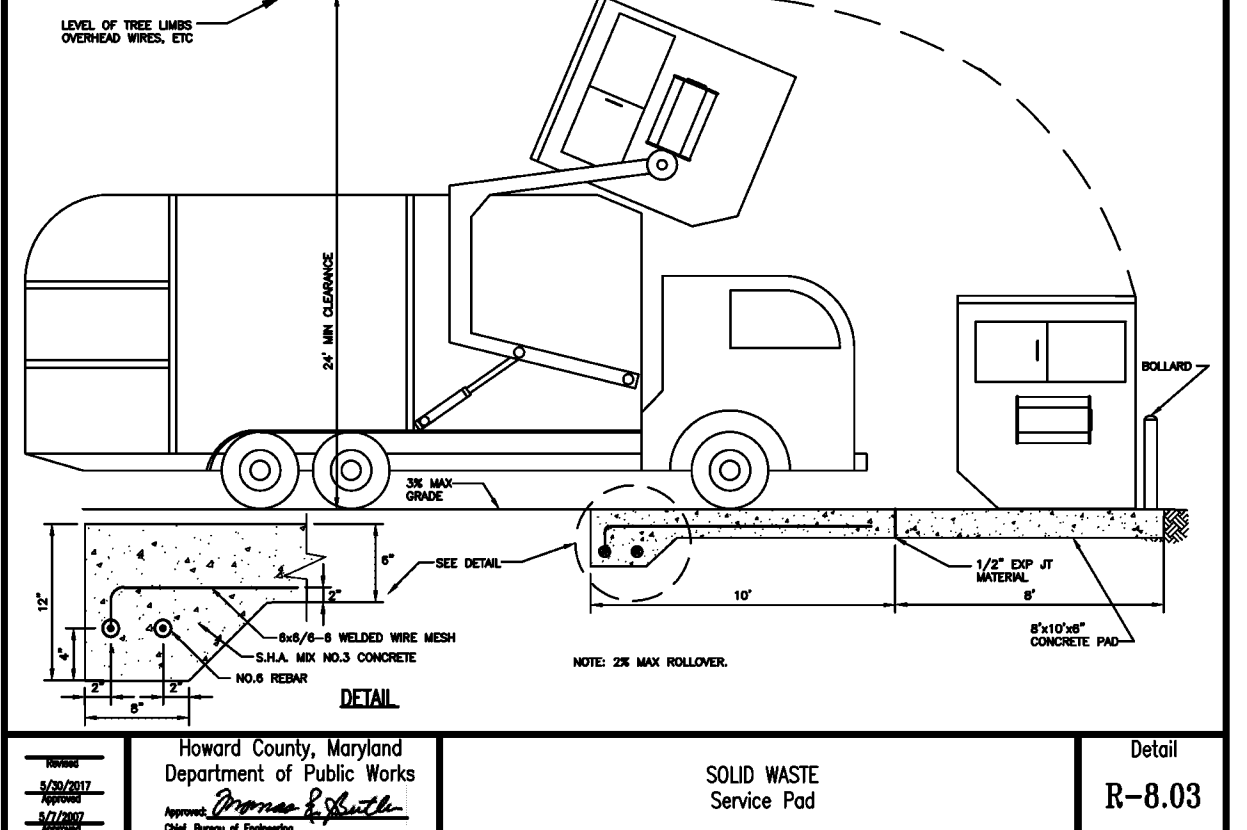
ROADS WITH CONCRETE BASE AND HOT MIX ASPHALT SURFACE



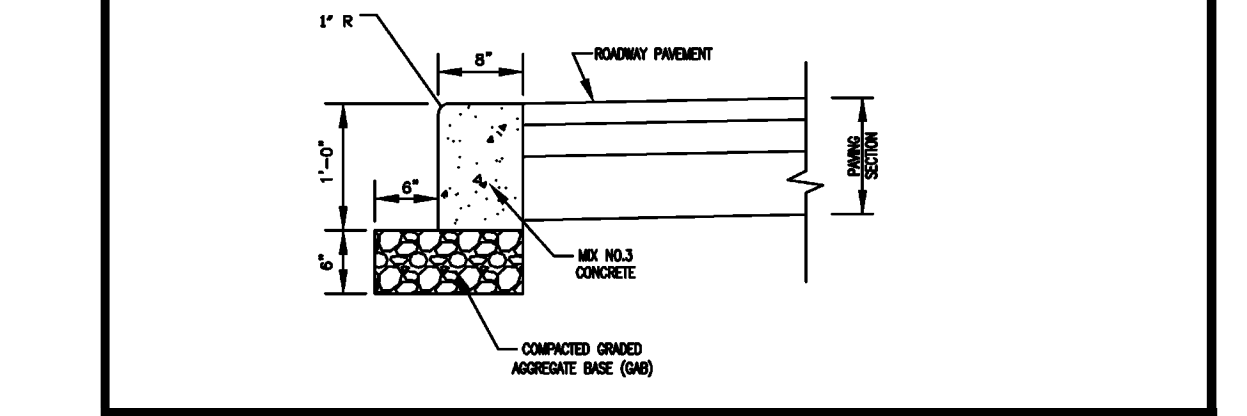
ROADS WITH FLEXIBLE PAVEMENT

Table with 3 columns: ROAD AND STREET CLASSIFICATION / TYPE, CALIFORNIA BEARING RATIO (CBR), and SUPERFINE ASPHALT MIX WITH CONSISTENT SAND.

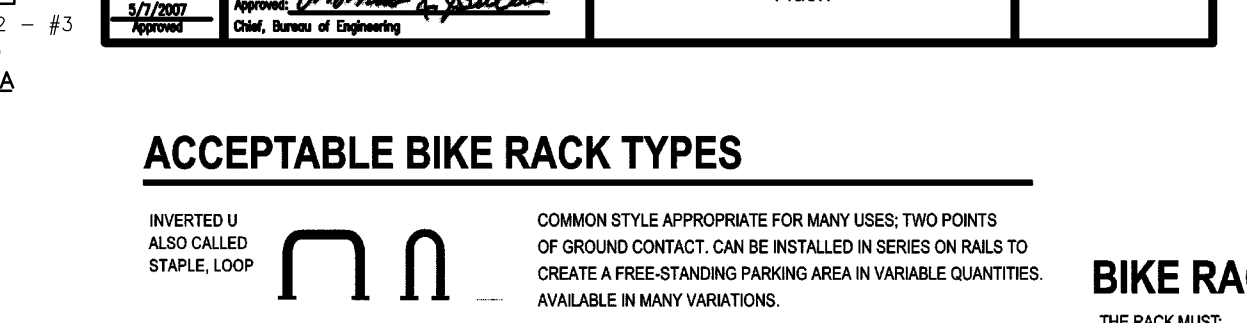
Table with 3 columns: ROAD AND STREET CLASSIFICATION / TYPE, CALIFORNIA BEARING RATIO (CBR), and SUPERFINE ASPHALT MIX WITH CONSISTENT SAND.



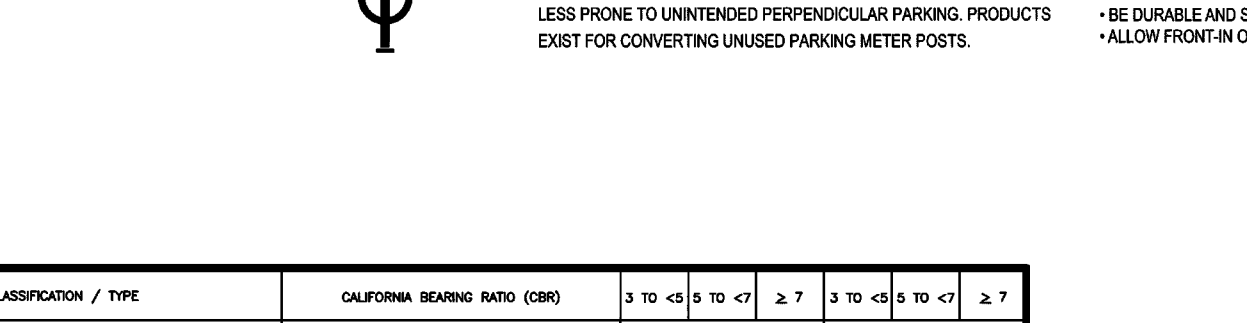
Howard County, Maryland Department of Public Works SOLID WASTE Service Pool R-8.03



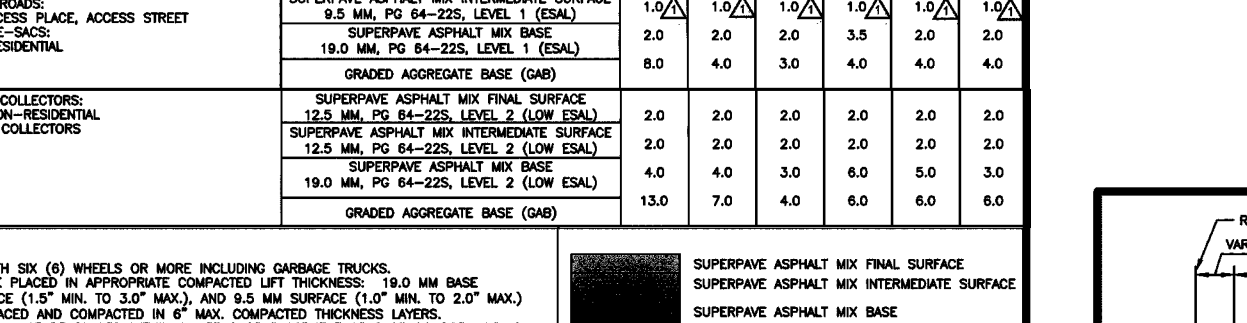
Howard County, Maryland Department of Public Works MODIFIED SOLID WASTE Single Container Enclosure R-8.04



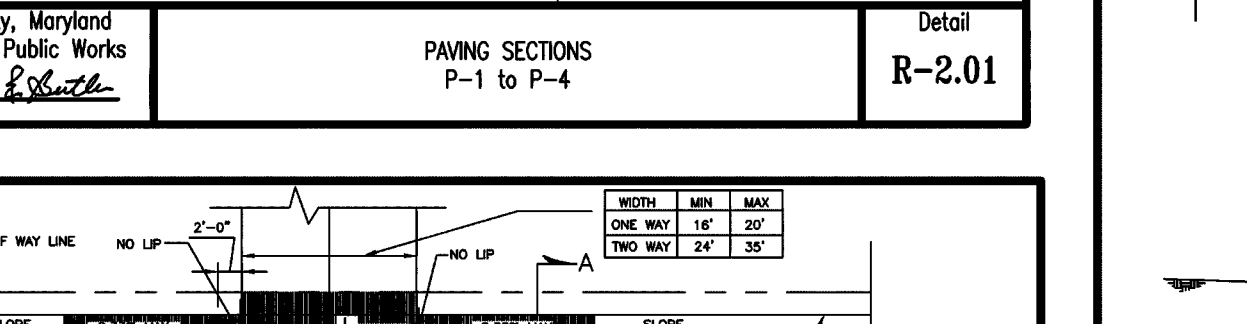
Howard County, Maryland Department of Public Works Curb Flush R-3.07



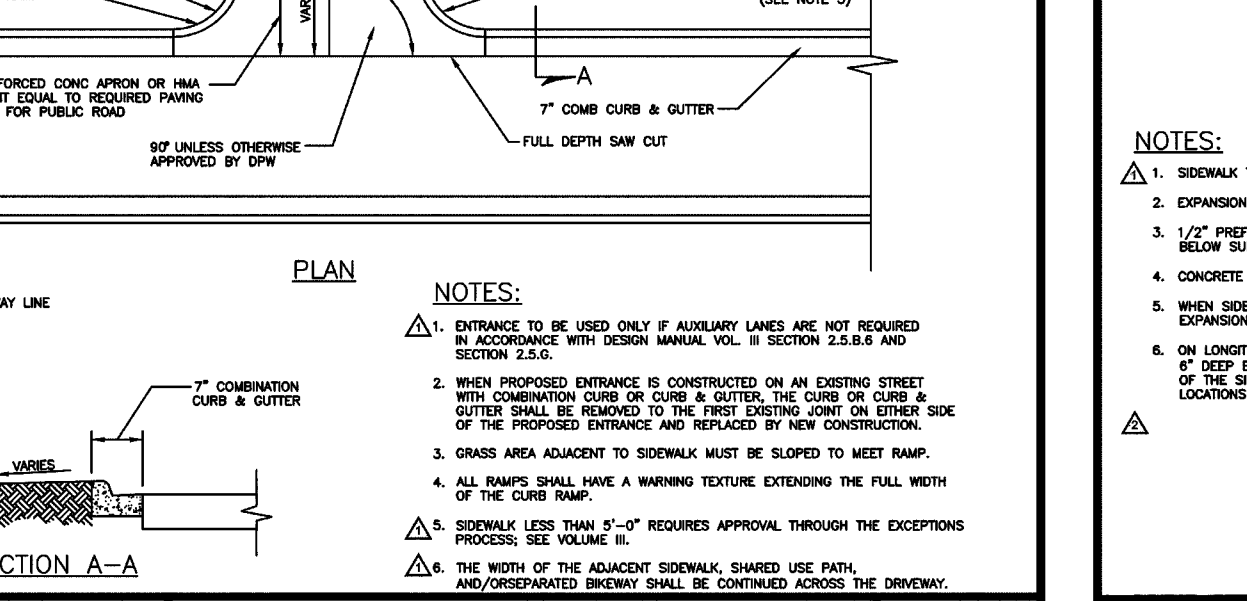
ACCEPTABLE BIKE RACK TYPES



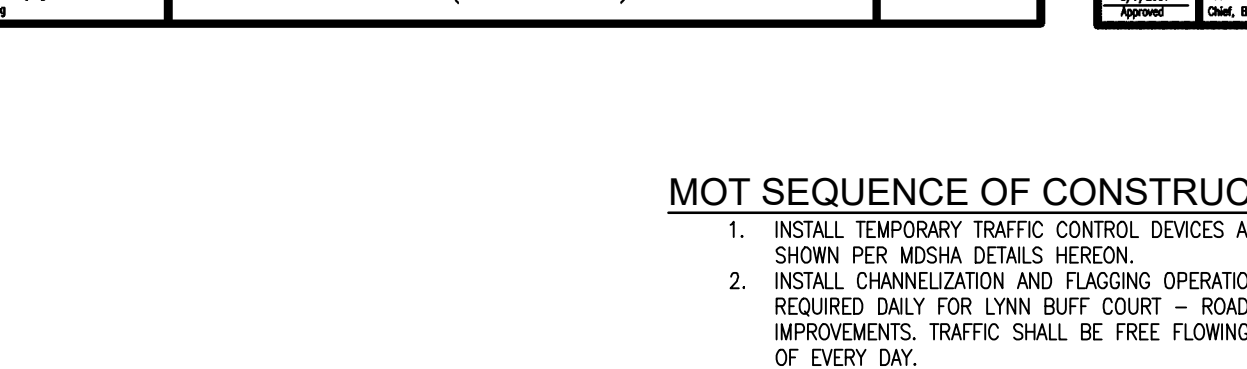
BIKE RACK TYPE SPECIFICATIONS



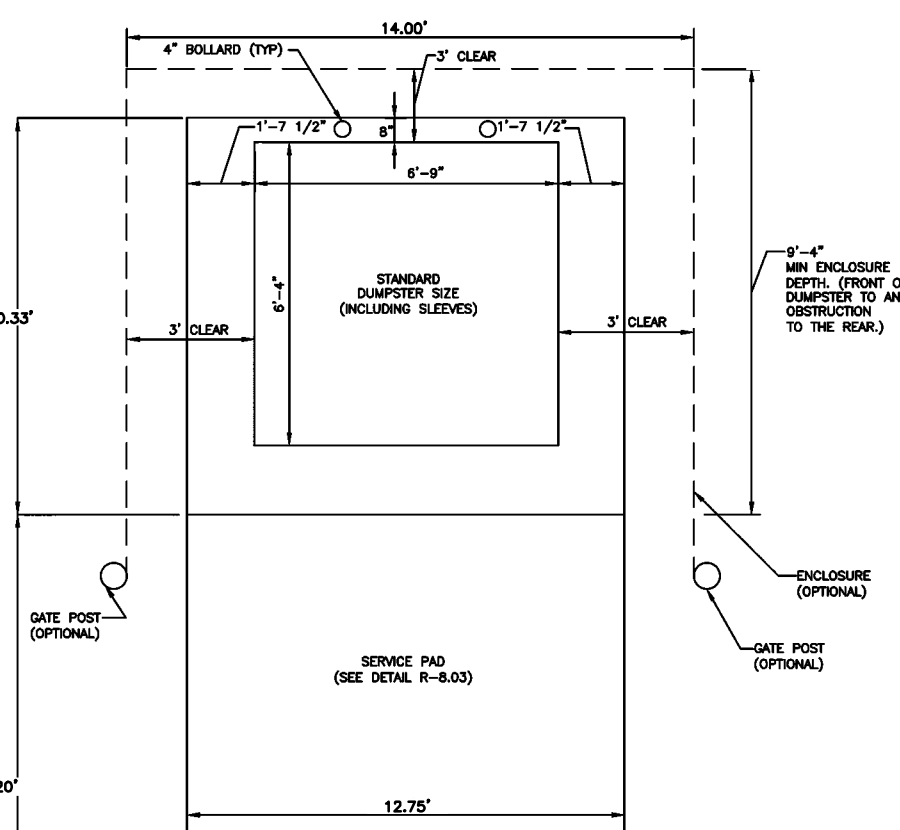
Howard County, Maryland Department of Public Works PAVING SECTIONS P-1 to P-4 R-2.01



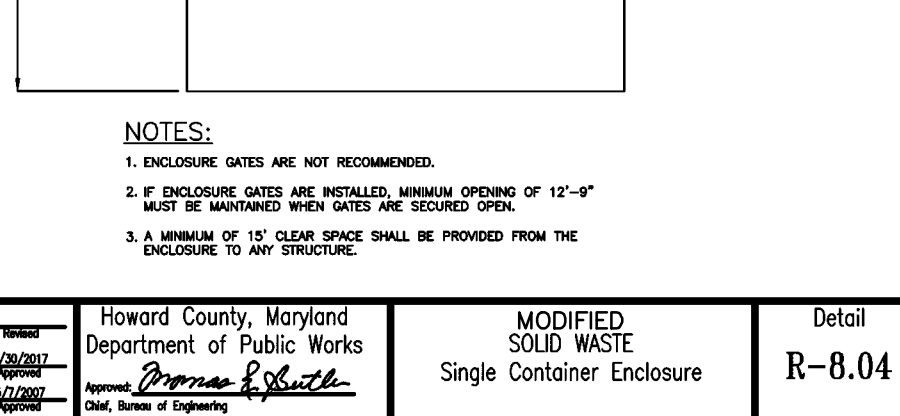
Howard County, Maryland Department of Public Works CONCRETE SIDEWALK R-3.05



Howard County, Maryland Department of Public Works COMMERCIAL-INDUSTRIAL-APARTMENT Entrance on Closed Section Roadway (<200 V.P.H.) R-6.09



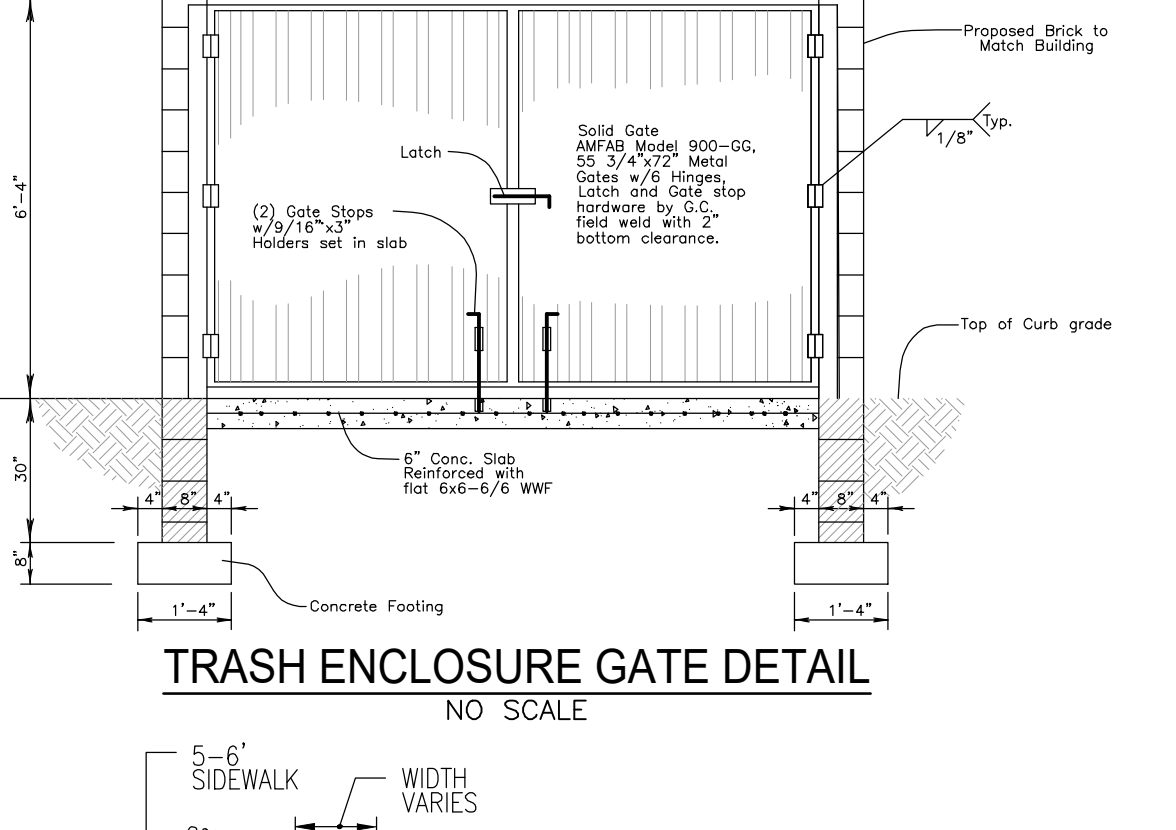
TRASH ENCLOSURE GATE DETAIL NO SCALE



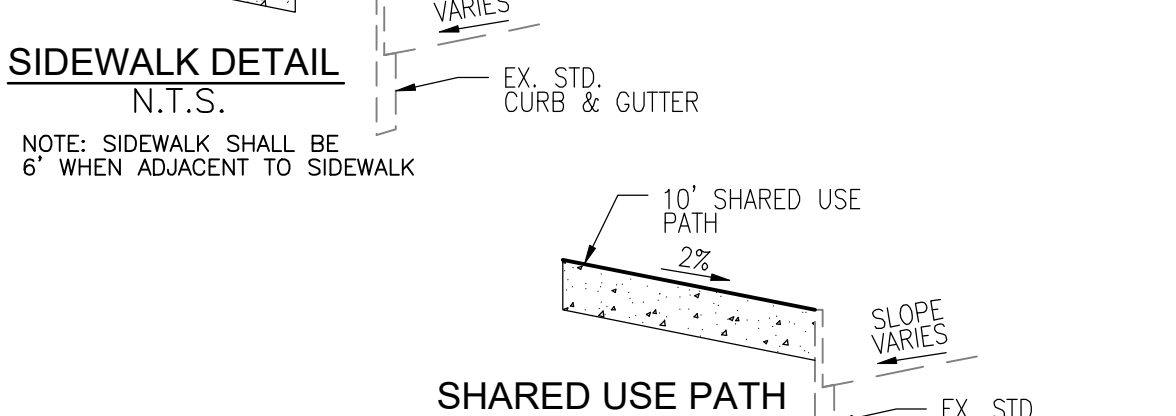
SIDEWALK DETAIL N.T.S.



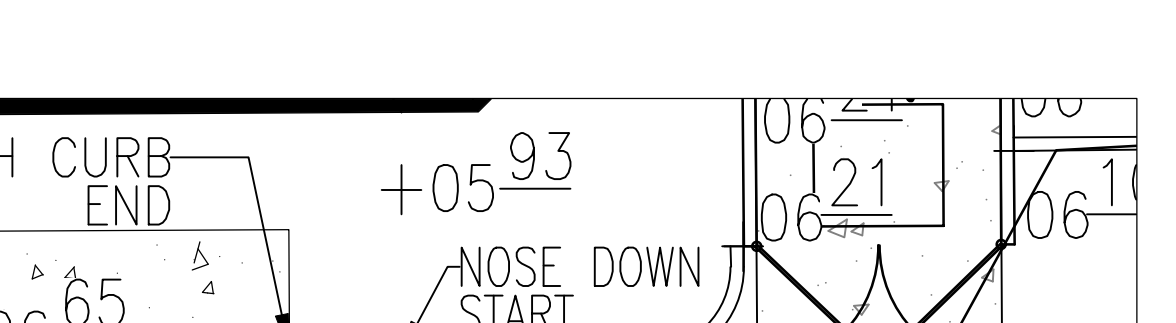
SHARED USE PATH DETAIL N.T.S.



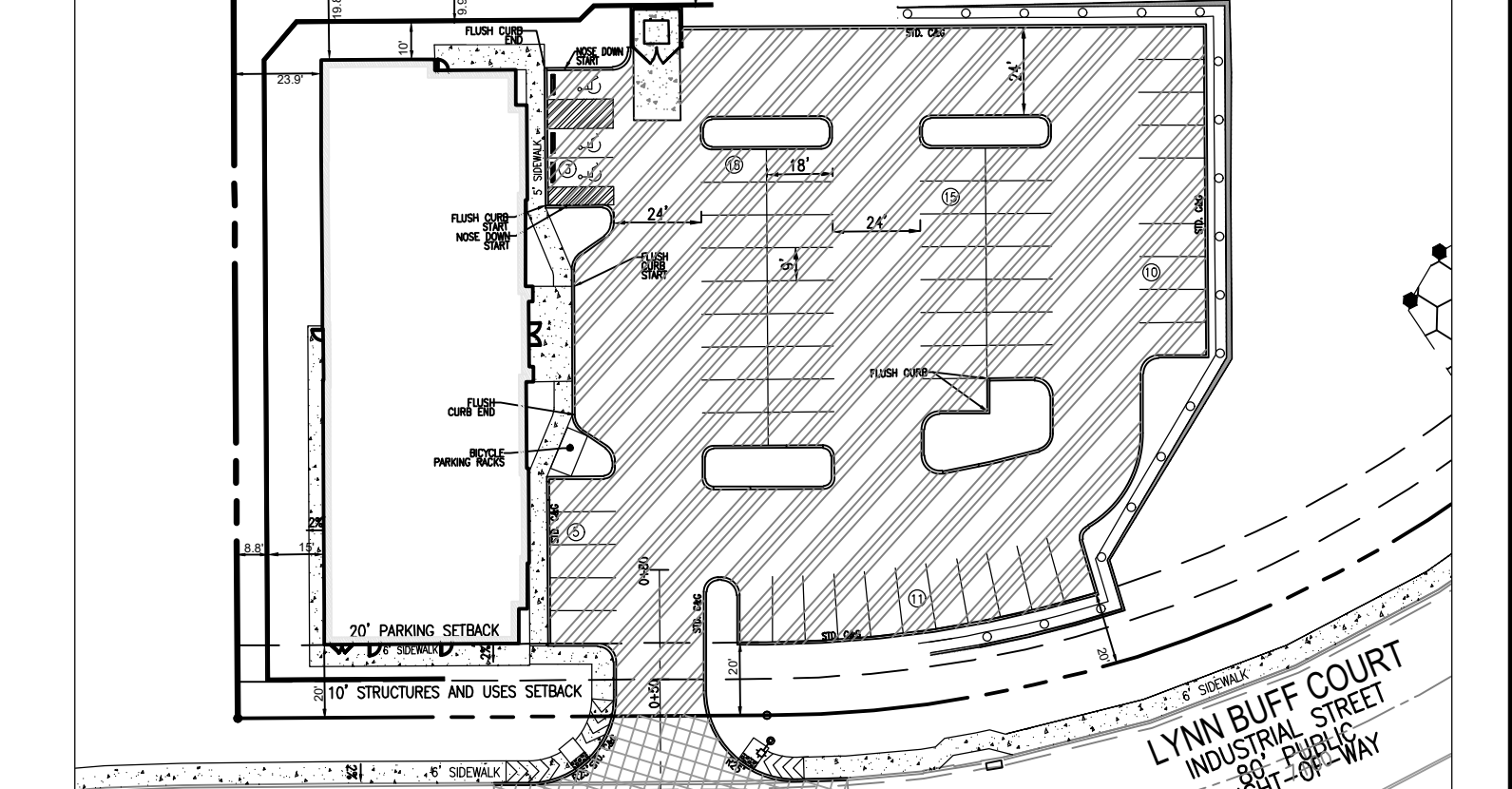
FLUSH CURB END



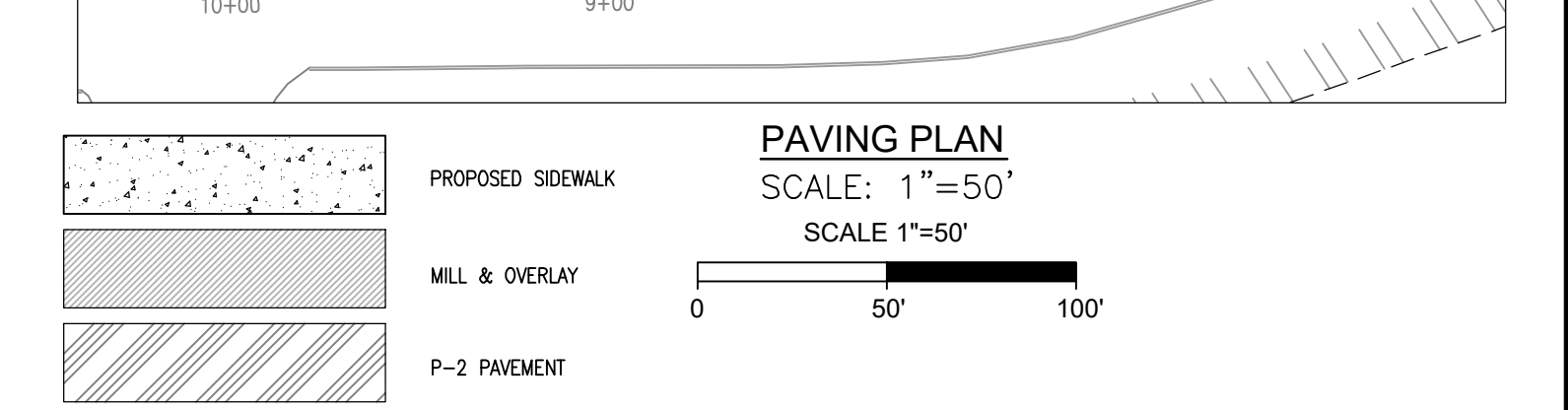
FLUSH CURB START



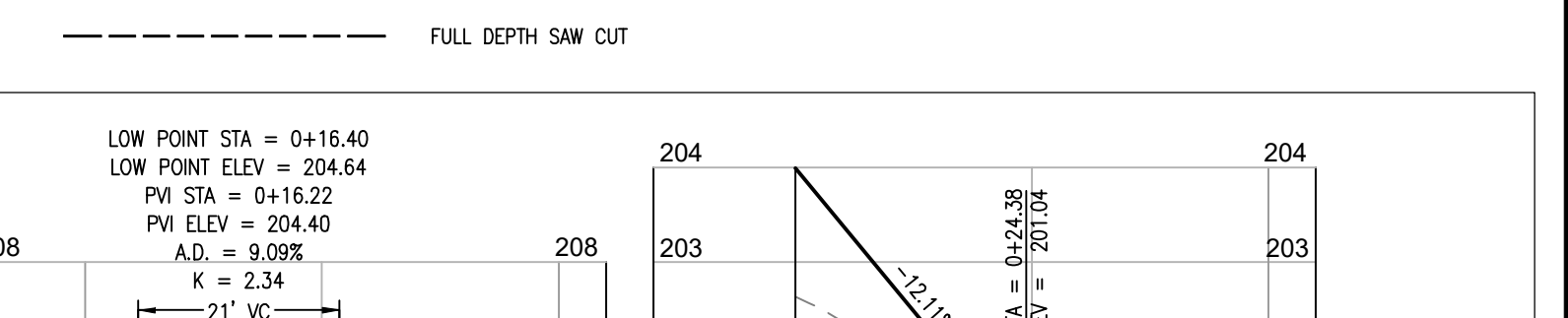
HANDICAP PARKING DETAIL SCALE: 1"=10' SCALE 1"=10'



PAVING PLAN SCALE: 1"=50' SCALE 1"=50'



WEST FILLET PROFILE SCALE: HORIZONTAL 1"=20' VERTICAL 1"=2'

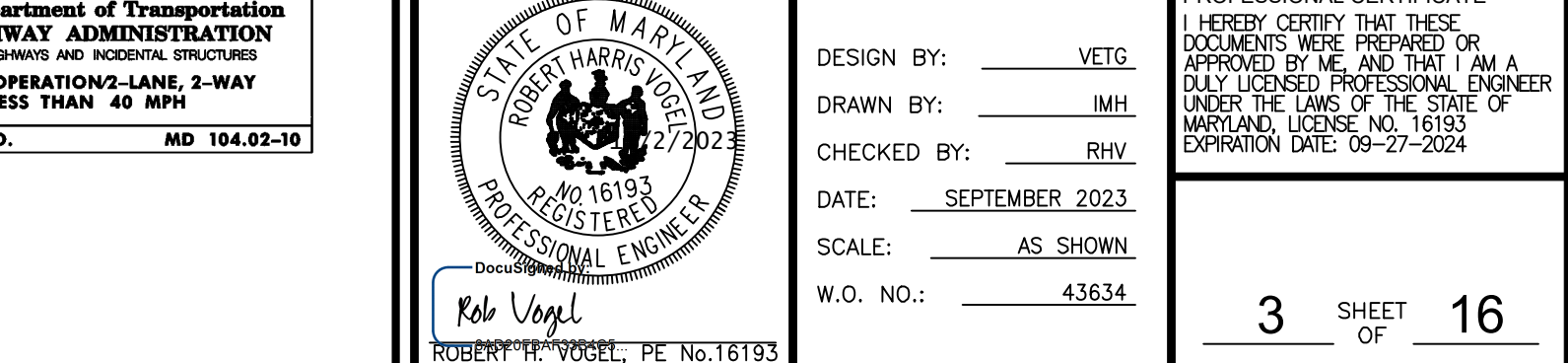
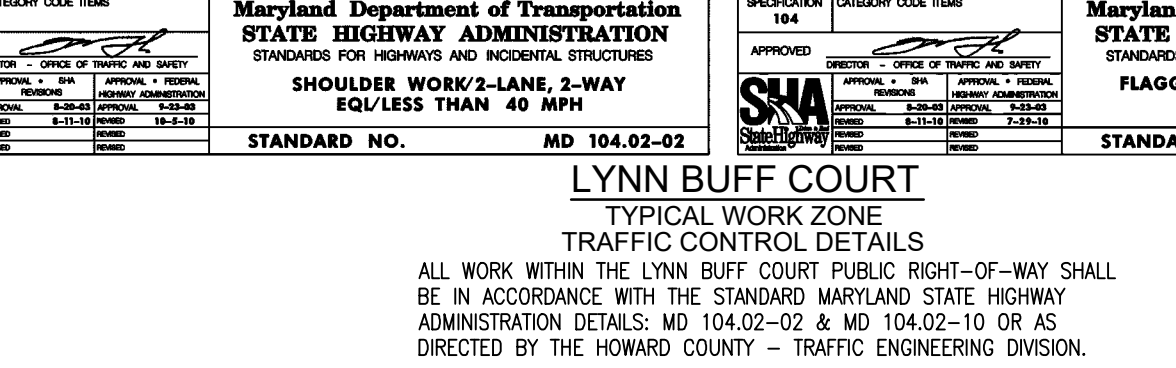


EAST FILLET PROFILE SCALE: HORIZONTAL 1"=20' VERTICAL 1"=2'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

MOT SEQUENCE OF CONSTRUCTION

MOT GENERAL NOTES:



OWNER/DEVELOPER MUHAMMAD SALEEM SHAISTA SALEEM

Table with 3 columns: NO., REVISION, DATE

SITE DEVELOPMENT PLAN SITE DETAILS US 1 JOINT VENTURE, PARCEL E-2 9530 LYNN BUFF COURT LAUREL, MARYLAND 20723

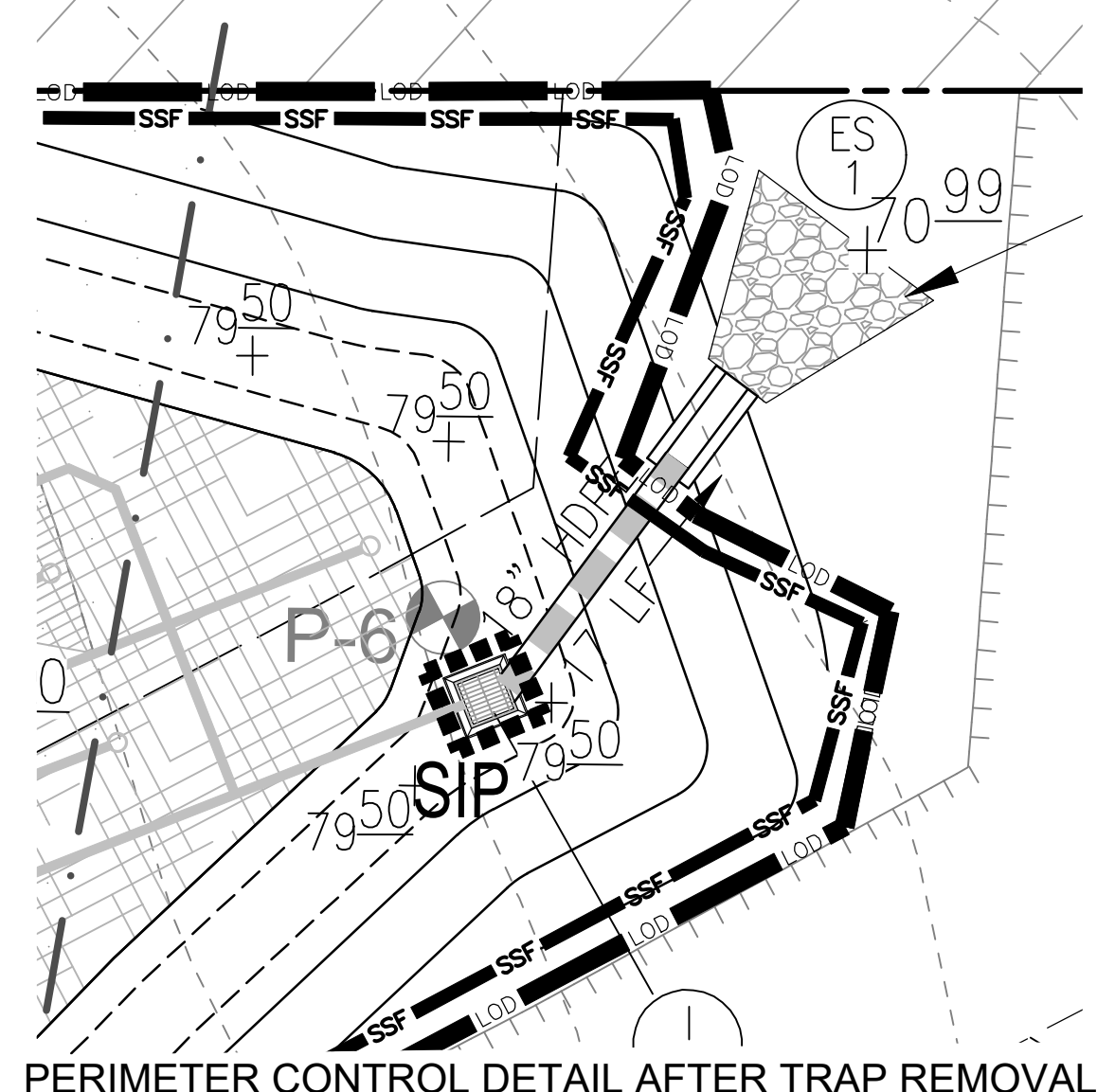
PROFESSIONAL CERTIFICATE VOGEL ENGINEERING TIMMONS GROUP





EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1"=30'  
SCALE 1"=30'  
0 30' 60'



PERIMETER CONTROL DETAIL AFTER TRAP REMOVAL

SCALE: 1"=10'  
SCALE 1"=10'  
0 10' 20'

OWNER/DEVELOPER

MUHAMMAD SALEEM  
SHAISTA SALEEM  
4309 VALLEY STREAM AVE.  
BURTONSVILLE, MD 20866  
(301)370-6587

NOTE:  
SIDEWALK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED USING SAME-DAY STABILIZATION.

NOTE:  
1. DISTURBANCE SHOULD BE ONLY FOR THE MINIMUM NECESSARY TO CONSTRUCT THE HOTEL BUILDING, PARKING, BIO-RETENTION AREA, UTILITY UPGRADES, A RETAINING WALL AND THE NECESSARY GRADING SHOWN IN THE LIMITS OF DISTURBANCE ON THE EXHIBIT.  
2. ALL DISTURBANCES THAT ARE BEYOND THE LIMITS OF DISTURBANCE MUST BE RETURNED TO THEIR NATURAL CONDITIONS AND RE-VEGETATED AFTER THE PROPOSED IMPROVEMENTS.

NOTE  
PROVIDE SHEETING AND SHORING IF NECESSARY TO CONSTRUCT RETAINING WALL. CONSULT WITH PROJECT GEOTECHNICAL ENGINEER.

MAPPED SOILS TYPES - HOWARD COUNTY, MARYLAND				HIGHLY ERODIBLE
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRC K <sub>u</sub> RANGE	
FsaA	FALLSINGTON SANDY LOAM, 0 TO 2% SLOPES, NORTHERN COASTAL PLAIN	D	YES 0.02	NO
Ha	HARBORG-COORUSS SILT LOAMS, 0 TO 3% SLOPES	D	YES 0.37	NO
Se	SASAPRAS AND CROOM SOILS, 15 TO 20% SLOPES	B	NO 0.32	YES
Ud	URBAN LAND-GEORGETOWN COMPLEX, 0 TO 15% SLOPES	D	NO 0.02	NO

NOTE:  
TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, AND HOWARD COUNTY SOIL CONSERVATION DISTRICT WEBSITE DOCUMENTS  
HTTS://WWW.HOWARDSCD.ORG/DOCUMENTS  
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING PAVING
- HIGHLY ERODIBLE SOILS
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- EXISTING TREELINE
- PROPOSED CURB
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT GRADE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- EARTH DIKE
- STABILIZED CONSTRUCTION ENTRANCE
- EXISTING TREE
- EXISTING OVERHEAD LINE
- EXISTING SEWER LINE
- EXISTING WATER LINE
- EXISTING MAILBOX
- EXISTING JUNCTION BOX
- EXISTING SIGN
- EXISTING UTILITY POLE
- EXISTING WETLANDS
- WETLAND BUFFER
- 100-YR FLOODPLAIN
- EX. 20' PUBLIC ROW CONSTRUCTION EASEMENT L. 542 F.140

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DocuSigned by:  
*And Edman* 12/12/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DocuSigned by:  
*Linda Eisenberg* 12/12/2023

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DocuSigned by:  
*Muhammad Saleem* 12/12/2023

DIRECTOR DATE

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

DocuSigned by:  
*Muhammad Saleem* 11/2/2023

OWNER/DEVELOPER SIGNATURE DATE  
Muhammad Saleem

PRINTED NAME & TITLE

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

DocuSigned by:  
*Rob Vogel* 11/2/2023

DESIGNER'S SIGNATURE DATE  
ROBERT H. VOGEL

PRINTED NAME

DocuSigned by:  
*Alexander Bratchie* 12/7/2023

DATE

MD REGISTRATION NO. 16193  
ROBERT H. VOGEL, OR R.L.A. (circle one)

HOWARD S.C.D. DATE

DocuSigned by:  
*Alexander Bratchie* 12/7/2023

DATE

MD REGISTRATION NO. 16193  
ROBERT H. VOGEL, OR R.L.A. (circle one)

HOWARD S.C.D. DATE

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN  
EROSION & SEDIMENT CONTROL PLAN

US 1 JOINT VENTURE, PARCEL E-2  
9530 LYNN BUFF COURT  
LAUREL, MARYLAND 20723

TAX MAP: 47 BLOCK: 23  
6TH ELECTION DISTRICT

ZONED: CE-CL1  
PARCEL: 910  
HOWARD COUNTY, MARYLAND

**VOGEL ENGINEERING**

**TIMMONS GROUP**

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

PROFESSIONAL CERTIFICATE  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2024

DESIGN BY: VEG  
DRAWN BY: IMH  
CHECKED BY: RHV  
DATE: SEPTEMBER 2023  
SCALE: AS SHOWN  
W.O. NO.: 43634

DocuSigned by:  
*Rob Vogel* 12/12/2023

ROBERT H. VOGEL, PE No.16193

4 SHEET OF 16



HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- 1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855... 2. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT...

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.

- 1. GENERAL NOTES: A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE... 2. TEMPORARY STABILIZATION: A. SEEDING PERMANENT CONSTRUCTION ENTRANCE... B. APPLY FERTILIZER AND LIM AS PRESCRIBED ON THE PLANS...

Table with 2 columns: Description and Value. Includes rows for Total Area to be Stabilized, Area to be Vegetated, Total Fertilizer, and Total Lime.

- 6. SITE ANALYSIS: TOTAL AREA TO BE STABILIZED: 1.88 ACRES... 7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE...

- 8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEMAND NECESSARY BY THE CID... 9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY...

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

DEFINITION ESTABLISHMENT OF VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES. PURPOSE TO PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES.

- 1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT... 2. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.1): A. CONSTRUCT AND STABILIZE ALL TEMPORARY SLOPES OR Dikes THAT WILL BE USED TO CONFINED RUNOFF AROUND THE EXCAVATION...

PERMANENT SEEDING SUMMARY table with columns for Hardness Zone, Seed Mixture, Application Rate, Seeding Dates, Seeding Depths, Fertilizer Rate, Lime Rate, and Species.

- 3. SOIL MAINTENANCE: A. IN THE ABSENCE OF ADEQUATE NATURAL WATER DRAINAGE... B. AFTER THE FIRST WASH, SOIL WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT... 4. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.2): A. CONSTRUCT AND STABILIZE ALL TEMPORARY SLOPES OR Dikes THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL... B. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICES...

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

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOWSLING 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.

- 1. GENERAL NOTES: A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3... 2. TEMPORARY STABILIZATION: A. SEEDING PERMANENT CONSTRUCTION ENTRANCE... B. APPLY FERTILIZER AND LIM AS PRESCRIBED ON THE PLANS...

Table with 2 columns: Description and Value. Includes rows for Total Area to be Stabilized, Area to be Vegetated, Total Fertilizer, and Total Lime.

- 6. SITE ANALYSIS: TOTAL AREA TO BE STABILIZED: 1.88 ACRES... 7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE...

- 8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEMAND NECESSARY BY THE CID... 9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY...

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

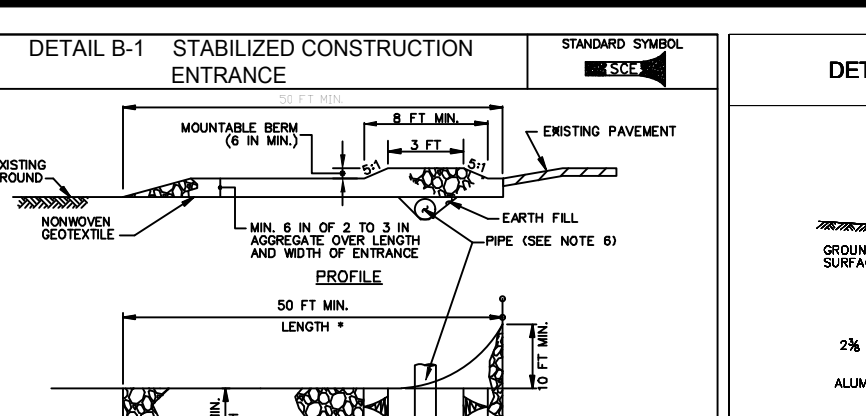
DEFINITION ESTABLISHMENT OF VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES. PURPOSE TO PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES.

- 1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT... 2. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.1): A. CONSTRUCT AND STABILIZE ALL TEMPORARY SLOPES OR Dikes THAT WILL BE USED TO CONFINED RUNOFF AROUND THE EXCAVATION...

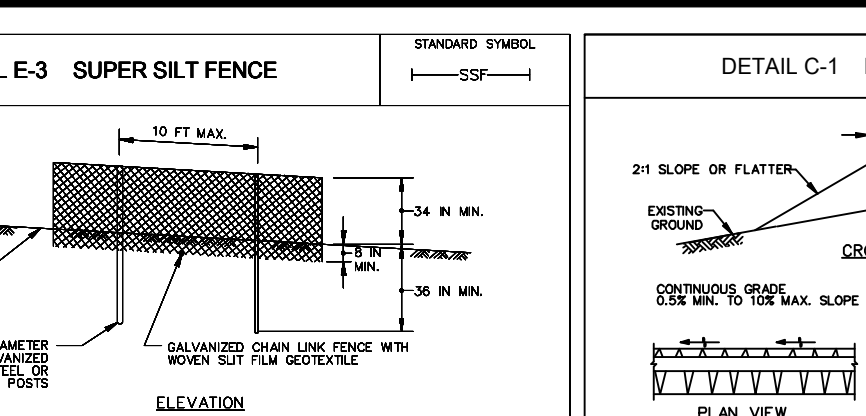
PERMANENT SEEDING SUMMARY table with columns for Hardness Zone, Seed Mixture, Application Rate, Seeding Dates, Seeding Depths, Fertilizer Rate, Lime Rate, and Species.

- 3. SOIL MAINTENANCE: A. IN THE ABSENCE OF ADEQUATE NATURAL WATER DRAINAGE... B. AFTER THE FIRST WASH, SOIL WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT... 4. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.2): A. CONSTRUCT AND STABILIZE ALL TEMPORARY SLOPES OR Dikes THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL... B. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICES...

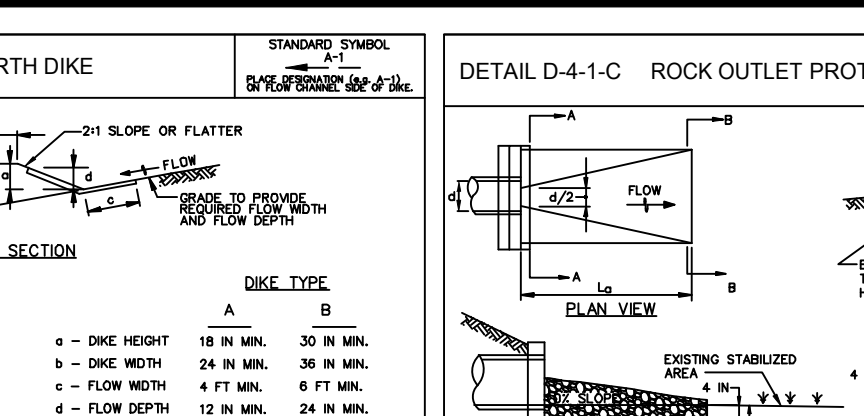
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Includes signatures and dates for Chief, Division of Land Development, and Director.



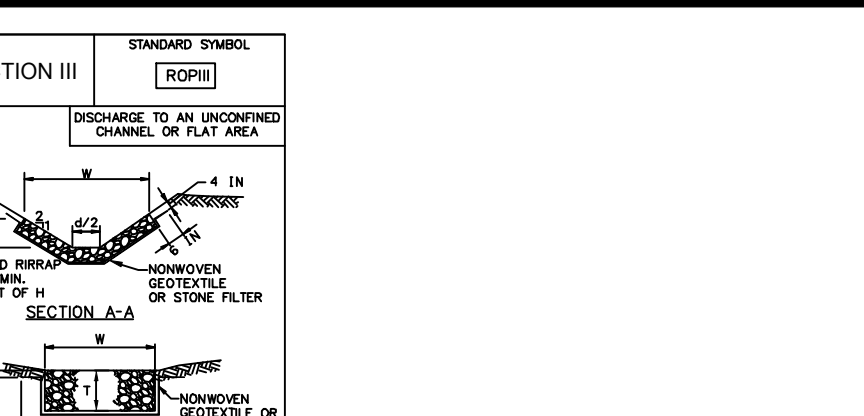
CONSTRUCTION NOTES: 1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN... 2. MAINTAIN ENTRANCE TO A MINIMUM OF 18 INCHES CLEAR OF THE ENTRANCE... 3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS...



CONSTRUCTION NOTES: 1. INSTALL 2x8 INCH DIAMETER GALVANIZED STEEL POSTS OF 6.00 INCH WALL THICKNESS... 2. MAINTAIN ENTRANCE TO A MINIMUM OF 18 INCHES CLEAR OF THE ENTRANCE... 3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS...



CONSTRUCTION NOTES: 1. INSTALL 2x8 INCH DIAMETER GALVANIZED STEEL POSTS OF 6.00 INCH WALL THICKNESS... 2. MAINTAIN ENTRANCE TO A MINIMUM OF 18 INCHES CLEAR OF THE ENTRANCE... 3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS...



CONSTRUCTION NOTES: 1. RIPPAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS... 2. USE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS... 3. MAINTAIN ENTRANCE TO A MINIMUM OF 18 INCHES CLEAR OF THE ENTRANCE...

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

DEFINITION THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER. PURPOSE TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

- 1. GENERAL NOTES: A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW... 2. APPLICATION: A. APPLY MULCH TO ALL EXPOSED SOILS... B. MULCHING: 1. MULCH MATERIALS (IN ORDER OF PREFERENCE): A. STRAW... B. WOOD CELLULOSE FIBER MULCH...

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS. PURPOSE TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

- 1. GENERAL NOTES: A. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1... 2. APPLICATION: A. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING... B. MULCH ANCHORING TOOL... C. ANCHORING: 1. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH...

B-4-5 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES. PURPOSE TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

- 1. GENERAL NOTES: A. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN... 2. APPLICATION: A. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING... B. MULCH ANCHORING TOOL... C. ANCHORING: 1. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH...

B-4-6 STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL PRACTICES FOR WORKING IN NONWETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

DEFINITION BEST MANAGEMENT PRACTICES FOR WORKING IN NONWETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS. PURPOSE TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

- 1. GENERAL NOTES: A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW... 2. APPLICATION: A. APPLY MULCH TO ALL EXPOSED SOILS... B. MULCHING: 1. MULCH MATERIALS (IN ORDER OF PREFERENCE): A. STRAW... B. WOOD CELLULOSE FIBER MULCH...

NOTE: EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

NOTE: EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

NOTE: EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

NOTE: EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

DESIGN CERTIFICATION: I, THE CERTIFYING DEVELOPER, CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS...

DESIGN CERTIFICATION: I, THE CERTIFYING DEVELOPER, CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS...

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DESIGN CERTIFICATION: I, THE CERTIFYING DEVELOPER, CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS...

TEMPORARY SEEDING SUMMARY table with columns for Hardness Zone, Seed Mixture, Application Rate, Seeding Dates, Seeding Depths, Fertilizer Rate, Lime Rate, and Species.

TEMPORARY SEEDING SUMMARY table with columns for Hardness Zone, Seed Mixture, Application Rate, Seeding Dates, Seeding Depths, Fertilizer Rate, Lime Rate, and Species.

TEMPORARY SEEDING SUMMARY table with columns for Hardness Zone, Seed Mixture, Application Rate, Seeding Dates, Seeding Depths, Fertilizer Rate, Lime Rate, and Species.

TEMPORARY SEEDING SUMMARY table with columns for Hardness Zone, Seed Mixture, Application Rate, Seeding Dates, Seeding Depths, Fertilizer Rate, Lime Rate, and Species.

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

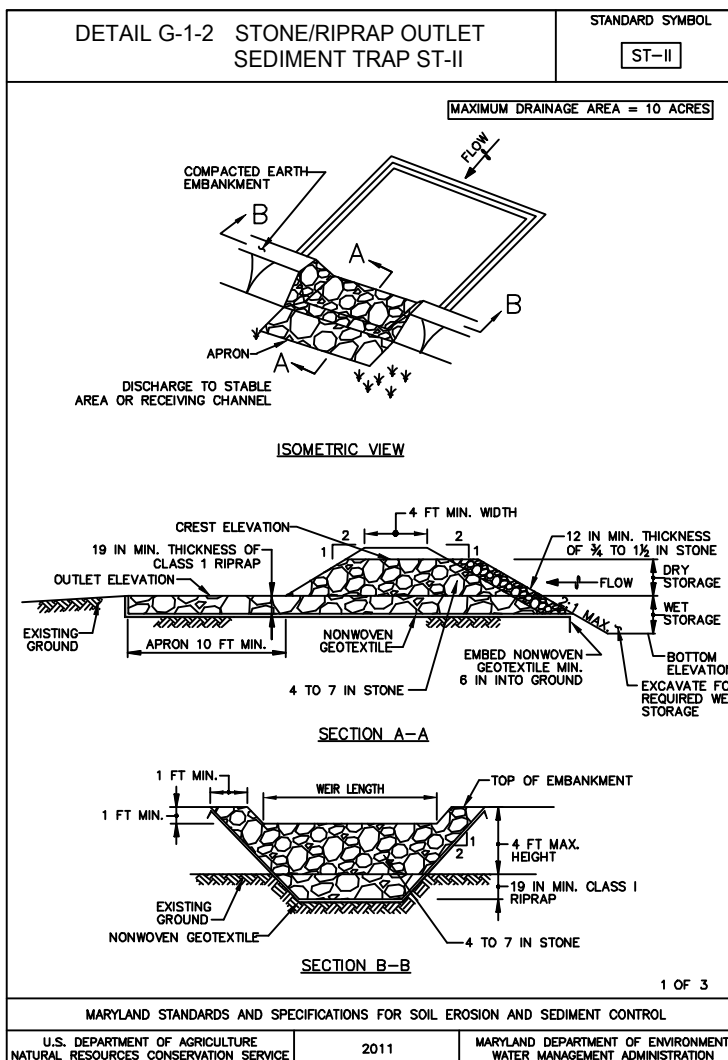
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Includes signatures and dates for Chief, Division of Land Development, and Director.

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

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

OWNER/DEVELOPER MUHAMMAD SALEEM SHAISTA SALEEM 4309 VALLEY STREAM AVE. BURTONSVILLE, MO 64086 (313)370-6587. Includes site development plan, erosion and sediment control notes, and professional engineer seal for Robert H. Vogel, P.E.



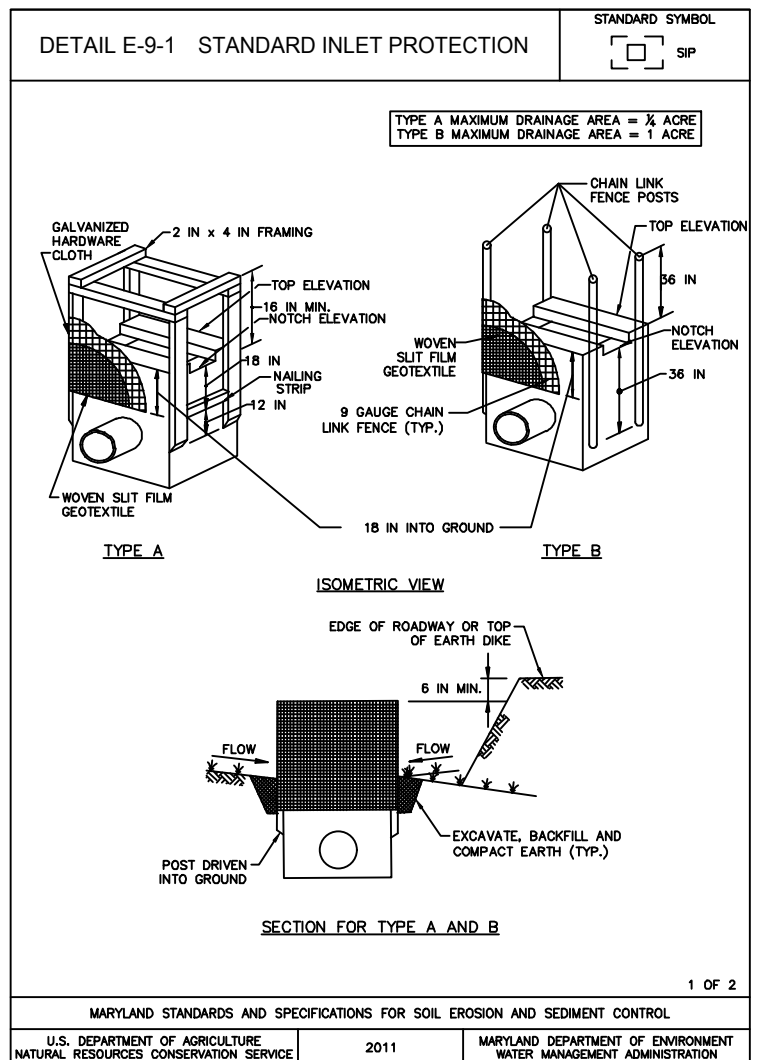
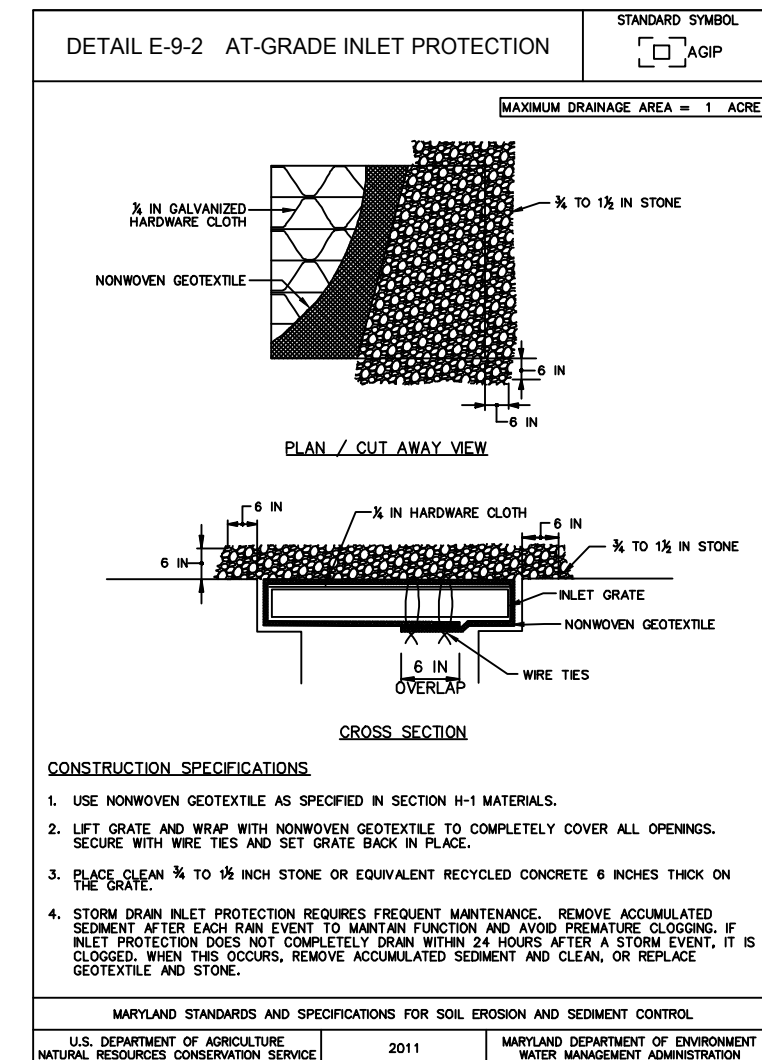
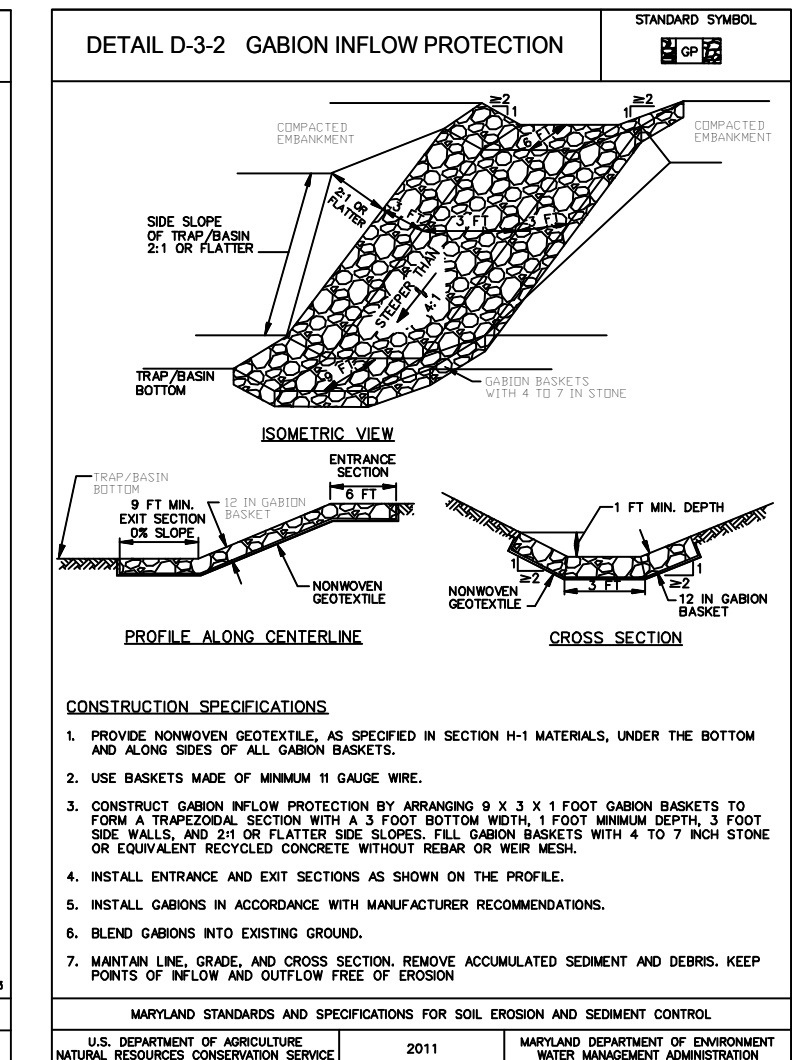


**CONSTRUCTION SPECIFICATIONS**

- CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED.
- CLEAN GRADE AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE EMBANKMENT AND TRAP BOTTOM.
- USE ALL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERGROWN STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.
- CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE WEIR CREST. COMPACT THE EMBANKMENT BY TAMPING WITH EQUIPMENT UNTIL IT IS BEING CONSTRUCTED.
- MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.
- PLACE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS OVER THE BOTTOM AND SIDES OF OUTLET AND APPROX. PRIOR TO PLACEMENT OF RIPRAP. OVERLAY SECTION OF GEOTEXTILE AT LEAST 1 FOOT WITH THE SECTION NEAREST TO THE TRAP PLACED ON TOP. EMBED GEOTEXTILE AT LEAST 6 INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
- USE CLEAN 4 TO 7 INCH RIPRAP TO CONSTRUCT THE WEIR. USE CLASS 1 RIPRAP FOR THE APRON. USE OF RECYCLED CONCRETE EQUIVALENT IS ACCEPTABLE.
- PLACE 1 FOOT OF CLEAN 8 TO 18 INCH STONE OR EQUIVALENT RECYCLED CONCRETE ON THE UPSTREAM FACE OF THE WEIR.
- CONSTRUCT AND MAINTAIN THE OUTLET ACCORDING TO APPROVED PLAN, AND IN SUCH A MANNER THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.
- STABILIZE THE EMBANKMENT AND INTERIOR SLOPES WITH SEED AND MULCH. STABILIZE POINTS OF CONCENTRATED INFLOW AS SHOWN ON APPROVED PLAN.
- REMOVE SEDIMENT AND RESTORE TRAP TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO CLEANOUT ELEVATION. TOP OF NET STORAGE (DEPTH) SHOULD REMAIN IN AN APPROVED AREA AND BE SUCH A MANNER THAT IT WILL NOT ERODE. KEEP PORTS OF INFLOW AND OUTFLOW AS WELL AS INTERIOR OF THE TRAP FREE FROM EROSION, AND REMOVE ACCUMULATED SEDIMENT AND OBSTRUCTIONS TO CONTINUOUS FLOW. REPAIRMENTS FOR ROUGH, WOOLY OR OTHER UNDESIRABLE MATERIALS SHALL BE RELOCATED TO STABILIZER TRAP. ANY REELS, BAGS, OR OTHER WOODY VEGETATION SHOULD BE REMOVED OR NEAR PRINCIPAL SPILLWAY. MAINTAIN LINK, GRADE, AND CROSS SECTION.
- WHEN DEMATERING TRAP, PASS REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL TRAP.
- UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

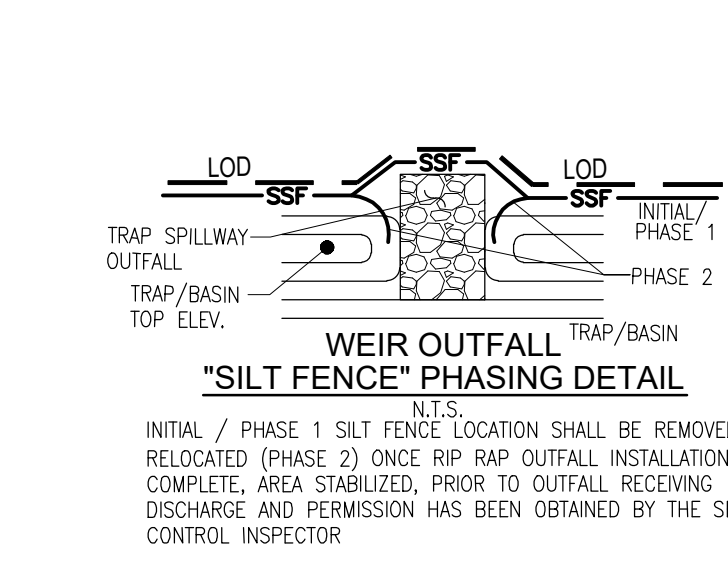
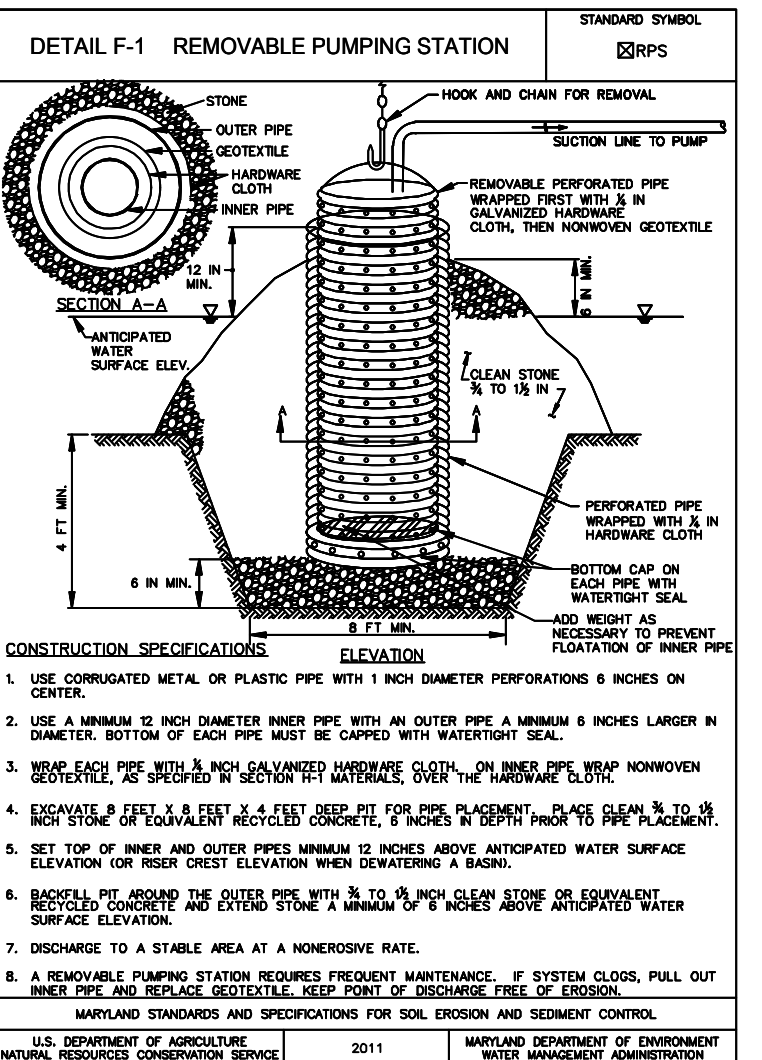
**STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. \_\_\_\_\_**

DRAINAGE AREA - INITIAL	0.93	ACRES
DRAINAGE AREA - FINAL	0.93	ACRES
TOTAL STORAGE REQUIRED	3,900	CF
TOTAL STORAGE PROVIDED	9,100	CF
NET STORAGE REQUIRED	1,800	CF
NET STORAGE PROVIDED	1,800	CF
DRY STORAGE REQUIRED	1,800	CF
DRY STORAGE PROVIDED	7,325	CF
EXISTING GROUND ELEVATION AT OUTLET LINK STORAGE ELEVATION	172.00	FT
TRAP BOTTOM ELEVATION	170.70	FT
TRAP BOTTOM DIMENSIONS	46 x 23	FT x FT
WEIR LENGTH	4	FT
CLEANOUT ELEVATION	172.95	FT
TOP OF EMBANKMENT ELEVATION	173.00	FT
SIDE SLOPE	2:1	H:V RATIO
EMBANKMENT TOP WIDTH	4	FT
OUTLET PROTECTION - LENGTH	12	FT
OUTLET PROTECTION - DEPTH	14	IN



**CONSTRUCTION SPECIFICATIONS**

- USE WOMEN SUELT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2 INCH 1/4 INCH CONSTRUCTION GRADE LUMBER POSTS, SPACING 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STAMPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. REMOVE THE TOP PORTION OF THE 2 1/4 INCH DIAMETER SECTION. INSERT A HIGH CALIBRE GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
- FOR TYPE B, USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.0625 INCH WALL THICKNESS AND 8 FOOT LENGTH, SPACING A MINIMUM OF 28 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN B GAUGE OR HEAVIER CHAIN LINK FENCE, 4 INCHES IN HEIGHT, SECURELY TO THE STEEL POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
- BACKFILL AROUND THE INLET IN LAYERS 4 INCH THICK UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
- STORM DRAIN ALLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOSING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.



**STABILIZATION NOTE:**  
IMMEDIATE STABILIZATION W/ SEED, MULCH AND PSSM@ 1.75 LB/50' IS REQUIRED FOR ALL DISTURBANCES AROUND ALL WEIR OUTFALLS WHEN TRANSITIONING FROM THE INITIAL AND RECONFIGURED FENCE LOCATION.

INITIAL / PHASE 1 SILT FENCE LOCATION SHALL BE REMOVED AND RELOCATED (PHASE 2) ONCE RIP RAP OUTFALL INSTALLATION IS COMPLETE. AREA STABILIZED PRIOR TO OUTFALL RECEIVING DISCHARGE AND PERMISSION HAS BEEN OBTAINED BY THE SEDIMENT CONTROL INSPECTOR.

**MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL**

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011

MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

**MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL**

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U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE 2011

MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING**

DocuSigned by: *Chad Edmondson* 12/12/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

12/7/2023

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

12/12/2023

DIRECTOR *Lynda Eisenberg* DATE

**OWNER/DEVELOPER CERTIFICATION:**

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

Muhammad Saleem 11/2/2023

OWNER/DEVELOPER SIGNATURE DATE

Muhammad Saleem

PRINTED NAME & TITLE

**DESIGN CERTIFICATION:**

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

DocuSigned by: *Rob Vogel* 11/2/2023

DESIGNER'S SIGNATURE DATE

ROBERT H. VOGL

PRINTED NAME

MD REGISTRATION NO. 16193

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

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

DocuSigned by: *Alexander Bratovic* 12/7/2023

HOWARD SOIL CONSERVATION DISTRICT DATE

**OWNER/DEVELOPER**

MUHAMMAD SALEEM  
SHAISTA SALEEM  
4309 VALLEY STREAM AVE.  
BURTONSVILLE, MD 20866  
(301)370-6587

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN  
EROSION & SEDIMENT CONTROL  
NOTES AND DETAILS

**US 1 JOINT VENTURE, PARCEL E-2**  
9530 LYNN BUFF COURT  
LAUREL, MARYLAND 20723

TAX MAP: 47 BLOCK: 23 ZONED: CE-CU  
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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

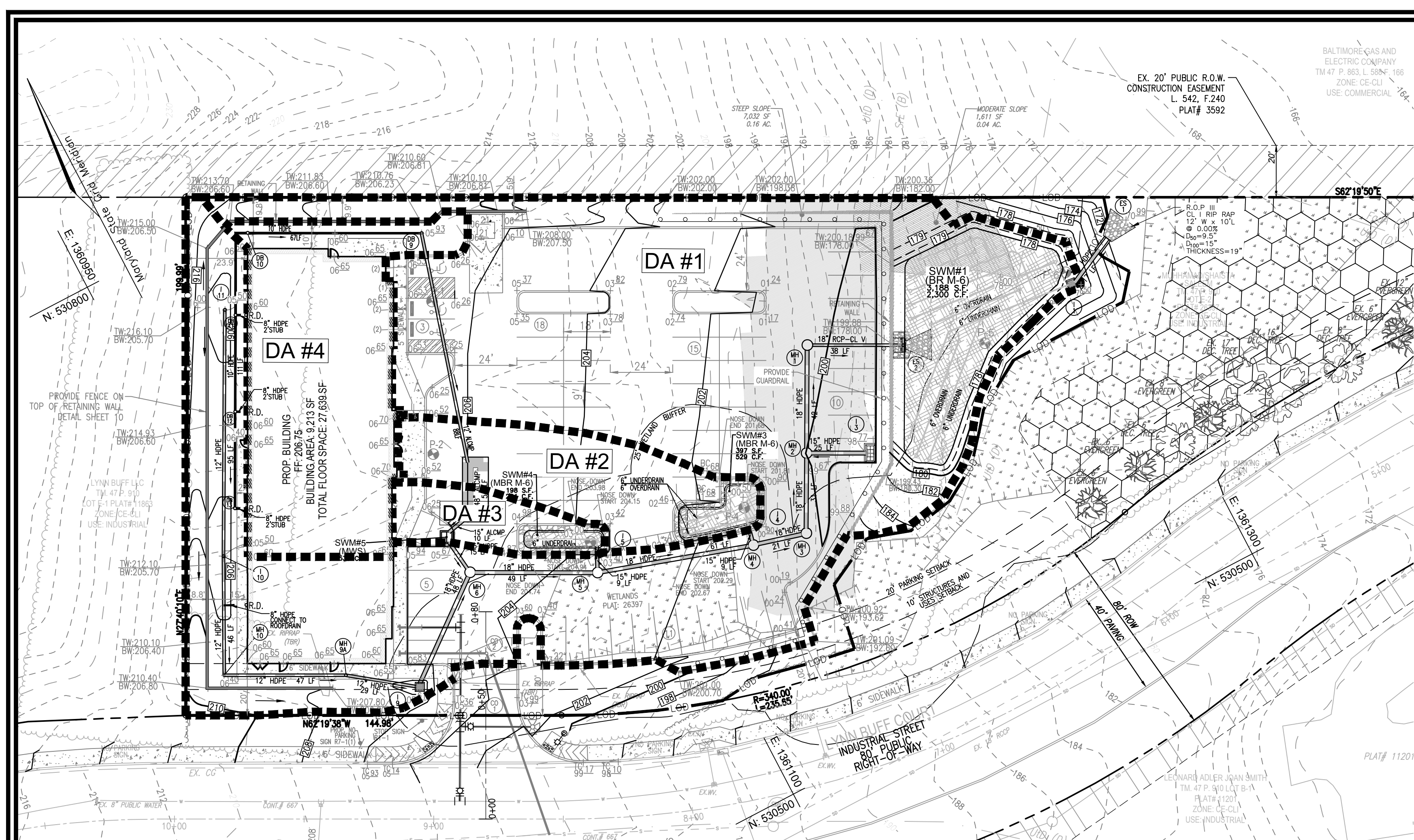
PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 03-27-2024

DESIGN BY: VETG.  
DRAWN BY: IMH  
CHECKED BY: RHV  
DATE: SEPTEMBER 2023  
SCALE: AS SHOWN  
W.O. NO.: 43634

6 SHEET OF 16

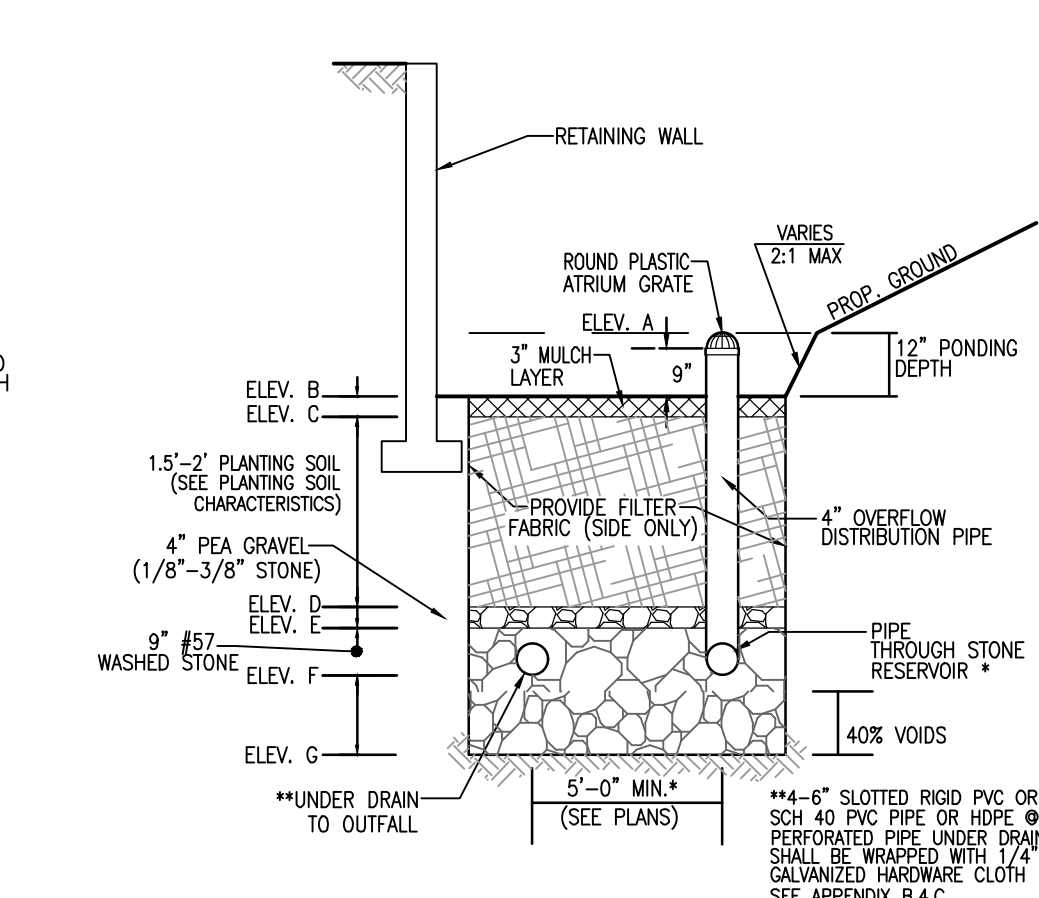
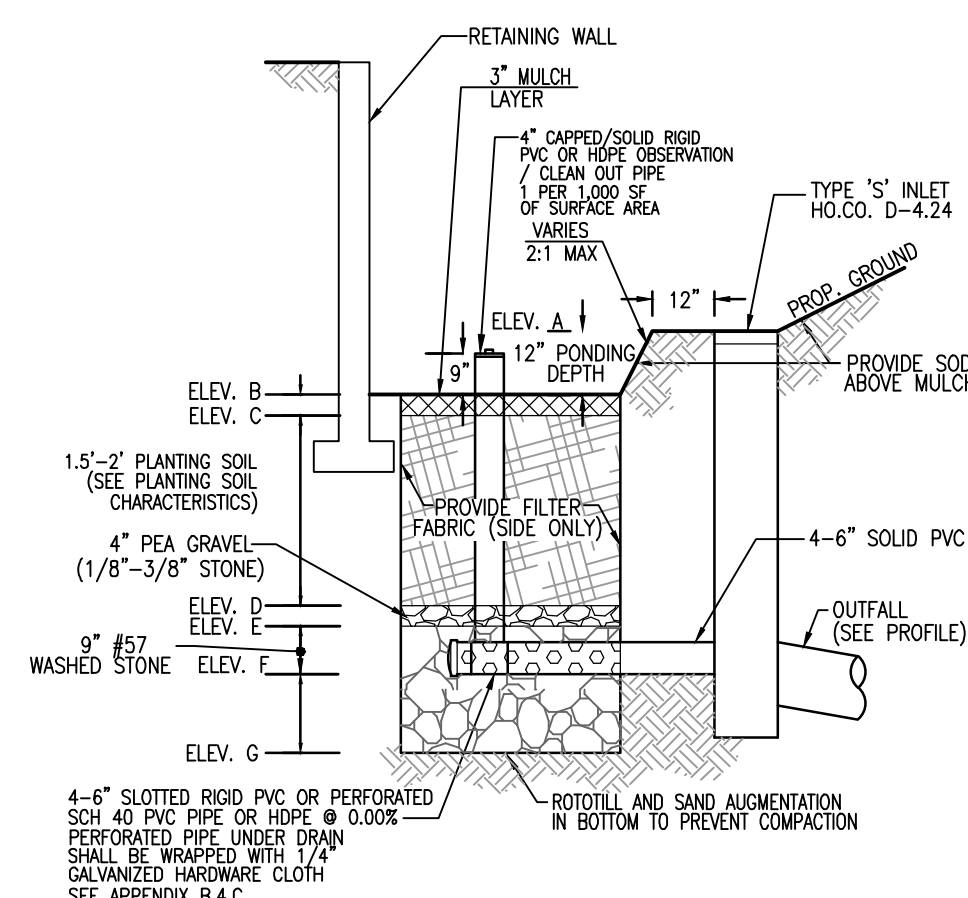
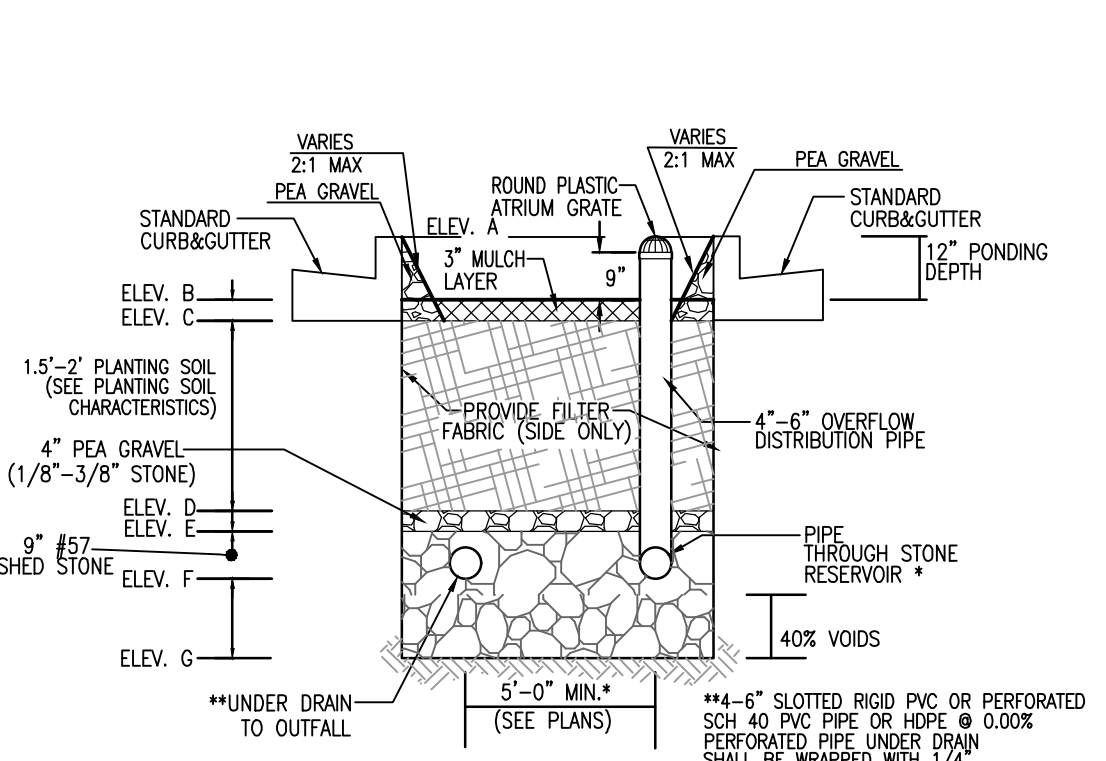
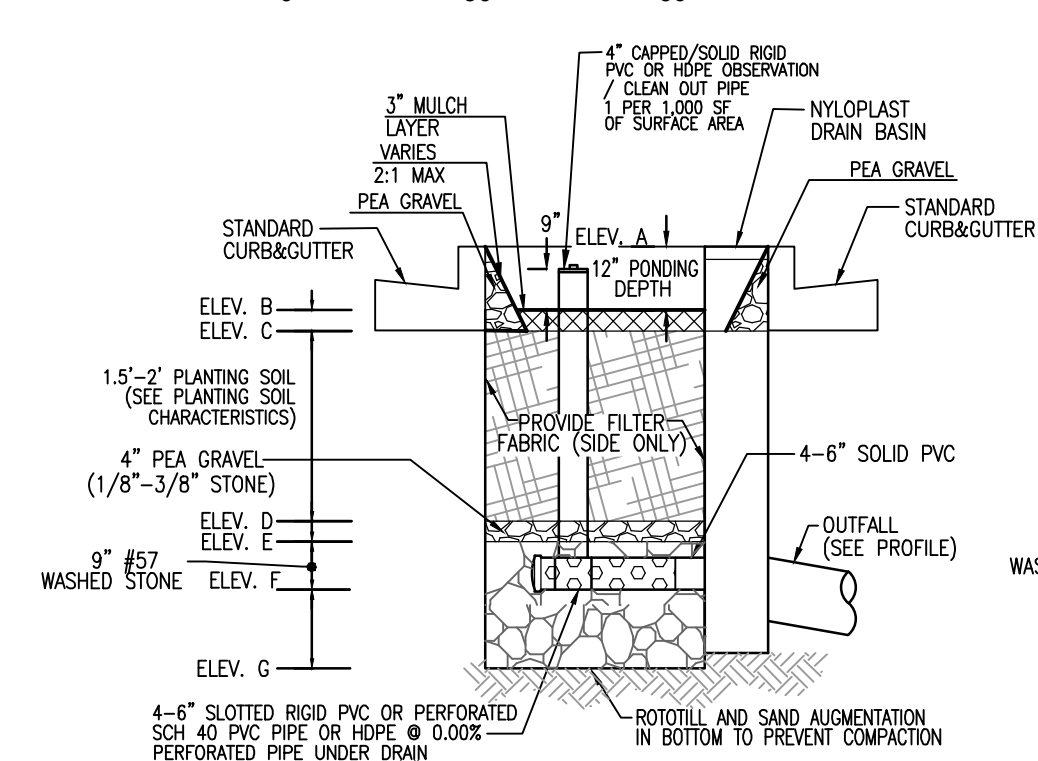




STORMWATER MANAGEMENT DRAINAGE AREA MAP

SCALE: 1"=30'

SCALE: 1"=30'



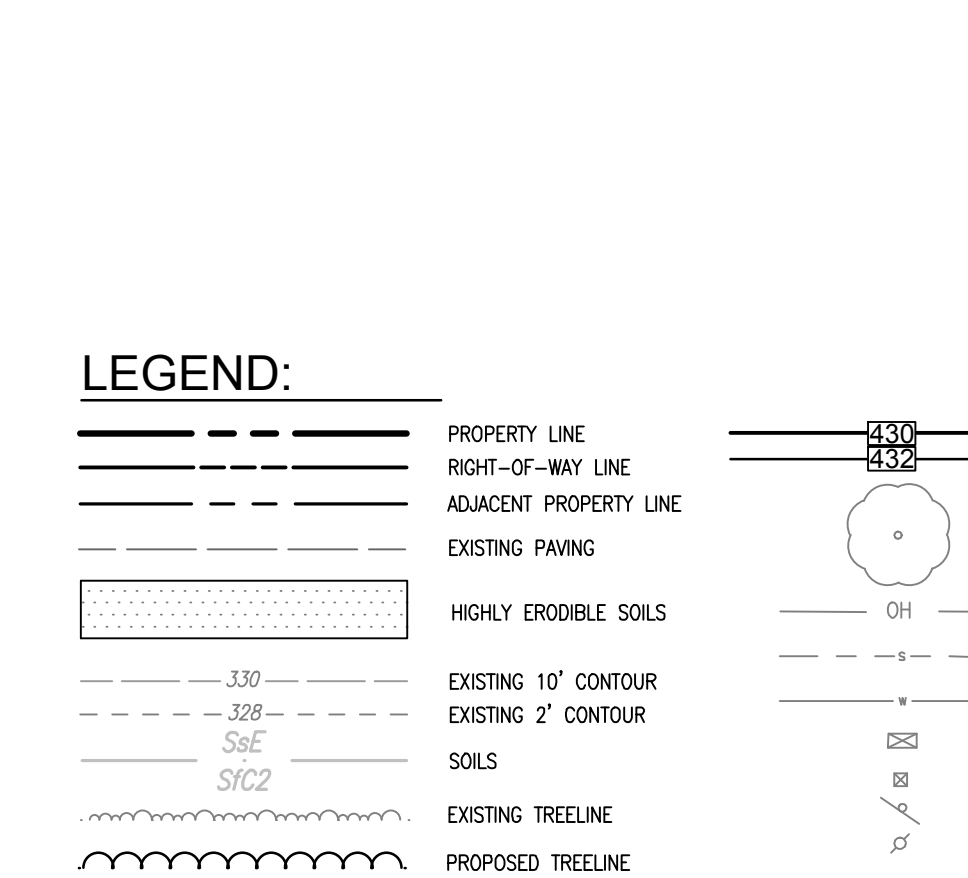
BIOTENTION (UNDERDRAIN) (F-6)

BIOTENTION (UNDERDRAIN) (F-6)

BIOTENTION & MICRO-BIOTENTION NOTES:

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

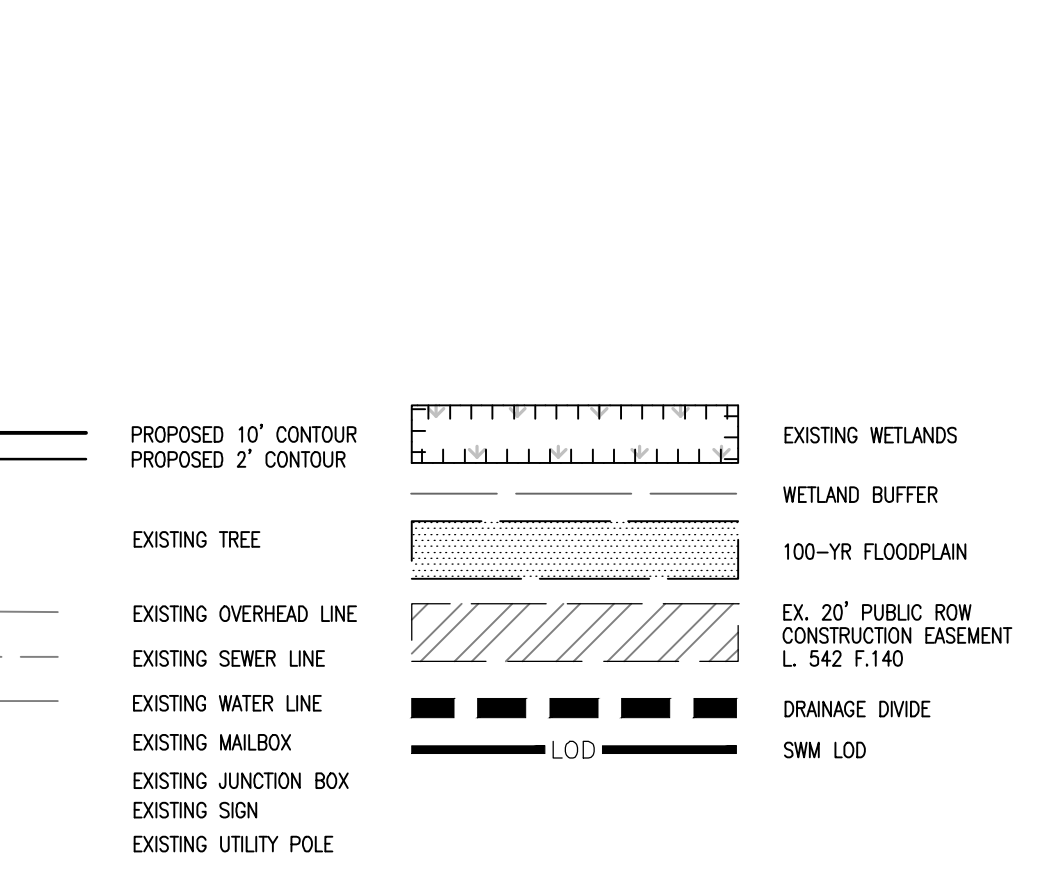
LEGEND:



BIOTENTION & MICRO-BIOTENTION NOTES:

- ONLY THE SIDES OF BIOTENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE BIOTENTION WILL CAUSE THE BR TO FAIL, AND THEREFORE SHALL NOT BE INSTALLED.
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- PROVIDE 5" MINIMUM SPACING BETWEEN UNDER DRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLANS)

LEGEND:



MICRO-BIOTENTION FACILITY - DESIGN ELEVATION CHART

MBR/BR FACILITY #	ESD WSEL	TOP MULCH A	TOP PLANT C	BOTTOM PLANT D	BOTTOM PEA GRAVEL E	INV PIPE (1) F	INV STONE G	SURFACE AREA SF	APPROX DIM
1	179.00	178.00	177.75	176.25	175.92	175.17	173.92	3188	SEE PLAN
3	201.50	200.50	200.25	198.75	198.42	197.67	196.67	357	SEE PLAN
4	204.00	203.00	202.75	201.25	200.92	200.17	199.17	198	SEE PLAN

MAPPED SOILS TYPES - HOWARD COUNTY, MARYLAND

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRO	Kv RANGE	HIGHLY ERODIBLE
Foa	FALLSINGTON SANDY LOAM, 0 TO 2% SLOPES, NORTHERN COASTAL PLAIN	D	YES	0.00	NO
Hg	HARBORO-COOROS SILT LOAMS, 0 TO 3% SLOPES	D	YES	0.37	NO
Sr	SARASWATI AND CHODOL SOILS, 15 TO 25% SLOPES	D	NO	0.32	YES
Ue	URBAN LAND-WOODHAMS COMPLEX, 0 TO 15% SLOPES	D	NO	0.02	NO

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL EROSION FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division  
 Chief, Division of Planning and Development  
 Director

12/12/2023  
 12/7/2023  
 12/12/2023

INDIVIDUAL PRACTICE ESDv DESIGN COMPUTATIONS

SWM PRACTICE	DA (AC)	IMPVPR	IMPVPR	REV	PRV	PRACTICE	MIN PRACTICE VOLUME (L)	TARGET ESDv (L)	MAX PRACTICE VOLUME (2.47)	TOTAL PRACTICE VOLUME PROVIDED	RECHARGE VOLUME PROVIDED	REMARKS										
DA #1 SWM#1 MBR (M-6)	41.00	0.96	25.662	0.59	15,938	0.37	62	0.61	2,098	3,827	5,455	4.251	319	4.251	319	BRIO RETENTION (F-6) (SWM#1)	4.251	3.188	Surface Area of MBR @ 1.0 ponding (75% above) Depth	0.25	0.4	
DA #2 SWM#2 MBR (M-6)	4.258	0.10	3.661	0.08	997	0.01	86	0.82	292	533	760	529	529	529	529	529	MICROSCALE MICRO-BIO RETENTION (M-6) (SWM#2)	529	307	Surface Area of MBR @ 1.0 ponding (75% above)		
DA #3 SWM#3 MBR (M-6)	3.706	0.04	1.942	0.03	364	0.01	79	0.76	108	197	280	264	264	264	264	264	MICROSCALE MICRO-BIO RETENTION (M-6) (SWM#3)	264	198	Surface Area of MBR @ 1.0 ponding (75% above)		
DA #4 SWM#4 MWS	8.155	0.19	6.909	0.16	1,246	0.03	85	0.81	552	1,007	1,436	550	550	550	550	550	MODULAR WETLANDS SYSTEM (MWS)	550	CF			
TOTALS	55.719	1.28	37.574	0.27	18,145	0.42						5,574	319				TOTAL PROVIDED					

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

Appendix B.4. Construction Specifications for Environmental Site Design Practices

Material	Specifications	Site	Notes
Planting soil (2" to 4" deep)	loamy sand (60-65%) & compost (35-40%) or sandy loam (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 92)		
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 (L8" to 1.8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	PI Type 1 nonwoven
Geotextile	AASHTO M-43	NO. 17 OR NO. 6 AEGREGIATE (L8" to 3.45")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row, minimum of 3" of gravel over pipe; not necessary underdrain pipes. Perforated pipe shall be wrapped with 1/4" galvanized hardware cloth
Poured in place concrete (if required)	MNSA Min. No. 3, F, = 3500 psi @ 28 days, normal weight, air-entrained, reinforcing to meet ASTM A615-40	n/a	28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standard requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 309.8(R) vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressure); and analysis of potential cracking
Sand	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Gneiss (#10) are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "track dust" can be used for sand.

Table B.3.2. Materials Specifications for Bioretention

Material	Specifications	Site	Notes
Planting soil (2.5" to 4" deep)	see Appendix A, Table A.4	n/a	plantings are site-specific
Mulch	shredded hardwood		aged 6 months, minimum
pea gravel diaphragm and curtain drain	pea gravel: ASTM D-448	pea gravel: No. 6 stone: 2" to 5"	
geotextile	Class "CC" apparent opening size (ASTM D-4751), gab fabric strength (ASTM D-4832), puncture resistance (ASTM D-4832)	n/a	for use as necessary beneath underdrains only
underdrain gravel	AASHTO M-43	0.375" to 0.75"	
underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipe; not necessary underdrain pipes
poured in place concrete (if required)	MNSA Min. No. 3, F, = 3500 psi @ 28 days, normal weight, air-entrained, reinforcing to meet ASTM A615-40	n/a	28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standard requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 309.8(R) vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressure); and analysis of potential cracking
sand (1" deep)	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Gneiss (#10) are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "track dust" can be used for sand.

BORING #	APPROX. EXIST. GROUND ELEV.	PROP. GROUND ELEV.	INVERT FACILITY / PRACTICE	DEPTH TO GROUNDWATER	BOTTOM PIT	PIT DEPTH	NOTES
TEST PIT#1	210.17	205.00	201.92	-	202.17	8.00	DRY CLAY
P-2	210.10	205.00	201.92	-	202.10	10.00	DRY SAND COLLAPSE
P-3	202.47	202.70	199.20	-	198.47	8.00	DRY
P-4	200.00	200.70	197.20	-	197.33	6.67	DRY CLAY
P-5	178.00	179.00	175.50	-	171.00	7.00	DRY
P-6	172.75	173.00	171.92	-	169.75	7.00	DRY

\*\* REQUIRED DEPTH OR UNTIL REFUSAL

\*\* NOTE DEPTH OF GROUNDWATER, IF ENCOUNTERED

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

- 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, PRUNING, APPLICABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE EQUIPMENT, OR LIGHT EQUIPMENT WITH TUBE TYPE. USE OF EQUIPMENT WITH WASH TRACKS OR WASH TRUCKS OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL BE CORRECTED TO DESIGN WETLANDS.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TEST CHECKED TREES AND SHRUBS, AND REEVALUATE ALL DEFICIENT STAGES AND WIPES.
- 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 MULCH IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

SPECIFICATIONS FOR BIOTENTION, MICRO-BIOTENTION

1. MATERIAL SPECIFICATIONS

2. FILTERING MEDIA OR PLANTING SOIL

3. COMPACTION

4. PLANT MATERIAL

5. PLANT INSTALLATION

6. UNDERDRAINS

7. EARTH FILL

8. MISCELLANEOUS

9. BIOTENTION & MICRO-BIOTENTION NOTES:

10. LEGEND:

11. MAPPED SOILS TYPES - HOWARD COUNTY, MARYLAND

12. APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

13. CHIEF, DEVELOPMENT ENGINEERING DIVISION

14. CHIEF, DIVISION OF PLANNING AND DEVELOPMENT

15. DIRECTOR

16. TAX MAP: 47 BLOCK: 23

17. 6TH ELECTION DISTRICT

18. ZONED: CE-CU

19. PARCEL: 910

20. HOWARD COUNTY, MARYLAND

21. VOGEL ENGINEERING

22. TIMMONS GROUP

23. 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043

24. P: 410.461.7666 F: 410.461.8961 www.timmons.com

25. PROFESSIONAL CERTIFICATE

26. THESE DOCUMENTS WERE PREPARED OR

27. REVIEWED BY ME, AND I AM A DULY LICENSED PROFESSIONAL ENGINEER

28. UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16163

29. EXPIRATION DATE: 09-27-2024

30. DESIGN BY: VETG

31. DRAWN BY: IMH

32. CHECKED BY: RHY

33. DATE: SEPTEMBER 2023

34. SCALE: AS SHOWN

35. W.O. NO.: 43634

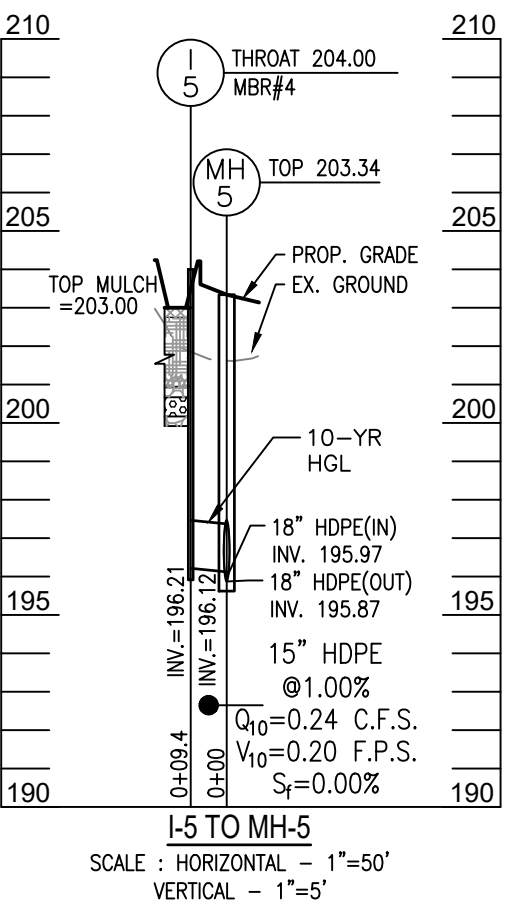
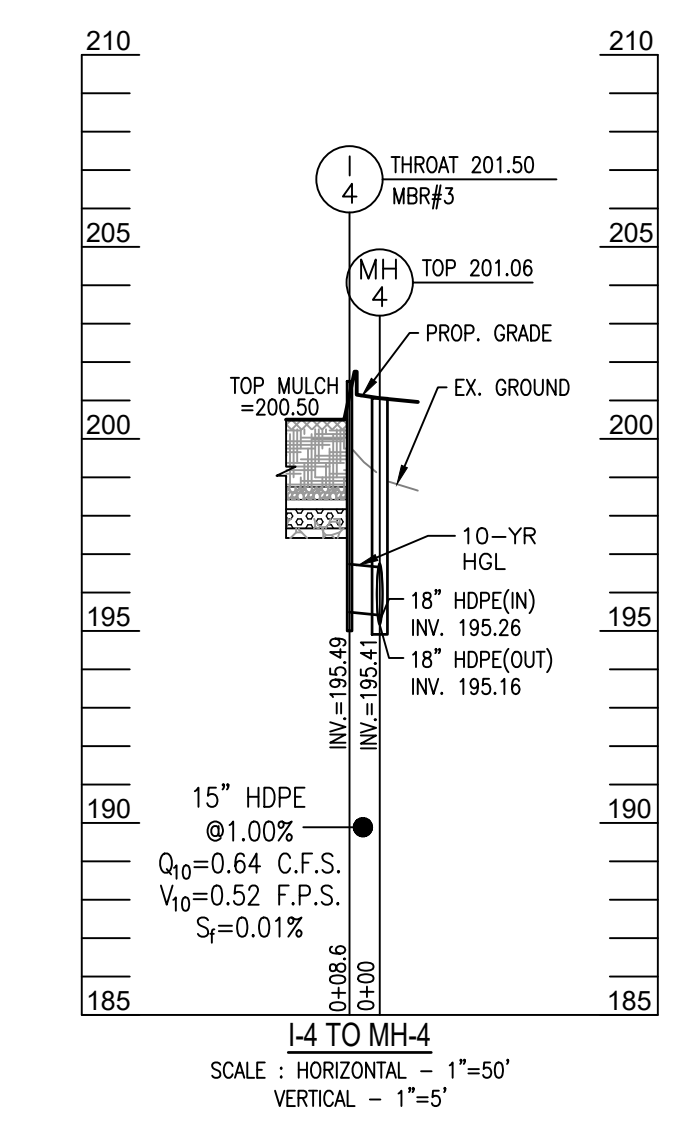
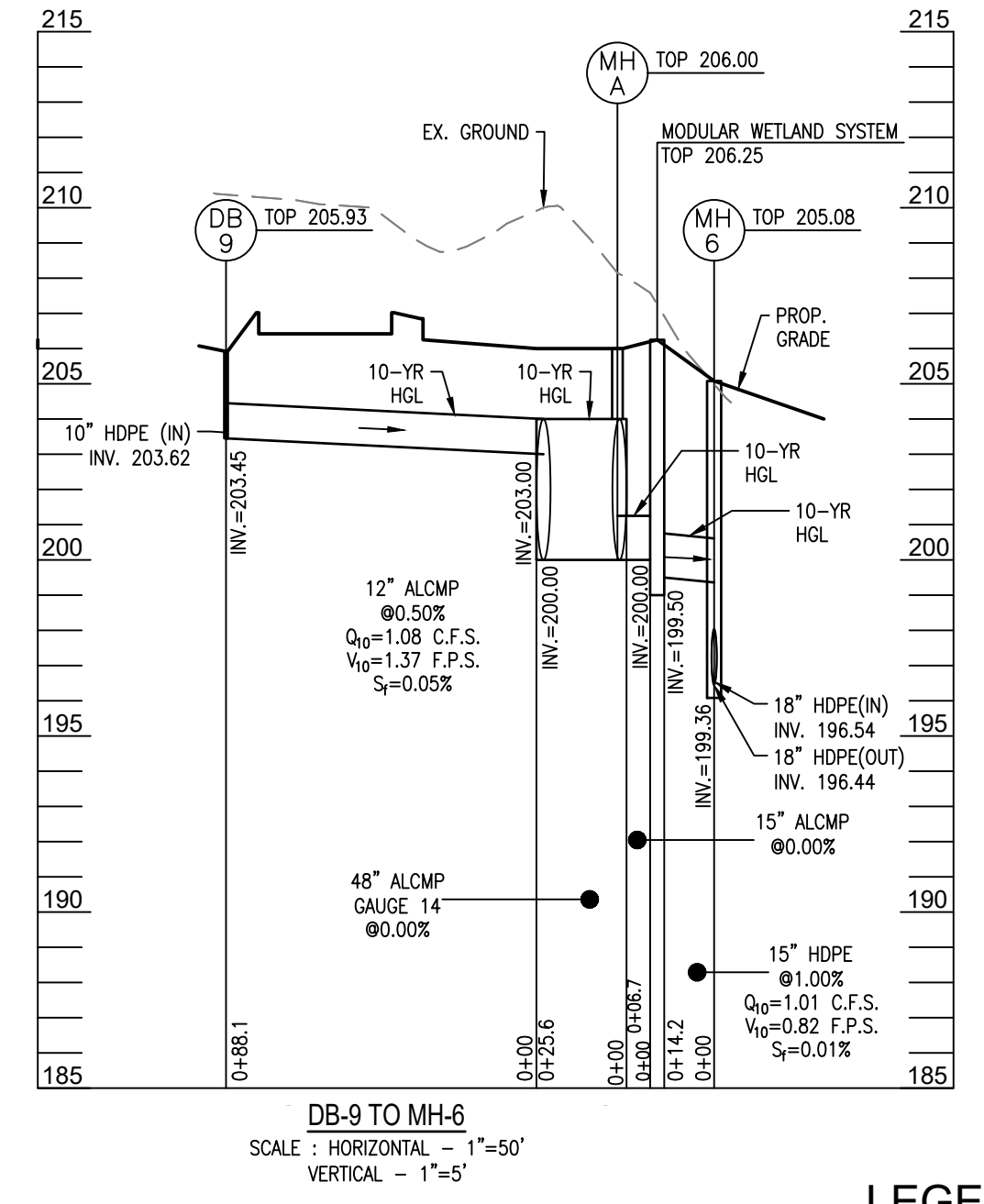
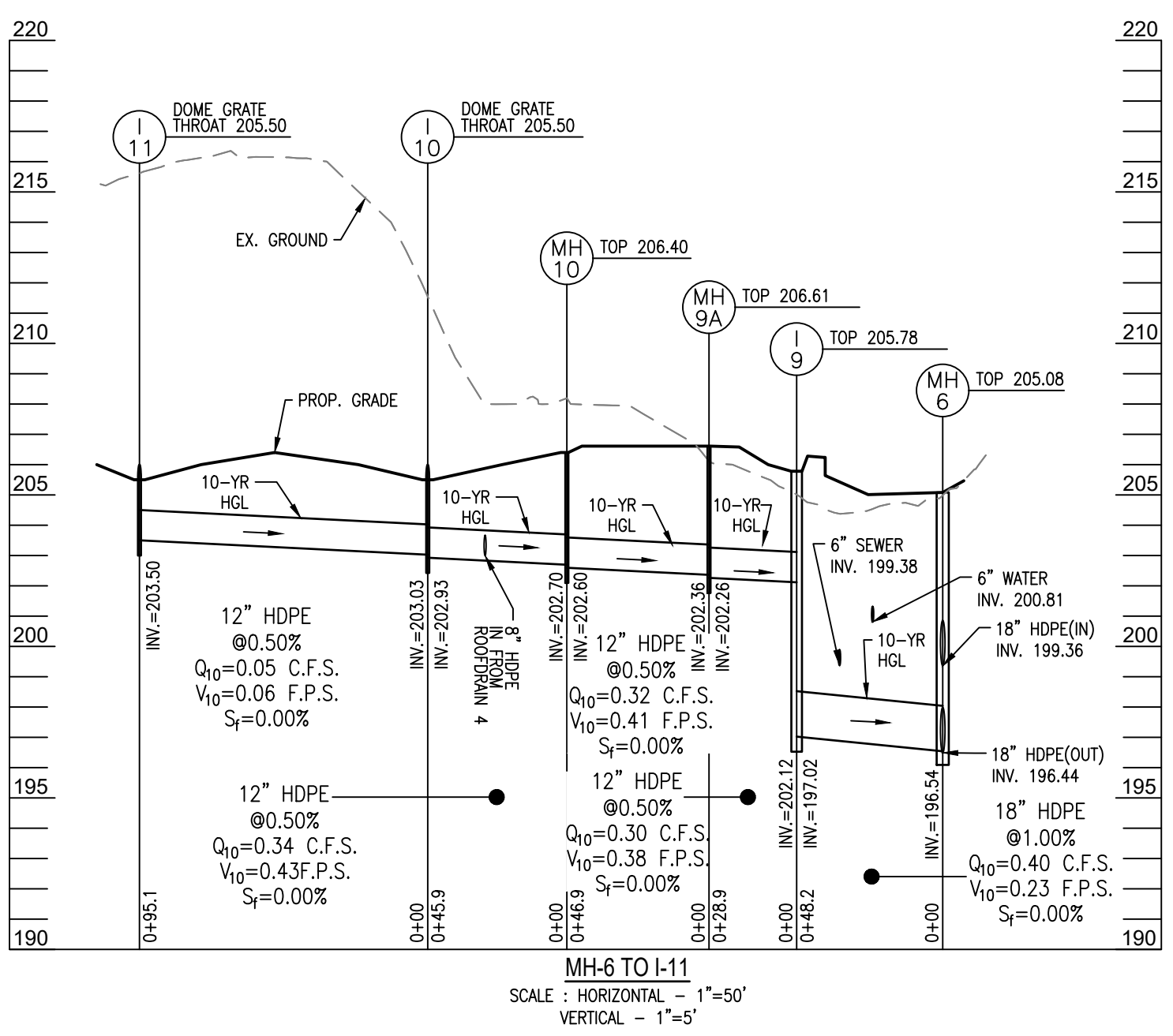
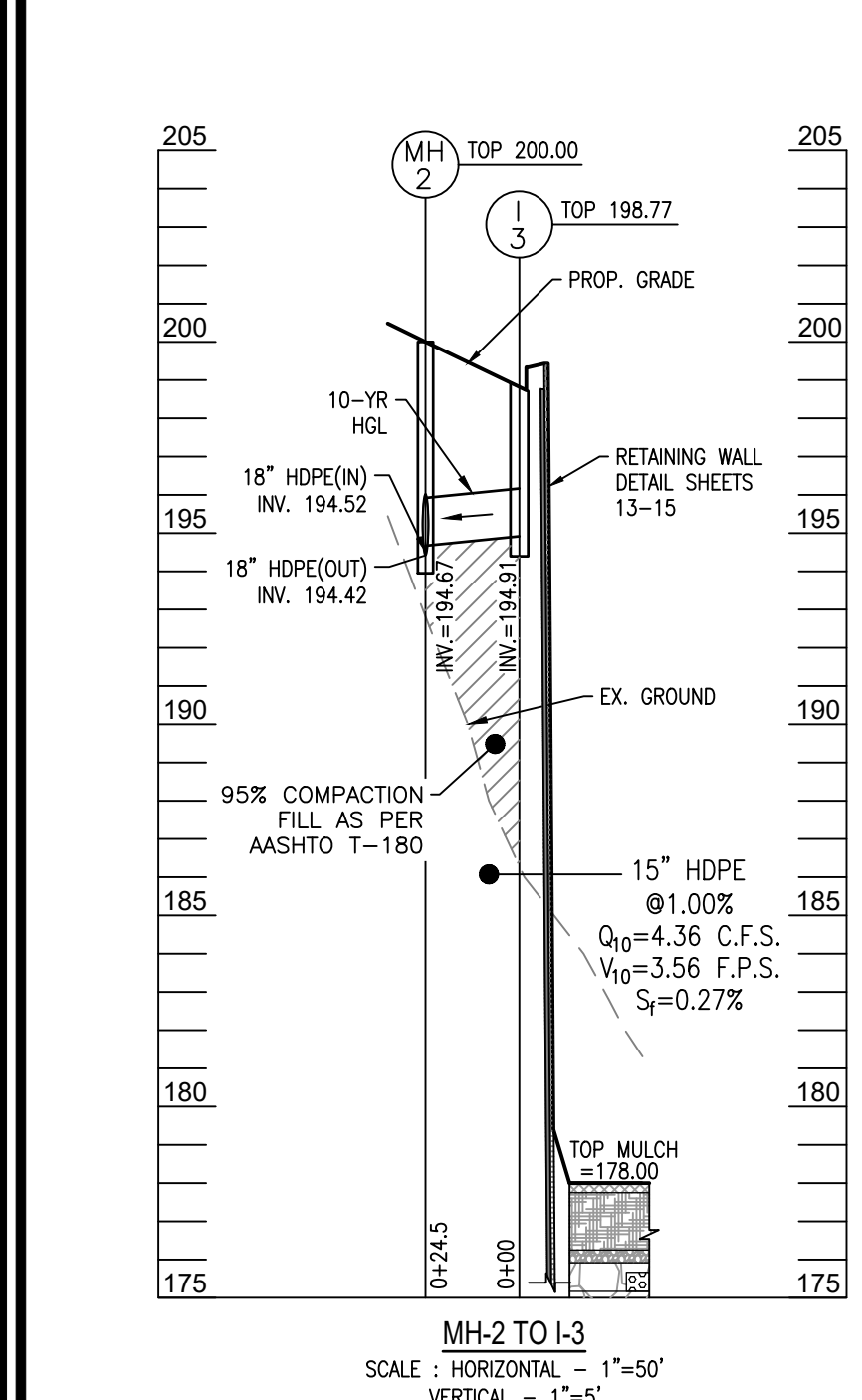
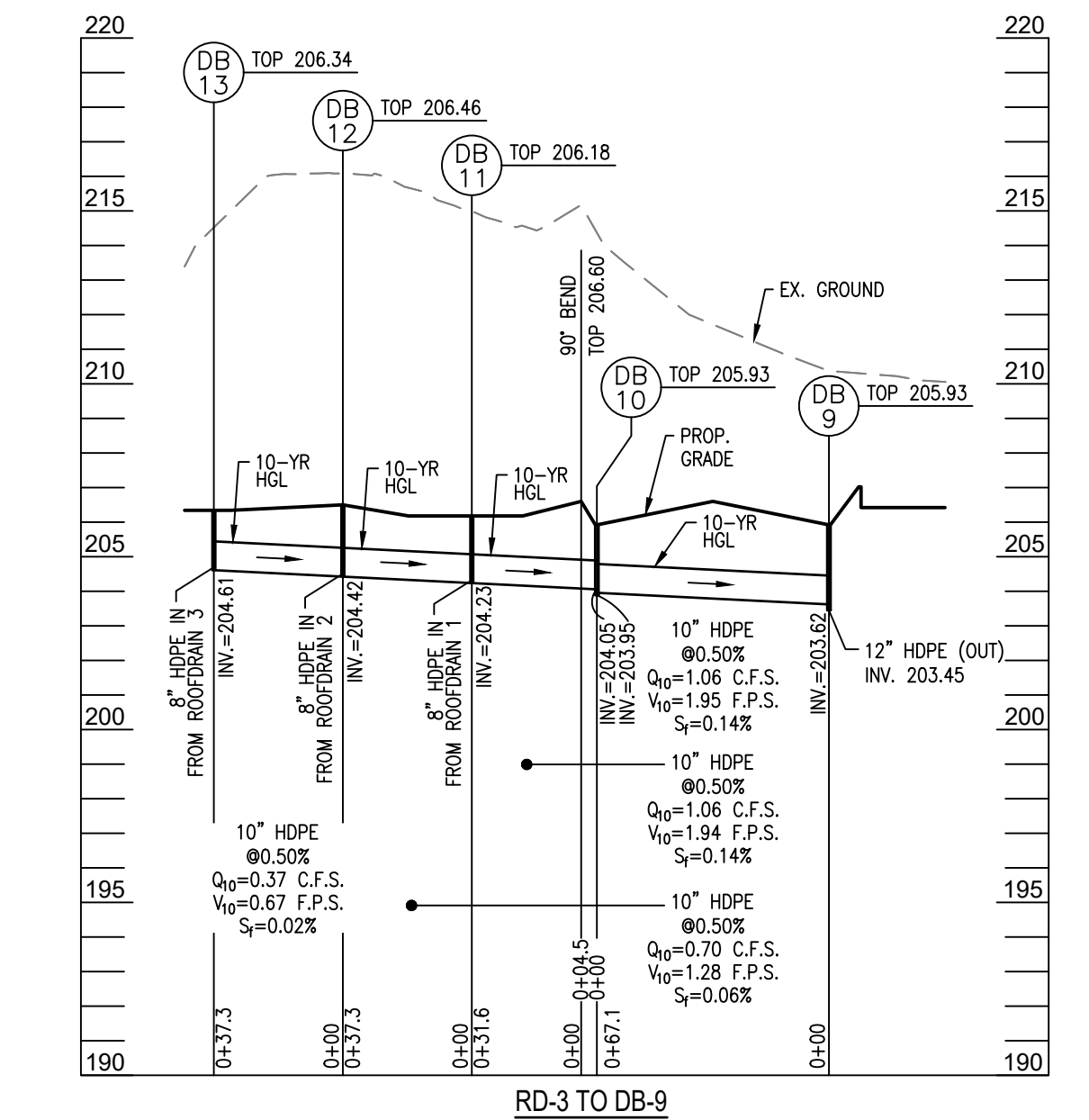
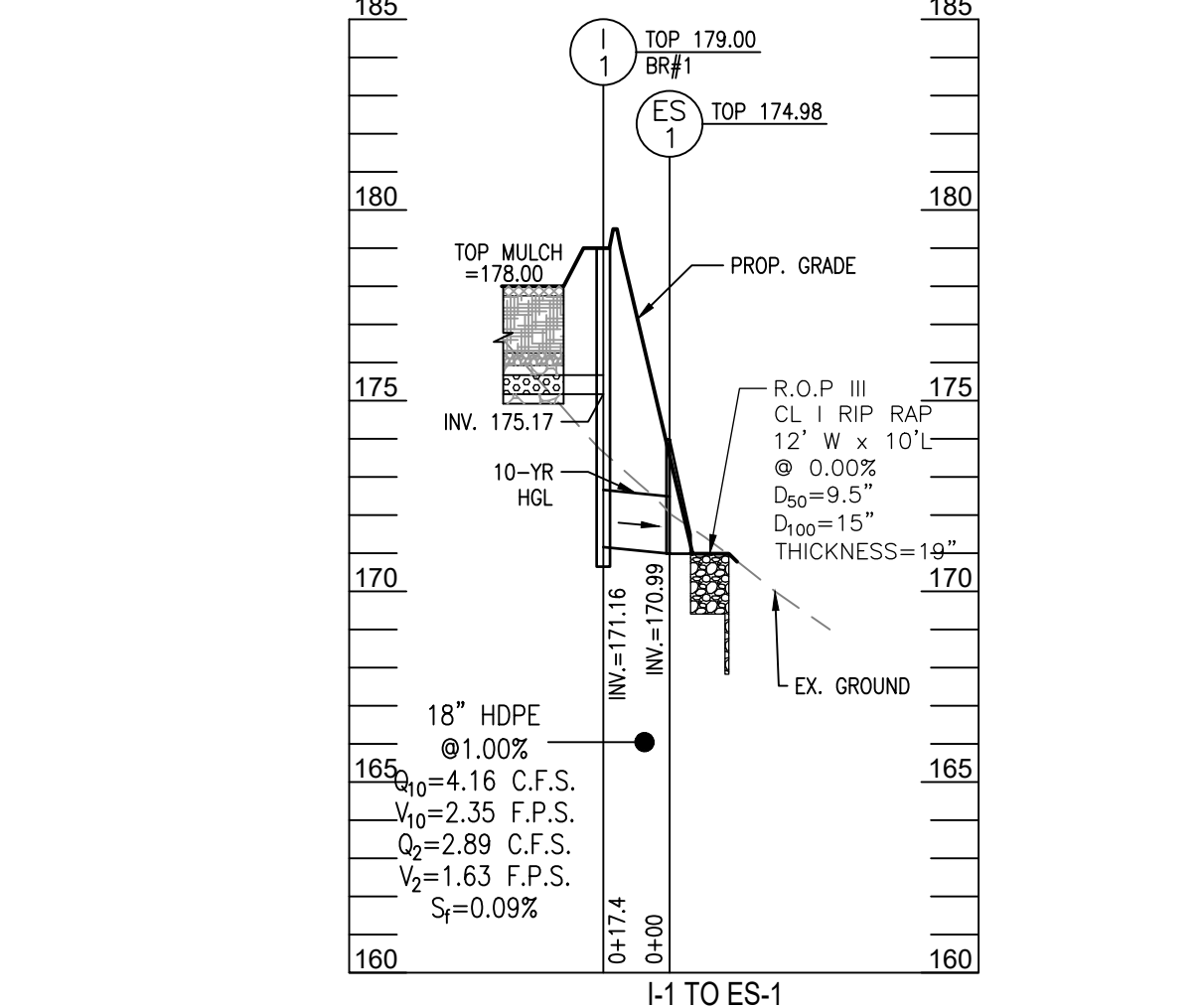
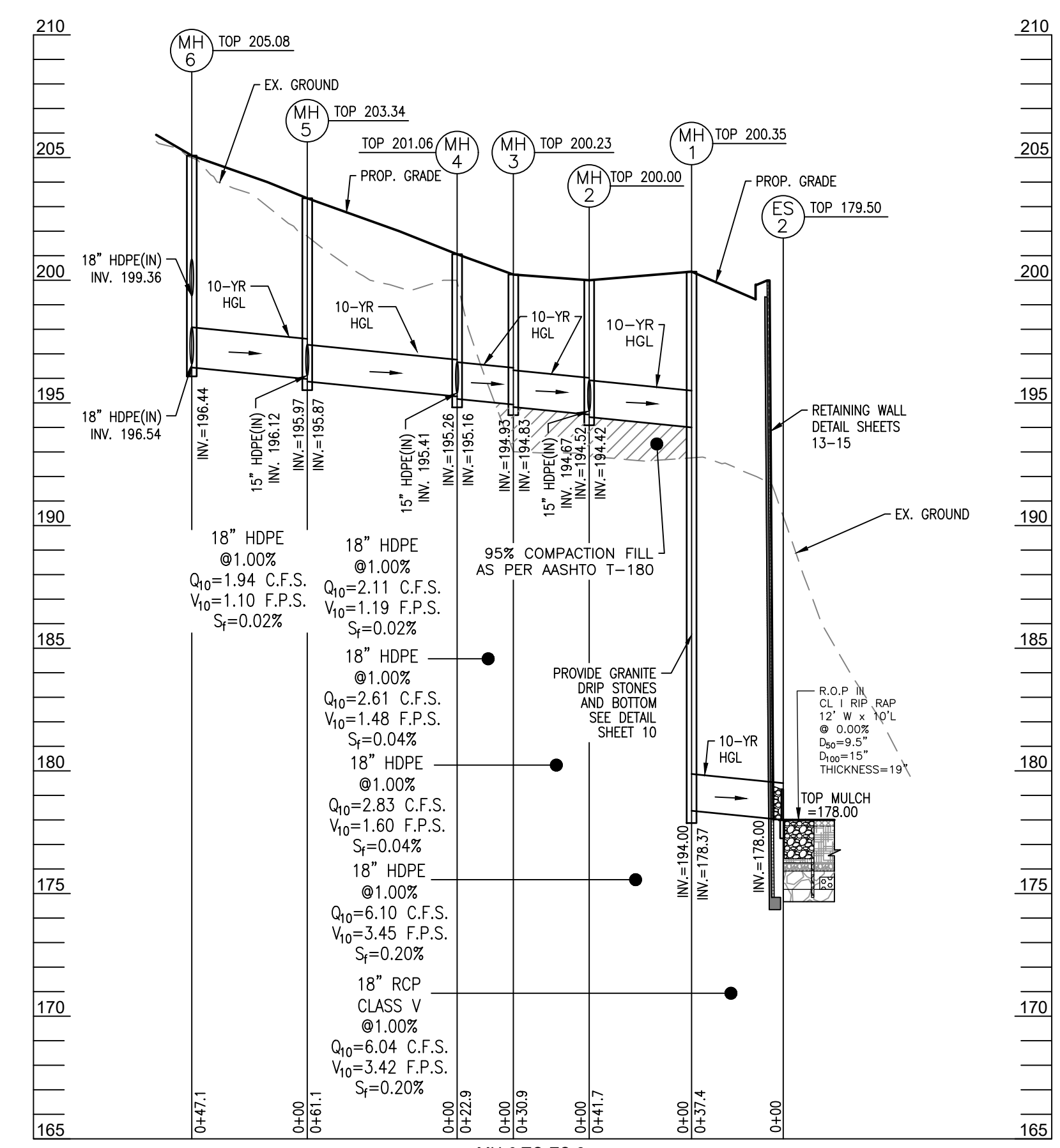
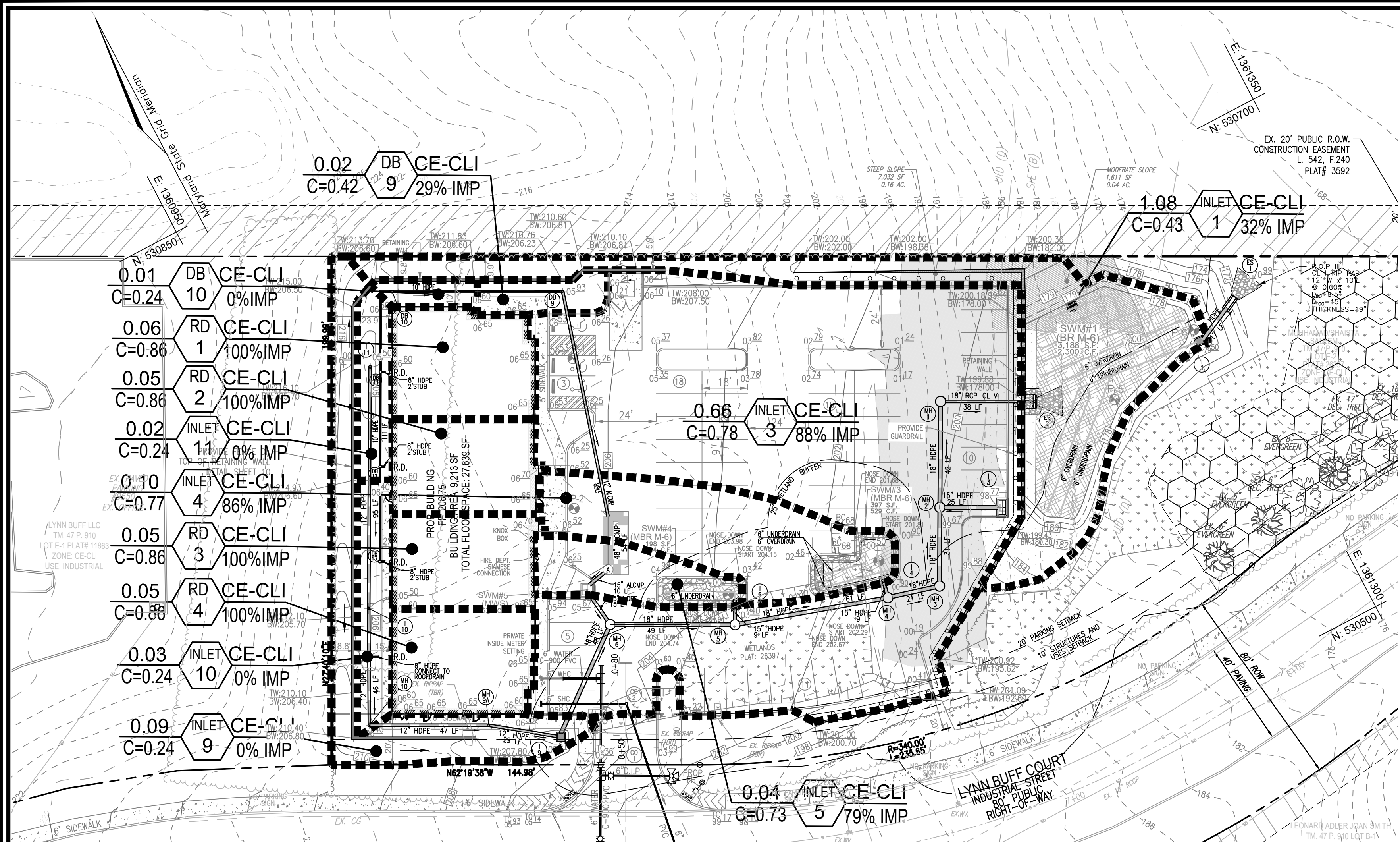
36. 7 SHEET OF 16

37. SDP-22-048









**LEGEND:**

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING PAVING
- HIGHLY ERODIBLE SOILS
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- PROPOSED TREELINE
- PROPOSED CURB
- STORM DRAIN
- STORM DRAIN INLET
- GUARDRAIL
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- EXISTING TREE
- EXISTING OVERHEAD LINE
- EXISTING SEWER LINE
- EXISTING WATER LINE
- EXISTING JUNCTION BOX
- EXISTING SIGN
- EXISTING UTILITY POLE
- EXISTING WETLANDS
- WETLAND BUFFER
- 100-YR FLOODPLAIN
- EX. 20' PUBLIC ROW CONSTRUCTION EASEMENT L. 542 F.140
- DRAINAGE DIVIDE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *Ulyssa Edmondson* 12/12/2023

Chief, Division of Land Development: *Ulyssa Edmondson* 12/12/2023

Director: *Ulyssa Edmondson*

**MAPPED SOILS TYPES - HOWARD COUNTY, MARYLAND**

SYMBOL NAME / DESCRIPTION	GROUP	HYDRC	Kw RANGE	HIGHLY ERODIBLE
Fsp1 FALLSINGTON SANDY LOAM, 0 TO 2% SLOPES, NORTHERN COASTAL PLAIN	D	YES	0.02	NO
Hs HARBORO-CODORUS SILT LOAMS, 0 TO 3% SLOPES	D	YES	0.37	NO
Ss SKANSWAY AND CROM SOILS, 15 TO 25% SLOPES	B	NO	0.32	YES
Ud URSUM LAND-UDERTHENS COMPLEX, 0 TO 15% SLOPES	D	NO	0.02	NO

NOTE: TAKEN FROM: USDA, SCS-WE8 SOIL SURVEY, AND HOWARD COUNTY SOIL CONSERVATION DISTRICT WEBSITE DOCUMENTS  
HTS://WWW.HOWARDSOILS.COM/DOCUMENTS

HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

**OWNER/DEVELOPER**  
MUHAMMAD SALEEM SHAISTA SALEEM  
4309 VALLEY STREAM AVE.  
BURTONS VILLE, MD 20866  
(301)370-6587

SCALE 1"=50'

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**STORM DRAIN DRAINAGE AREA MAP AND PROFILES**  
**US 1 JOINT VENTURE, PARCEL E-2**  
9530 LYNN BUFF COURT  
LAUREL, MARYLAND 20723

TAX MAP: 47 BLOCK: 23 6TH ELECTION DISTRICT ZONED: CE-CLJ PARCEL: 910 HOWARD COUNTY, MARYLAND

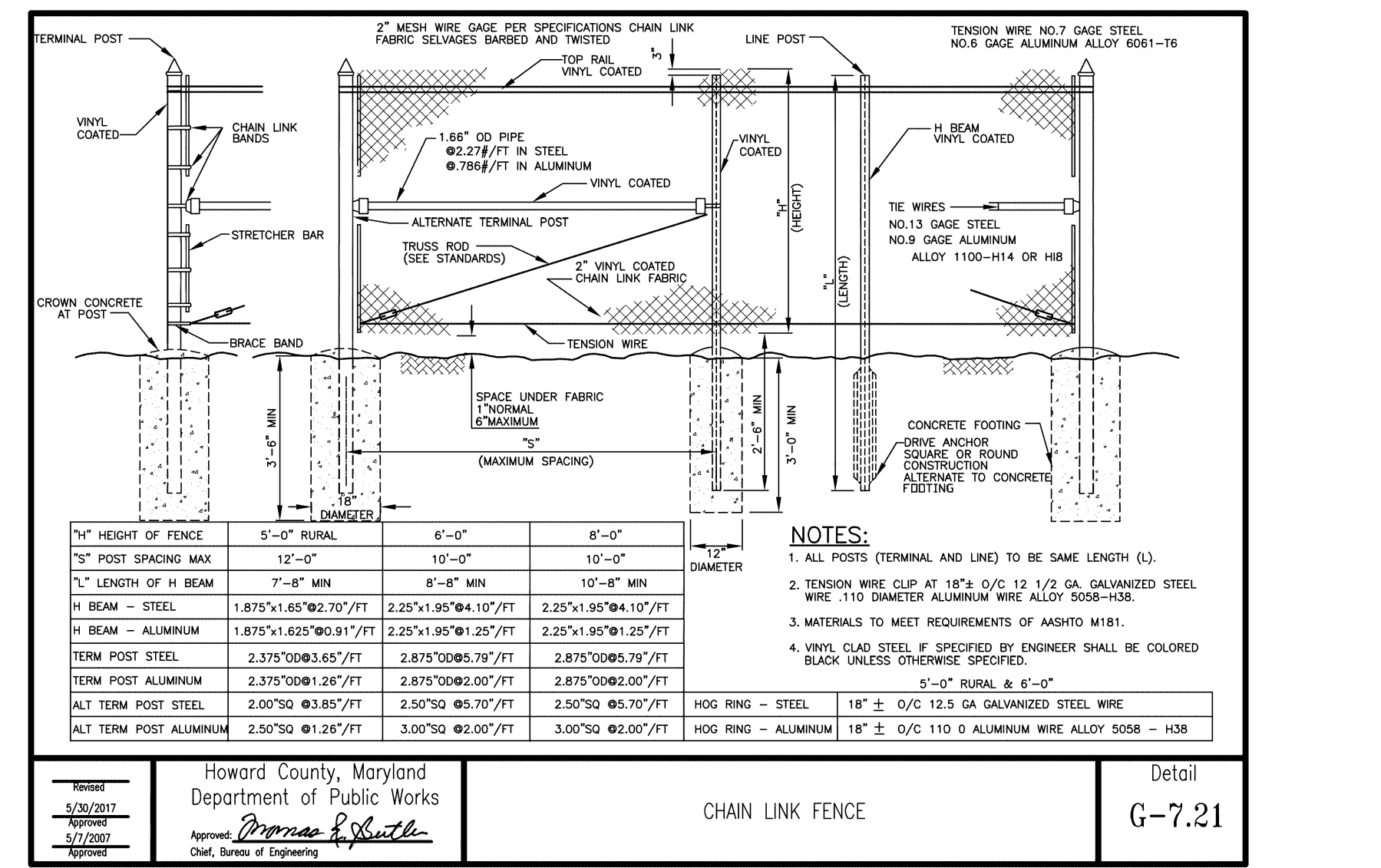
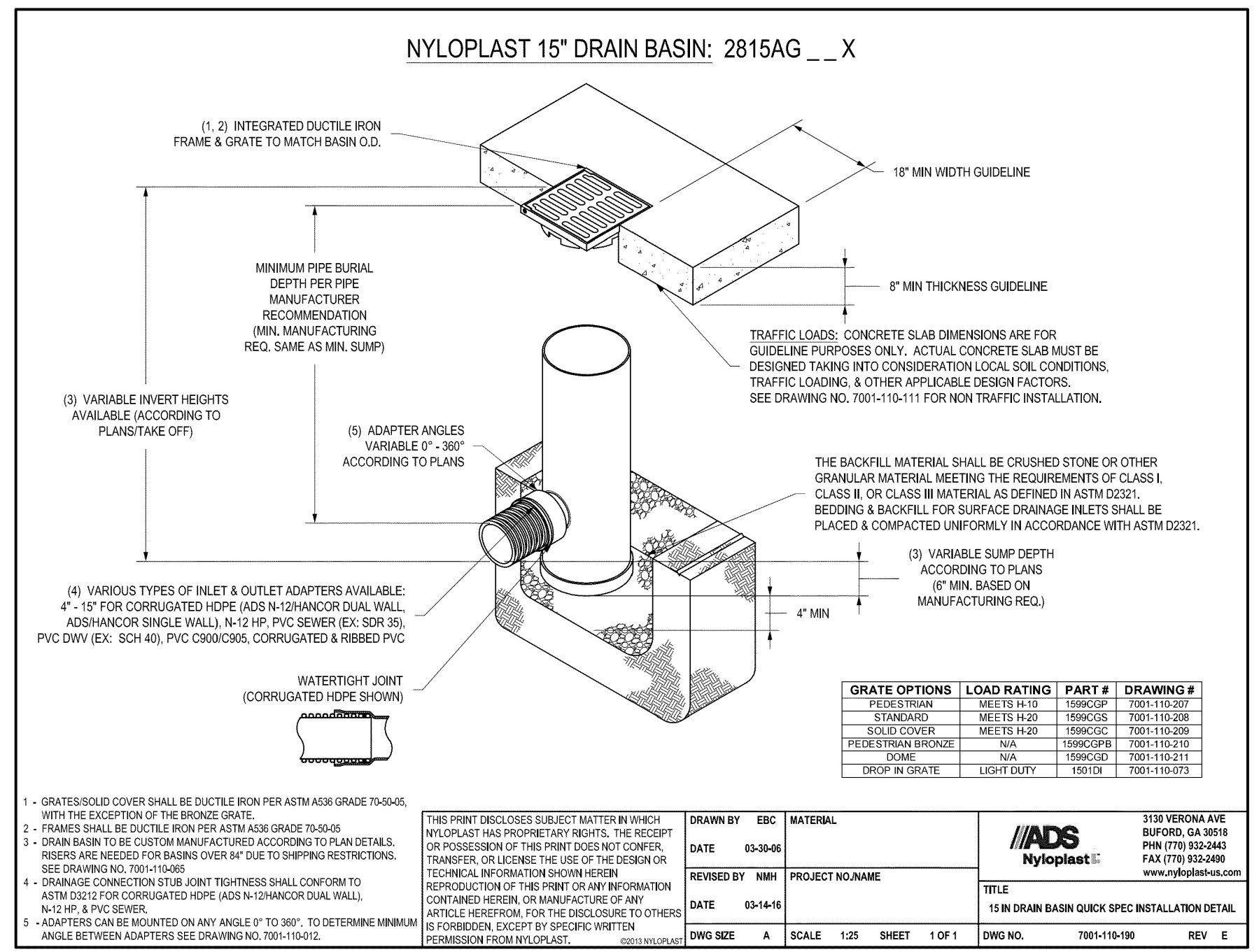
**VOGEL ENGINEERING**  
**TIMMONS GROUP**  
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 16193 EXPIRATION DATE: 09-27-2024

DESIGN BY: *YETG*  
CHECKED BY: *IMH*  
DRAWN BY: *RHV*  
DATE: *SEPTEMBER 2023*  
SCALE: *AS SHOWN*  
W.O. NO.: *43634*

9 SHEET OF 16





SIZE	PUBLIC/PRIVATE	CLASS	LENGTH	NOTE
8	PRIVATE	HDPE	19	ROOF DRAINS
10	PRIVATE	HDPE	176	
12	PRIVATE	HDPE	302	
15	PRIVATE	HDPE	53	
15	PRIVATE	AL CMP	26	
18	PRIVATE	HDPE	306	
18	PRIVATE	RCP CLASS V	37	

STR #	TYPE	INV. IN	INV. OUT	TOP/THROAT ELEV	DETAIL	LOCATION	REMARKS
I-1	S INLET	175.17	171.16	179.00	D-4.25	N 530625.12 E 1361287.00 (1) PRIVATE	
I-3	DOUBLE S INLET	-	194.91	198.77	D-4.25	N 530603.21 E 1361187.79 (1) PRIVATE	
I-4	15\"/>						

STR #	TYPE	INV. IN	INV. OUT	TOP OR UPPER/LOWER	DETAIL	LOCATION	REMARKS
ES-1	18\"/>						

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *Chad Edmondson* 12/12/2023

CHIEF, DIVISION OF LAND DEVELOPMENT: *Linda Ewinery* 12/12/2023

DIRECTOR: *Linda Ewinery* 12/12/2023

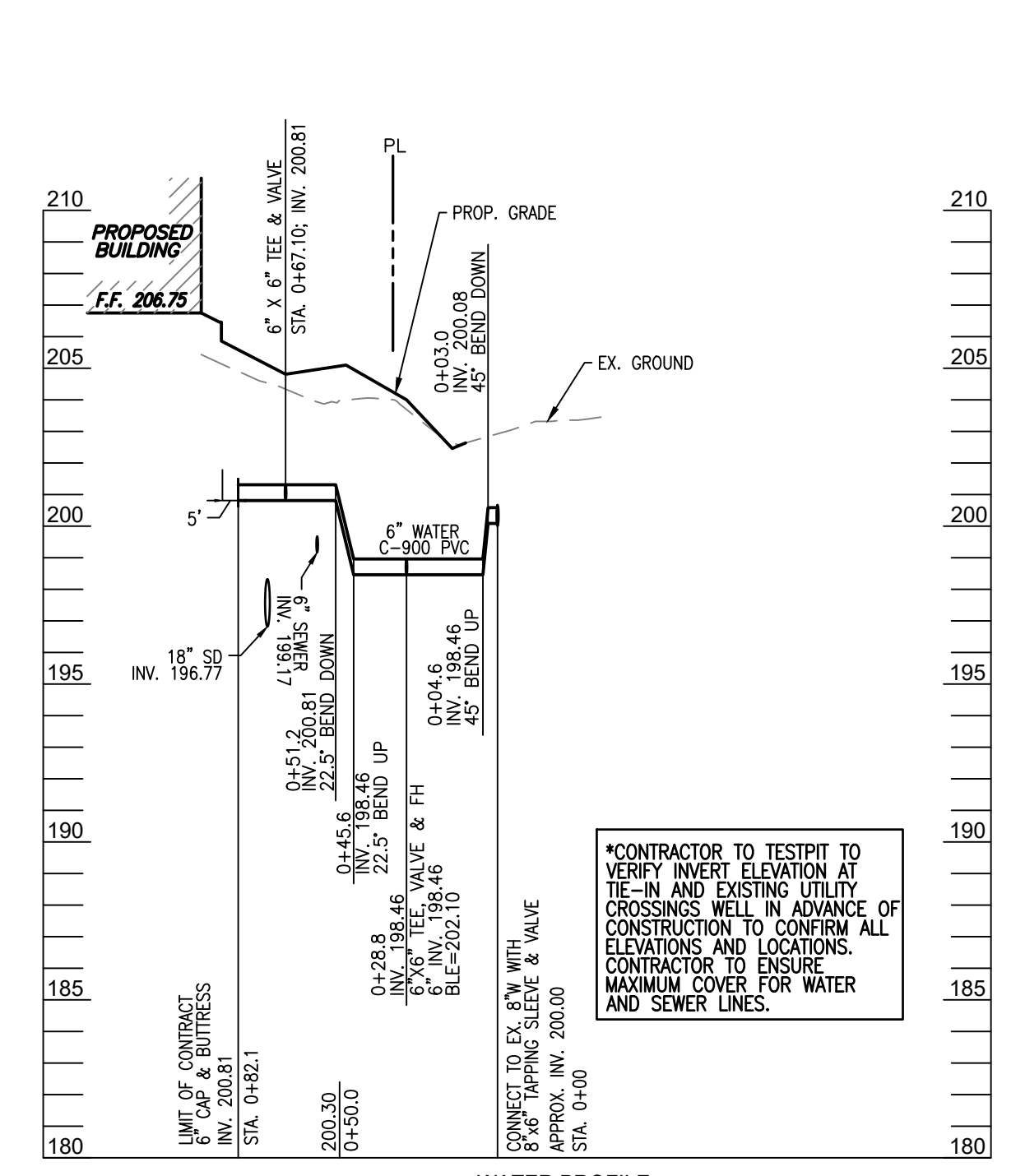
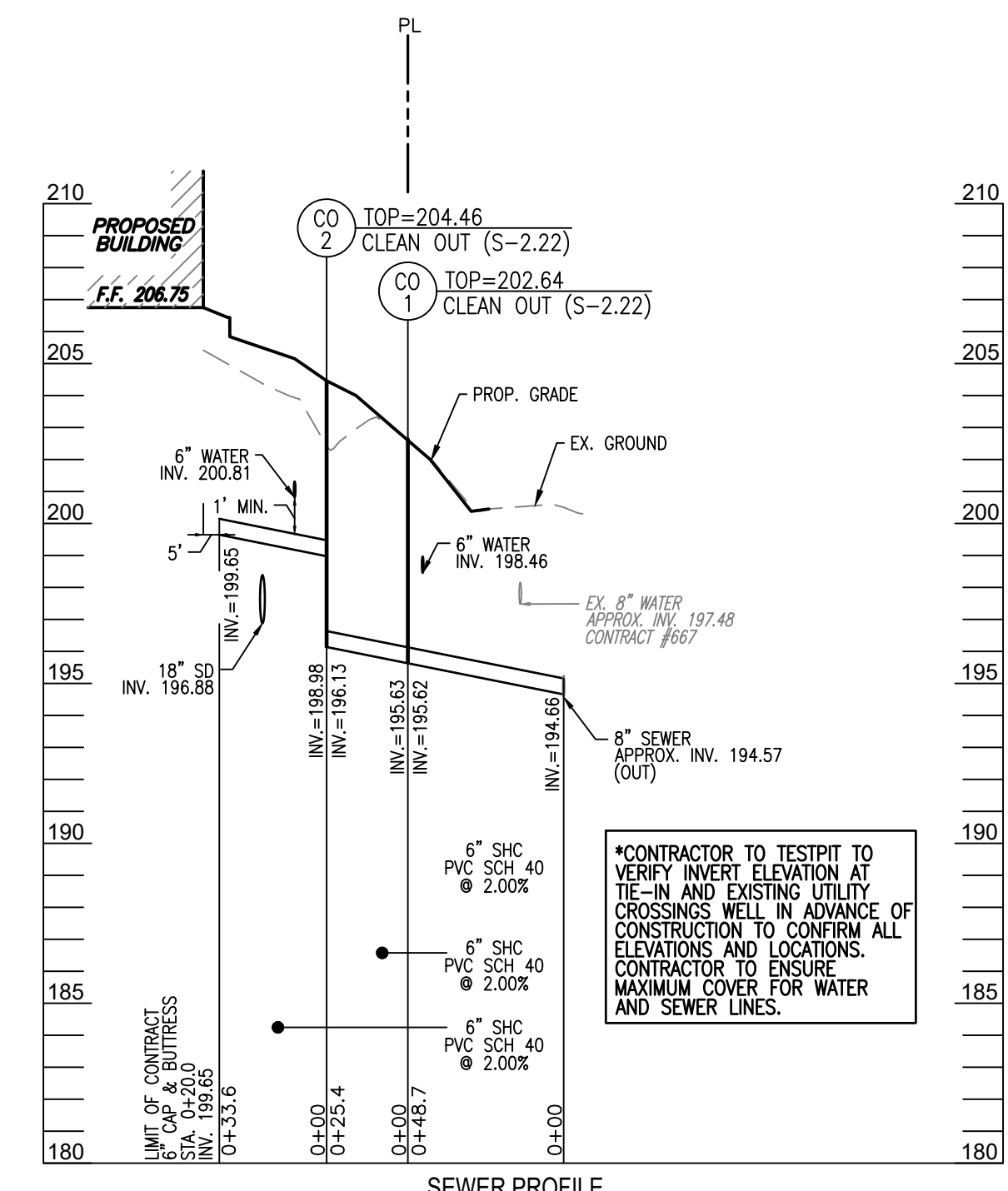
**CONSTRUCTION NOTES FOR ADO**

**PART I - GENERAL CONSTRUCTION NOTES**

- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS USE, HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION), THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- THE A.D.O. CONSTRUCTION WORK MUST BE PERFORMED UNDER THE CONTINUOUS INSPECTION OF THE CONSTRUCTION INSPECTORS DIVISION OF THE DEPARTMENT OF PUBLIC WORKS. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTORS DIVISION (410) 313-1800 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF ANY CONSTRUCTION FOR THIS A.D.O.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY AND AGENCIES AND MISS UTILITY AT TWO (2) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.
- WORK PERFORMED WITHIN MARYLAND STATE HIGHWAY ADMINISTRATION (MSHA) RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE MSHA PERMIT ISSUED FOR THE CONTRACT. THE CONTRACTOR SHALL NOTIFY THE MARYLAND STATE HIGHWAY ADMINISTRATION, 410-531-5533, AT LEAST FIVE (5) WORKING DAYS BEFORE EXCAVATING WITHIN THE MARYLAND STATE HIGHWAY RIGHT-OF-WAY FOR LAYING WATER OR SEWER MAINS OR SERVICE CONNECTIONS.
- EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON DRAWINGS. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- EXCAVATIONS MUST BE SUPPORTED FOR THE PROTECTION OF WORKERS. THE CONSTRUCTION WORK AREA AND ADJACENT PROPERTY, REFER TO TEMPORARY EXCAVATION SUPPORT SYSTEMS UNDER SECTION 1000.03.03 OF THE STANDARD SPECIFICATIONS.
- EXCAVATIONS MUST BE KEPT WELL DRAINED AT ALL TIMES. DETERNATING, DRAINAGE AND PUMPING IS REQUIRED DURING CONSTRUCTION. REFER TO DETERNATING, DRAINAGE AND PUMPING UNDER SECTION 1000.03.03 OF THE STANDARD SPECIFICATIONS. PUMPS MUST BE THE PROPER TYPE AND CAPACITY TO MAINTAIN A DRY WORK AREA.
- THE USE OF STEEL PLATES TO PROTECT THE TRENCH AND ROADWAY SHALL BE AS SPECIFIED UNDER SECTION 1000.03.05, SECTION 104 AND STANDARD DETAIL G-4.02 OF THE STANDARD SPECIFICATIONS.
- TEMPORARY AND PERMANENT REPAIR OF ROADWAY OPENINGS SHALL BE AS SPECIFIED UNDER SECTION 1000.03.08 AND STANDARD DETAIL G-4.01 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED BY PERMIT FROM THE AUTHORITY HAVING JURISDICTION. TEMPORARY PAVING SHALL CONSIST OF NOT LESS THAN 12 (TWELVE) INCHES OF CROWNED STONE AND 2 (TWO) INCHES OF BITUMINOUS COLD PATCH MATERIAL.

**PART II - WATER CONSTRUCTION NOTES**

- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-0" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- THE CONTRACTOR SHALL NOTIFY THE DPW BUREAU OF UTILITIES (410-313-4900) AT LEAST 48 HOURS IN ADVANCE OF SCHEDULED SHUTDOWNS OF THE EXISTING WATER MAIN. SHUT DOWNS OF THE EXISTING WATER MAIN FOR NEW CONNECTIONS ARE REMOVAL OF EXISTING SERVICE CONNECTIONS SHALL BE AS SPECIFIED UNDER SECTION 1002.06- CONNECTIONS OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- THE 6-INCH WATER SERVICE SHALL BE D.I.P. AND ALL JOINTS SHALL BE RESTRAINED BETWEEN WATER MAIN AND THE PROPERTY LINE.
- WATER SERVICE CONNECTIONS SHALL BE AS SPECIFIED UNDER SECTION 1004- WATER HOUSE SERVICE AND APPURTENANCES OF THE STANDARD SPECIFICATIONS.
- THE NEW WATER METER ASSEMBLY SHALL BE THE INSIDE COMBINED FIRE/DOMESTIC PER HOWARD COUNTY DETAIL PLATE W-3.44. INSTALLATION OF THE WATER METER IS NOT PART OF THE A.D.O. CONSTRUCTION WORK.

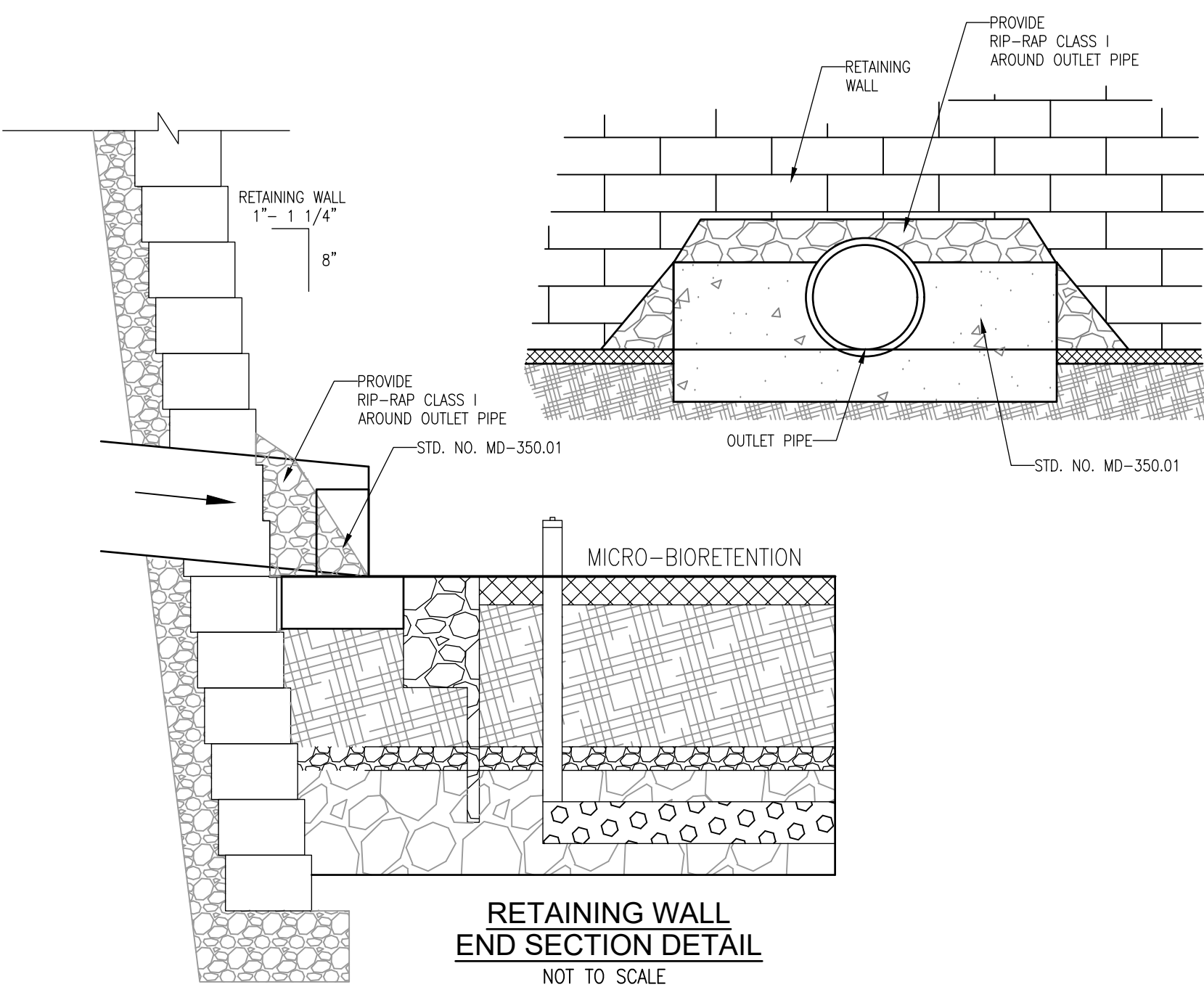
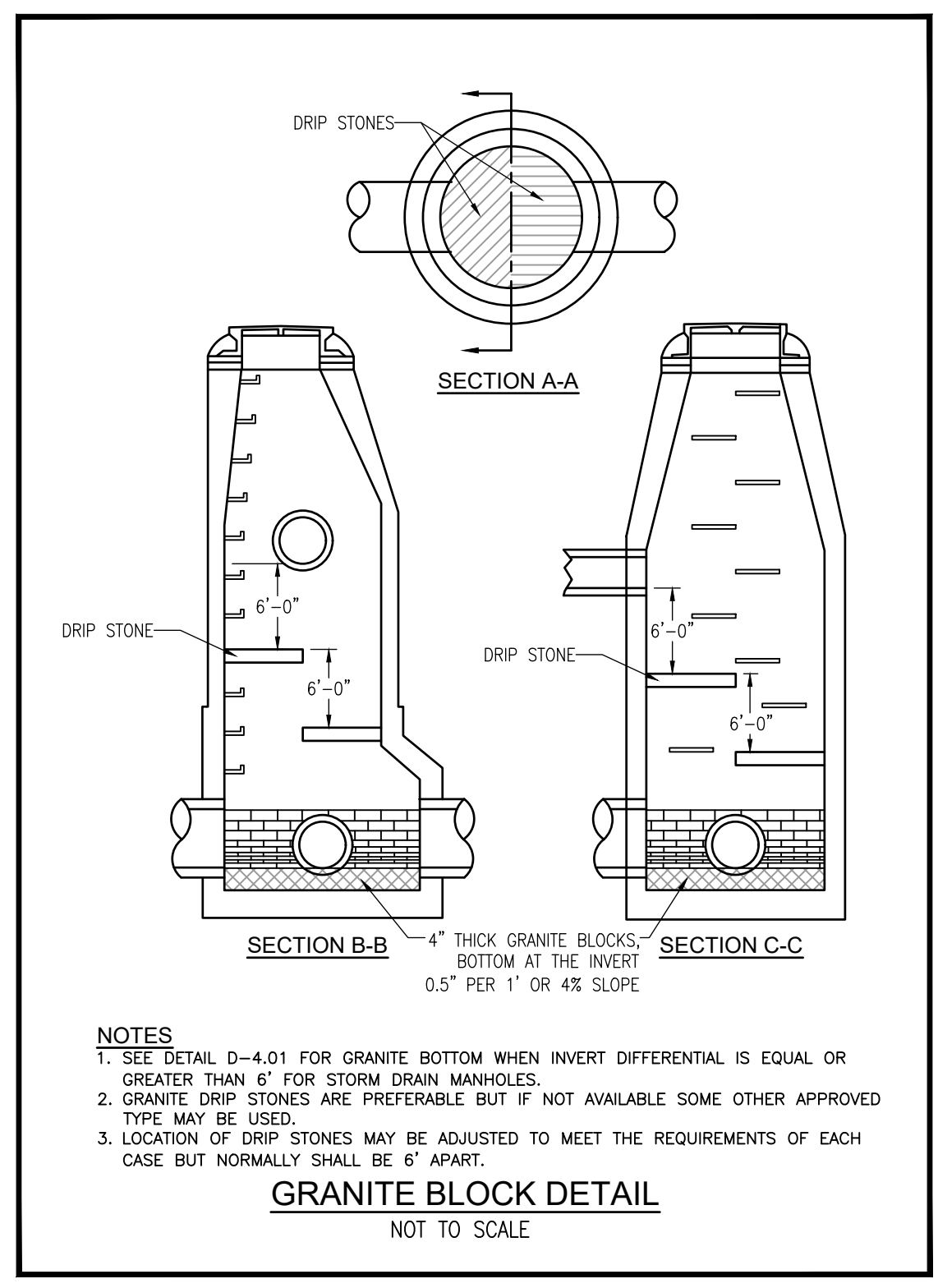


SIZE	TYPE	MATERIAL	LENGTH (LF)
6"	SEWER HOUSE CONNECTION	PVC SCH 40	108

WH NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
CO 1	SEWER HOUSE CONNECTION HO.CO. STD. DET. S-2.22	N 530578.40 E 1361017.12	202.64	195.63	195.62	
CO 2	SEWER HOUSE CONNECTION HO.CO. STD. DET. S-2.22	N 530603.51 E 1361020.91	204.46	198.98	196.13	

STATION	APPURTENANCE	WATERLINE	
		NORTHING	EASTING
0+00.0	8"x6" TAPPING SLEEVE	530557.73	1360985.25
0+04.0	6" SHUTOFF VALVE	530561.27	1360987.12
0+28.8	6"x6" TEE, VALVE & FIRE HYDRANT	530583.19	1360998.78
0+33.1	6" SHUTOFF VALVE	530586.96	1361000.79
0+67.1	6"x6" TEE	530616.98	1361016.75
0+82.1	6" CAP AND BUTTRESS	530623.95	1361003.47

SIZE	TYPE	MATERIAL	LENGTH (LF)
6"	WATER	C-900 PVC	88
6"	WATER	DUCTILE IRON PIPE (AWWA C-15)	28



**OWNER/DEVELOPER**

MUHAMMAD SALEEM  
SHAISTA SALEEM  
4309 VALLEY STREAM AVE.  
BURTONSVILLE, MD 20866  
(301)370-6587

**SITE DEVELOPMENT PLAN**

**UTILITY PROFILES, NOTES AND SCHEDULES**

**US 1 JOINT VENTURE, PARCEL E-2**  
9530 LYNN BUFF COURT  
LAUREL, MARYLAND 20723

TAX MAP: 47 BLOCK: 23  
6TH ELECTION DISTRICT

ZONED: CE-CU  
PARCEL: 910  
HOWARD COUNTY, MARYLAND

**VOGEL ENGINEERING**

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

PROFESSIONAL CERTIFICATE

DESIGN BY: *VEIG*

DRAWN BY: *IMH*

CHECKED BY: *RHV*

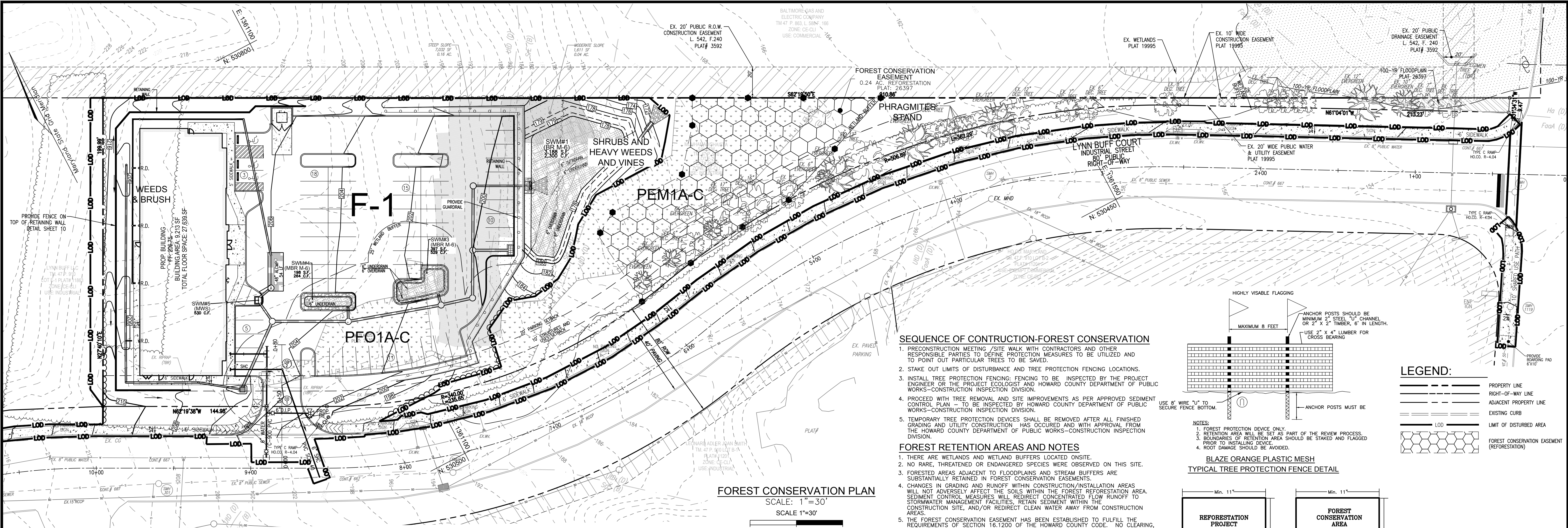
DATE: *SEPTEMBER 2023*

SCALE: *AS SHOWN*

W.O. NO.: *43634*

10 SHEET OF 16





FOREST CONSERVATION PLAN  
SCALE: 1"=30'  
SCALE 1"=30'

GENERAL NOTES

- WATERSHED NAME: LITTLE PATUXENT RIVER  
WATERSHED NUMBER: 02131105
- A. GROSS SITE AREA: 1.88 AC.  
NET SITE AREA: 1.87 AC.  
B. AREA OF 100-YEAR FLOODPLAIN: 0.01 AC. DFIRM
- C. AREA OF WETLANDS AND BUFFERS(ONSITE): 0.87 AC.  
AREA OF STREAM AND BUFFERS(ONSITE): 0.00 AC.
- D. AREA OF > 25% STEEP SLOPES: 0.16 AC.
- E. EXISTING FOREST: 1.10 AC.
- F. ZONED: CE-CL1
- G. EXISTING USE: VACANT
- H. PROPOSED USE: COMMERCIAL

\*\*FOREST CONSERVATION WORKSHEET  
BASED ON COUNCIL BILL CB62-2019\*\*

FOREST CONSERVATION WORKSHEET FOR 9530 LYNN BUFF COURT

Net Tract Area  
A. Total (Gross) Tract Area  
B. Area within 100-year Floodplain  
C. Other Deductions (Identify)  
D. Net Tract Area

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

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

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

Proposed Forest Clearing  
L. Total Area of Forest to be Cleared  
M. Total Area of Forest to be Retained

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

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

CONSTRUCTION PERIOD PROTECTION AND  
MANAGEMENT NOTES FOR FOREST CONSERVATION

- PRE-CONSTRUCTION PHASE  
1. FOR REFORESTATION AREAS, INSTALL BLAZE ORANGE FENCE AND REFORESTATION SIGNS BEFORE CONSTRUCTION BEGINS.  
2. FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.  
3. A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNING SHALL BE LIMITED TO 25% OF THE ROOT SYSTEM. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.
- CONSTRUCTION PHASE  
1. NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE REFORESTATION AREA.  
2. NO EQUIPMENT SHALL BE OPERATED INSIDE THE TREE REFORESTATION AREA INCLUDING TREE CANOPIES.  
3. IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.
- POST-CONSTRUCTION PHASE  
1. AT THE DISCRETION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.  
2. FENCE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.  
3. DO NOT REMOVE SIGNS.

REFORESTATION PLANTING SCHEDULE

Table with columns: QUANTITY, SPECIES, COMMON NAME, SIZE, SPACING, EQUIVALENT AREA/TREE, TOTAL UNITS. Includes rows for ACER RUBRUM, BETULA NIGRA, NYSSA SYLVATICA, PLATANUS OCCIDENTALIS, QUERCUS PALUSTRIS, SALIX NIGRA.

Wetland Data

Table with columns: WETLAND SYSTEM, COWardin CLASSIFICATION, DOMINANT VEGETATION. Includes rows for PFO1A-C and PEM1A-C.

FOREST STAND ANALYSIS TABLE

Table with columns: Key, Type of Community, Area (0.1 acres), Soil Type, Soil Forest Cover, Woodland Standby Index, Habitat Value for Soil, Existing Vegetation (dominant species & %), Stand Characteristics (Size, Age, Crown Closure), Forest Area in Sensitive Environments (0.1 acres).

SEQUENCE OF CONSTRUCTION-FOREST CONSERVATION

- 1. PRE-CONSTRUCTION MEETING / SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
- 2. STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
- 3. INSTALL TREE PROTECTION FENCING: FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS-CONSTRUCTION INSPECTION DIVISION.
- 4. PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN - TO BE INSPECTED BY HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS-CONSTRUCTION INSPECTION DIVISION.
- 5. TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS-CONSTRUCTION INSPECTION DIVISION.

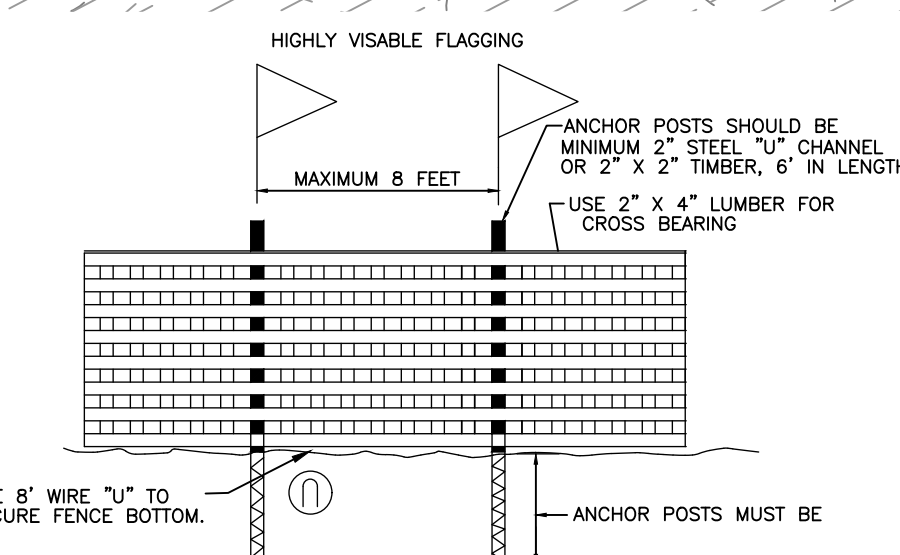
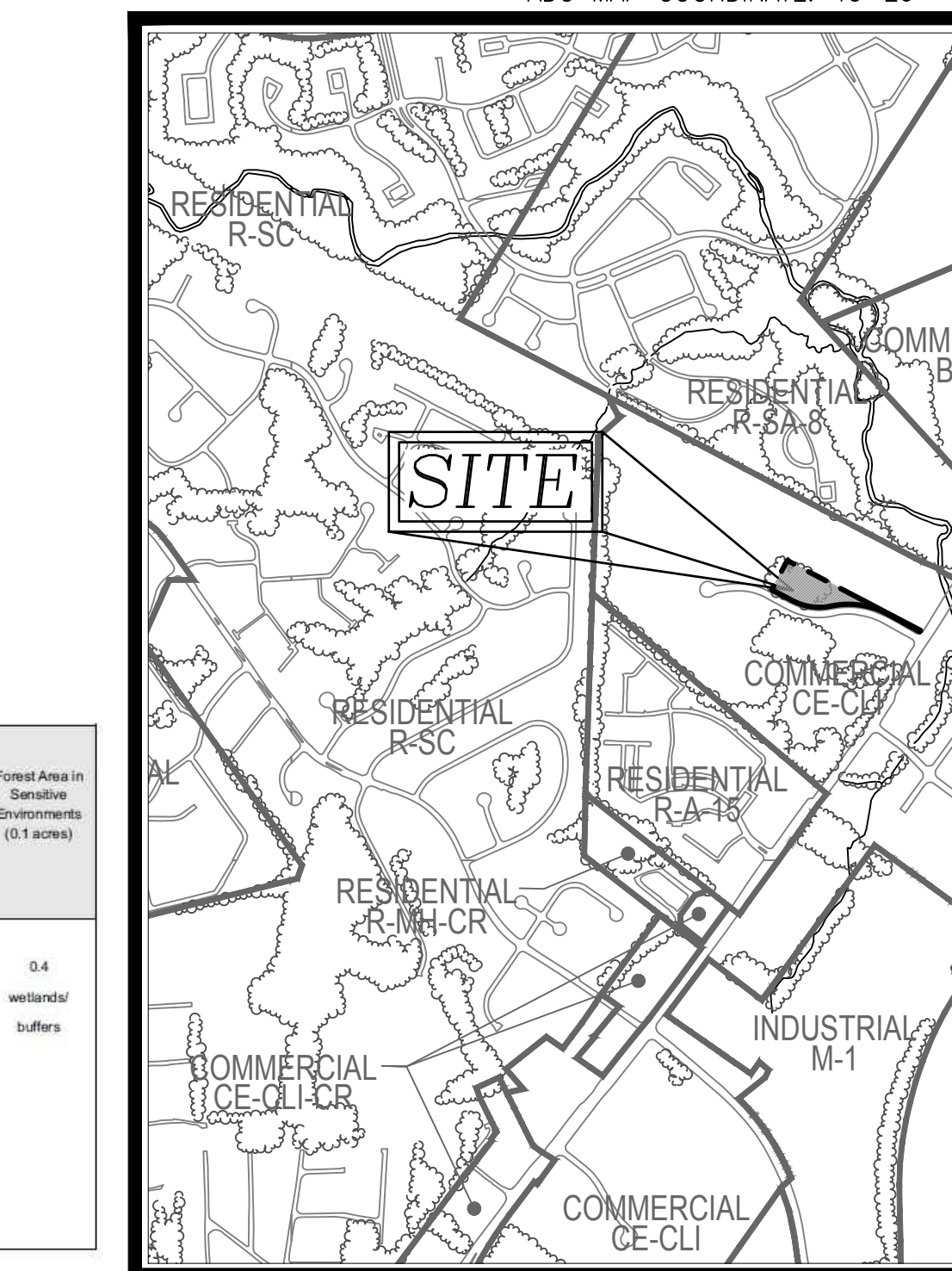
FOREST RETENTION AREAS AND NOTES

- 1. THERE ARE WETLANDS AND WETLAND BUFFERS LOCATED ONSITE.
- 2. NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.
- 3. FORESTED AREAS ADJACENT TO FLOODPLAINS AND STREAM BUFFERS ARE SUBSTANTIALLY RETAINED IN FOREST CONSERVATION EASEMENTS.
- 4. CHANGES IN GRADING AND RUNOFF WITHIN CONSTRUCTION/INSTALLATION AREAS WILL NOT ADVERSELY AFFECT THE SOILS WITHIN THE FOREST RETENTION AREA. SEDIMENT CONTROL MEASURES WILL REDIRECT CONCENTRATED FLOW RUNOFF TO STORMWATER MANAGEMENT FACILITIES. RETAIN SEDIMENT WITHIN THE CONSTRUCTION SITE, AND/OR REDIRECT CLEAN WATER AWAY FROM CONSTRUCTION AREAS.
- 5. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

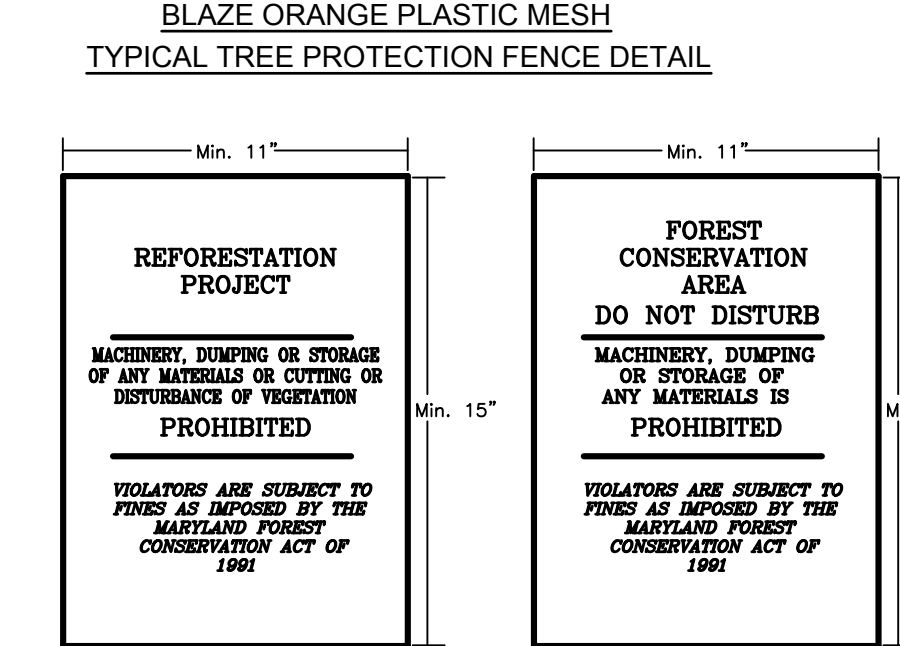
Figure 3-M:  
Plant Quantity, Size, Spacing and Equivalent Area

Table with columns: Number trees/acre, Size, Spacing (feet), Equivalent area/tree (sq ft). Includes rows for 2-inch caliper, 1-inch caliper, 2- to 3-gallon container grown, 1-gallon container grown, Whips, Seedlings.

VICINITY MAP  
SCALE: 1"=1000'  
ADC MAP COORDINATE: 40-E6



BLAZE ORANGE PLASTIC MESH  
TYPICAL TREE PROTECTION FENCE DETAIL



FOREST CONSERVATION AREA SIGNS

LEGEND: PROPERTY LINE, RIGHT-OF-WAY LINE, ADJACENT PROPERTY LINE, EXISTING CURB, LIMIT OF DISTURBED AREA, FOREST CONSERVATION EASEMENT (REFORESTATION)

Eco-Science Professionals, Inc. CONSULTING ECOLOGISTS

J. Brody McAllister ISA Certified Arborist

FOREST CONSERVATION EASEMENT TABLE  
Table with columns: EASEMENT, RETENTION, REFORESTATION, TOTAL. Includes rows for FCE and TOTAL.

MAPPED SOILS TYPES - HOWARD COUNTY, MARYLAND  
Table with columns: SYMBOL, NAME / DESCRIPTION, GROUP, HYDRC, K, RANGE, HIGHLY ERODIBLE.

NOTE: TAKEN FROM: USDA, SCS-WE8 SOIL SURVEY, AND HOWARD COUNTY SOIL CONSERVATION DISTRICT WEBSITE DOCUMENTS  
HTS://WWW.HOWARDSOILS.DOC.GOV/DOCUMENTS

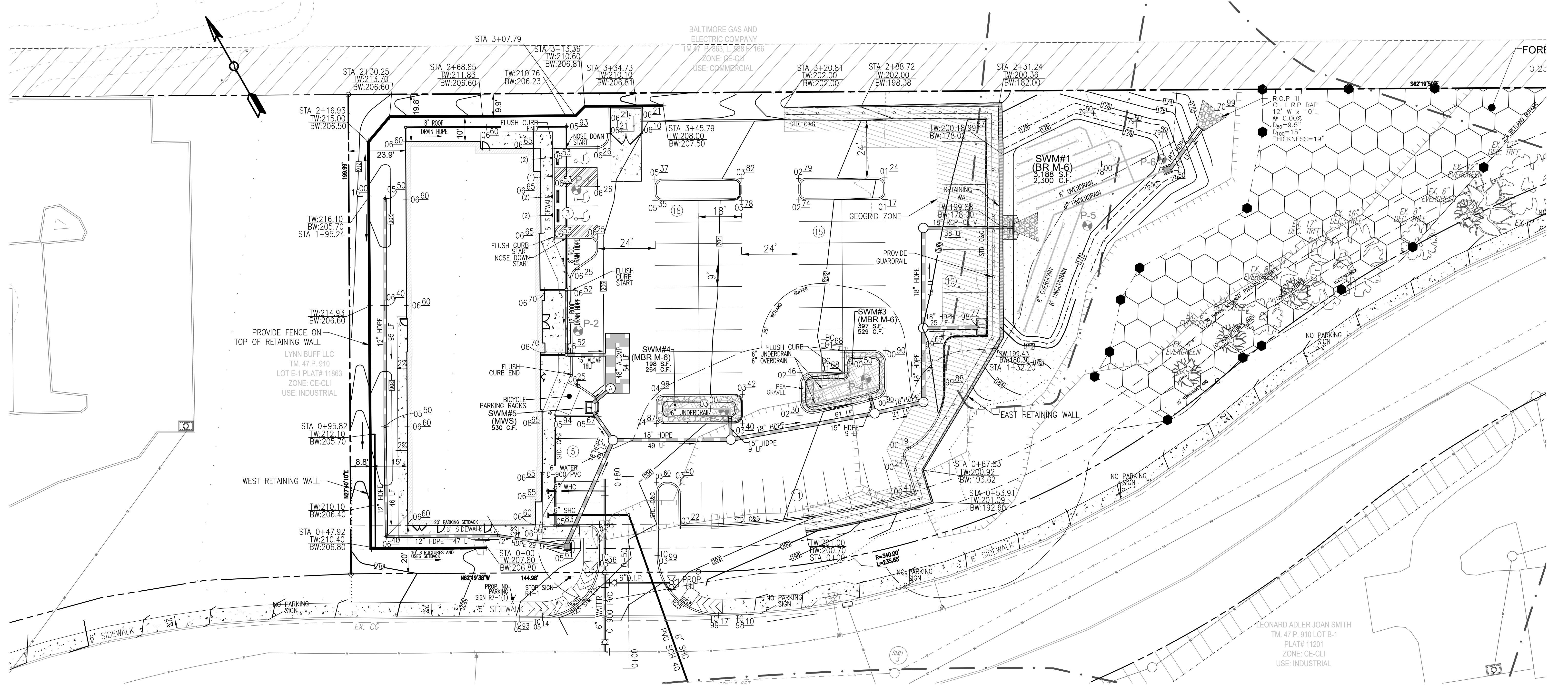
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
Chief, Development Engineering Division  
Chief, Division of Land Development

OWNER/DEVELOPER  
MUHAMMAD SALEEM  
SHAISTA SALEEM  
4309 VALLEY STREAM AVE.  
BURTONSVILLE, MD 20866  
(301)370-6587

SITE DEVELOPMENT PLAN  
FOREST CONSERVATION PLAN  
US 1 JOINT VENTURE, PARCEL E-2  
9530 LYNN BUFF COURT  
LAUREL, MARYLAND 20723  
TAX MAP: 47 BLOCK: 23  
6TH ELECTION DISTRICT  
ZONED: CE-CL1  
PARCEL: 910  
HOWARD COUNTY, MARYLAND  
VOGEL ENGINEERING  
TIMMONS GROUP  
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: VETG  
DRAWN BY: IMH  
CHECKED BY: RHY  
DATE: SEPTEMBER 2023  
SCALE: AS SHOWN  
W.O. NO.: 43634  
11 SHEET OF 16





**RETAINING WALL PLAN**  
SCALE: 1"=20'

**OWNER/DEVELOPER**

MUHAMMAD SALEEM  
SHAISTA SALEEM  
4309 VALLEY STREAM AVE.  
BURTONSVILLE, MD 20886  
(301)370-6587

NO.	REVISION	DATE

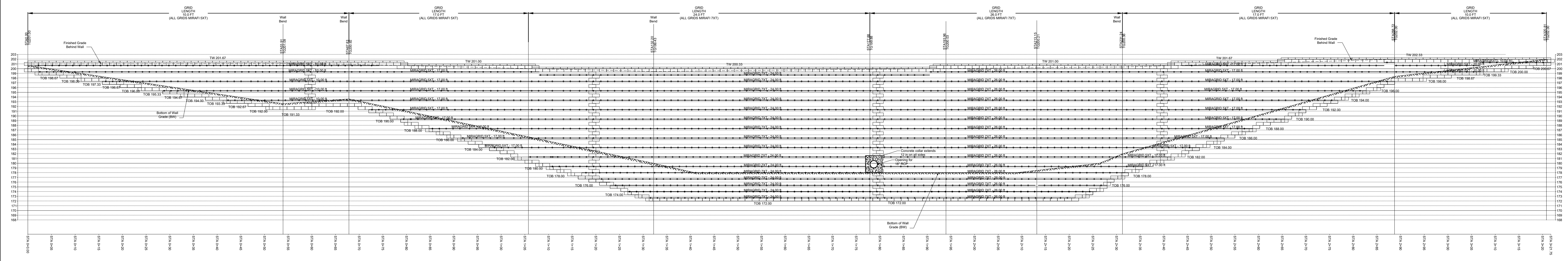
SITE DEVELOPMENT PLAN  
RETAINING WALLS  
PLAN VIEW  
**US 1 JOINT VENTURE, PARCEL E-2**  
9530 LYNN BUFF COURT  
LAUREL, MARYLAND 20723  
TAX MAP: 47 BLOCK: 23 3RD ELECTION DISTRICT  
ZONED: CE-CL1  
PARCELS: 910  
HOWARD COUNTY, MARYLAND

**FROEHLING & ROBERTSON, INC.**  
Engineering Stability Since 1881  
9017 Red Branch Road, Suite G  
Columbia, Maryland 21045  
T 410.825.4131 | F 410.321.7384

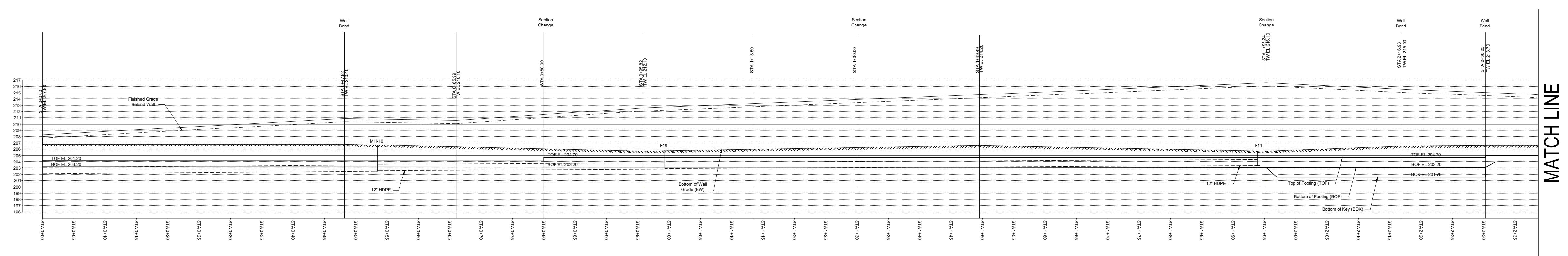
	DESIGN BY: HMA	PROFESSIONAL CERTIFICATE I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 28553, EXPIRATION DATE: 12-31-2023.
	DRAWN BY: DMA	
	CHECKED BY: HMA	
	DATE: MAY 2023	
SCALE: AS SHOWN	W.O. NO.: 75A0070	12 SHEET OF 16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
Designed by: *CHAD Edmondson* 12/12/2023  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 12/7/2023  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 12/12/2023  
DIRECTOR  
DATE:





**EAST RETAINING WALL PROFILE**  
 HORIZONTAL SCALE: 1"=10'  
 VERTICAL SCALE: 1"=10'

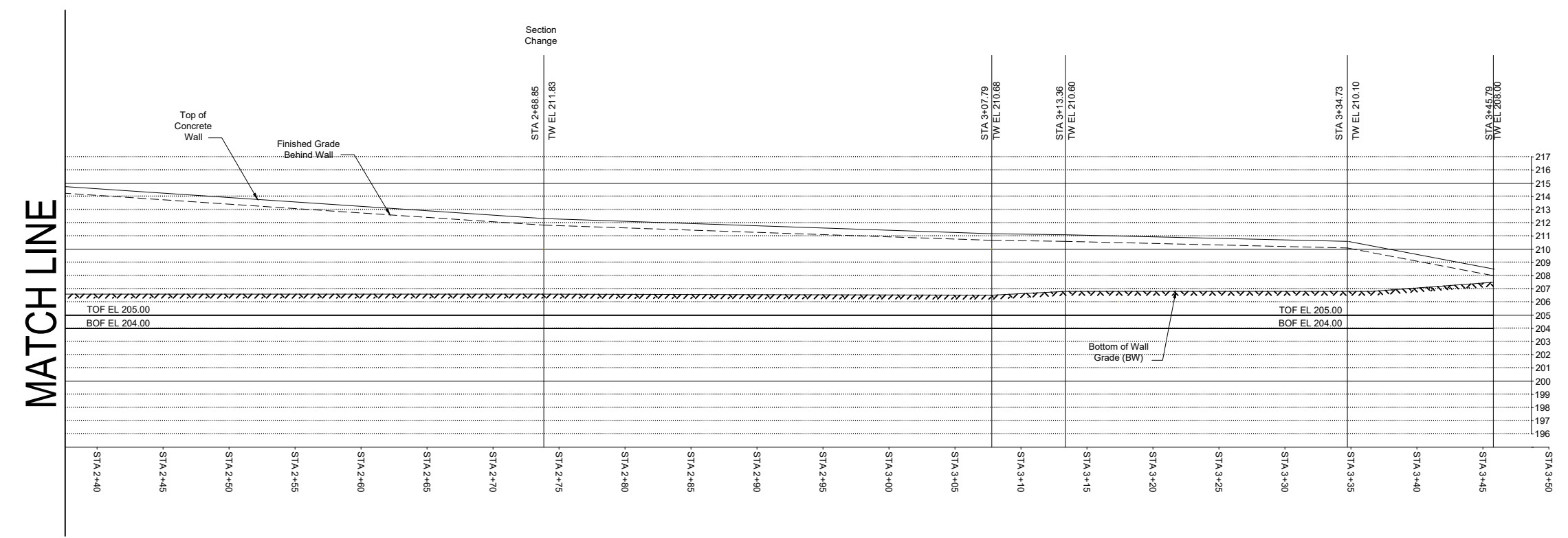


**WEST RETAINING WALL PROFILE**  
 HORIZONTAL SCALE: 1"=10'  
 VERTICAL SCALE: 1"=10'

**NOTES:**

- ○ ○ ○ ○ MIRAGRID 5XT
- ○ ○ ○ ○ MIRAGRID 7XT

TW = TOP GRADE ELEVATION  
 TC = TOP OF WALL CAP ELEVATION  
 BW = BOTTOM GRADE ELEVATION  
 BOB = BOTTOM OF BLOCK ELEVATION



**WEST RETAINING WALL PROFILE**  
 HORIZONTAL SCALE: 1"=10'  
 VERTICAL SCALE: 1"=10'

**OWNER/DEVELOPER**  
 MUHAMMAD SALEEM  
 SHAISTA SALEEM  
 4309 VALLEY STREAM AVE.  
 BURTONSVILLE, MD 20866  
 (301)370-6587

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

\_\_\_\_\_  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 12/12/2023  
 DATE

\_\_\_\_\_  
 CHIEF, DIVISION OF PLANNING AND DEVELOPMENT  
 12/7/2023  
 DATE

\_\_\_\_\_  
 DIRECTOR  
 12/12/2023  
 DATE

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**RETAINING WALLS**  
**PROFILE VIEWS**  
**US 1 JOINT VENTURE, PARCEL E-2**  
 9530 LYNN BUFF COURT  
 LAUREL, MARYLAND 20723  
 ZONED: CE-CU  
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DESIGN BY: \_\_\_\_\_ HMA  
 DRAWN BY: \_\_\_\_\_ DMA  
 CHECKED BY: \_\_\_\_\_ HMA  
 DATE: \_\_\_\_\_ MAY 2023  
 SCALE: \_\_\_\_\_ AS SHOWN  
 W.O. NO.: \_\_\_\_\_ 75A0070

I HEREBY CERTIFY THAT THESE DOCUMENTS  
 WERE PREPARED OR APPROVED BY ME, AND  
 THAT I AM A FULLY LICENSED PROFESSIONAL  
 ENGINEER UNDER THE LAWS OF THE STATE  
 OF MARYLAND, LICENSE NO. 29553  
 EXPIRATION DATE: 12-31-2023

Hasan M. Aboumatar  
 PROFESSIONAL ENGINEER  
 FROEHLING & ROBERTSON, INC. PE NO. 29553

13 SHEET OF 16







**General Notes:**

- A. Retaining walls must be constructed under the supervision of a Maryland Registered Professional Engineer.
- B. Work includes preparation of foundation soils, furnishing all materials, and installing all materials to the lines and grades shown on the construction drawings.
- C. The Contractor is responsible for verifying that no conflict exists between all bid documents prior to beginning work. The layout shown is based on the information provided to F&R by Vogel Engineering + Timmons Group. The Contractor is responsible for furnishing latest plans and files. F&R can not be held liable for using information furnished by the Contractor and its content.
- D. The Contractor shall check the materials upon delivery to assure that the proper materials have been received.
- E. The Contractor shall properly handle and store the materials to prevent damage to the materials. Damaged materials shall not be incorporated into the wall.
- F. The Owner shall engage a qualified testing agency to provide observation and testing services as described below:
  - F.A. The agency shall inspect the formwork and reinforcing steel placement for compliance with the contract documents. Reinforcing steel should be inspected for correct size, quantity, and spacing.
  - F.B. Fresh concrete shall be sampled in accordance with ASTM C 172, and tested for slump, air entrainment, and temperature.
  - F.C. Test cylinders shall be molded in accordance with ASTM C 31. Six test cylinders shall be molded for each day's pour, or for every 50 cubic yards of concrete placed, whichever is greater.
  - F.D. A minimum of one compaction test per lift should be made per 2,000 square feet of fill lift area, but not fewer than two tests per lift should be made.
  - F.E. The elevations and locations of the field density tests should be clearly identified at the time of fill placement and compaction.
- G. Concrete shall conform to Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials
- H. Material should consist of soil classified as SM or more granular, in accordance with ASTM D 2487.
- I. Material should have no particle larger than 2.5 inches and shall contain no more than 25 percent, by weight, passing the U.S. No. 200 sieve.
- J. The Contractor should submit samples of the proposed backfill soils to the Geotechnical Engineer of Record for approval prior to their use.

**CONSTRUCTION**

**General:**

- G1. All existing underground utilities shall be properly marked, and relocated if necessary, prior to construction.
- G2. All proposed underground utilities or structures in the general wall area shall be completely installed prior to the construction of the wall.
- G3. Protect all existing and/or new structures from damage by construction equipment. Immediately repair any damage that has occurred.

**Foundations:**

- F1. The wall foundation shall be excavated to the grades and lines as shown on the construction drawings. Contractor should take care not to disturb foundation soils beyond the lines and grades shown.
- F2. The foundation shall bear at the minimum embedment depths indicated, as measured from the final grade at the front of the wall.
- F3. The foundation subgrade soils shall be testing by a qualified representative of the Geotechnical Engineer to verify the availability of the design bearing pressure of 3,000 psf.
- F4. If unsuitable soils are encountered at design foundation levels, the unsuitable soils shall be removed and the over-excavated areas shall be replaced with compacted structural fill.

**Steel Reinforcement:**

- S1. All steel reinforcing shall have a minimum clear cover of 3 inches unless otherwise noted on the contract documents.
- S2. Where applicable, splices for reinforcing steel shall be made by contact tension lap splices.
- S3. Welding and field-bending of reinforcing steel is not permitted.
- S4. Furnish all accessories, chairs, space bars, supports, etc. necessary to secure reinforcing.

**Cast-in-Place Concrete:**

**CA. Foundation Concrete**

- CA.1 The vertical faces of the footing and key excavation may be used as forms for placement of foundation concrete.
- CA.2 Foundation concrete, or protective mud mats, should be placed the same day that the foundation subgrade is approved.
- CA.3 Provide concrete protection against freezing during placement and for 5 days thereafter.
- CA.4 Concrete compressive strength at 28 days shall be 3,000 psi.

**CB. Wall Concrete**

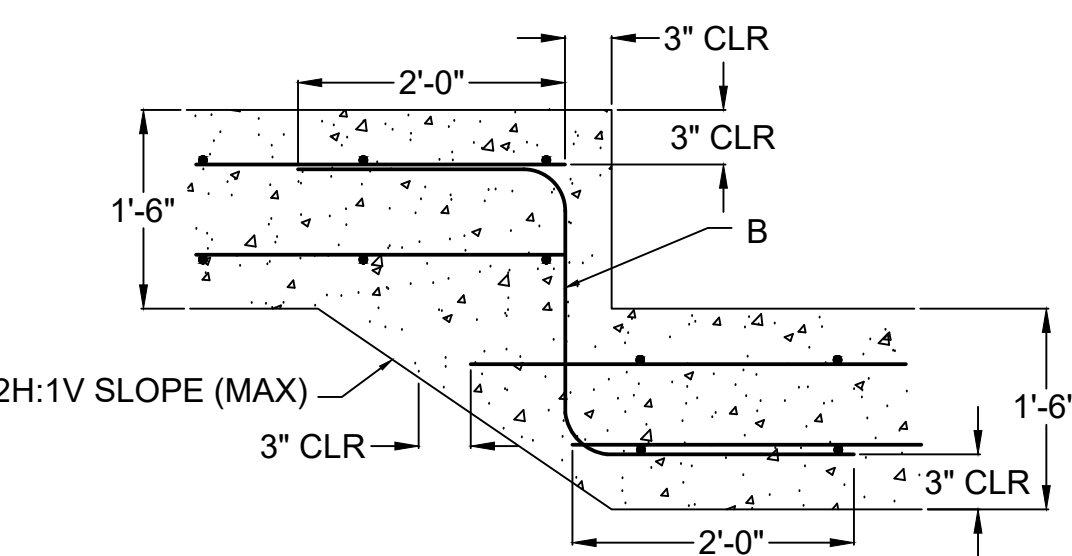
- CB.1 Furnish and erect concrete forms to the lines and grades shown on the construction drawings.
- CB.2 Locate construction joints as to not impair the strength of the structure, but not more than 60 feet in any direction. Provide continuous bentonite strip waterstrip at all construction joints.
- CB.3 Make stops in concrete pours using vertical bulkheads.
- CB.4 All reinforcing shall be continuous through joints and bulkheads.
- CB.5 Chamfer exposed concrete corners 3/4" by 3/4" minimum.
- CB.6 Provide 4" diameter weep holes every 8 feet along the bottom of the wall and at wall ends. The weep holes should be formed in place prior to concrete placement by using PVC pipe. Weep hole locations must not interfere with steel reinforcing, and shall be no greater than 4 inches above final grade at the front of the wall.
- CB.7 Where a fence is required, it is recommended that the fence posts be installed during wall concrete placement. The fence posts shall have a minimum of 24 inches of embedment into the wall, and be located along the center of the wall. Alternatively, provide 4 inch diameter by 24 inch deep post holes at the designated fence post locations along the centerline of the wall. The post holes should be formed in place prior to concrete placement by using PVC pipe.
- CB.8 Concrete compressive strength at 28 days shall be 4,500 psi.

**Backfilling:**

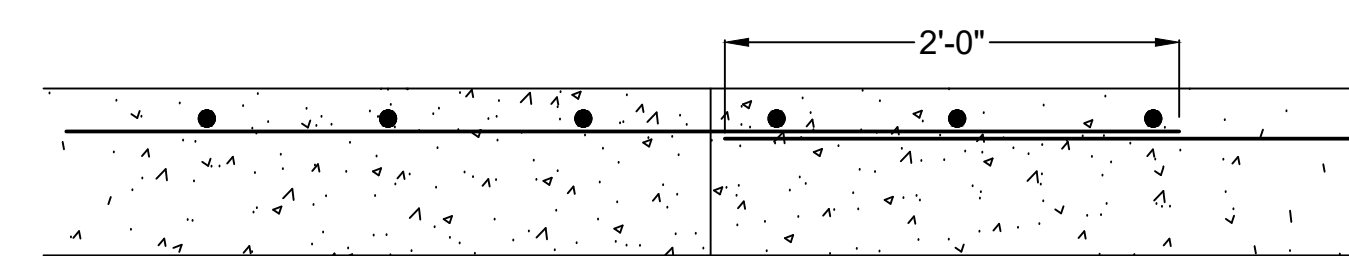
- B1. All soil backfill shall conform to the material requirements here-in and the project Geotechnical Report.
- B2. Backfill shall be moisture conditioned to within 2 percentage points of the optimum moisture content, as determined in accordance with ASTM D-698.
- B3. Backfill shall be placed in loose lifts, not exceeding 8 inches in thickness, and then compacted to at least 95 percent of the maximum dry density, as determined in accordance with ASTM D-698.
- B4. Backfilling shall not occur against the wall until the wall concrete has attained at least 100 percent of the 28-day design strength, and no earlier than 3 days after placement.
- B5. Where feasible, maintain equal grades on each side of the wall during backfilling to prevent overturning and lateral movements. When the grade differential at the wall exceeds 12 inches, only hand-operated compaction equipment shall be allowed.
- B6. Drainage boards shall be placed against the wall, extending from the weep hole up within 12 inches of final grade at the top of the wall.

**Finish:**

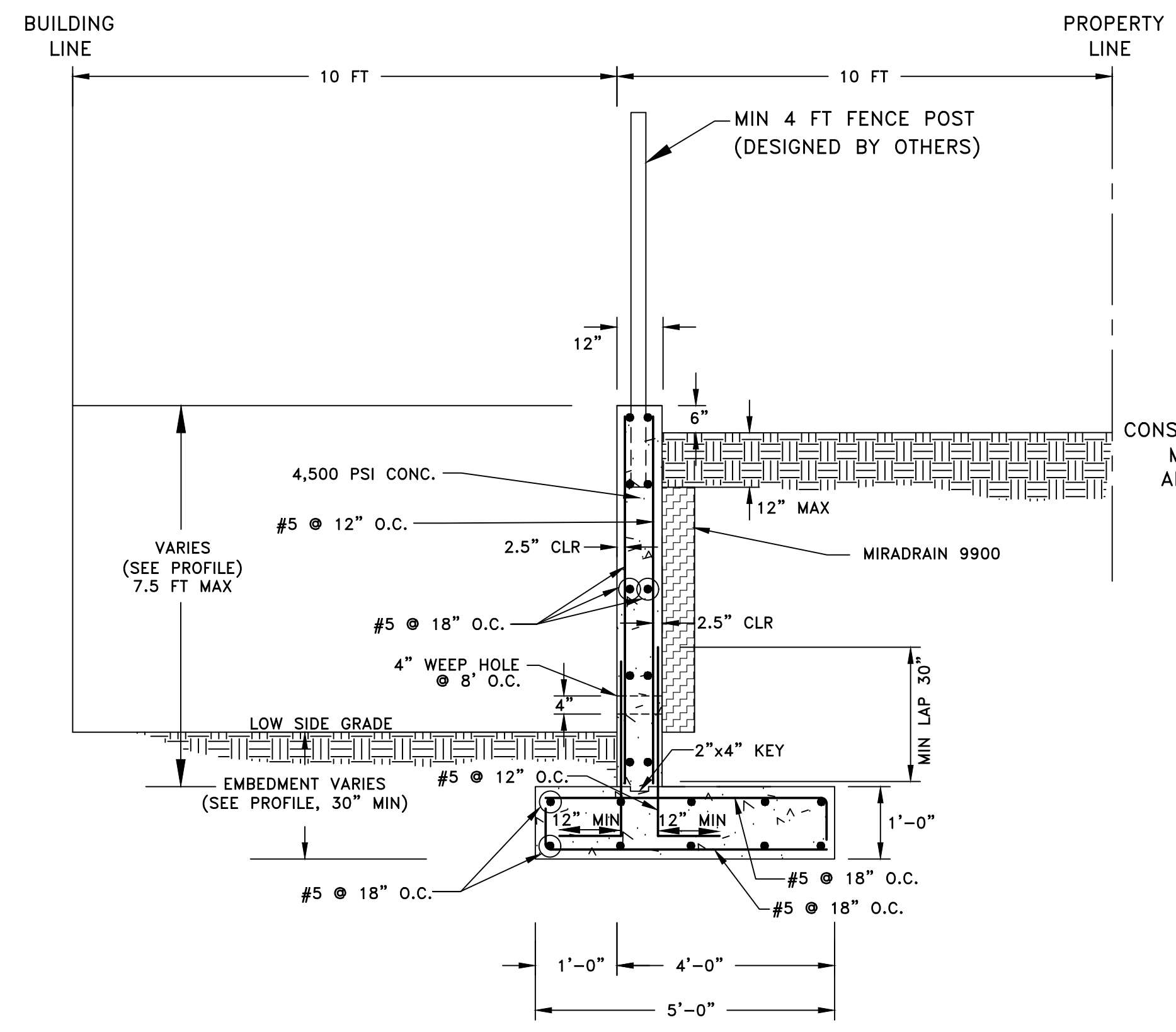
- F1. Final grades at the wall shall be established by the Contractor in the field.
- F2. Final grades shall be stabilized and seeded per the approved civil plans unless noted otherwise on the site grading plans.
- F3. Install a 4 ft fence at the top of the wall. If fence posts are installed subsequent to wall construction, the fence posts shall be grouted into the PVC post holes using 3,000 psi non-shrink grout.



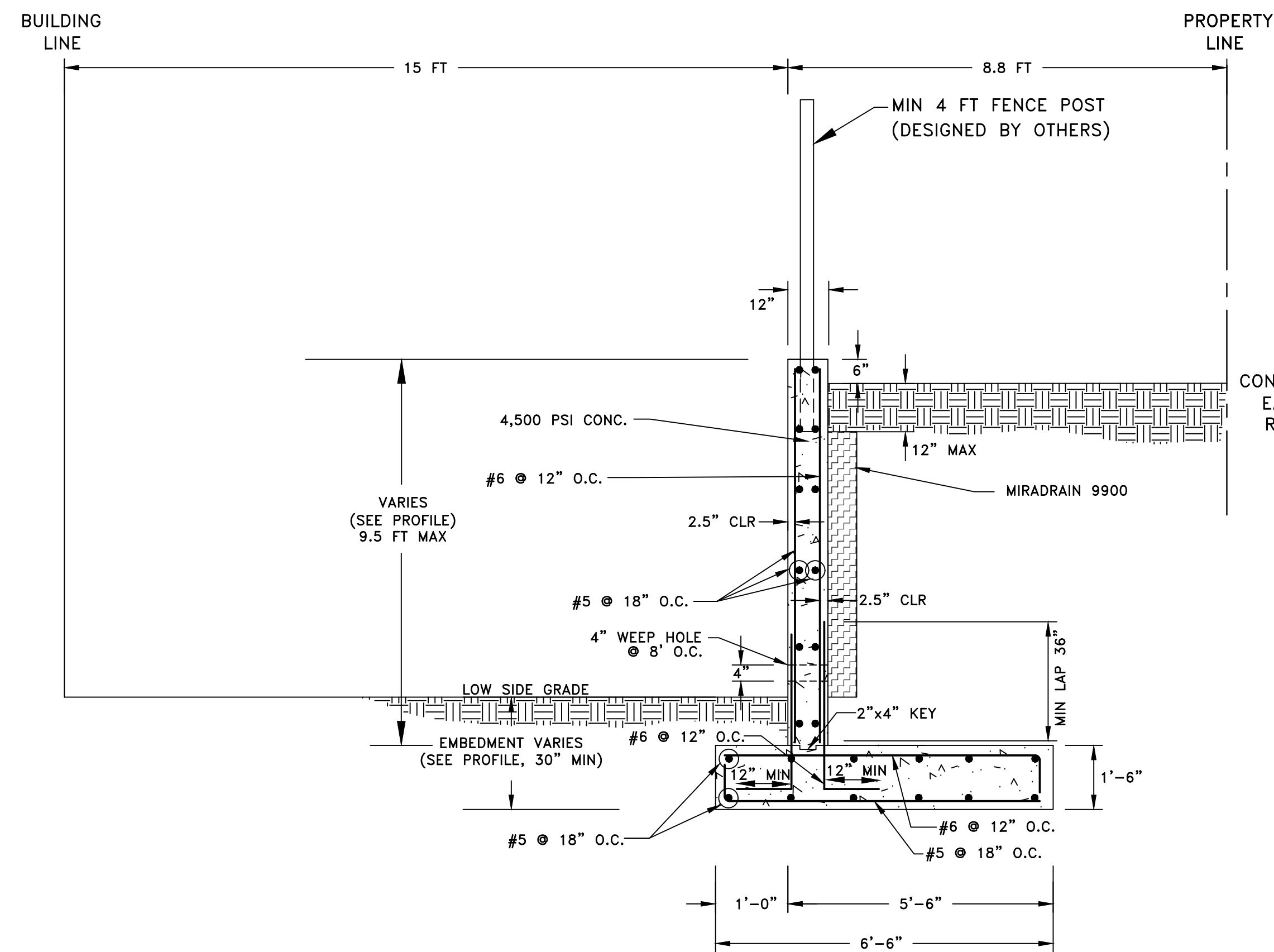
FOOTING STEP  
NTS



CONSTRUCTION JOINT  
NTS



TYPICAL SECTION - WEST WALL  
START OF WALL TO STA 0+80.00  
NTS



TYPICAL SECTION - WEST WALL  
STA 0+80.00 - STA 1+30.00  
NTS

CONSTRUCTION EASEMENT  
MAY BE REQUIRED  
AFTER STA 0+47.92

CONSTRUCTION  
EASEMENT  
REQUIRED

**OWNER/DEVELOPER**

MUHAMMAD SALEEM  
SHAISTA SALEEM  
4309 VALLEY STREAM AVE.  
BURTONSVILLE, MD 20866  
(301)370-6587

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN

**RETAINING WALLS - WEST WALL  
CAST-IN-PLACE DETAILS AND SECTIONS**

**US 1 JOINT VENTURE, PARCEL E-2**  
9530 LYNN BUFF COURT  
LAUREL, MARYLAND 20723

TAX MAP: 47 BLOCK: 23  
3RD ELECTION DISTRICT

ZONED: CE-CU  
PARCEL: 910  
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PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 295342, EXPIRATION DATE: 12-31-2023

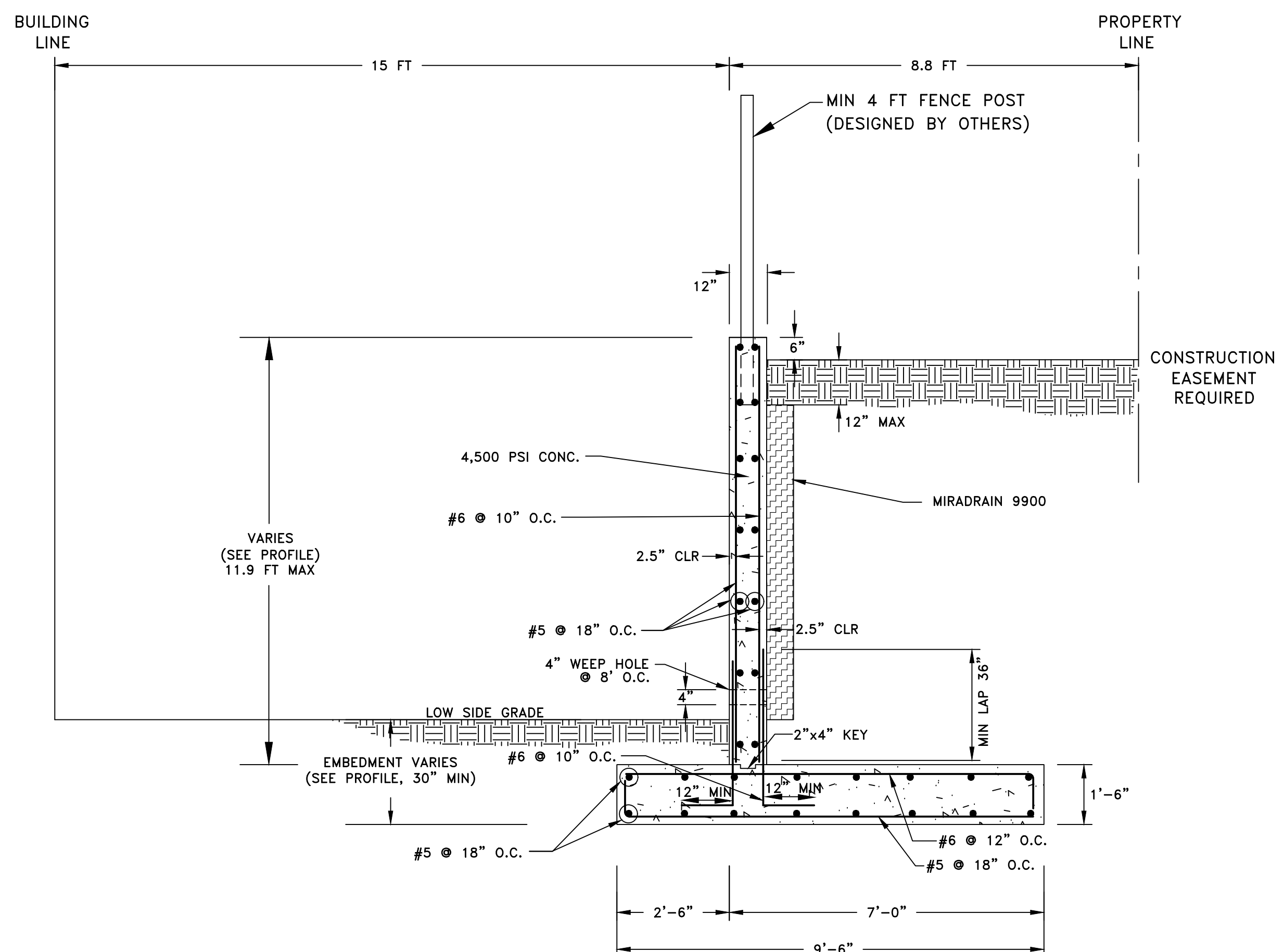
DESIGN BY: HMA  
DRAWN BY: DMA  
CHECKED BY: HMA  
DATE: MAY 2023  
SCALE: AS SHOWN  
W.O. NO.: 75A0072

15 SHEET OF 16

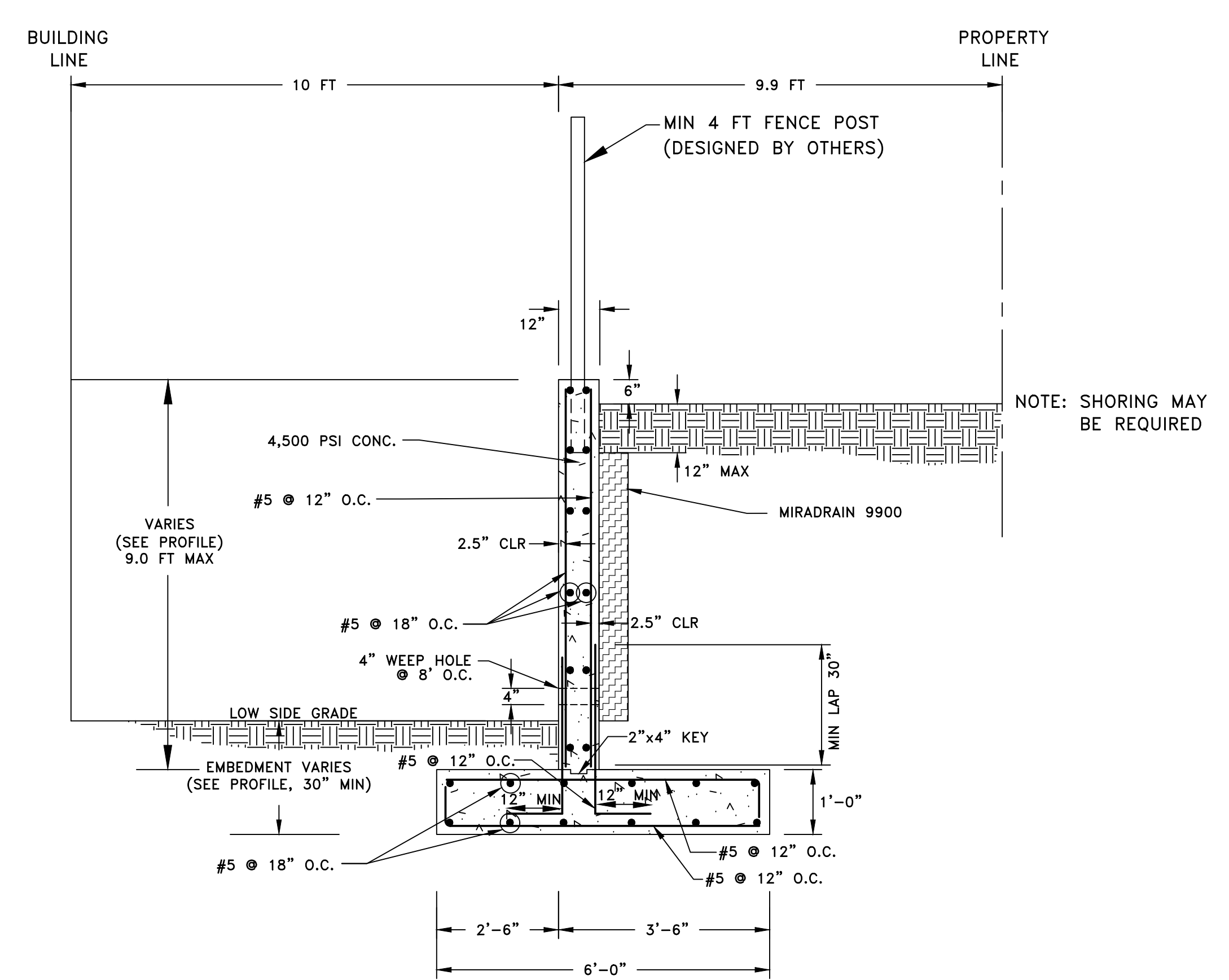
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
DIRECTOR	DATE



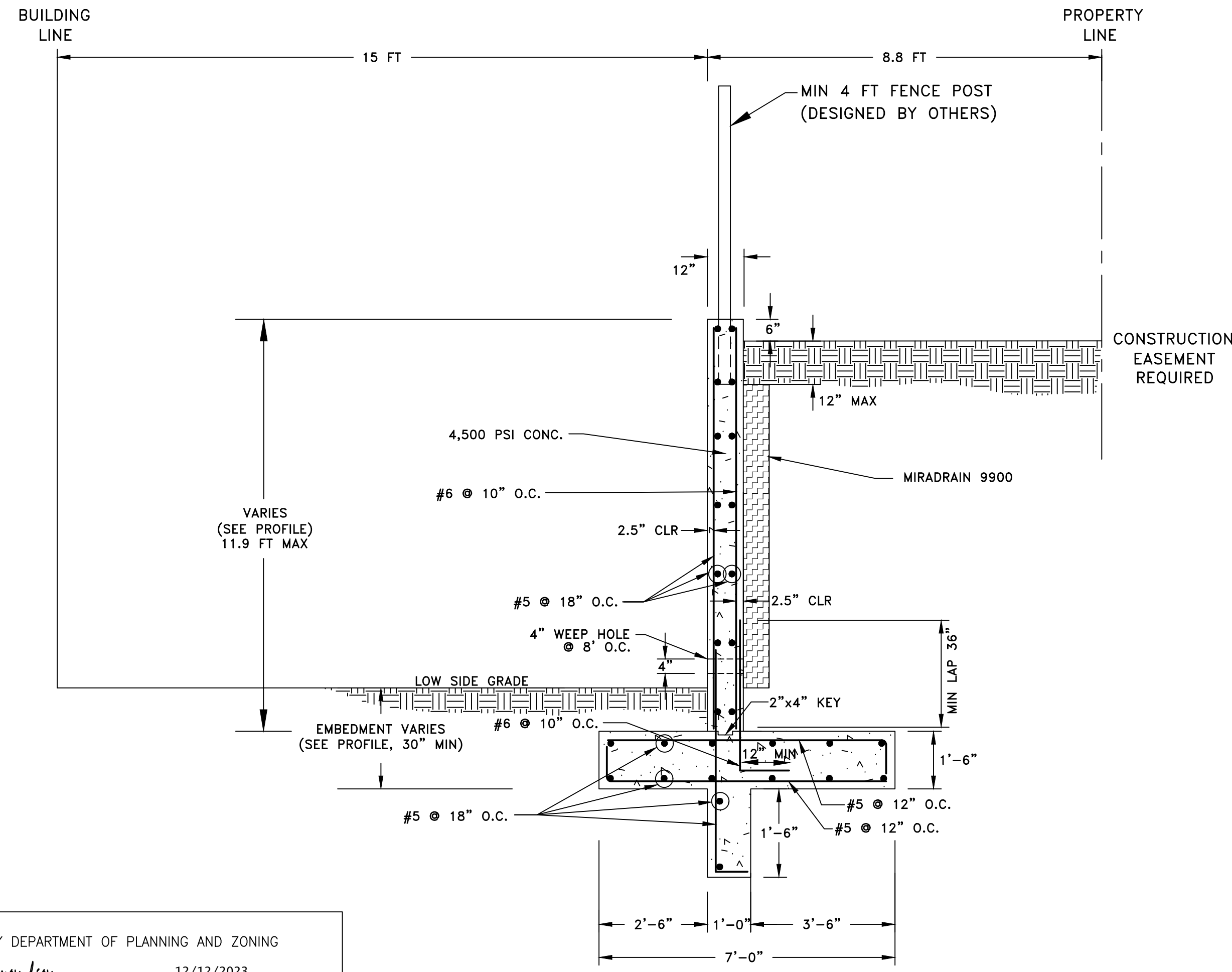


**TYPICAL SECTION - WEST WALL**  
**STA 1+30.00 - STA 1+95.00**  
**NTS**

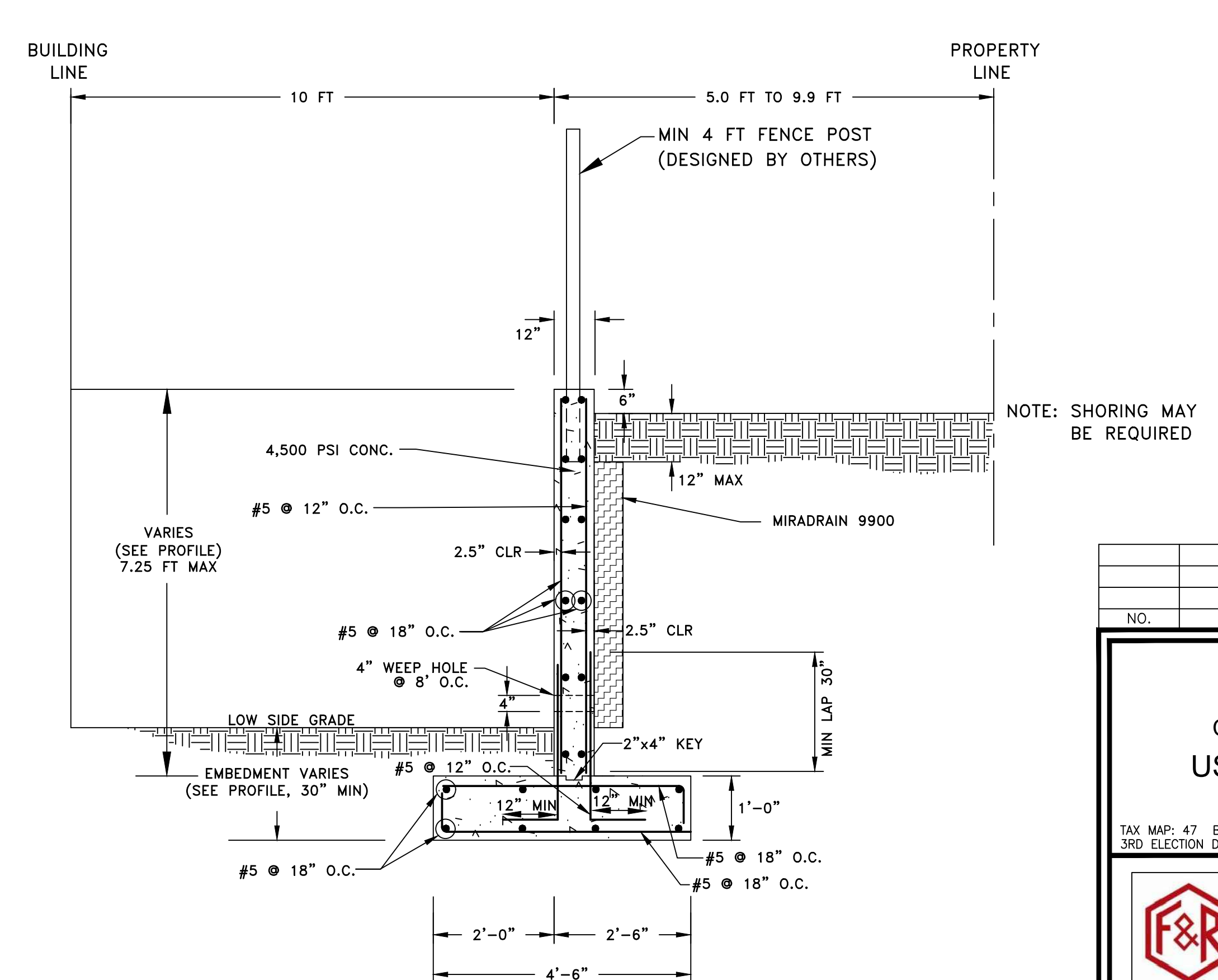


**TYPICAL SECTION - WEST WALL**  
**STA 2+30.25 - STA 2+68.85**  
**NTS**

NOTE: SHORING MAY BE REQUIRED



**TYPICAL SECTION - WEST WALL**  
**STA 1+95.00 - STA 2+30.25**  
**NTS**



**TYPICAL SECTION - WEST WALL**  
**STA 2+68.85 TO END OF WALL**  
**NTS**

NOTE: SHORING MAY BE REQUIRED

**OWNER/DEVELOPER**

MUHAMMAD SALEEM  
 SHAISTA SALEEM  
 4309 VALLEY STREAM AVE.  
 BURTONSVILLE, MD 20866  
 (301)370-6587

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**RETAINING WALLS - WEST WALL**  
**CAST-IN-PLACE DETAILS AND SECTIONS**  
**US 1 JOINT VENTURE, PARCEL E-2**  
 9530 LYNN BUFF COURT  
 LAUREL, MARYLAND 20723

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DESIGN BY: HMA  
 DRAWN BY: DMA  
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**16** SHEET OF **16**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

<i>CHAD Edmondson</i>	12/12/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Yvonne Eisenberg</i>	12/7/2023
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Yvonne Eisenberg</i>	12/12/2023
DIRECTOR	DATE